

SEAFOOD FRAUD AND MISLABELLING ACROSS CANADA



OCEANA CANADA

TESTED FOR SEAFOOD FRAUD

in five cities across Canada and
found widespread mislabelling.



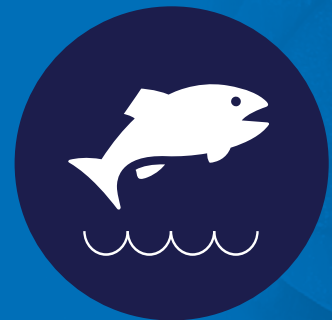
SEAFOOD FRAUD HARMS:



OUR
HEALTH



OUR
WALLETS



OUR
OCEANS

Oceana Canada is calling on
the Canadian Food Inspection
Agency to implement full
boat-to-plate traceability.



Join the conversation

#StopSeafoodFraud



FIVE CITIES

TESTED



44 %
OF SAMPLES
MISLABELLED



100%
OF SNAPPER
MISLABELLED

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EXECUTIVE SUMMARY

Seafood fraud is a global problem that hurts our health, our wallets and our oceans. A 2016 review of more than 200 published studies from 55 countries found that one in five seafood samples were mislabelled.¹

Results of testing done by Oceana Canada in 2017 and 2018 show that Canada is no exception. Of the nearly 400 samples tested from food retailers and restaurants in five cities, 44 per cent were mislabelled.

The problem is particularly prevalent in restaurants, where more than half of the samples tested were mislabelled.

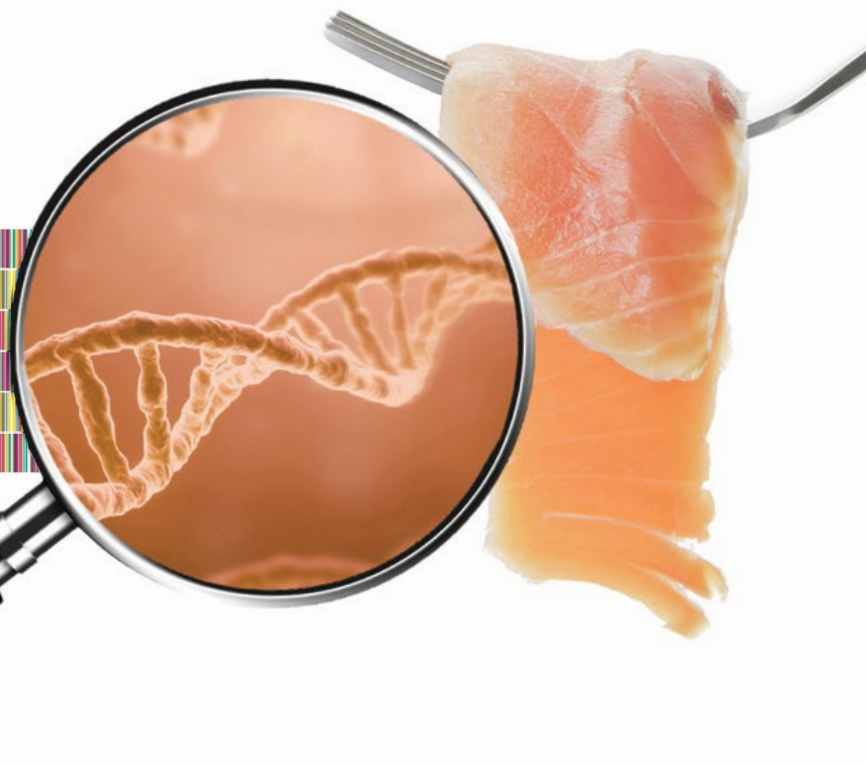
This national investigation into seafood fraud and mislabelling — the most comprehensive ever conducted in Canada — found cheaper haddock and pollock substituted for cod; farmed salmon served up as wild salmon; and escolar (a fish banned in many countries because of its health risks) masquerading as butterfish or white tuna. Meanwhile, every single sample of so-called “red snapper” tested was actually another species. Those are only a few examples of mislabelling uncovered in this study.

This creates food safety risks for Canadians. It also threatens the health of our oceans and cheats consumers as well as honest fishers and vendors.

What makes mislabelling on this scale possible? The global seafood supply chain is obscure and increasingly complex. Once a fish has been caught, it can travel halfway around the world for processing, passing across many national borders before it ends up on your plate.

That’s why full-chain traceability is crucial. The European Union is leading the way with measures to track fish at every step from capture to consumption. These traceability regulations are working: fraud rates have declined significantly since they were put in place. The United States has recently taken important steps in this direction by implementing boat-to-border traceability for at-risk species groups.

It’s time for Canada to do the same. Mounting evidence shows seafood fraud is an urgent, widespread issue across the country that needs attention from the federal government.



Unfortunately, the Canadian Food Inspection Agency's (CFIA) new *Safe Food for Canadians Regulations*, which come into effect at the beginning of 2019, fail to address the problem of seafood fraud. Despite CFIA's own research showing the prevalence of seafood mislabelling, Canadian regulations lack measures to deter seafood fraud. As a result, Canada lags well behind international best practices.

In order to stop seafood fraud and ensure that seafood sold in Canada is safe, honestly labelled and legally caught, CFIA must implement boat-to-plate traceability requirements to protect consumers, conserve our oceans and give honest fishers and vendors the fair treatment they deserve.



NEARLY
400
SAMPLES
TESTED
FROM FOOD RETAILERS
AND RESTAURANTS IN
FIVE CITIES

**THE CANADIAN FOOD
INSPECTION AGENCY'S
NEW SAFE FOOD FOR
CANADIANS REGULATIONS
FAIL TO ADDRESS
THE PROBLEM OF
SEAFOOD FRAUD.**



NATIONAL RESULTS: 44 PER CENT OF SAMPLES MISLABELLED

To better understand the extent of seafood fraud in cities across the country, in 2017 and 2018 Oceana Canada staff collected 382 seafood samples from 177 retailers and restaurants in Halifax, Ottawa, Toronto, Vancouver and Victoria. Of these, 44 per cent (168 samples) did not meet the labelling requirements set out by the Canadian Food Inspection Agency (CFIA).



**OF THE 177 RETAILERS
AND RESTAURANTS WE
VISITED, 64 PER CENT
SOLD MISLABELLED FISH.**

BEWARE BUTTERFISH, SNAPPER AND YELLOWTAIL

The investigation focused on types of fish prone to being mislabelled because of their economic value, availability or popularity. Past studies from both Canada and the United States have shown that cod, halibut, snapper, tuna, salmon and sole have the highest rates of species substitution.

Samples of other types of fish, such as yellowtail and butterfish, were also tested in lower numbers, based on menu availabilities and regional differences.

Figure 1 shows the highest rates of mislabelling in the fish tested. (For the full analysis, which includes all the samples collected, go to oceana.ca/SeafoodFraudCanada.) Figure 2 gives examples of common substitutes for these target fish.

FIGURE 1:

EXTENT OF MISLABELLING OF TARGET FISH



FISH NAME ON LABEL/MENU	NUMBER OF SAMPLES COLLECTED	PERCENTAGE MISLABELLED
SNAPPER	44	100%
YELLOWTAIL	18	100%
BUTTERFISH	10	100%
SEA BASS	10	50%
SOLE	26	42%
TUNA	49	41%
HALIBUT	35	34%
COD	53	32%
SALMON	56	18%

None of the 44 samples of so-called snapper collected turned out to be legitimate, despite the fact that the CFIA Fish List allows over 200 fish species to carry that label. These findings are similar to those of other investigations. For example, a 2013 study in the United States found

87 per cent of “snapper” was mislabelled,² while a recent study by the University of British Columbia, in which Oceana Canada collaborated, found mislabelling rates of 91 per cent.³

FIGURE 2:

EXAMPLES OF COMMON SUBSTITUTIONS

WHAT YOU BOUGHT	WHAT YOU GOT	IMPACT
BUTTERFISH	ESCOLAR	+
COD	HADDOCK, POLLOCK	\$
HALIBUT	HADDOCK, FLOUNDER, TURBOT	\$
WILD-CAUGHT PACIFIC SALMON	FARMED ATLANTIC SALMON	+ \$ 🌿
SEA BASS	ASIAN CATFISH	+ \$ 🌿
SNAPPER	ROCKFISH, TILAPIA	\$
SOLE	ASIAN CATFISH	+ \$ 🌿
WHITE TUNA	ESCOLAR	+
YELLOWTAIL	JAPANESE AMBERJACK	+

+ Health \$ Economic 🌿 Environmental

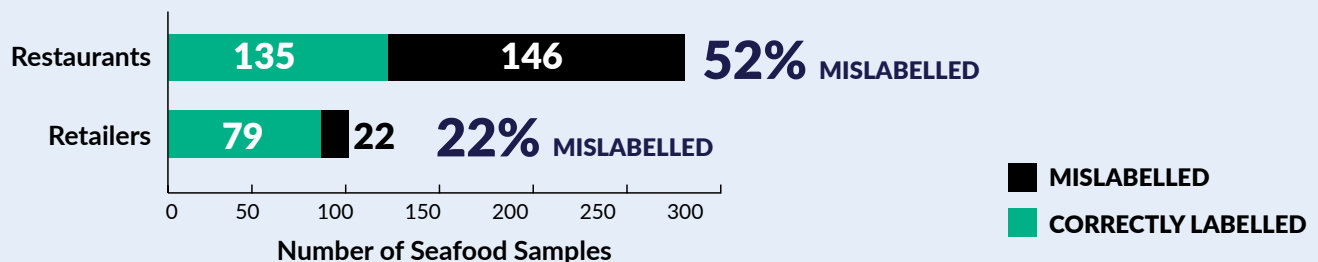
GREATER RISK IN RESTAURANTS

Although restaurants and retailers both sold mislabelled fish, mislabelling rates were higher in restaurants, where 52 per cent of samples were mislabelled (Figure 3). At food retailers, including grocery stores and markets, the rate was 22 per cent.

The problem isn't confined to just a few restaurants or vendors. Of the 177 food businesses assessed, 64 per cent (114 businesses) sold mislabelled fish. Oceana Canada found fraud in 70 per cent of the restaurants tested (95 out of 136 restaurants) and 46 per cent of the retailers (19 of 41 retailers).

FIGURE 3:

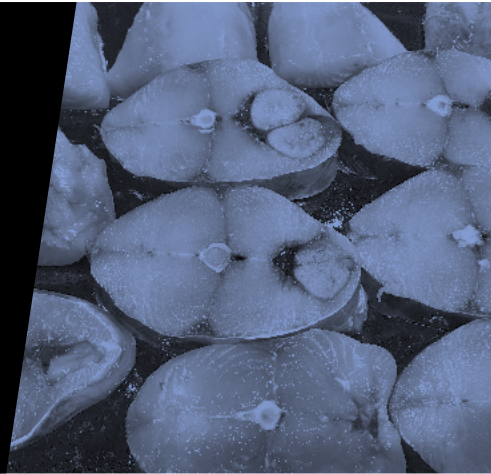
SEAFOOD MISLABELLING BY TYPE OF BUSINESS



SEAFOOD FRAUD HURTS OUR HEALTH, OUR WALLETS AND OUR OCEANS

Despite seafood's popularity and despite increasing concern about where our food comes from,^{4,5} Canadian consumers are routinely given little or no information about the seafood we purchase.⁶ When menus or labels do provide information, it is often misleading or fraudulent.

DEFINING FRAUD
SEAFOOD FRAUD ENCOMPASSES ANY
ACTIVITY THAT MISREPRESENTS THE
SEAFOOD PRODUCT YOU BUY.



More and more of the seafood sold in Canada is imported – up to 80 per cent, according to one recent estimate.⁷ This seafood often follows a long, complex and notoriously opaque path from the fishing vessel to the plate, with many opportunities for fraud and mislabelling along the way.⁸ With over 900 different species of seafood now available for sale in Canada, it simply isn't realistic for consumers to independently and accurately determine what fish they're eating.

This is why Oceana Canada's work focuses on the mislabelling of seafood: the presentation of false, incomplete or misleading information about a product.

A particularly harmful form of mislabelling is species substitution: swapping cheaper, less-desirable or more readily available species for more expensive ones; farmed products for wild-caught; and black-market fish for legally caught varieties. Other types of seafood fraud include product adulteration, such as adding chemicals to preserve the appearance of the product, or practices such as short-weighting (claiming a product weighs more than it does by adding extra bread or water).

Seafood fraud affects public health and food safety. It cheats consumers and hurts honest, law-abiding fishers and seafood businesses. It undermines the environmental and economic sustainability of fisheries and fish populations. It even masks global human rights abuses by creating a market for illegally caught fish.



SEAFOOD FRAUD HAS SERIOUS HEALTH IMPLICATIONS

No one likes being deceived. But seafood fraud hurts more than your ego. Nearly 60 per cent of the substituted samples (97 out of 168 samples) found in this investigation could have potential health consequences for consumers.

This makes seafood fraud a food safety issue.



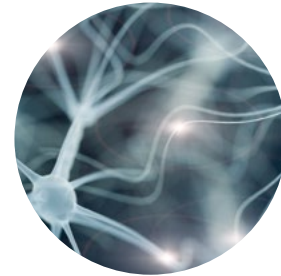
ESCOLAR: THE LAXATIVE OF THE SEA

All 10 of the samples labelled “butterfish” and 10 of the 15 samples labelled “white tuna” actually turned out to be escolar. This oily fish can cause acute gastrointestinal symptoms such as diarrhea, vomiting and nausea. Japan, South Korea and Italy have all banned the sale of escolar because of its health risks.⁹ Canada has issued special guidelines for the sale of escolar and require the fish to be labelled as either escolar or snake mackerel,¹⁰ but frequent mislabelling leaves consumers susceptible.



FARMED FISH SOLD AS WILD

Oceana Canada found examples of species that are typically farmed sold as wild-caught fish, including tilapia sold as snapper; Asian catfish sold as grouper and sole; and farmed Atlantic salmon sold as wild Pacific salmon. If you unwittingly end up with farmed fish instead of wild-caught, you run the risk of consuming chemicals with your meal. According to CFIA, farmed tilapia, salmon and Asian catfish may contain drug residues, antibiotics and contaminants that pose health hazards.¹¹ Unlike the European Union and the United States, Canadian labelling laws do not require fish labels to include whether the product was wild-caught or farmed.



CIGUATERA

Ciguatera is a natural toxin found in certain reef fish, including some species of snapper and amberjack. Unless you’re treated within a few days of consuming it, ciguatera can cause long-term debilitating neurological symptoms. But you’re not likely to be diagnosed correctly unless you know exactly what you’ve eaten. Oceana Canada’s studies found that all 18 samples of “yellowtail” collected across Canada were in fact Japanese amberjack.

FISHY IDENTITIES

What’s really on your plate?

When Oceana Canada tested mislabelled seafood to reveal its true identity, three species accounted for almost 40 per cent of substitutions:

TILAPIA
27
SAMPLES

ESCOLAR
20
SAMPLES

JAPANESE
AMBERJACK
19
SAMPLES



SEAFOOD FRAUD CHEATS CONSUMERS

Seafood fraud is most often driven by economic gain, although some mislabelling may result from human error. Cheap or more readily available species are mislabelled so they can be sold as expensive, desirable or supply-limited ones. So when you fork out big money for seabass, what you're actually getting could be far cheaper catfish. And that's just one example.

In 74 per cent of instances of mislabelling (124 out of 168 samples) that Oceana Canada uncovered, the fish listed on the menu or the label was a more expensive variety than the fish actually being sold. By undercutting prices for responsibly caught seafood, these low-cost substitutions cheat consumers and hurt the honest fishers and seafood businesses who play by the rules.

THE COST TO CONSUMERS, AND THE INDUSTRY AS A WHOLE, IS STEEP.

NOT ONLY ARE YOU NOT GETTING WHAT YOU PAID FOR, RESPONSIBLE SEAFOOD BUSINESSES FACE UNFAIR MARKET COMPETITION FROM THOSE NOT PLAYING BY THE RULES.

DID YOU GET WHAT YOU PAID FOR?

Examples of cheaper species sold as more expensive ones (CND \$/kg):

WHITING VS **ATLANTIC COD**
\$7^{.33/KG} VS **\$33**^{.33/KG}

HADDOCK VS **HALIBUT**
\$39^{.88/KG} VS **\$74**^{.77/KG}

CRAYFISH VS **ROCK LOBSTER**
\$20^{.02/KG} VS **\$95**^{.16/KG}

ATLANTIC SALMON VS **SOCKEYE SALMON**
\$37^{.66/KG} VS **\$101**^{.69/KG}

CATFISH VS **SEABASS**
\$11^{.64/KG} VS **\$113**^{.88/KG}

These price differences were calculated by comparing a retailer (seafoodonline.ca) who sold both types of fish in similar forms.

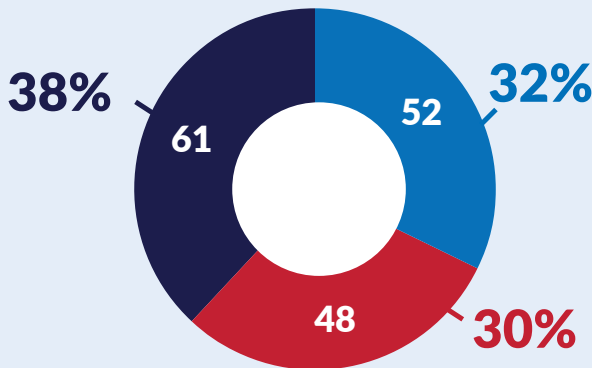


SEAFOOD FRAUD DISGUISES ENDANGERED SPECIES

Thirty per cent of the mislabelled samples that Oceana Canada found were endangered, threatened or vulnerable species (Figure 4). Eating these fish puts further stress on their stocks. In the case of another 38 per cent of samples, the status of the fish isn't clear. That's because the relevant assessment body – the International Union for the Conservation of Nature (IUCN) or the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) – either hasn't made a decision yet or doesn't have enough information to do so.

FIGURE 4:

CONSERVATION STATUS OF SUBSTITUTED SPECIES



- Least concern
- Vulnerable, threatened or endangered
- Not assessed/Data deficient

Conservation status of species was based on IUCN and COSEWIC determinations. Seven samples were not included because only genus-level information was available and therefore no conservation status was available.

When a cheaper, more abundant fish is mislabelled as a more expensive, less-abundant fish, it can give consumers a perception that the stocks are healthier than they actually are. For example, the IUCN has listed red snapper as a vulnerable species. The current investigation found 29 examples of “red snapper” listed on menus, making it easy to believe the species is healthy and abundant. However, when those samples were tested, none of them turned out to be actual red snapper.

Illegal fishing

Illegal, unreported and unregulated (IUU) fishing operates outside of international and domestic rules and laws. It can include fishing in closed areas, fishing during prohibited times, using illegal gear or catching prohibited species. Global estimates suggest a minimum of 20 percent of seafood worldwide is either caught illegally or unreported,¹² with an estimated value of \$23 billion US annually.^{13,14}

Seafood fraud allows illegally caught fish to enter the market by giving it a new “legal” identity.¹⁵ This undermines efforts to manage fisheries responsibly, prevent overfishing, deter destructive fishing practices and protect at-risk areas and animals. On top of that, illegal fishing is often tied to human rights violations, including modern slavery and child labour.¹⁶



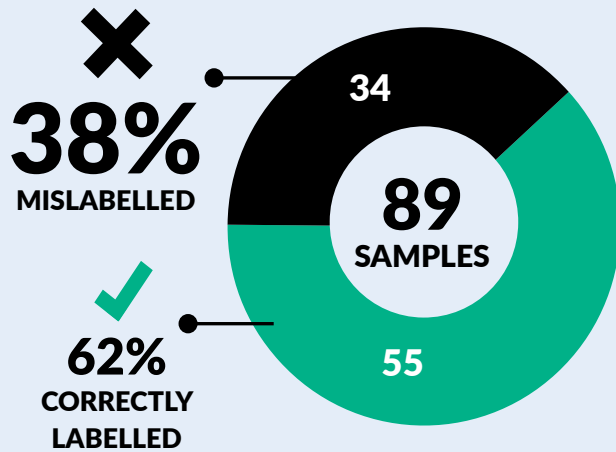
GLOBAL ESTIMATES SUGGEST A MINIMUM OF

20%

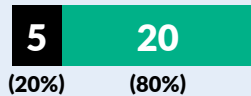
OF SEAFOOD WORLDWIDE IS CAUGHT ILLEGALLY OR UNREPORTED¹²

CITY-BY-CITY RESULTS

HALIFAX



RETAILERS – 25 SAMPLES IN TOTAL



RESTAURANTS – 64 SAMPLES IN TOTAL



Halifax prides itself on the quality of its seafood, but 38 per cent of the seafood samples from this city were mislabelled (34 samples out of 89). Seventy-one per cent of the substituted samples (24 out of 34) were cheaper varieties than the fish named on the label, including catfish sold as seabass; yellowfin tuna sold as bluefin tuna; and crayfish sold as rock lobster.

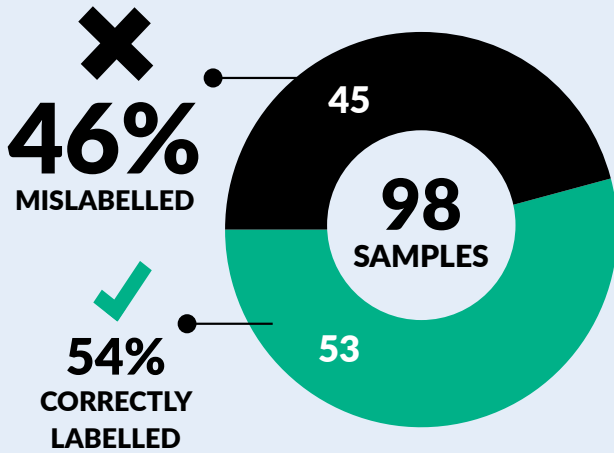
Fifty-nine per cent of these substitutions (20 samples out of 34) have health implications for the consumers, including Japanese amberjack sold as yellowtail; escolar sold as butterfish or white tuna; and tilapia sold as snapper.

COD CON

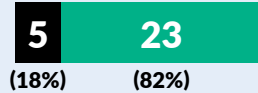
Thought you were buying iconic Atlantic cod? In fact, that fish may have been Pacific cod flown in from the West Coast, readily available haddock or cheaper pollock. More than one-third of the Atlantic cod samples tested (five out of 13) were mislabelled. As a result, consumers may think Atlantic cod populations are more abundant than they actually are.

MISLABELLED SEAFOOD WAS SOLD AT FOUR OF THE 10 RETAILERS AND 19 OF THE 34 RESTAURANTS.

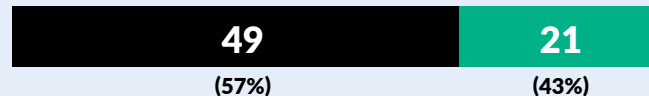
OTTAWA



RETAILERS – 28 SAMPLES IN TOTAL



RESTAURANTS – 70 SAMPLES IN TOTAL



■ MISLABELLED ■ CORRECTLY LABELLED

In 2017, Oceana Canada investigated seafood fraud in our nation's capital, targeting restaurants and grocery stores near Parliament Hill that are popular among politicians and decision-makers. As previously reported in *Seafood Fraud and Mislabelling in Ottawa*,¹⁷ nearly half of the samples tested (45 out of 98) were mislabelled.

Sixty-nine per cent of the substituted samples (31 out of 45) were cheaper varieties than the fish named on the label or menu, including farmed Atlantic salmon sold as wild salmon; southern blue whiting sold as cod; and cod sold as the more expensive European bass.

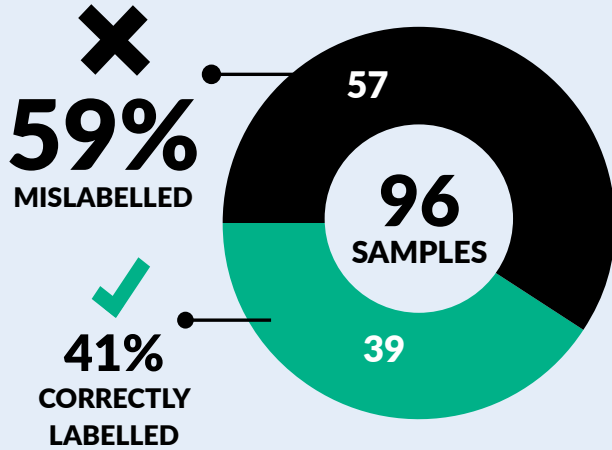
Fifty-three per cent of those substitutions (24 samples) have potential health implications, including Asian catfish sold as sole; escolar sold as white tuna or butterfish; and tilapia sold as white fish or snapper.

WAS YOUR DINNER ENDANGERED?

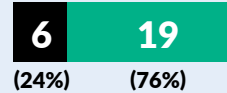
Oceana Canada's Ottawa investigation revealed several examples of species at risk. One mislabelled sample turned out to be white hake, an endangered species. Two other samples were near-threatened fish: lane snapper and spinycheek grouper.

**MISLABELLING WAS DETECTED
AT FOUR OUT OF 10 RETAILERS AND
26 OUT OF 34 RESTAURANTS.**

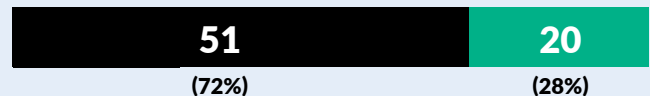
TORONTO



RETAILERS – 25 SAMPLES IN TOTAL



RESTAURANTS – 71 SAMPLES IN TOTAL



■ MISLABELLED ■ CORRECTLY LABELLED

Nearly 60 per cent of the samples collected in Toronto – 57 out of 96 – were mislabelled. Seventy-three per cent of the substituted samples (41 samples out of 57) were cheaper varieties than the fish named on the label or menu. This includes Atlantic salmon sold as B.C. salmon and Chinook salmon; haddock labelled as Pacific cod; and halibut labelled as sablefish.

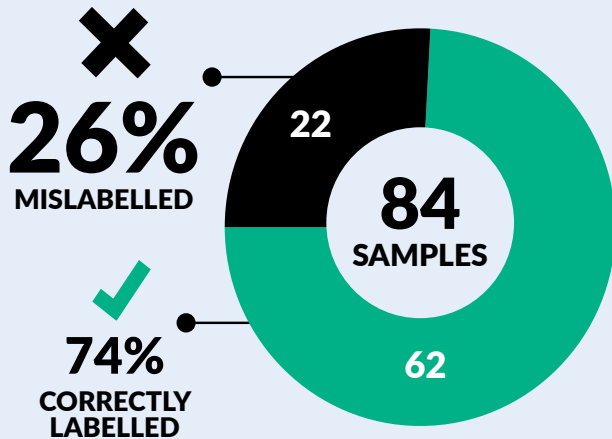
Fifty-eight per cent of the substitutions (33 out of 57) have potential health implications, including Asian catfish sold as grouper or sole; tilapia sold as red snapper; and escolar sold as butterfish or white tuna.

POISONOUS POTENTIAL

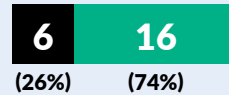
All of the 14 snapper samples Oceana Canada collected in Toronto were mislabelled. One of the samples labelled “red snapper” was actually twinspot snapper: a species that has been restricted or banned from sale in certain parts of the world due to its reputation for causing ciguatera poisoning.¹⁸

**MISLABELLING WAS DETECTED
AT 30 OF THE 32 RESTAURANTS TESTED AND
AT SIX OF THE 11 RETAILERS.**

VANCOUVER



RETAILERS – 23 SAMPLES IN TOTAL



RESTAURANTS – 61 SAMPLES IN TOTAL



■ MISLABELLED ■ CORRECTLY LABELLED

In Vancouver, 22 of the 84 samples tested (26 per cent) were mislabelled – that’s one in every four instances.

In most cases (82 per cent, 18 of 22 samples), the substituted samples were cheaper varieties than the fish named on the label or menu. For example, Chilean rock crab sold as Dungeness crab, Asian catfish was sold as cod; chum salmon and rainbow trout were sold as Sockeye salmon; and haddock was sold as halibut. Fifty-nine per cent of those substitutions (13 of 22 samples) have potential health implications for consumers, such as tilapia and Japanese amberjack.

OPAQUE ORIGINS

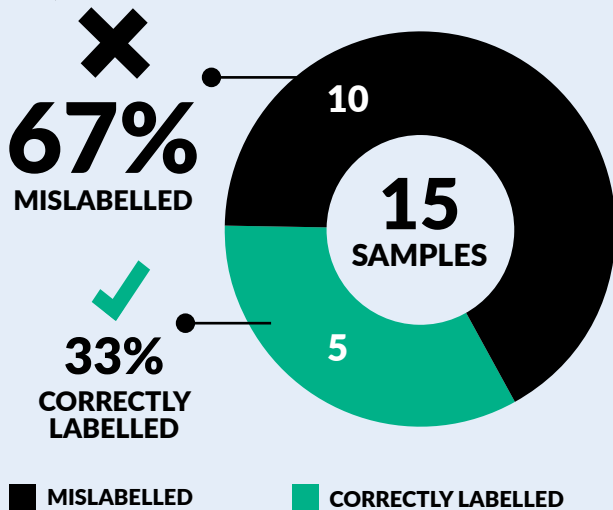
The rate of mislabelled salmon in Vancouver was relatively low (9.5 per cent). However, the type of

genetic analysis used in this investigation doesn’t reveal which country the salmon came from. Nor will you find that information on fish labels. Unlike the European Union and the United States, Canada doesn’t require labels to include where a fish was caught or harvested. The only required geographic information is where the seafood was last processed.

That means consumers may believe they are purchasing a local species when it actually comes from Russia, where illegal practices in salmon fisheries are an ongoing concern.¹⁹ A 2017 news story revealed that Russian sockeye has been making its way to Canadian markets for years.²⁰ Meanwhile, a 2014 study estimated that up to 70 per cent of the wild salmon exported to the United States via China is illegally caught Russian salmon.²¹

MISLABELLING WAS DETECTED AT FIVE OF THE 10 STORES AND AT 12 OF THE 28 RESTAURANTS ASSESSED.

VICTORIA



Oceana Canada collected 15 samples from restaurants in Victoria, all in the vicinity of the Parliament buildings where decision-makers are likely to eat. Mislabelling was uncovered at all eight locations tested.

Ten of the 15 samples tested (67 per cent) were mislabelled. In all cases, the substituted species were cheaper varieties than the fish named on the menu, including yellowfin tuna sold as bluefin tuna; Atlantic rock crab sold as Dungeness crab; and rainbow trout and steelhead salmon sold as sockeye salmon. Seven of the substituted species have health implications for consumers, including Asian catfish sold as cod.

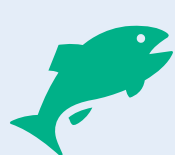
MISLABELLING WAS UNCOVERED AT ALL EIGHT LOCATIONS TESTED.

NATIONAL TESTING: HOW WE DID IT

In this national investigation, Oceana Canada purchased seafood samples from grocery stores, market vendors and restaurants in five cities across Canada. The particular venues were chosen based on their location, popularity and menus. In some areas, targeting was based on proximity to government offices and media headquarters. (For the complete analysis, visit Oceana.ca/SeafoodFraudCanada.)

Each sample was sent to TRU-ID, a commercial lab in Guelph, Ontario, that uses DNA barcoding to

determine the species of fish. Once that identity was determined, it was compared to the acceptable market name(s) specified in CFIA's *Fish List*. This is the same methodology used by CFIA in their own studies of seafood mislabelling, as well as by previous studies across Canada.²² Samples were considered mislabelled when the name of the sample was not an acceptable market name for the given species, when an acceptable market name was not used or when the species was not found on the *Fish List*.



101 SAMPLES FROM
41 RETAILERS

281

SAMPLES FROM

136 RESTAURANTS



CITIZEN SCIENCE: SEAFOOD SLEUTHS



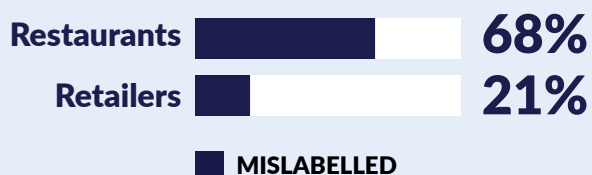
IN ADDITION TO THE TESTING DONE BY OCEANA CANADA STAFF, CITIZEN SCIENTISTS FROM VANCOUVER, TORONTO AND HALIFAX VOLUNTEERED TO DO THEIR OWN SEAFOOD SLEUTHING.

Oceana Canada asked them to each collect samples from a list of target fish — from either grocery stores or restaurants of their choosing — using DNA testing kits from the LifeScanner lab in Guelph, Ontario. The volunteers submitted the samples along with details

about their purchases. Their results closely mirrored the Oceana Canada findings presented earlier in this report. (Note that citizen-sourced results were not included in the national or city-by-city results.)

In total, 92 seafood sleuths collected 139 samples from 49 grocery retailers and 40 restaurants. They revealed significant levels of seafood mislabelling in their cities:

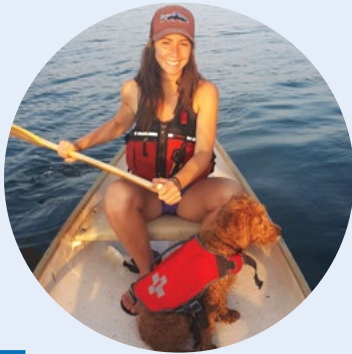
42% OVERALL MISLABELLING



MISLABELLING BY CITY:



WHAT OUR SLEUTHS ARE SAYING:



“I care about where my seafood comes from for many reasons. What bothers me the most is to consume products that may impact my health but could also be harmful for the health of ocean ecosystems. I believe that seafood should be caught legally, using techniques that are respectful of the environment and assure sustainability of fish populations.”

– Geneviève, Halifax



“With all the international trade we must know where the seafood originates and where its processed. We must hold retailers and government accountable.”

– Graham, Vancouver



“I’m bothered that a less expensive fish is being sold at a higher price under a different name, a dishonest business practice, and I worry where the deception in that sea to table pathway began.”

– Craig, Toronto



“As a consumer, I always wonder if the fish I order in a restaurant is really what is being advertised on the menu.”

– Jim, Toronto

STOPPING THE BAIT-AND-SWITCH

CANADA NEEDS BOAT-TO-PLATE TRACEABILITY

Despite all the attention focused on this issue, Oceana Canada found consistently high levels of mislabelling of certain fish across the country, with implications for food safety, the industry and our oceans.

Given the complex nature of global seafood supply chains and the lack of traceability requirements, it's impossible to determine from these results at what point in the chain seafood fraud takes place. Substitutions or mislabelling can take place on the boat, during processing, at the retail level or somewhere else along the way. In fact, in a 2016 global review of seafood fraud investigations, mislabelling was detected at every stage of the supply chain.²³

That's why Canada needs full-chain traceability: measures to track fish every step of the way from capture to consumption.

OTHER COUNTRIES ARE TAKING ACTION

The European Union, the largest importer of seafood in the world, has some of the most stringent traceability and comprehensive labelling requirements. The EU also requires catch documentation – which identifies the origin of the fish and proves it was legally harvested – that must accompany seafood products.

Since those regulations were implemented, the rate of mislabelling in Europe has decreased markedly. Analysis by Oceana revealed a drop from approximately 23 per cent before 2011 down to seven per cent after 2014.²⁴ A similar conclusion was reached by a separate 2015 study – the largest multi-species, transnational study of fish labelling in Europe – which found approximately five per cent mislabelling at the retail level.²⁵

Closer to home, the United States has taken an important first step by implementing boat-to-border traceability and catch documentation requirements for a significant portion of its seafood imports at the beginning of 2018.



The European Union, the largest importer of seafood in the world, has stringent traceability and comprehensive labelling requirements.

CFIA MUST DO MORE

Canada lags behind. CFIA — the government agency responsible for the safety of Canada's food supply — had the opportunity to include full-chain traceability in the *Safe Food for Canadians Regulations*, which will come into force in 2019. Despite Oceana Canada's recommendations, and CFIA's own research, which found a 15 per cent rate of mislabelling before seafood products even reached the processing stage,²⁶ the final regulations fell short.

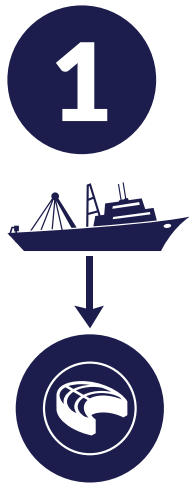
To most effectively fight seafood fraud and illegal fishing, Canada must build more transparency into our seafood supply chains. It must tackle seafood fraud proactively by creating authentication and inspection procedures that are robust and transparent. Canada needs a comprehensive system that harmonizes with our major trading partners, protects ocean health and safeguards consumers. To achieve this, CFIA must work with the relevant departments and agencies at both the federal and provincial levels.

**TO MOST EFFECTIVELY
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**DESPITE NUMEROUS STUDIES,
INCLUDING BY OCEANA AND
CFIA, CFIA'S REGULATIONS
FAIL TO PROTECT CANADIAN
CONSUMERS FROM
SEAFOOD FRAUD.**

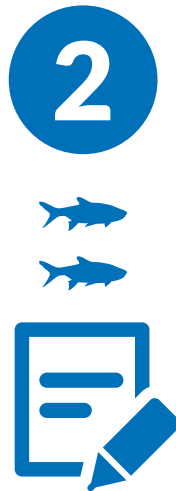


HOW CANADA CAN STOP SEAFOOD FRAUD



Trace all seafood from boat to plate

CFIA must require that key information follows all seafood products throughout the supply chain, from the boat or farm to the point of final sale, whether that's a restaurant, a grocery store or a fish market. This information should include the who, what, where, when and how of fishing, processing and distribution.



Require catch documentation

CFIA must work with Fisheries and Oceans Canada (DFO) to require catch documentation for all domestic and imported seafood, in line with what is currently required by the European Union and recommended by the United Nations' Food and Agricultural Organization,²⁷ which Canada agreed to support at the G7 Summit in 2018.²⁸



Introduce traceability verification measures

CFIA must introduce DNA testing for species authentication into its inspection program. It should incorporate inspection, verification and enforcement measures at levels high enough to deter fraud.



Improve consumer information

CFIA's labelling standards – which should apply to wholesalers, retailers and restaurants – must be brought in line with those used in the European Union.²⁹ They should include essential information such as the scientific species name, whether the fish was wild-caught or farmed, where it came from (geographic origin) and the type of fishing gear used.

It's time to stop seafood fraud so Canadians can enjoy their seafood, knowing it is safe, honestly labelled and legally caught.

ONE NAME, ONE FISH: WHY SEAFOOD NAMES MATTER



In Canada, the only information required on seafood labels is a generic marketplace name and the country where the seafood product was last processed. Naming protocols, which are based on CFIA's *Fish List*, allow many different species to be listed under the same common name. The use of ambiguous names for seafood sold in Canada can lead to confusion and undesired consequences. For example, more than 200 species can be listed as snapper, more than 100 as rockfish, 125 as crab, 40 as shrimp, 21 as sole and 14 as tuna.³⁰ Those different species may have different prices, conservation statuses or health risks. Vague labelling rules therefore potentially cheat consumers, risk harming their health or make them unwitting accessories to the consumption of unsustainable or even illegal fish.

In contrast, the Latin scientific name provides a unique identifier for every species. It is universally recognized, regardless of language, and is already used on many regulatory documents around the world.

Currently, the European Union requires all unprocessed fishery products sold in stores and online to be labelled with the scientific name, as well as other information on where and how it was caught.

Requiring that the species-specific name of every seafood product accompanies the product from boat to plate would make it easier to prevent and deter seafood fraud. Additionally, making species-specific names available at the point of sale, along with production method, gear type and geographic origin, would let consumers make more informed seafood choices based on their preferences, whether that be taste, sustainability, health or other factors.

**MORE THAN 200 SPECIES
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PREVENTING ILLEGAL, UNREPORTED AND UNREGULATED FISHING

Because Canada has no effective accountability in our seafood supply chain, fish obtained by illegal and unregulated means can easily (and profitably) find their way onto our dinner plates. By the time illegally caught fish reaches consumers, its true identity is a mystery.³¹

Although extensive studies have not been conducted in Canada, a recent report estimated that 25–30 per cent of wild-caught seafood imported into the United States comes from illegal and unreported sources and has a value of \$1.3–\$2 billion US.³² Experts suggest that the percentage of IUU seafood in Canada would be the same, if not higher, given the similarities between the United States and Canadian imports, the significant amount of seafood imported from the United States into Canada and Canada's weaker legislation.³³

IUU fishing practices mask human rights abuses. Working environments on these vessels or facilities can be extremely unsafe, and child labour is common.³⁴ On top of that, there is extensive evidence of the organized and systemic use of modern slavery by vessels engaged in illegal fishing.^{35,36,37} Undocumented migrants are being kidnapped, sold and tricked onto fishing vessels to work as forced labourers or indentured slaves. Escaped slaves have told of egregious human rights violations, including physical abuse, torture and even murder.

Clearly, Canada has a responsibility to address IUU fishing. In June 2018, at the G7 Summit hosted in Charlevoix, Quebec,³⁸ leaders committed to taking action to fight IUU fishing, including the implementation of unique vessel identifiers. However, there are currently few measures in place to stop illegal products from entering Canadian supply chains. Full-chain traceability will ensure that the seafood entering Canadian supply chains is legally caught.



IUU FISHING PRACTICES MASK HUMAN RIGHTS ABUSES. WORKING ENVIRONMENTS ON THESE VESSELS OR FACILITIES CAN BE EXTREMELY UNSAFE, AND CHILD LABOUR IS COMMON.

TELL CFIA TO STOP SEAFOOD FRAUD



Add your name to our petition urging the Canadian Food Inspection Agency to implement full boat-to-plate traceability.

Go to oceana.ca/StopSeafoodFraud.

GET SEAFOOD SAVVY



KNOW

THE FISH YOU EAT: Ask what species it is and where and how it was caught.



BUY THE WHOLE

FISH: It is harder to misrepresent a whole fish than a fillet.



CHECK PRICES:

If the price is too good to be true, it probably is.



INFORM YOURSELF

about the seasonality of your favourite seafood: products sold out of season are more likely to be fraudulent.



BUY YOUR FISH FROM A TRUSTED, LOCAL FISHMONGER or support companies that have voluntarily introduced traceability systems like the Marine Stewardship Council.



IF YOU THINK YOU GOT SICK FROM A MISLABELLED FISH MEAL or were served the wrong fish, report it to your local CFIA and Public Health offices.

ENDNOTES

- ¹ Warner, K. *et al.* (2016) *Deceptive dishes: Seafood swaps found worldwide*. Oceana. Available at: <http://usa.oceana.org/publications/reports/deceptive-dishesseafood-swaps-found-worldwide>
- ² Warner, K. *et al.* (2013) *Oceana study reveals seafood fraud nationwide*. Available at: <https://oceana.org/reports/oceana-study-reveals-seafood-fraud-nationwide>
- ³ Hu, Y. *et al.* (2018) "Study of fish products in Metro Vancouver using DNA barcoding reveals fraudulent labeling." *Food Control*, 94
- ⁴ The Canadian Centre for Food Integrity (2017) *Tackling Transparency and How It Builds Trust*. Public Trust Research.
- ⁵ Marine Stewardship Council (2016) "Study reveals low levels of trust in seafood labels among Canadians." Available at: <https://www.msc.org/media-centre/press-releases/new-research-reveals-levels-of-consumer-trust-in-seafood-labelling> Accessed: August 10, 2017.
- ⁶ Roebuck, K. *et al.* (2017) *Canadians Eating in the Dark: A Report Card of International Seafood Labelling Requirements*. SeaChoice.
- ⁷ Townley, A. (2017) "Risk Assessment of Illegal, Unreported, Unregulated and Mislabelled Seafood in Canadian Values Chains." Dalhousie University. Submitted for publication.
- ⁸ FishWise (2017) *Advancing Traceability in the Seafood Industry: Assessing Challenges and Opportunities*. Available at: <https://www.fishwise.org/traceability/traceability-white-paper>
- ⁹ Ling, K.H. *et al.* (2009) "Fish-induced keriorrhea." *Adv Food Nutr Res*, 57(1). doi: 10.1016/S1043-4526(09)57001-5.
- ¹⁰ Health Canada (2008) *Escolar and Adverse Reactions*. Available at: <https://www.canada.ca/en/health-canada/services/food-nutrition/food-safety/information-product/escolar-adverse-reactions.html> Accessed: July 13, 2018
- ¹¹ Canadian Food Inspection Agency. *Product Ingredients and Incoming Materials*. Available at: <http://active.inspection.gc.ca/rdhi-bdrid/english/rdhi-bdrid/hazdane.aspx?i=2> Accessed: September 15, 2017
- ¹² Agnew, DJ *et al.* (2009) Estimating the worldwide extent of illegal fishing. *PLoS one*, 4(2)
- ¹³ *Ibid* (2009).
- ¹⁴ Fisheries and Oceans Canada (2016) *United Nations Food and Agriculture Organization's Port State Measures*. Available at: <http://www.dfo-mpo.gc.ca/international/isu-iiu-09a-eng.htm>. Accessed: August 17, 2017.
- ¹⁵ Watson *et al.* (2015) "Provenance of global seafood." *Fish and Fisheries*, 17(3): 585–595. doi: 10.1111/faf.12129.
- ¹⁶ McDowell, R. *et al.* (2015) AP Exclusive: AP tracks slave boats to Papua New Guinea. Associate Press News. Available at: <https://apnews.com/c2fe8406ff7145a8b484deae3f748aa5/ap-tracks-missing-slave-fishing-boats-papua-new-guinea>
- ¹⁷ Oceana Canada (2017) *Seafood fraud and mislabelling in Ottawa*. Available at: oceana.ca/seafoodfrauddottawa
- ¹⁸ Russell, B. *et al.* (2016) *Lutjanus bohar*. The IUCN Red List of Threatened Species. Available at: <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T194363A2321975.en>
- ¹⁹ OceanWise (2017) *Ocean Wise salmon recommendations for the Canadian market*. Available at: <http://seafood.oceana.org/wp-content/uploads/2016/09/Ocean-Wise-Salmon-Recommendations-2017.pdf>
- ²⁰ Harnandez, J. (2017) "Unlabelled, 'unsustainable' Russian sockeye being sold in Vancouver markets." *CBC News*. Available at: <https://www.cbc.ca/news/canada/british-columbia/unlabelled-unsustainable-russian-sockeye-being-sold-in-vancouver-markets-1.4233058>
- ²¹ Pramod, G. *et al.* (2014). Estimates of Illegal and Unreported Fish in Seafood Imports to the USA. *Marine Policy* 48: 102-113.

- ²² Shehata, H. *et al.* (2018) "DNA barcoding as a regulatory tool for seafood authentication in Canada." *Food Control*, 92, 147-153; Wong, E. & Hanner, R. (2008) "DNA barcoding detects market substitution in North American seafood." *Food Research International*, 41: 828–837; Hanner, R. *et al.* (2011) "FISH-BOL and seafood identification: Geographically dispersed case studies reveal systemic market substitution across Canada." *Mitochondrial DNA*, 22(S1): 106–122; Naaum, A. & Hanner R. (2015) "Community engagement in seafood identification using DNA barcoding reveals market substitution in Canadian seafood." *DNA Barcodes* 3(1): 74–79.
- ²³ Warner, K. *et al.* (2016) *Deceptive dishes: Seafood swaps found worldwide*. Oceana. Available at: <http://usa.oceana.org/publications/reports/deceptive-dishesseafood-swaps-found-worldwide>
- ²⁴ *Ibid* (2016).
- ²⁵ Mariani *et al.* (2015) "Low mislabeling rates indicate marked improvements in European seafood market operations." *Frontiers in Ecology and the Environment*, 13(10)
- ²⁶ Shehata, H. *et al.* (2018) DNA barcoding as a regulatory tool for seafood authentication in Canada. *Food Control*, 92, 147-153
- ²⁷ FAO (2017) Voluntary guidelines for catch documentation schemes. Available: <http://www.fao.org/fi/staticmedia/MeetingDocuments/CDS/TC2016/wpAnnex.pdf>
- ²⁸ G7 2018. (2018) *Charlevoix blueprint for healthy oceans, seas and resilient coastal communities*. Available at: <https://g7.gc.ca/wp-content/uploads/2018/06/HealthyOceansSeasResilientCoastalCommunities.pdf>
- ²⁹ European Commission (2014) A pocket guide to the EU's new fish and aquaculture consumer labels. Luxembourg: Publications Office of the European Union. Available at: https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/eu-new-fish-and-aquaculture-consumer-labels-pocket-guide_en.pdf
- ³⁰ Canadian Food Inspection Agency. CFIA Fish List. Available: <http://www.inspection.gc.ca/active/scripts/fssa/fispoi/fplist/fpresults.asp?lang=e&q=&cmbIn=e&cbShowAll=on> Accessed: September 29, 2017.
- ³¹ Stiles, M. *et al.* (2013) *Stolen Seafood: the impact of pirate fishing on our oceans*. Oceana. Available at: <http://oceana.org/reports/stolen-seafood-impact-pirate-fishing-our-oceans>
- ³² Pramod, G. *et al.* (2014) "Estimates of illegal and unreported fish in seafood imports to the USA." *Marine Policy*, 48: 102–113.
- ³³ Bailey, M. (2017) Evaluation of the Regulatory and Market Environment to Combat Seafood Mislabeling and Fraud in Canada. Oceana. Unpublished manuscript.
- ³⁴ Verité (2016) *Fishing and Aquaculture*. Available at: <http://www.verite.org/wp-content/uploads/2016/12/Fishing-and-AquacultureOverview.pdf>
- ³⁵ McDowell, R. *et al.* (2015) "AP Exclusive: AP tracks slave boats to Papua New Guinea." Associate Press News. Available at: <https://apnews.com/c2fe8406ff7145a8b484deae3f748aa5/ap-tracks-missing-slave-fishing-boats-papua-new-guinea>
- ³⁶ Urbina, I. (2015) "The Outlaw Ocean." *New York Times*. Available at: <https://www.nytimes.com/interactive/2015/07/24/world/theoutlaw-ocean.html>
- ³⁷ Hodal, K. & Kelly, C. (2014) "Trafficked into slavery on Thai trawlers to catch food for prawns." *The Guardian*. <https://www.theguardian.com/global-development/2014/jun/10/-sp-migrant-workers-new-life-enslaved-thai-fishing>
- ³⁸ G7 2018. (2018) *Charlevoix blueprint for healthy oceans, seas and resilient coastal communities*. Available at: <https://g7.gc.ca/wp-content/uploads/2018/06/HealthyOceansSeasResilientCoastalCommunities.pdf>

WE CAN SAVE THE OCEANS AND FEED THE WORLD

Oceana Canada was established as an independent charity in 2015 and is part of the largest international advocacy group dedicated solely to ocean conservation. Canada has the longest coastline in the world, with an ocean surface area of 7.1 million square kilometres, or 70 per cent of its landmass. Oceana Canada believes that Canada has a national and global obligation to manage our natural resources responsibly and help ensure a sustainable source of protein for the world's growing population.

Oceana Canada works with civil society, academics, fishers, Indigenous Peoples and the federal government to return Canada's formerly vibrant oceans to health and abundance. By restoring Canada's oceans, we can strengthen our communities, reap greater economic and nutritional benefits and protect our future.

Sign up as a *Wavemaker* today, and follow us on Facebook, Twitter and Instagram.



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