Wild Alaska Pollock 2040:

Future Potential for Current and New Markets

ALASKA GENUINE POLLOCK®

McKINLEY RESEARCH GROUP, LLC

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Purpose of this report

Genuine Alaska Pollock Producers (GAPP) provides marketing support to the producers harvesting and producing wild pollock products from Alaska waters. In order to support long-term investments in market diversification, GAPP contracted with McKinley Research Group for market research on current and potential future markets. The research provides GAPP and its members with objective, data-driven assessment about current and potential future wild Alaska pollock markets over a mid- to long-range time horizon (year 2040). The research supports focus and prioritization of GAPP investments to support these markets.

About Genuine Alaska Pollock Producers

GAPP is a nonprofit that advocates for one of the world's most sustainable and nutritious seafood products, U.S.-caught Wild Alaska Pollock.

GAPP's mission is to build demand and awareness for the fish through driving product innovation, conducting research, and creating awareness about product quality and the responsibly managed fishery the product comes from.

About McKinley Research Group

McKinley Research Group is Alaska's most experienced multidisciplinary research and consulting firm. McKinley has served Alaska's seafood industry throughout its 50-year history with work including market research, business feasibility studies, and cost-benefit analyses.

Research Process

The project team used an iterative three-phase process to identify and profile the twenty countries described in this report.

PHASE 1

McKinley Research Group identified a list of key seafood industry and macroeconomic indicators that would be used in Phase 2 and Phase 3 of the project to identify which markets have the most potential for wild Alaska pollock.

The process emphasized comparable, globally-used statistics from sources such as the World Bank, World Economic Forum, and the Food and Agriculture Organization of the United Nations. Key indicators included: pollock and other whitefish import volumes, population growth trends, income distribution statistics, and economic competitiveness rankings.

PHASE 2

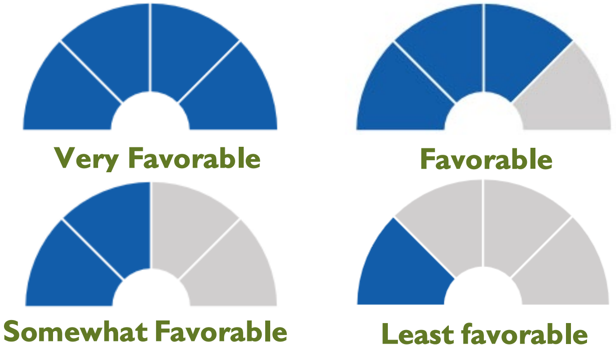
The project team used the key data and indices to hone in on countries whose demographic, economic, and political indicators, and seafood trade characteristics suggested opportunities for pollock on the 2040 time horizon. The research was complemented by interviews with pollock industry experts, who provided context and identified potential strengths and weaknesses among the countries identified in the initial analysis.

The project team then presented GAPP a preliminary 24 countries for consideration. In consultation with GAPP's board, the list was narrowed to a set of 20 total markets: 6 established markets and 14 emerging markets.

PHASE 3

The project team conducted an additional 24 interviews with in-country experts including seafood importers, manufacturers, marketers, and US government officials.

The project team prepared this report on the 20 study countries. Each country profile includes whitefish consumption habits, seafood statistics, socioeconomic and governance rankings, a SWOT analysis, and an overall ranking on a four-point scale.



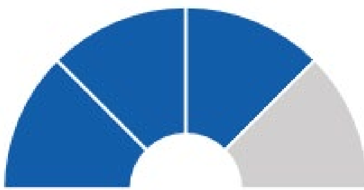
Key Research Themes

- **Purchasing power is critical** – Size of population with means to purchase pollock was a primary research criterion; most of the world lives in extreme poverty, especially compared to US standards
- **Cultural food tastes change slowly –** Marketing efforts may convert societies with limited seafood consumption into pollock markets, but converting existing cod or pangasius markets will likely be easier; country profiles describe current whitefish consumption habits and identify possible opportunities for wild Alaska pollock
- **Some international markets may require product innovation** – Customers in several potential emerging markets prize whole, fresh, and head-on fish; development of a high-quality, less-processed pollock product form may help in these markets; other markets may depend on new unique breakout products like surimi eels in Spain
- **Declining foreign fishery stocks create opportunities** – Pollock could help fill demand for wild-caught whitefish in several parts of the world that have experienced declining catch volumes
- **Finfish aquaculture is growing rapidly and putting price pressure on whitefish markets** – Farmed pangasius and tilapia are the main whitefish products in many study countries; success depends on customers in these countries viewing pollock as a healthier, better-quality, and more sustainable alternative
- **Good governance makes for safer investments** – Research includes metrics on political stability, corruption, and port infrastructure to provide industry with consistent metrics about which countries are preferable locations for long-term investments

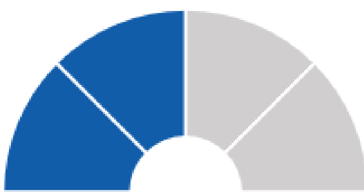
About the Recommendations

The recommendations are bottom-line conclusions about the ***potential of each country to grow or maintain high-value pollock markets over time***

Very favorable – Market has opportunities for important growth with investment, in near-term or by 2040. Current markets with potential for expansion, or meaningful future markets.



Favorable – Can be or will continue to be an important market. Markets may be relatively stable.



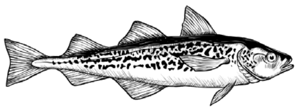
Somewhat favorable – Conditions in the market, such as demographics, political stability, wealth/poverty, difficulty of market access, are challenging relative to other markets.

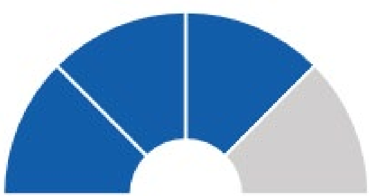
Least favorable – Muted growth potential or uncertainty/volatility too significant to warrant investment.

Recommendations Summary – Part 1

Very Favorable

- **Malaysia** – Avid fish eaters, increasing demand for imported fish, growing population, mostly urban, large middle/upper class
- **Spain** – Large existing whitefish and surimi market with growth potential from cod or hake substitution
- **United Kingdom** – Strong existing market with large potential for cod substitution
- **United States** – Key pool of middle-upper income residents; customers drawn to sustainable and US-caught fish

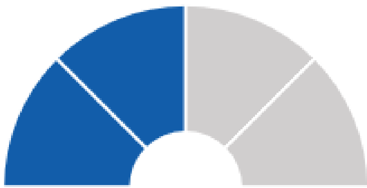




Favorable

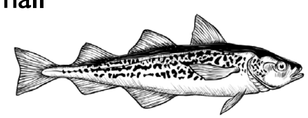
- **France** – Large existing whitefish market and growth in surimi with potential for innovative pollock product growth
- **Germany** – Largest existing whitefish market with potential for innovative pollock product growth
- **Japan** – More growth potential than demographics would indicate; will remain largest market for surimi and roe even with population decline
- **Poland** – Growing middle/upper class, strong infrastructure, increasing consumer demand for western-EU pollock products
- **South Korea** – Will continue to be a key market in 2040, but pollock export growth likely to plateau
- **United Arab Emirates** – Small population, burgeoning food processing center; jumping-off point to broader region

Recommendations Summary – Part 2



Somewhat Favorable

- **Brazil** –Recent pollock import declines could be a concern, but demographics signal this can be a key market
- **China** – Would be a leading growth market if not for strained US-China diplomatic relations; nonetheless too big to ignore
- **Indonesia** – Huge population and ability to process imports, but GDP is very low and middle/upper class small
- **Italy** – Consumers prefer fresh, yet niche products could grow and thrive
- **Mexico** – Small middle-income market and poor governance rankings temper advantages from strong US trade ties
- **Thailand** – Urban demand for imported product is high, surimi is popular, but disposable income is low and middle/upper class small



Least favorable

- **India** – Worth watching, but not ready to become key market due to especially low income level and regulatory challenges
- **Russia** – Even if trade relationship improved, Russia has a falling population, small middle class, low fish consumption, and abundant domestic seafood sources
- **South Africa** – Despite expected fast-paced population growth, South Africa may be too small and too low income to grow into key market by 2040; potential distribution gateway to sub-Saharan Africa
- **Ukraine** – Unstable political climate, very small middle/upper class, low disposable income, low seafood consumption

Country Profiles (Most Favorable)

- Malaysia
- Spain
- United Kingdom
- United States of America

MALAYSIA

Demographic Snapshot

30%
Middle & Upper Income

77%
Urban

$11,400
GDP Per Capita

60% of Malaysians are Muslim.

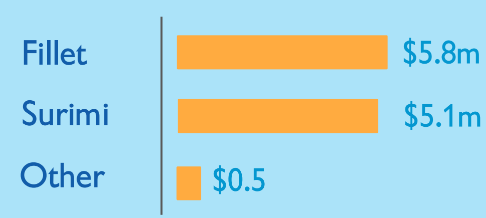
37% of Malaysians eat seafood every day.

Projected Population

Seafood Snapshot

Seafood Consumption	1.7 million MT
Per Capita	55 kg
Domestic Capture + Aquaculture Production	1.7 million MT
Whitefish Imports	19,200 MT
Direct Pollock Imports from US	1,100 MT

Pollock Imports to Malaysia from All Countries



Most imported fish: **Marine fish**
(not identified)

Whitefish Consumption Profile

Malaysians eat many different cuisines and are adventurous in trying new styles of food.

Whitefish is cooked at home with the head on and bones in, fried or cooked in sauce, and served at the center of the table. During Chinese New Year, fish is served with the head and tail on, signifying a start and an end to the year.

Surimi is popular and is available at noodle stalls, in fish balls, fish cakes, and as a snack food in convenience stores. Roe is consumed primarily at Japanese restaurants; it is rarely consumed at home.

Key Insights

Malaysia has a rapidly growing multi-ethnic population that is dominated by fish-eating cultures. Although halal certification is not mandatory for seafood, it significantly facilitates market access. Demand for halal products is increasing in Malaysia, and consumers see it as a proxy for quality, food safety, and cleanliness.

Malaysia ranks high for port infrastructure and shipping connectivity and is a key Southeast Asia shipping hub. Internally, Malaysia has excellent refrigerated trucking and cold-storage.

Food manufacturing is held back by the lack of raw product. But migrant labor is abundant, comprising 4 million foreign workers. The Malaysian government plans to shift their economy away from exports and towards wages and consumption.

Culturally, everyone can consume fish in Malaysia – Muslims, Hindus, Christians, and Buddhists. But full market access will require halal certification for frozen and processed seafood.

American franchises lead the fast-food sector in Malaysia with over 1,000 outlets.

S

- Highest per capita seafood consumption among study countries (55 kg/per person)
- Growing HRI sector and US-style restaurants
- Rising disposable income and demand for imported products

W

- Fresh, whole fish preferred
- Export shipment quantities of WAP are too large for Malaysia importers to handle
- East and West Malaysia are on different islands, adding logistical complexity

O

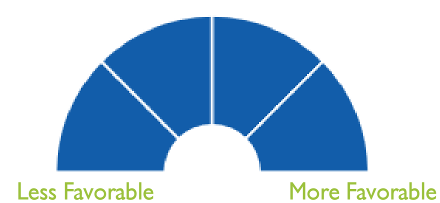
- E-commerce is already huge for seafood
- Excellent ports, large population growth
- Local seafood production is waning, demand for imports increasing
- US products are trusted

T

- Australia and New Zealand have FTAs with Malaysia; the US does not
- Malaysia imports most seafood from China and other ASEAN countries

Rank Among 20 Study Countries

Recommendation



Avid fish eaters, increasing demand for imported fish, growing population, mostly urban, large middle/upper class

SPAIN

Demographic Snapshot

51%
Middle & Upper Income

$29,600
GDP Per Capita

81%
Urban

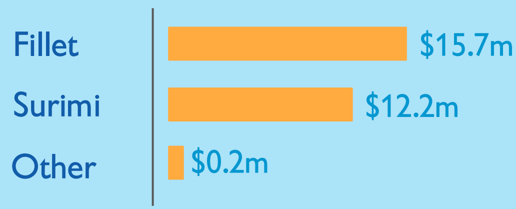
15% of 2021 population was born outside of Spain. Most foreign-born residents are from Latin America, EU, or Africa.

Projected Population

Seafood Snapshot

Seafood Consumption	1.6 million MT
Per Capita	33 kg
Domestic Capture + Aquaculture Production	1.2 million MT
Whitefish Imports	257,900 MT
Direct Pollock Imports from US	6,200 MT

Pollock Imports to Spain from All Countries



Most imported fish: **Squid**

Whitefish Consumption Profile

Hake and salted cod are the most widely consumed whitefish in Spain, which has the third highest per-capita seafood consumption in Europe. Spaniards buy most of their fish in retail stores, where the fresh fish counter is a key customer draw.

Spaniards buy pollock largely in the form of surimi, which is used to produce a popular imitation eel product (gulas). Twice-frozen pollock fillets are sold as a low-cost alternative to pangasius and tilapia.

Key Insights

Spain is a strong candidate for pollock export growth. It is a mid-sized European country with a rich history of seafood consumption, a large middle-income population, an extensive seafood processing infrastructure, and a track record for importing pollock, with room to grow.

Spain proportionally imports far less pollock than other Western European study countries (Germany, France, and the United Kingdom). While other whitefish like cod and hake are widely eaten here, pollock is not well known. Where pollock is known, it has a reputation as a low-quality fillet similar to farmed tilapia.

Growing the Spain market and increasing the value of pollock sold here will likely require product form innovation. Spaniards prefer fish in fresh or refreshed forms. A high-quality, refreshed product could do well here. Opportunities may also exist for salted pollock and for pollock roe as a replacement for cod roe in dishes such as *Taramasalata* (Greek roe dip).

In 2019 Spain ranked 4th in the world for total seafood imports (by value), but 13th for pollock imports.

S

- Third-largest seafood consumption per capita in Europe (after Portugal and Lithuania)
- Fourth largest seafood imports in world (by value)
- Large seafood processing capacity, including surimi production

W

- Pollock not seen as a high-quality product
- Consumers generally prefer fresh fish to frozen
- Consumers prefer whole fish (including head on) to processed product forms

O

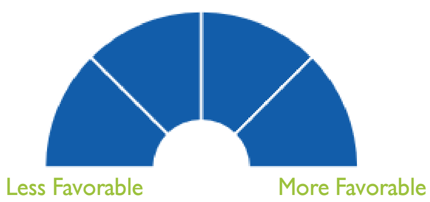
- Growing interest in refreshed seafood products
- Large (but shrinking) cod roe market
- High density of restaurants

T

- Seafood consumption is declining among younger generations (although salmon and sushi have caught on with these consumers)
- Population expected to decline 3.3% by 2040

Rank Among 20 Study Countries

Recommendation



Large existing whitefish and surimi market with growth potential from cod or hake substitution

UNITED KINGDOM

Demographic Snapshot

65%
Middle & Upper Income

$42,400
GDP Per Capita

84%
Urban

Immigration is a larger contributor to UK population growth than births.

Seafood Snapshot

Seafood Consumption	1.2 million MT
Per Capita	18 kg
Domestic Capture + Aquaculture Production	0.9 million MT
Whitefish Imports	207,200 MT
Direct Pollock Imports from US	3,200 MT

Whitefish Consumption Profile

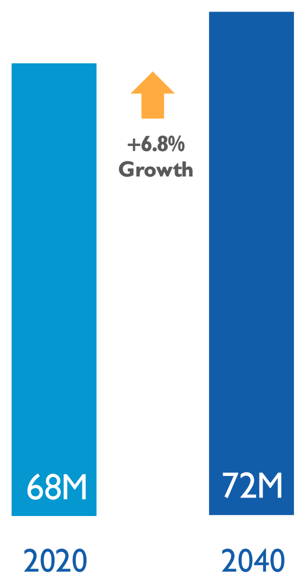
Whitefish is popular in the UK, although cod and haddock beat pollock due to tradition.

Demand for low-cost seafood is growing from a squeezed middle class. Sustainable product is a minimum requirement for both retail and caterers.

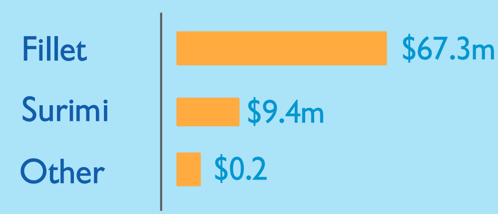
A growing urban population points to fewer home cooks and increased consumption of individual ready-to-eat meals and food from take-out restaurants.

Convenience is a driving factor.

Projected Population



Pollock Imports to the UK from All Countries



Most imported fish: Tuna

Key Insights

The United Kingdom population is growing at a moderate pace while domestic production of whitefish is not. The UK relies on imported whitefish for the nation's iconic fish-and-chips dish. The convenience and mildness of frozen, portioned WAP makes the product ideal for timid British home cooks, schools and institutions, and take-out restaurants. Most Brits continue the cultural practice of eating fish on Fridays.

UK has all the necessary elements for receiving, processing, and distributing higher volumes of frozen pollock, including multiple container ports and domestic breading/battering processors. Higher value single frozen pollock fillets direct from USA could serve the refreshed retail market.

Growing the UK market will require a general acceptance of pollock as a substitute for cod. The Alaska sustainability story resonates with UK retailers and consumers.

Brexit did not alter the already strong trade relationship between UK and US.

S

- Fish-eating tradition on Fridays, Christmas and Lent
- Battered whitefish is nation's most popular take-out food
- Pollock fish fingers are considered a comfort food and are often the first seafood children eat

W

- Frozen pollock faces a higher tariff than cod and haddock
- Overall low fish consumption per capita
- No discernable difference between Russia pollock and US pollock except price

O

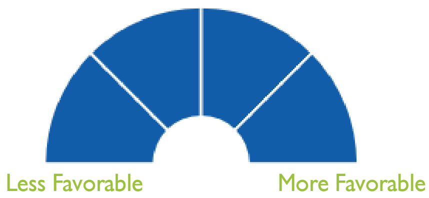
- Imports form the basis of UK seafood
- Excellent ports, cold storage and internal distribution systems
- Inflation and a squeezed middle-class will incentivize pollock over cod/haddock

T

- Consumers don't currently accept pollock as a substitute for cod
- UK belief that US food standards are lower
- WAP competes with UK, RU, and other whitefish as well as Pangasius

Rank Among 20 Study Countries

Recommendation



Strong existing market with large potential for cod substitution

UNITED STATES

Demographic Snapshot

76%
Middle & Upper Income

$65,300
GDP Per Capita

83%
Urban

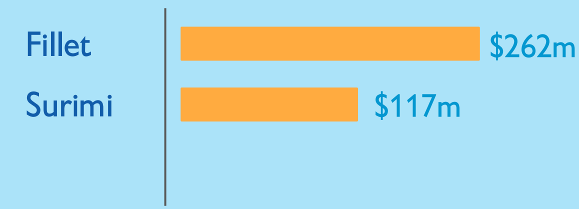
Latino and Asian populations are the fastest-growing ethnic/racial populations in the US.

Projected Population

Seafood Snapshot

Seafood Consumption	6.3 million MT
Per Capita	19 kg
Domestic Capture + Aquaculture Production	5.3 million MT
Whitefish Imports	505,300 million MT
US Pollock Production Not Exported	89,500 MT

US Pollock Supply (Production + Imports – Exports)



Most imported fish: Shrimp

Whitefish Consumption Profile

Most domestic consumption is in breaded fillet form. Food service, in particular the McDonald's Filet-O-Fish sandwich and similar products, has historically been the most important sales channel. As with other seafood products, COVID-19 may have helped introduce more Americans to preparing pollock at home.

Other important whitefish widely eaten in the US include cod (Atlantic and Pacific), haddock, pangasius, and tilapia.

ALASKA GENUINE POLLOCK

Key Insights

The United States is already a top market for pollock fillets and mid-sized market for surimi. Both markets have potential to grow with marketing investment.

The US is a wealthy nation with a large middle-class population. Consumers here are increasingly demanding foods that fit pollock's description: healthy, sustainable, and domestically produced.

US per-capita seafood consumption is relatively low, and knowledge about how to cook seafood has historically been a barrier to Americans buying it. This has worked to the advantage of pollock, which is used in ready-to-eat forms including fish sandwiches, fish sticks, California rolls, and surimi seafood salads.

Changes in consumer shopping and cooking patterns that occurred because of COVID-19 may increase the appeal of pollock fillet products to American shoppers.

88% of Alaska's pollock surimi, 72% of fillets, and 87% of H&G (by volume) have been exported in recent years.

S

- Largest middle/upper income population in world
- US-sourced foods highly valued
- Large market for convenience foods
- Alaska pollock name protection

W

- Relatively flat long-term per-capita seafood consumption trajectory
- High domestic shipping costs
- Low name recognition among some consumer segments
- Challenging to break out beyond breaded/battered category

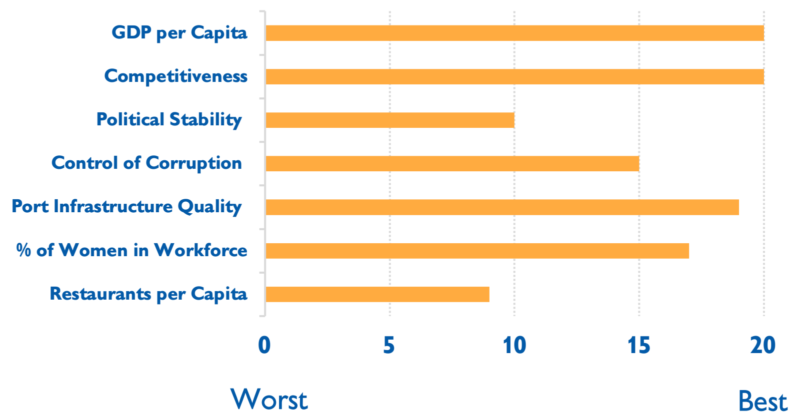
O

- Growing interest in nutritious and sustainable foods
- Room to expand fillet and especially surimi market
- Continued growth of pollock as a USDA school lunch product

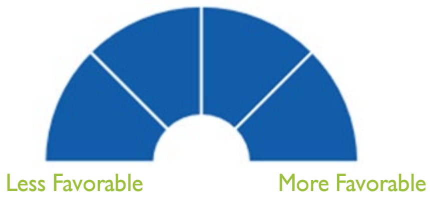
T

- Strong competition at both upper and lower end of the whitefish market
- Price competition from Russian-origin pollock and reputation damage from inconsistent quality of Russian product
- Emergence of plant-based "fish" products

Rank Among 20 Study Countries



Recommendation



Large pool of middle-upper income residents; customers drawn to sustainable and US-caught fish

Country Profiles (Favorable)

- France
- Germany
- Japan
- Poland
- South Korea
- United Arab Emirates

FRANCE

Demographic Snapshot

78%
Middle & Upper Income

$40,400
GDP Per Capita

81%
Urban

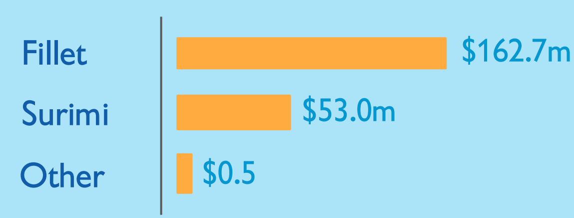
France accounts for 40% of European surimi consumption, mainly in the form of sticks.

Seafood Snapshot

Seafood Consumption	1.9 million MT
Per Capita	29 kg
Domestic Capture + Aquaculture Production	0.7 million MT
Whitefish Imports	207,600 MT
Direct Pollock Imports from US	16,200 MT

Projected Population

Pollock Imports to France from All Countries



Whitefish Consumption Profile

France has an incredible variety of seafood at restaurants and markets, and nearly all French (97%) eat seafood. The per-capita seafood consumption rate is also high, and one-third of French plan to eat more seafood products and less meat.

Whitefish – typically hake, mullet, sole, sea bass, monkfish or mackerel – is often poached in white sauce or put into fish stew (*bourride* or *bouillabaisse*). A breaded and pan-fried whitefish fillet (*meunière*) was popularized by Julia Child. The French consume 40% of EU-produced surimi products. Product origin is important to the French consumer.

ALASKA GENUINE POLLOCK

Key Insights

France is an urbanized country (80% urban) with a slow but constant urban growth rate. The urban density of France is lower than that of neighboring countries. The country has excellent port infrastructure and is well connected to EU supply chains and seafood trading partners.

French demand for seafood far outstrips domestic production, with imports comprising about 80% of seafood consumed. France is an EU leader in shellfish farming and is expanding finfish farming. The processing sector is large and diverse, producing fresh, frozen, canned, and cured products. Yet, other than surimi, little pollock is processed in France due to high labor costs.

The French middle class has shrunk over the past decades, yet the size is well above average. Seafood consumers in France have the surplus income to make buying decisions on more than price and taste, which include quality, local sourcing, nutrition, and environmental concerns.

Life expectancy in France is 85 years for women, increasing to 88 years in 2030 – among the highest in the world.

S

- Cooking at home remains popular
- Many young people are 'foodies' with an interest in new food experiences
- Roe products (e.g., *tarama* and *poutarge*) are served in restaurants as specialty items

W

- Innovation needed to maintain existing market share and grow it
- Home cooks want fresh or refreshed fish rather than frozen
- Cod is the most popular whitefish

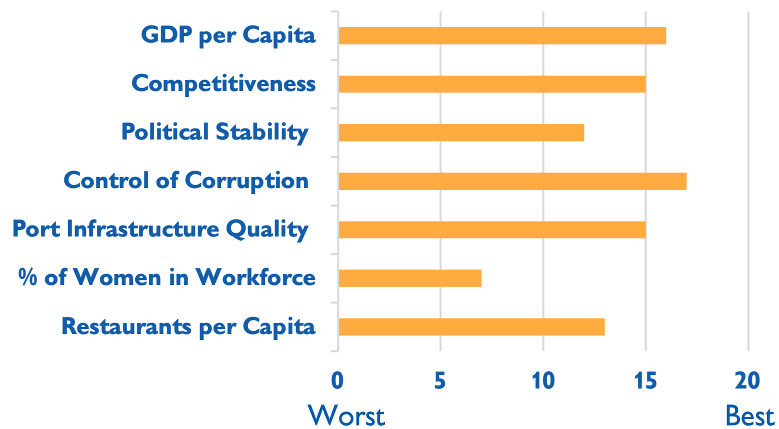
O

- Surimi is seen as a healthy protein and suitable snack for children
- Low carbon footprint foods are trending, as are meatless foods
- Convenience is a growing need for families with two working parents
- Sustainability story is important

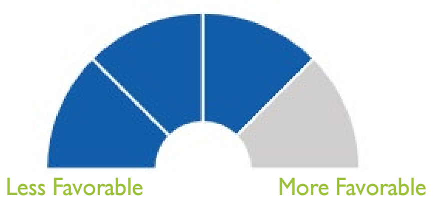
T

- French economic growth is modest
- The geographical distance from Alaska to France is antithetical to the local food ethos

Rank Among 20 Study Countries



Recommendation



Large existing whitefish market and growth in surimi with potential for innovative pollock product growth

GERMANY

Demographic Snapshot

78%
Middle & Upper Income

77%
Urban

$46,400
GDP Per Capita

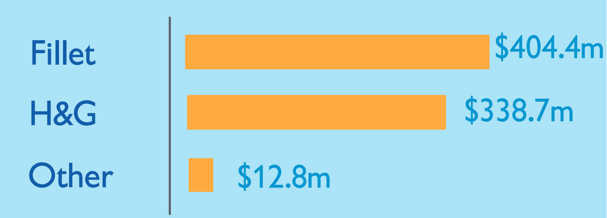
Upper income consumers choose value-for-money and are willing to pay higher prices for premium products.

Seafood Snapshot

Seafood Consumption	1.0 million MT
Per Capita	12 kg
Domestic Capture + Aquaculture Production	0.3 million MT
Whitefish Imports	261,000 MT
Direct Pollock Imports from US	43,300 MT

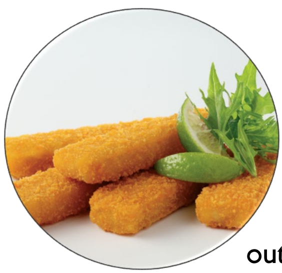
Projected Population

Pollock Imports to Germany from All Countries



Most imported fish: Pollock

Whitefish Consumption Profile



Domestic demand for seafood far outstrips domestic production in Germany. Germans have embraced pollock as a replacement for cod. Germany is the top importer country of US pollock after China (among the study countries).

Germans eat smoked, pickled and fried fish, breaded fish fingers and fillets, fish stew, dredged in flour and pan fried, in sandwiches, and fish-on-a-stick (*steckerlfisch*). Fish fingers are the first taste of fish for many German children.

Key Insights

German demand for pollock is the highest in Europe and has steady growth. The largest economy in the EU, Germany has excellent ports, secondary processing, and cold-chain distribution throughout the country and into the rest of the EU.

With the 2nd highest GDP per capita among the study countries (after the US), Germans have more purchasing power than consumers in other countries. Consumers with disposable income demand more than high quality and low price, and factor environmental and fair labor practices into their purchase decisions. Germans see their food purchases as an expression of their ethics and are leery of consuming unsustainably harvested seafood.

Germany ranks highly among the study countries in nearly all categories, including a high percent of women in the workforce (indicating a need for convenient foods). Consumers will be looking for additional easy-to-cook products, such as IQF fillets and single frozen refreshed product.

17% of the population are immigrants. By 2040, that number will be 35% to 40%.

S

- MSC certification is a market entry necessity
- Fish fingers are children's fist seafood and a comfort food
- Huge existing demand will continue, and growth expected

W

- Religious fish-easting traditions are dying out
- Students do not typically eat at school, so first fish experience is at home
- Name confusion about Alaska pollock vs. Alaska-origin pollock

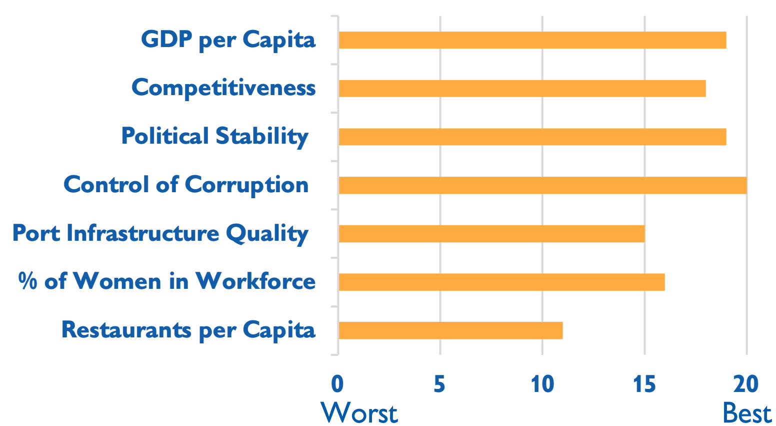
O

- Surimi can benefit from the increasing acceptance of 'substitution' foods
- Germans still cook at home, including budget-conscious college students
- Alaska's sustainability story and fair labor practices resonate with retailers and consumers

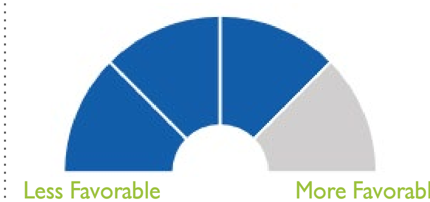
T

- Plastic and packaging concerns are rising
- High labor costs
- Declining population and low birth rate

Rank Among 20 Study Countries



Recommendation



Largest existing whitefish market with potential for innovative pollock product growth

JAPAN

Demographic Snapshot

79%
Middle & Upper Income

92%
Urban

$40,100
GDP Per Capita

Japan's population is predicted to continue to decline beyond 2040, dropping to below 106 million by 2050.

Seafood Snapshot

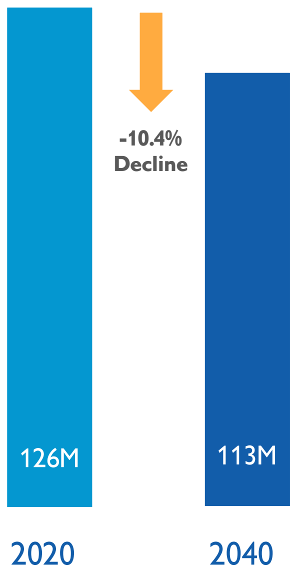
Seafood Consumption	**5.1 million MT**
Per Capita	**40 kg**
Domestic Capture + Aquaculture Production	**3.8 million MT**
Whitefish Imports	**219,000 MT**
Direct Pollock Imports from US	**80,500 MT**

Whitefish Consumption Profile

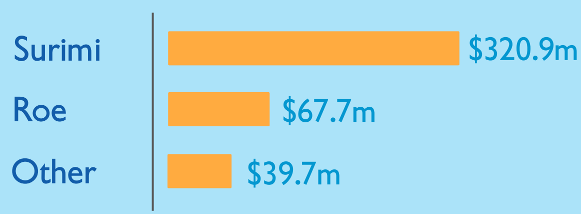
Seafood including pollock is central to the Japanese diet. Japan is a key consumer of pollock surimi, roe, and to a lesser extent fillets. Pollock is eaten in dozens of traditional products.

Key roe products include *mentaiko* and *tarako*. Key surimi products include *kamboko* and fish sausage. Fillet products include frozen breaded products, fish sandwiches, and bento box lunches.

Projected Population



Pollock Imports to Japan from All Countries



Most imported fish: **Shrimp**

Key Insights

Increasing demand for pollock in this key market will be challenging given Japan's projected population decline. However, even with a smaller population Japan will be a key wild Alaska pollock market in 2040.

Japan stands out among study countries for the variety of pollock products consumed. This gives Japan an advantage over markets that are contingent on the development of new culturally appropriate products.

Pollock is essential to traditional Japanese cuisine and is being adapted to new product forms such as *barako* (roe) sauces and surimi convenience store snacks. However, declining sales in the souvenir/gift market for *mentaiko* hurts demand for high-grade pollock roe.

Opportunity exists to leverage wild Alaska pollock's sustainability story and increase awareness about the fish that's already widely consumed here.

While pollock products have broad recognition, the specific species *suketōdara* is not widely known to be a key ingredient.

S

- Strong existing market for surimi and roe
- Tradition of pollock consumption
- Center for product innovation and a global cultural influencer
- Highly urban, high-income country

W

- Population decrease of more than 10% expected by 2040
- Fillet market less developed than surimi and roe market, sensitive to price fluctuations

O

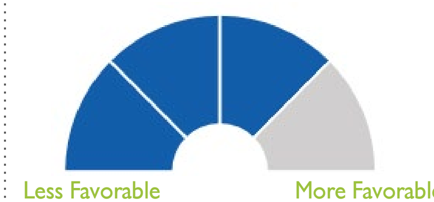
- Growing demand for boneless, skinless fish
- Growing interest in sustainable fisheries (interest emerged later than in other developed nations)
- Increasing demand for *barako* roe

T

- Competition from countries with free trade agreements with Japan. Current 10% tariff on pollock fillet imports from US
- Decreasing demand for in-skein roe products that use high-grade roe

Rank Among 20 Study Countries

Recommendation



More growth potential than demographics would indicate; will remain key market even with population decline

POLAND

Demographic Snapshot

30%
Middle & Upper Income

60%
Urban

$15,700
GDP Per Capita

Growth of Poland's economy since 1989 is an EU success story with 150% increase in GDP per capita.

Seafood Snapshot

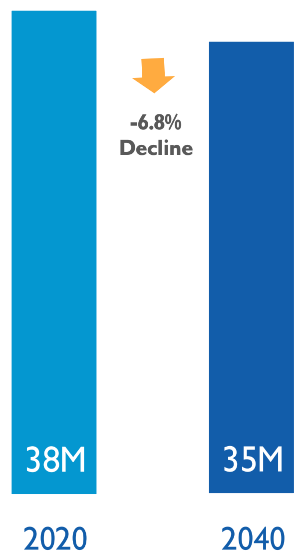
Seafood Consumption	0.5 million MT
Per Capita	12 kg
Domestic Capture + Aquaculture Production	0.3 million MT
Whitefish Imports	137,800 MT
Direct Pollock Imports from US	200 MT

Whitefish Consumption Profile

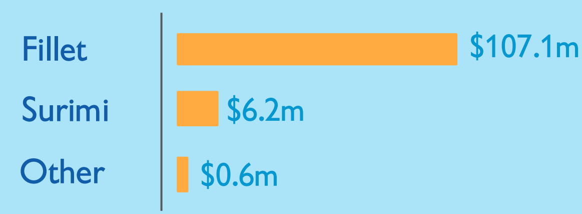
Older Poles (40+ years) will cook whitefish at home, typically with the tail and head on. But this form is fading; younger home cooks are not confident with seafood. Consumers are increasingly interested in quality seafood that is inexpensive, easily available at retail, and discounted. Homecooked meals remain the norm, but HRI provides exposure to new species of fish and forms of product beyond trout, salmon, and cod.

Poles bake, poach, bread, or pan fry whitefish topped with vegetables and sauce or put it in fish soup.

Projected Population



Pollock Imports to Poland from All Countries



Key Insights

The shrinking population of Poland is of similar size to Ukraine, but Poles have a substantial middle/upper class that can afford western-style products. Without much innovation, pollock products that are popular in Germany will be increasingly consumed in Poland.

Poland has decent ports, nearby re-processing facilities, and a plentiful workforce consisting of both Poles and migrants. Polish trade is well connected to the EU through overland trucking and coastal boat transportation. Poland scored high among the study countries for political stability. It has been part of the EU since 2004 and NATO since 1999.

Poland has relatively low seafood consumption rates compared to the study countries in the EU. Poland's seafood consumption rate is the same as Germany, but Poland has about half the population. Supermarkets are the main distribution channel for seafood in Poland, as specialty fish mongers have faded away.

Poland imports 95% of all the seafood it processes.

S

- Pollock is widely consumed and is priced low
- Demand for higher quality seafood is growing
- Poland is more and more able to afford typical western European products and quality

W

- Western EU distributes a lot of raw seafood imports into Poland, hiding true import volumes
- Younger consumers are less inclined towards seafood
- Poles seek low price and promotions

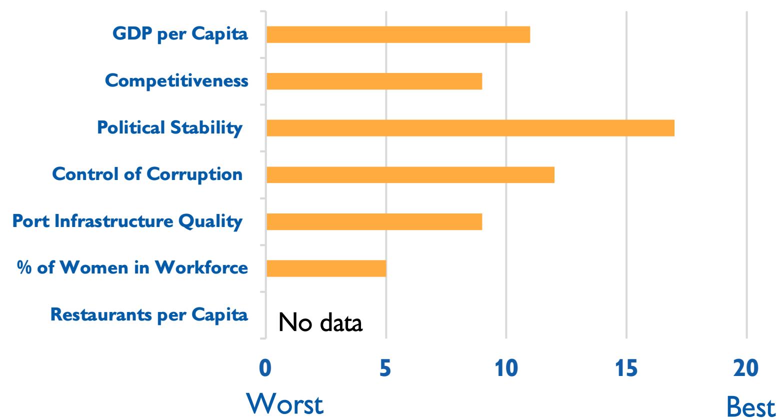
O

- Direct shipping to Poland could be increased
- Consumers are becoming more informed about food sources and care about quality control
- Poles believe seafood is healthy

T

- Brands, labels and certifications do not resonate
- Environmental, social, and ethical impacts of food are of low concern
- Live and fresh fish are displayed at hypermarkets

Rank Among 20 Study Countries



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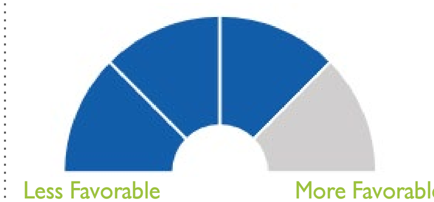


Growing middle/upper class, strong infrastructure, increasing consumer demand for western-EU pollock products

SOUTH KOREA

Demographic Snapshot

65%
Middle & Upper Income

$31,800
GDP Per Capita

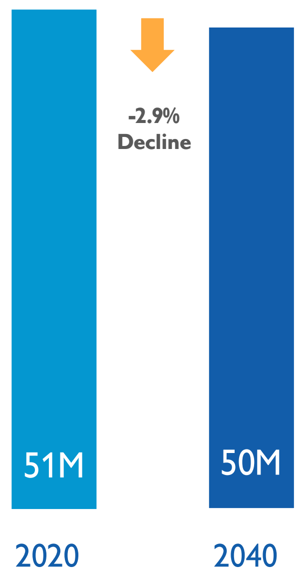
81%
Urban

South Korea has the lowest fertility rate in the world, which may lead to steep population declines beyond 2040.

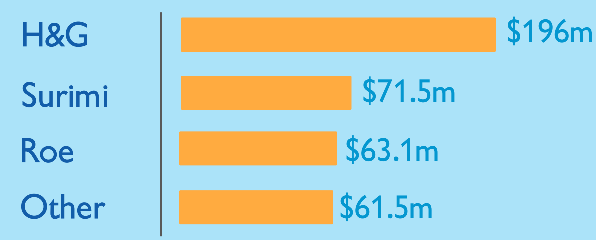
Seafood Snapshot

Seafood Consumption	2.4 million MT
Per Capita	47 kg
Domestic Capture + Aquaculture Production	1.9 million MT
Whitefish Imports	268,800 MT
Direct Pollock Imports from US	89,800 MT

Projected Population



Pollock Imports to South Korea from All Countries



Most imported fish: Pollock

Whitefish Consumption Profile

Pollock is a traditional part of the Korean diet and was previously caught locally. However, South Korea has not been a significant pollock harvester since the 1990s due to water temperature issues.

Important pollock product forms include roe (*myeongnan*), and surimi-based fish cakes (*odeng* or *eomuk*). Fillets are eaten to a lesser extent, usually in breaded, fried form. Breaded whitefish fillets are sometimes made from hoki rather than pollock.

Key Insights

South Korea is currently the world's largest direct importer of pollock from Alaska. Imports are a mix of domestic consumption and shipments that are kept in South Korea cold storage on their way to other markets.

Pollock exporters have benefited from South Korea's traditional appetite for pollock (including roe) and increased demand for imports due to decreasing domestic catch. Korea's fast-growing economy has also buoyed import growth.

Looking to 2040, South Korea's population is expected to decline slightly and could fall rapidly beyond 2040 based on recent fertility rates. As a developed nation, South Korea's economy is unlikely to grow at the pace experienced in the late 20th and early 21st centuries.

Growing the wild Alaska pollock market will likely depend on differentiating pollock surimi as a sustainable, better-quality alternative to tropical surimi.

Pollock makes up a larger share of total whitefish imports in South Korea than any other study country.

S

- Largest direct importer of pollock from Alaska (much of it for transport/secondary processing)
- Strong port infrastructure; large cold storage capacity in Busan
- High seafood consumption per-capita
- US free trade agreement

W

- Relatively small (and shrinking) population
- No ASMI overseas marketing representative
- Price-sensitive market, although pollock surimi is seen as a better product than tropical surimi

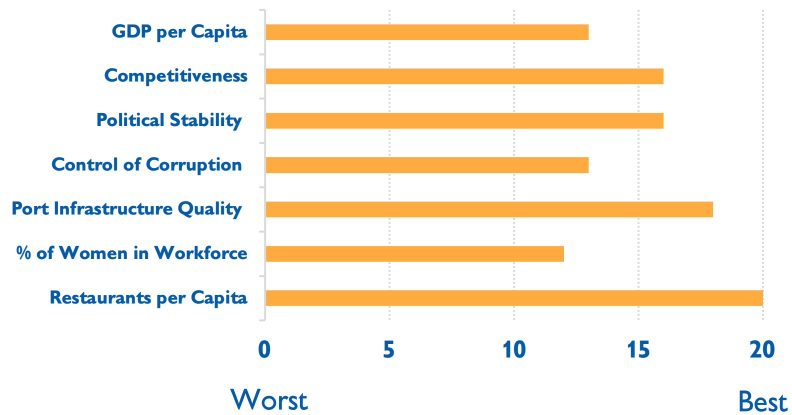
O

- Status as a major pollock transportation hub provides opportunity to divert more pollock for domestic consumption
- Increasing demand for convenience food, fueled by more single-person households and women in workforce

T

- Competition from lower-priced tropical surimi
- Preference for salmon and tuna over pollock among younger generation
- Free trade agreements with China may make Russia-origin pollock more competitive

Rank Among 20 Study Countries



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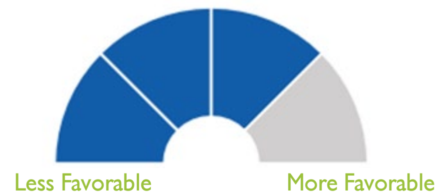


Will continue to be a key market in 2040, but pollock export growth likely to plateau

UNITED ARAB EMIRATES

Demographic Snapshot

98%
Middle & Upper Income

87%
Urban

$43,100
GDP Per Capita

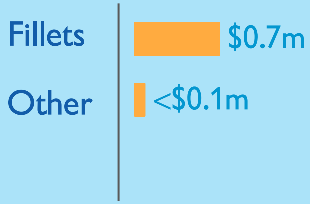
About 10% of UAE residents are citizens. The rest are expatriates. The largest expatriate communities are Indian and Pakistani.

Projected Population

Seafood Snapshot

Seafood Consumption	245,600 MT
Per Capita	26 kg
Domestic Capture + Aquaculture Production	76,200 MT
Whitefish Imports	27,900 MT
Direct Pollock Imports from US	<100 MT

Pollock Imports to UAE from All Countries



Whitefish Consumption Profile

Pangasius fillets are the main frozen imported whitefish product. Pangasius fillets are usually breaded or marinated and pan fried. Pangasius is served at employer accommodations for the UAE's large blue-collar expatriate workforce. In retail stores pangasius is sometimes labeled generically as whitefish.

Other locally-consumed whitefish include Nile perch from Africa and grouper from the Persian Gulf. Both are usually sold fresh and at a higher price point than pangasius and pollock.

Key Insights

United Arab Emirates is the smallest market considered for this study. However, the UAE's membership in the Arab League makes it a potential portal to a market of more than 400 million people, including other high-income Persian Gulf states and large developing nations with future potential such as Egypt.

Because of its stable governance, high-quality infrastructure, and recent seafood processing business development, the UAE is a logical launching point to reach this broader regional market.

Per-capita seafood consumption is relatively high in the UAE. Pollock is not commonly eaten here, but fillets may sell well as a superior alternative to pangasius.

Wages are high in the UAE. However, income data may overstate the number of people in the UAE with disposable income, given the importance of remittances to many in the country's largely South Asian expatriate workforce.

Tourism is a growing part of the UAE economy. In 2019 more than 25 million international visitors came to the country.

S

- Recent investment in transportation infrastructure, seafood processing capacity
- Business center for wider Middle East region; strong index scores for political stability and control of corruption

W

- Small market size on own
- Low rate of seafood consumption per capita in Saudi Arabia, a potential key final market
- Lack of pollock import history and product familiarity in region

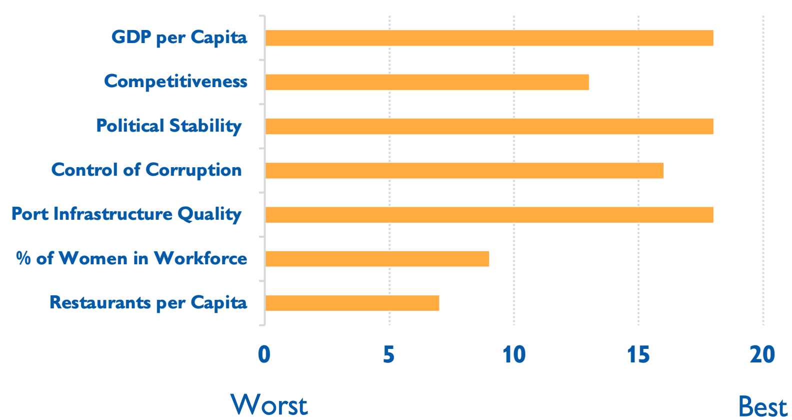
O

- Dubai is natural port for importing pollock to wider region
- Six-state Gulf Cooperation Council has population of 54 million (most in Saudi Arabia)
- Population of larger Arab League is more than 400 million

T

- Competition from imported pangasius
- Some of largest potential export countries (in particular Egypt) do not yet have large middle or upper-income populations with means to purchase wild Alaska pollock

Rank Among 20 Study Countries



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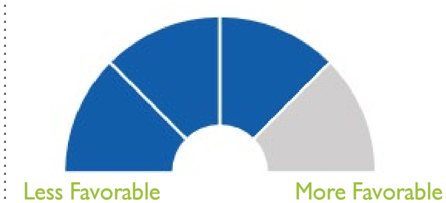


Small population, burgeoning food processing center; jumping-off point to broader region

Country Profiles (Somewhat Favorable)

- Brazil
- China
- Italy
- Mexico
- Thailand

BRAZIL

Demographic Snapshot

16%
Middle & Upper Income

87%
Urban

$8,900
GDP Per Capita

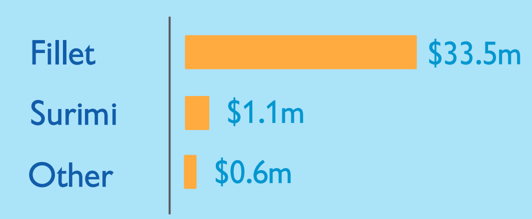
Population of two largest metro areas alone exceeds 30 million.

Seafood Snapshot

Seafood Consumption	1.9 million MT
Per Capita	9 kg
Domestic Capture + Aquaculture Production	1.3 million MT
Whitefish Imports	124,700 MT
Direct Pollock Imports from US	600 MT

Projected Population

Pollock Imports to Brazil from All Countries



Most imported fish: **Sardines**

Whitefish Consumption Profile

Brazilians are significant consumers of whitefish fillets including tilapia, hake, and pangasius. These fish are commonly sold in retail stores as well as at restaurants. Common preparations include baked and fried fillets.

Brazilians purchase salted pollock as an affordable alternative to traditional Portuguese salted cod (*bacalao*). Tilapia, which is farmed domestically, has the largest current market share. Tilapia is often sold as a whole fish, either fresh or frozen.

Key Insights

Brazil presents clear demographic opportunities for pollock importers. Brazil is the most populous nation and largest consumer of seafood products in Latin America. It is a highly urbanized country with a relatively large percentage of women in the workforce.

However, pollock imports have struggled over the past five years. The pollock market has been hurt by poor consumer opinion based on the reputation of twice-frozen product imported from China. In addition, Brazilian regulatory requirements have blocked some Chinese pollock imports because of problems with chemical preservatives, parasites, and high water content. Increasing global market prices for pollock have also led to decreasing demand in Brazil, which is a price-sensitive market.

Brazil's port infrastructure quality ranked last among study nations although this has not been flagged as an issue by seafood industry contacts.

In 2013, Brazil was the fourth largest pollock importer among study countries. By 2020 it had fallen to eighth.

S

- Largest nation and largest pollock importer in Latin America
- Highly urban population that is growing moderately quickly
- Largest Roman Catholic population in world (total, not as population percentage)

W

- Downward pollock import trajectory
- Low per-capita seafood consumption
- 10% tariffs on US fish imports; significant additional taxes for value-added products

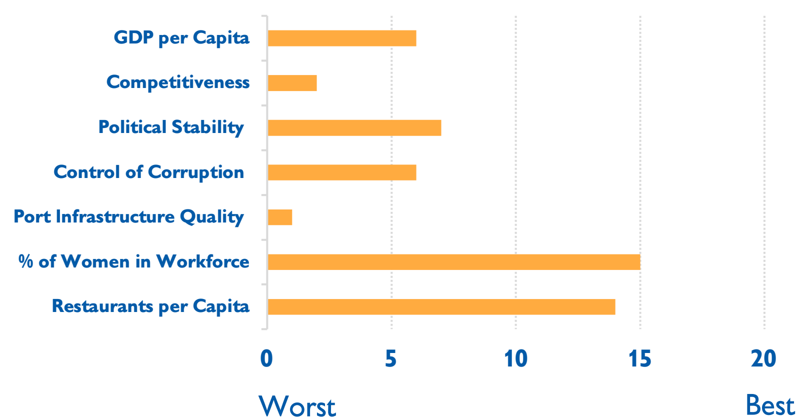
O

- Demand for cheaper alternative to increasingly expensive salted cod
- Free trade access to market through US-Peru and Peru-Brazil FTAs
- Low-cost food per kilogram (*porquilo*) at buffet restaurants

T

- Public perception that pollock is low-quality product
- Lower-cost whitefish such as pangasius and tilapia may appeal more to many consumers
- Low tariffs on Argentina-origin hake
- Growth of domestic tilapia industry

Rank Among 20 Study Countries



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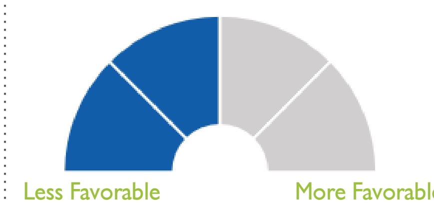


Recent pollock import declines could be a concern, but demographics signal this can be a key market

CHINA

Demographic Snapshot

4%
Middle & Upper Income

$10,200
GDP Per Capita

61%
Urban

By 2040, China's urban population is forecast to approach 1.1 billion, more than 25% larger than India's urban population.

Seafood Snapshot

Seafood Consumption	40.9 million MT
Per Capita	29 kg
Domestic Capture + Aquaculture Production	62.2 million MT
Whitefish Imports	1.0 million MT
Direct Pollock Imports from US	43,200 MT

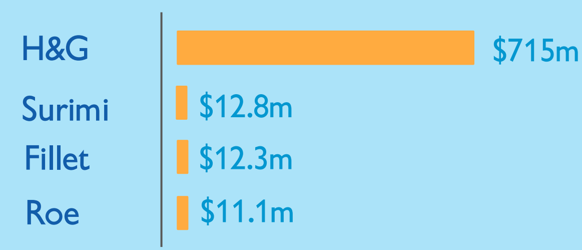
Whitefish Consumption Profile

Pollock, particularly surimi, is a traditional part of the diet in parts of China. Pollock is used in forms including fish cakes and imitation crab products.

Increasing uses for pollock surimi include fishbowls at fast casual restaurants. Pollock roe is increasingly used in savory pastries and in sushi along with other Japanese foods.

Projected Population

Pollock Imports to China from All Countries



Most imported fish: Pollock

Key Insights

China is the world's largest importer of pollock. However, most of it is H&G product for reprocessing.

If not for current diplomatic and trade tensions between the US and China, this market would be a clear choice for investment due to its tradition of pollock consumption, its centrality to the current Alaska seafood production process, and the growth and size of its middle/upper-income population (behind only US, Japan, and Germany using this study's metrics). By 2030 Chinese seafood consumption is expected to surpass domestic production, which may expand opportunities for seafood importers.

However, the state of US-China relations cannot be overlooked. Pollock imports (especially for consumption) have dropped steeply due to tariffs and COVID restrictions. In the current political environment, the Chinese government is more likely to encourage pollock imports from Russia than the US.

China catches more wild seafood than any other nation but produces the vast majority of its seafood through aquaculture.

S

- Large urban population with tradition of eating pollock
- Growing middle- and upper-income population
- Global leader in seafood processing
- US products seen as safe, good quality

W

- Tense diplomatic/trade relations with US; retaliatory tariffs
- Pollock consumption may already be near ceiling in large tier-one cities
- Consumers have traditionally preferred live and fresh seafood products; COVID may be changing this

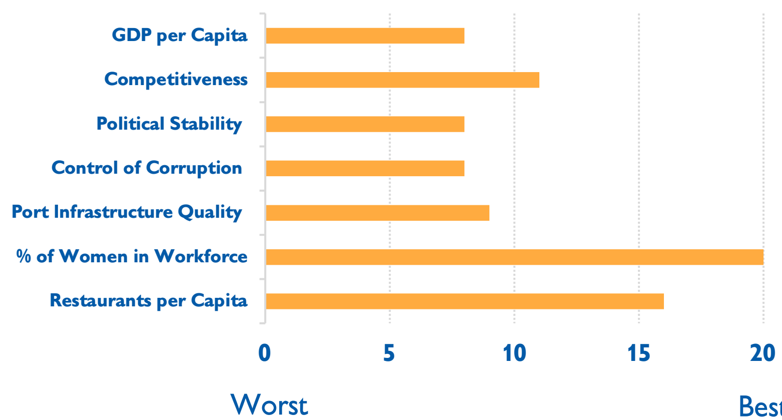
O

- Growing demand in smaller tier-two and tier-three cities, many of which are growing rapidly
- Increasing prices for pork and other meats
- Large and growing online shopping sector may help frozen fish market

T

- Competition from Russian pollock, which is also processed in China and sometimes (deceptively) labeled the same way as Alaska-origin pollock
- Increasing aquaculture may fill demand from stagnant or declining wild catch

Rank Among 20 Study Countries



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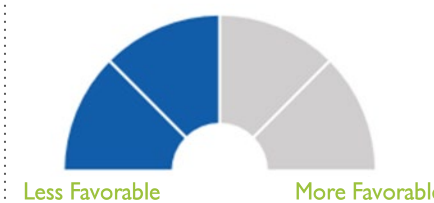


Would be a leading growth market if not for strained US-China diplomatic relations; nonetheless too big to ignore

ITALY

Demographic Snapshot

60%
Middle & Upper Income

71%
Urban

$33,600
GDP Per Capita

Northern and Southern Italy have dramatically different markets and consumer affluence.

Seafood Snapshot

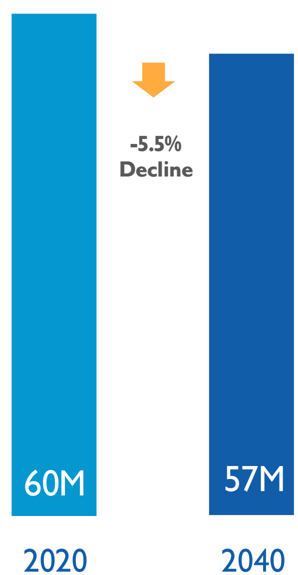
Seafood Consumption	1.5 million MT
Per Capita	24 kg
Domestic Capture + Aquaculture Production	0.3 million MT
Whitefish Imports	103,200 MT
Direct Pollock Imports from US	100 MT

Whitefish Consumption Profile

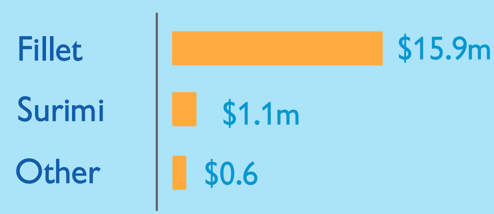
Fresh fish is considered by Italians to be the highest quality, although more shoppers are buying re-freshed. Fresh fish displays in supermarkets draw in customers. Italians prefer to buy fresh fish with the head and tail on, which currently does not include pollock.

Italy is the third largest EU market for surimi, consumed as sticks and slices, after France and Spain.

Projected Population



Pollock Imports to Italy from All Countries



Most imported fish: **Squid**

Key Insights

In comparison to Spain, Italy is weaker in container port infrastructure, seafood processing, and has lower urbanization. Yet, Italy has a higher GDP per capita than Spain, and a higher percentage of middle- and upper-class consumers. Within the country, northern Italy is more affluent than southern Italy and has seafood buying habits that mirror the German market.

Domestic production of seafood is quite low, as are direct imports of pollock from the US. Much of the pollock and all of the surimi eaten in Italy is processed elsewhere.

Pollock has a poor reputation in southern Italy, much of it being twice frozen IQF fillets. Higher quality single frozen fillet product directly imported from USA could do well in this market as a re-freshed product at retail.

Tourism is a driver for surimi consumption in hotel restaurants and package vacation.

S

- Italy imports much of its seafood
- *Merluzzo*, the Italian term for cod, has a positive connotation and can be used for pollock
- With wealth concentrated in cites and in northern Italy, marketing could be targeted

W

- Pollock fillet not seen as a high-quality product
- Consumers generally prefer fresh fish to frozen
- Consumers prefer whole fish (including head on) to processed product forms

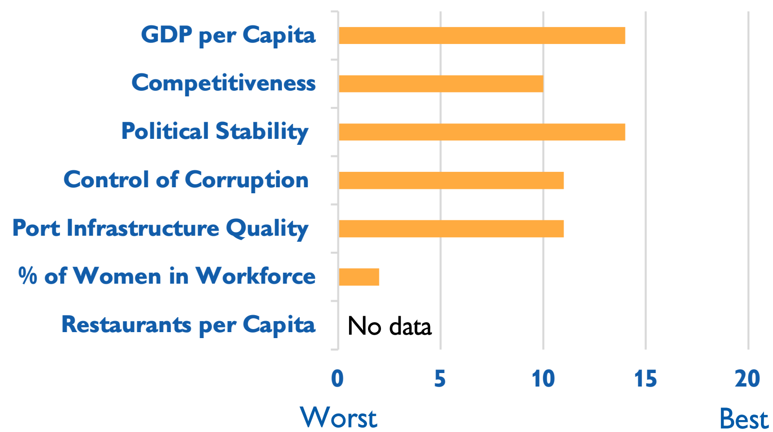
O

- Sustainability messaging is growing
- Pollock is a suitable size for pre-shredded *bacalao* product
- Surimi consumption could increase at home, in Asian restaurants, and inclusive tourism packages

T

- Local sourcing is a growing trend
- Lack of a secondary processing sector limits the growth of direct exports
- No surimi processing in Italy, imports mostly from Spain

Rank Among 20 Study Countries



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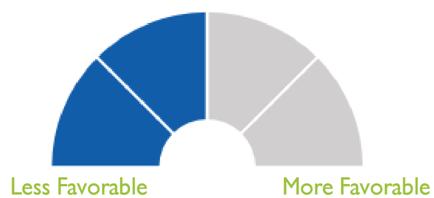


Consumers prefer fresh, yet niche products could grow and thrive

MEXICO

Demographic Snapshot

7%
Middle & Upper Income

81%
Urban

$10,000
GDP Per Capita

1.6 million US citizens live in Mexico. The country is the top foreign travel destination for US citizens.

Seafood Snapshot

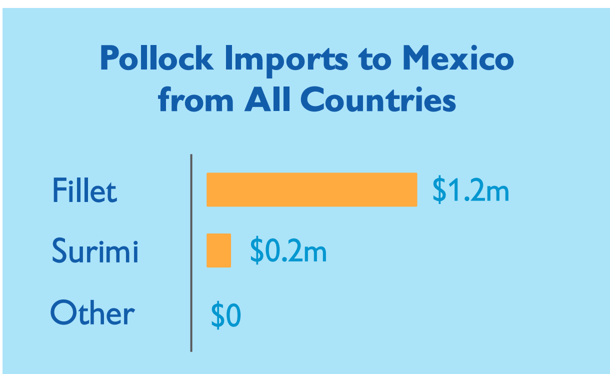
Seafood Consumption	1.7 million MT
Per Capita	13 kg
Domestic Capture + Aquaculture Production	1.9 million MT
Whitefish Imports	121,000 MT
Direct Pollock Imports from US	<100 MT

Projected Population

Whitefish Consumption Profile

Whitefish preparation is varied, with popular preparations including baked fillets, Sinaloa-style sushi (which can include surimi as well as cream cheese and meats), ceviche, and frozen, breaded products.

Key whitefish species include tilapia (both imported and farmed domestically) and imported pangasius. Domestic surimi is made from pollock and Pacific whiting.



Most imported fish: Tilapia

Key Insights

Mexico's prospects as a market for wild Alaska pollock benefit from the country's proximity to the US, and the US-Mexico-Canada free trade agreement. Mexico has a growing population and a greater rate of seafood consumption per capita than Brazil, the other Latin American study country.

However, political and economic challenges exist in Mexico. Global indices rank Mexico particularly low among study countries for corruption, political stability, and general competitiveness.

Additionally, the relatively low number of middle- and upper-income people may make this market too price-sensitive for wild Alaska pollock. In recent years pollock import volumes (which were already low) have decreased, while imports and domestic production of tilapia have increased. There may be a profitable price point between the lower price for imported tilapia and the higher price of domestic tilapia.

Both domestic farm production and imports of tilapia have more than doubled over the past decade in Mexico.

S

- US-Mexico-Canada Free Trade Agreement
- Geographic and cultural links to US
- Multiple styles of regional cuisine that feature seafood, e.g. Veracruz and Sinaloa

W

- Trend of decreasing pollock imports
- Relative lack of familiarity with pollock compared to other whitefish
- Domestic seafood harvest/aquaculture exceeds domestic consumption

O

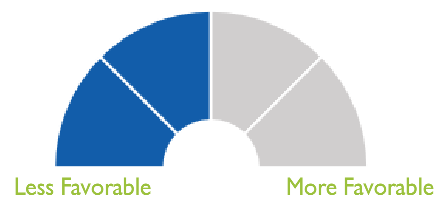
- Opportunities exist for higher-end center-of-plate proteins in Mexico's large international tourism sector
- Presence of US retailers and brands may facilitate cross-border pollock marketing

T

- Higher potential for violence, corruption, and political instability in this market compared to other study countries
- Competition from farmed freshwater fish and some local wild caught marine fish

Rank Among 20 Study Countries

Recommendation



Small middle-income market and poor governance rankings temper advantages from strong US trade ties

THAILAND

Demographic Snapshot

9%
Middle & Upper Income

$7,800
GDP Per Capita

51%
Urban

Rural Thais cook local fish at home.

Urban Thais eat out or buy quick-cook products at the supermarket.

Seafood Snapshot

Seafood Consumption	1.9 million MT
Per Capita	27 kg
Domestic Capture + Aquaculture Production	2.5 million MT
Whitefish Imports	40,600 MT
Direct Pollock Imports from US	7,200 MT

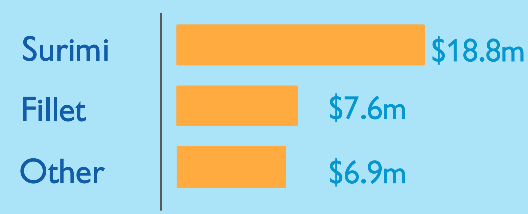
Whitefish Consumption Profile

Thais enjoy fish as balls, cakes, fingers, soup, curries, deep-fried, grilled and sautéed. Fish is well integrated into the diet of the Thai people.

Surimi is a popular and convenient snack food and topping on soup. Thais, expatriates, and tourists eat fish at Japanese-style restaurants, hotels, street food stalls, and franchise restaurants.

Projected Population

Pollock Imports to Thailand from All Countries



Most imported fish: **Tuna**

Key Insights

Thailand's ports rank low among the study countries for infrastructure quality; however, distribution is adequate for moving frozen product to processors. There is a robust seafood processing sector.

Predominantly a Buddhist country, Thais incorporate seafood into everyday cuisine. Thailand has an emerging middle class demanding high-quality, imported seafood in supermarkets and e-commerce. With a high percentage of women working, food purchase and prep must save time, energy, and money. For example, frozen fish balls can be purchased at the supermarket and quickly cooked at home.

Thailand is one of the slowest growing economies in Southeast Asia, behind the other study countries of Indonesia and Malaysia. Thailand has poor political stability due to a military-dominated government and corruption, yet the trade relationship with the US is good, and seafood products from the US face fewer government hurdles compared to Indonesia.

Seafood consumption rates are higher than pork, beef, or chicken.

S

- Sophisticated cold chain and seafood processing sector
- Japanese food trend is large and growing, includes roe and surimi
- Large tourism and expatriate communities with disposable income

W

- Fresh, whole fish preferred
- No brand or provenance awareness
- No consumer discernment or branding differences for tropical vs. cold-water sourced surimi

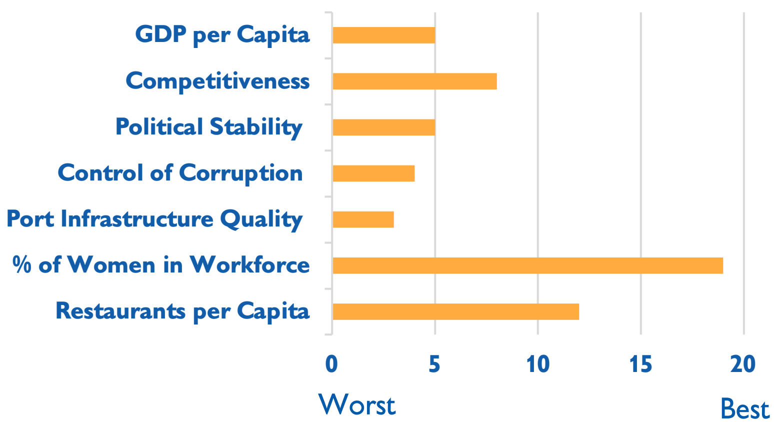
O

- E-commerce and urban delivery is well developed
- Local marine seafood production is down
- High surimi production and consumption

T

- Pangasius imports from Vietnam and locally harvested barramundi compete with WAP
- Local fish and imported fish are in two separate logistics systems
- Consumers lack knowledge of imported species

Rank Among 20 Study Countries



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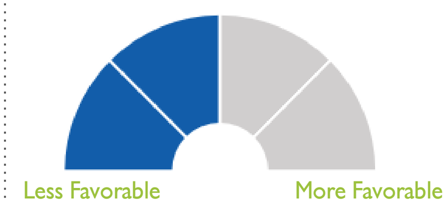


Urban demand for imported product is high, surimi is popular, but disposable income is low and middle/upper class small

Country Profiles (Least Favorable)

- India
- Russia
- South Africa
- Ukraine

INDIA

Demographic Snapshot

<1%
Middle & Upper Income

35%
Urban

$2,100
GDP Per Capita

By 2027 India is expected to be the most populous nation in the world.

Projected Population

Seafood Snapshot

Seafood Consumption	9.2 million MT
Per Capita	7 kg
Domestic Capture + Aquaculture Production	12.5 million MT
Whitefish Imports	8,500 MT
Direct Pollock Imports from US	300 MT

Pollock Imports to India from All Countries

Most imported fish: **Sardines**

Whitefish Consumption Profile

Pollock is not well known in India and has not been imported in large volumes. Most pollock imports in recent years has been in the form of surimi.

Potential competing products include tropical surimi, imported pangasius and locally caught (or farmed) fish such as Indian carp. Common fish preparations include fried and curry dishes such as the Kerala-style fish eaten in southwestern India.

Key Insights

India is the second most populous nation in the world and the world's third-largest total consumer of seafood (behind China and Indonesia). While India will likely be a major market for seafood in 2040 it may not be an important market for Alaska-origin pollock, a product that is unaffordable for most Indians.

India is the lowest-income nation in this study with per-capita GDP of $2,100. It is also the least urban as a percentage of population. India's economy is growing rapidly, but the current baseline may make it a less preferable market compared to study countries that already have large middle- and upper-income populations.

The USDA Foreign Agriculture Service warns that India is a challenging nation for US exports due to high tariffs, difficult regulatory requirements, and cold chain infrastructure that makes it difficult and expensive to transport frozen products overland.

Despite its large population, India is not a large whitefish importer. It ranks 19th in whitefish import volumes (ahead of Indonesia).

S

- Enormous market; population of largest metro areas alone is larger than most study countries
- Per-capita seafood consumption has been on long-term upward trajectory
- Emerging consumer interest in healthy products and quality over price

W

- Most of population too poor to afford imported pollock
- Difficult country to work in: high tariffs, changing regulatory requirements, poor inland transportation, importer requirements for consolidated shipments

O

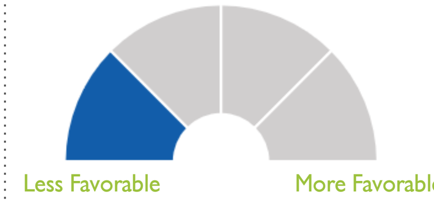
- Tens of millions of people expected to enter middle class by 2040
- Large processing infrastructure associated with domestic shrimp aquaculture
- Some of largest cities could become significant pollock markets

T

- Low-cost competition from domestic and regionally produced seafood
- Low World Bank score for political stability; fear of violence/terrorism (second lowest among study countries, similar to Mexico and ahead of Ukraine)

Rank Among 20 Study Countries

Recommendation



Worth watching, but not ready to become key market due to low income level and regulatory challenges

RUSSIA

Demographic Snapshot

16%
Middle & Upper Income

75%
Urban

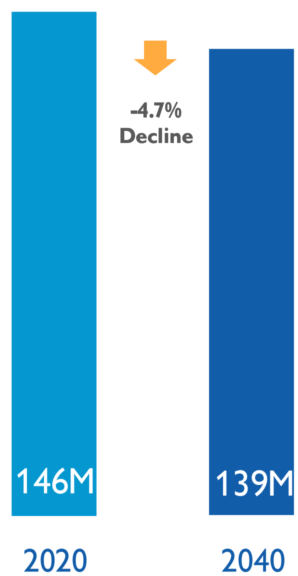
$11,500
GDP Per Capita

Russia has one of the world's lowest male life expectancies (62 years).

Whitefish Consumption Profile

Headed and gutted frozen pollock is a cheap and accessible form of domestic pollock. Russians are accustomed to frozen, canned, and preserved fish, but are not knowledgeable about fish beyond the flesh color (white or red). Fish soup and baked fillet with sauce are popular whitefish preparations. Convenient and easy-prep seafood is increasingly in demand by urban and young Russian consumers, but price is the deciding factor for most buyers. Dining out is reserved for special occasions.

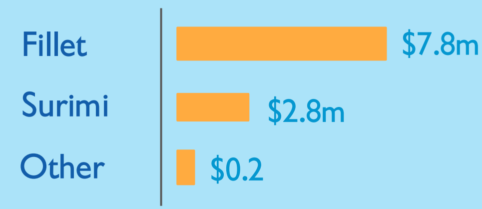
Projected Population



Seafood Snapshot

Seafood Consumption	2.8 million MT
Per Capita	20 kg
Domestic Capture + Aquaculture Production	5.2 million MT
Whitefish Imports	59,900 MT
Direct Pollock Imports from US	N/A

Pollock Imports to Russia from All Countries



Most imported fish: Mackerel

Key Insights

Trade sanctions against US-harvested seafood and other products has hurt the Russia-US trade relationship, with additional economic sanctions likely. Russia's ban on US seafood actually supports a Russian nationalist narrative.

Should the trade relationship turn around, Russia's strengths would include a modern western port that is near several urban centers. Younger Russians show preferences for eating out and convenience foods if personal finances allow. But when incomes dip, Russians switch to the cheapest form of protein, often chicken.

Russia has a history of financial crises and currency devaluation; Russians react by saving money and seeking discounts at the local supermarket. While Russian consumers believe seafood is healthy, that has not translated into increased sales. Overall, seafood consumption is low.

Russia's seafood ban was used to boost domestic production and consumption of seafood.

S

- Lent (40+ days) is widely observed; fish is primary protein consumed
- Roe is widely accepted and a common everyday food
- Prior to trade sanctions, Russia was a leading import country

W

- Pollock not seen as a high-quality product
- Negative association with former Soviet-imposed 'Fish Thursdays'
- Based on school meals, young consumers dislike fish

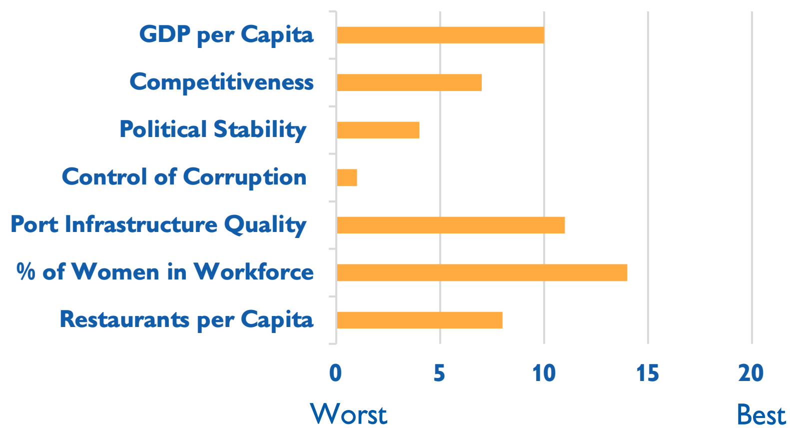
O

- Frozen fish is common
- Moscow and St. Petersburg have higher incomes and expatriate communities
- Seafood consumption will increase if the GDP per capita grows, despite population decline

T

- Continuing (and increased) trade sanctions resulting from the Ukraine crisis will worsen the RU-US trade relationship
- Russia's self-sufficiency targets will increase domestic seafood harvest, processing, and fish farming

Rank Among 20 Study Countries



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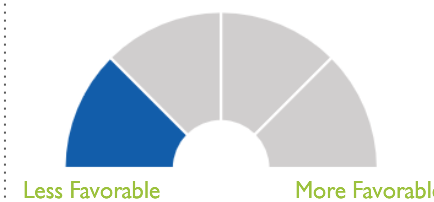


Falling population, small middle class, low fish consumption, and abundant domestic seafood sources

SOUTH AFRICA

Demographic Snapshot

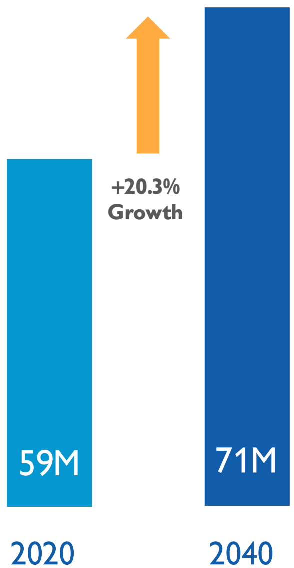
9%
Middle & Upper Income

67%
Urban

$6,000
GDP Per Capita

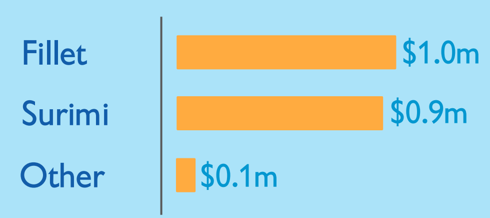
By 2040, South Africa expected to be the 11th most populous study country (currently 14th).

Projected Population



Seafood Snapshot

Seafood Consumption	362,600 MT
Per Capita	6 kg
Domestic Capture + Aquaculture Production	516,000 MT
Whitefish Imports	30,000 MT
Direct Pollock Imports from US	<100 MT



Most imported fish: **Sardines**

Whitefish Consumption Profile

South Africa is a significant producer of hake, although much of it is exported. Common product forms for hake and imported whitefish are fillet, breaded products, fish cakes, and ready-to-eat-meals. About half of South Africa's pollock imports in recent years have been surimi.

Larger breaded fish manufacturers use labels that mention hake, pollock, or whiting, which allows the manufacturer to select the whitefish that is available at the lowest price.

Key Insights

South Africa is growing rapidly and has higher business competitiveness rankings than other developing nations. But seafood is not poised to be a promising business in this country in the immediate future.

The market of people who are able and likely to buy imported seafood is small because of South Africa's relatively small (albeit rapidly growing) population, high rates of poverty, and low rates of seafood consumption (the lowest among the 20 study countries). The decreasing value of the South African rand over the past 20 years has made imported fish increasingly unaffordable for most South African consumers.

South Africa's prospects as a pollock import market improve slightly when the country is viewed as a gateway to the sub-Saharan African market. South Africa and its direct neighbors alone represent a market of well over 100 million people. However, this broader region is not yet ripe for marketing efforts.

Much of South Africa's domestic hake is exported, most of it to Spain and Italy.

S

- Highest rate of population growth among study countries
- Relatively high rates of surimi imports for market size and income level
- Relatively high rankings for corruption control and political stability

W

- Lowest seafood consumption per capita among study countries; most animal protein in diet comes from chicken and red meat
- No recent trend of increased per-capita seafood consumption

O

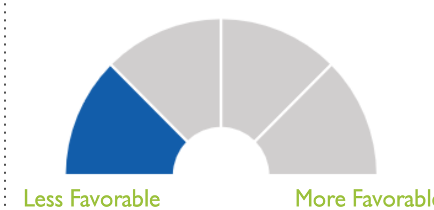
- Key gateway to sub–Saharan Africa, but also significant market on its own
- Shelf stable product may do well here based on canned salmon import volumes

T

- Competition from countries with free trade agreements; political preference for importing from BRICS countries
- Continued devaluation of the South African rand compared to dollar

Rank Among 20 Study Countries

Recommendation



Even with expected fast-paced population growth, South Africa may be too small and too low income to grow into key market by 2040; potential distribution gateway to sub-Saharan Africa

UKRAINE

Demographic Snapshot

2%
Middle & Upper Income

70%
Urban

$3,700
GDP Per Capita

In 2020, 45% of Ukrainians were in poverty.

Seafood Snapshot

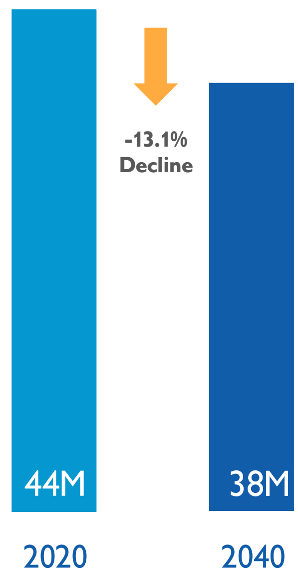
Seafood Consumption	**0.5 million MT**
Per Capita	**11 kg**
Domestic Capture + Aquaculture Production	**0.1 million MT**
Whitefish Imports	**61,200 MT**
Direct Pollock Imports from US	**6,000 MT**

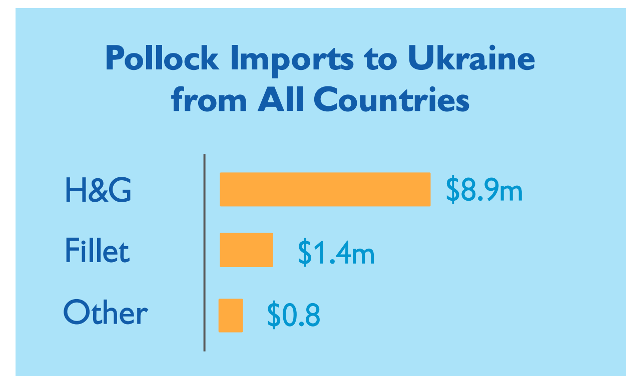
Whitefish Consumption Profile

Hake with the head and tail on is preferred in Ukraine over other whitefish, mostly because of consumer familiarity. HGT fish is sold in bulk IQF at convenience markets and pan-fried at home or used in soup. The price-conscious consumer shies away from the more expensive fillet options.

Ukrainians believe seafood is healthy and nutritious. Local sources of fish have decreased because Ukrainians have less access to the Black Sea.

Projected Population





Most imported fish: Herring

Key Insights

The Ukraine has very little domestic seafood harvest and therefore the populace is accustomed to imported and frozen seafood. Unfortunately, that seafood has been of low quality, such as thawed/ refreshed H&G. Consumers do not view most seafood as a luxury food item, rather it is a cheap form of protein that competes against chicken. Fish is chosen during Christian meatless holidays.

Ukraine has virtually no middle or upper class, therefore most consumers do not have extra income to prioritize anything other than price at the supermarket.

Ukraine is situated on the Black Sea, and has port infrastructure for receiving product, although it ranks low among study countries on port quality. Ukraine is a trade partner both to the east and the west, situating it well for future potential as a distributing country. However, Ukrainians first need stability, increased buying power, and reduced corruption.

Ukrainians observe Lent. Fish consumption during that holiday period is increased.

S

- Lent (40+ days) is widely observed; fish is primary protein consumed then
- Roe (jarred or canned) is a convenient snack and eaten regularly

W

- Unstable political situation threatens commerce, banking, investment and trade
- Fish has a reputation of low quality
- Alaska brand recognition is non-existent

O

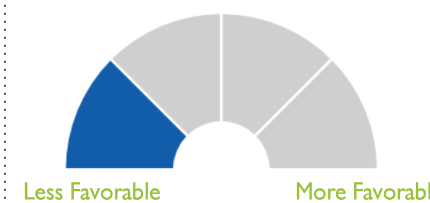
- Ukraine increasingly seeks western food, such as breaded fish sticks popular in Germany
- Trade with Russia may be severed, creating opportunity for US seafood
- Inexpensive and shelf-stable/frozen seafood of high demand during unrest

T

- Higher potential for violence, corruption, and political instability in this market compared to most other study countries
- Not a strong fish-eating culture
- Storing product in a politically unstable country may be risky

Rank Among 20 Study Countries

Recommendation



Unstable political climate, very small middle/upper class, low disposable income, low seafood consumption

Appendix: Methods & Data Sources

Where possible the project team used data sets that covered all 20 countries in order to make direct comparisons possible. Data are from the most recent available year except in the case of some seafood statistics where multi-year averages were used to minimize the effect of year-to-year variation.

Population

United Nations 2020 population and 2040 population projection based on medium fertility model

Demographic Snapshot Statistics

Percent Urban: World Bank, 2020

GDP Per Capita: World Bank, 2020

Percent Upper & Middle Income: World Bank PovcalNet poverty research tool. Percentage is the percentage of people who live in households with income above $30 per day (purchasing power parity-adjusted). Most recent available data year (varies among countries). Income levels in China, India, Indonesia, Russia, Thailand, and Ukraine are based on consumption surveys rather than income surveys, which may result in lower levels of medium/high income households reported in these countries. The $30 income level is almost 16 times the global poverty rate of $1.90 per day. It was chosen using the US as a benchmark. Based on this measure 76% of US household are middle and upper income corresponding with other measures for the size of middle and upper classes in the US.

Seafood Snapshot Statistics

Seafood consumption: Food and Agriculture Organization (FAO) of the United Nations, 2018 consumption and population data. Note: FAO seafood consumption data is based on a disappearance model that estimates consumption based on production, imports, and exports. This data was used because of comparability between countries. These consumption figures are generally higher than survey-based consumption figures.

Domestic Capture + Aquaculture: FAO, 2017-2019 average. Note: Figures exclude aquatic plants because of limited relevance to seafood protein substitution.

Appendix: Methods & Data Sources

Seafood Snapshot Statistics (continued)

Whitefish imports: FAO, 2014-2018 average. Note: Whitefish definition includes all varieties of pollock (Alaska pollock and saithe), cod, hake, haddock, tilapia, and catfish.

Direct pollock imports from US: National Marine Fisheries Services, 2016-2020 average. Note: Excludes fishmeal and oil. United States slide displays US production minus US exports.

Pollock imports from all countries: Trade Data Monitor (customs data), 2016-2020 average. Note: Roe figures (where relevant) estimated based on US and South Korea exports. Excludes fishmeal and oil. United States slide displays US supply: production minus exports plus imports.

Rank Among Study Countries

GDP Per Capita: World Bank, 2020

Competitiveness: World Economic Forum, 2019

Political Stability: World Bank, 2020

Control of Corruption: World Bank, 2020

Port Infrastructure Quality: World Economic Forum, 2019

% of Women in Workforce: World Bank, 2019

Restaurants Per Capita: Irish Food Board/Technomic, 2020

Whitefish Photo Credits

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South Korea: Image from Flickr user kfoodaddict

Spain: Image from Wikimedia Commons user Bikkit