
ALASKA SEAFOOD
A MODEL FOR SUSTAINABILITY

Sustainability

It's a catchphrase that's everywhere. In the case of seafood, it means the fisheries can exist long-term without compromising the survival of the species or the health of the surrounding ecosystem. Alaska sets the world's gold standard for its precautionary approach to resource management.

How Alaska's Fisheries Are Managed

All Alaska seafood is wild, and all of it is sustainable. Unlike many of the world's other fisheries, Alaska's are managed for protection against overfishing, habitat damage, and pollution. By proactively ensuring a healthy, wild and sustainable harvest, Alaska has helped to preserve and protect its superior seafood for future generations.

Alaska's major fisheries include:

- **Salmon** (King, Sockeye, Coho, Keta, and Pink)
- **Groundfish** (Cod, Alaska Pollock, Sole and Flounder)
- **Halibut**
- **Crab** (King, Snow and Dungeness)

Since 1959, when Alaska became a state and took over the management of its fisheries, the constitution mandated that "fish…be utilized, developed and maintained on the sustained yield principle." Alaska is the only state to have written such conservation language into its constitution.

Alaska has a variety of comprehensive management methods in place that are not widely practiced in the rest of the world. With every aspect of its fisheries strictly regulated, closely monitored and rigidly enforced for nearly five decades, Alaska's successful management practices are considered a model of sustainability for the entire world.

GLOSSARY

- Alaska Department of Fish & Game – ADFG or Department
- Allowable Biological Catch – ABC
- American Exclusive Economic Zone – EEZ
- Bering Sea/Aleutian Islands – BSAI
- Alaska Board of Fisheries – BoF or Board
- Escapement – the annual estimated number of salmon that escape capture in a fishery and then go on to spawn
- Food & Agriculture Organization of the United Nations – FAO
- Individual Fishing Quota – IFQ
- International Pacific Halibut Commission – IPHC
- Magnuson-Stevens Fishery Conservation and Management Act – MSFCMA, sometimes referred to as MSA
- Marine Protected Areas – MPAs
- National Marine Fisheries Service – NMFS, also called NOAA Fisheries
- National Oceanic & Atmospheric Administration – NOAA
- North Pacific Fishery Management Council – NPFMC
- Office for Law Enforcement – OLE
- Run – migration of spawning salmon
- Scientific and Statistical Committee – SSC
- Total Allowable Catch – TAC
- Vessel Monitoring System – VMS

SO MUCH TO PROTECT

Alaska is one of the world's most abundant sources of wild seafood that live a natural life-cycle and feed upon a natural marine diet.

With its remote location and small population (just over 670,000 in 2006, or one person per square mile), Alaska has one of the cleanest and most natural marine environments on earth.

In Alaska, protecting the future of both fish stocks and the environment takes priority over opportunities for commercial harvest. The key is this: Alaska takes a precautionary approach to ensure the needs of the stocks and ecosystem are met, first and foremost. In fact, no species of Alaska seafood has ever been listed as endangered under the Endangered Species Act. This approach is constantly improving as new science becomes available.

Testament to the state's leadership in sustainable seafood is Alaska's proven track record in effective resource management, reliance upon the latest scientific research, and conformance to relevant international standards, notably those of the Food & Agricultural Organization of the United Nations (FAO). Alaska's exemplary fisheries management practices are also characterized by an unusual degree of collaboration among the state, federal and international organizations that are charged with protecting the resource. This is bolstered by strict laws and enforcement policies, and procedures that ensure public participation and transparency, earning the state significant international recognition.

HISTORICAL EFFECTIVENESS

Alaska's long-term success record of effective fisheries management is unparalleled virtually anywhere in the world.

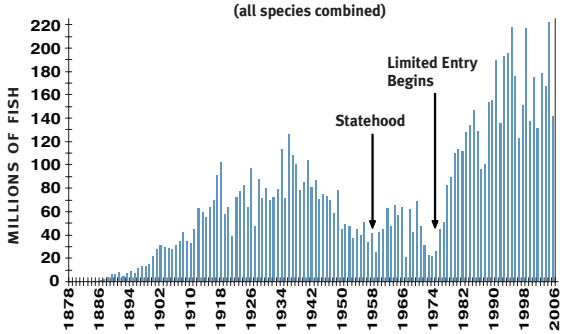
In fact, no Alaska salmon stocks and no Alaska groundfish stocks are classified as overfished, subject to overfishing, or approaching overfishing, according to the most recent "Report on the Status of the U.S. Fisheries," which is published every year by the National Marine Fisheries Service*. The only two crab stocks that are classified as "overfished" have been closed to all fishing for several years, in order to allow the stocks to rebuild**.

Alaska's salmon fisheries represent one particularly striking example of the historical effectiveness of the Alaska method. Commercial salmon fishing has occurred in Alaska waters for well over 100 years, but it wasn't until Alaska was admitted into the United States, in 1959, that Alaska became legally capable of managing its salmon fisheries. In fact, the desire to improve the management of its own fisheries was one of the major driving forces behind the statehood movement.

After statehood, salmon runs rose for several years, as a result of improved management. Then, as more participants were attracted to the fishery, harvests dropped again. In response, Alaska instituted its program of "limited entry" (license limitation) in the mid-1970s, which limited the number of harvesters in each fishery. Other management initiatives were undertaken in that period. These included the establishment of the first Alaska salmon hatcheries, which were used to rebuild salmon stocks and dampen population fluctuations.

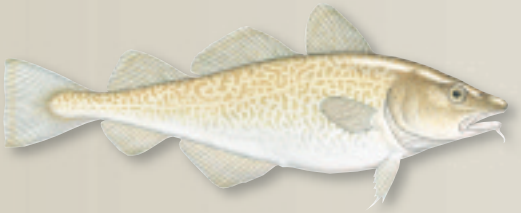
As a result of effective management, Alaska's salmon harvests increased well beyond historical levels. Those rich harvests were not merely short-term gains—Alaska has enjoyed abundant salmon returns and harvests for more than three decades.

Alaska Commercial Salmon Catches 1878-2006
(all species combined)



To compare NMFS' evaluation of Alaska's fisheries vs. those elsewhere in the United States, see www.nmfs.noaa.gov/sfa/domes_fish/StatusofFisheries/2006/2006RTCFinal_Report.pdf
**Blue King Crab from the Pribilof Islands and from St. Matthew Island.*

RESOURCE MANAGEMENT



The State of Alaska recognizes seafood as a precious natural resource and the seafood industry as a vital component of the state's economy.

Alaska leads the nation in effective and comprehensive resource management, quality assurance and conservation, ensuring that Alaska seafood remains the world's finest for future generations.

The Alaska fisheries management system was specifically designed to allow maximum sustainable yield without compromising environmental and economic integrity. The state's major fisheries (salmon, groundfish, halibut and crab) are managed by several different agencies of the state or federal government. Within each fishery different entities are responsible for scientific research, regulatory enforcement, and policy/allocation. Each agency has similar goals, strategies, and methods, employing a precautionary approach to fisheries management. However, there is a clear separation between the authority for primary conservation and the authority for allocation of the resource. No single agency has complete authority; they work in collaboration. This is one of the strengths of the Alaska fisheries management system.

The Management Structure

Salmon are state managed.
- The Alaska Department of Fish & Game (ADFG or Department) is responsible for conservation and management
- The Alaska Board of Fisheries (BoF or Board) is responsible for policy and allocation

Groundfish are federally managed.
- The National Marine Fisheries Service (NMFS, also called NOAA Fisheries) is responsible for conservation and management
- The North Pacific Fishery Management Council (NPFMC) is responsible for policy and allocation

Halibut are managed internationally, through a cooperative agreement between the U.S. government and Canada.
- The International Pacific Halibut Commission (IPHC), a bilateral collaborative organization composed of members from the United States and Canada, is responsible for conservation and management, working closely with the North Pacific Fishery Management Council (NPFMC) on the issue of allocations

Crab are managed through an agreement between federal and state organizations.
- The Alaska Department of Fish & Game (ADFG) is responsible for conservation and management
- The North Pacific Fishery Management Council (NPFMC) is responsible for policy and allocation

In addition, each fishery is protected by a designated regulatory enforcement agency:
- **Salmon**: The Alaska Wildlife Troopers
- **Groundfish** and **Halibut**: The National Marine Fisheries Service (NMFS)
- **Crab**: Collaboration between the National Marine Fisheries Service (NMFS) and the Alaska Department of Fish & Game (ADFG)

State, Federal and International Management of Alaska's Fisheries

	Salmon State Management	**Groundfish** Federal Management	**Halibut** International Management – U.S. and Canada	**Crab** Collaborative Federal & State Management
CONSERVATION AND MANAGEMENT (includes Scientific Research)	Alaska Department of Fish & Game (ADFG)	National Marine Fisheries Service (NMFS)	International Pacific Halibut Commission (IPHC)	Alaska Department of Fish & Game (ADFG)
POLICY AND ALLOCATION	Alaska Board of Fisheries (BoF)	North Pacific Fishery Management Council (NPFMC or Council)	INTERNATIONAL – International Pacific Halibut Commission (IPHC) NATIONAL – North Pacific Fishery Management Council (NPFMC)	North Pacific Fishery Management Council (NPFMC or Council)
REGULATORY ENFORCEMENT	Alaska Wildlife Troopers	National Marine Fisheries Service (NMFS)	National Marine Fisheries Service (NMFS)	National Marine Fisheries Service (NMFS) and Alaska Department of Fish & Game (ADFG)

FISHERIES MANAGEMENT METHODS

Using a variety of management methods not widely practiced elsewhere in the world, Alaska's fisheries are globally recognized as a model of sustainability.

The National Marine Fisheries Service and the Alaska Department of Fish & Game use a wide variety of fishery management methods and techniques, but they both consider the Total Allowable Catch (TAC) and escapements as firm limits, beyond which fishing must stop (see Stock Assessment and Quota Establishment). Until those limits are reached, harvesting is limited and regulated in several ways.

A process known as "regulated inefficiency" is the largest and most basic collection of these operational fishery management techniques. In every fishery in the world, fishing fleets tend to become more efficient in their catching power, thus increasing pressure on the stock. Harvesters increase in number, and they improve in fishing skill. Boats become bigger, faster, and more powerful. Electronic fish-finding equipment becomes more sensitive and accurate. Fishing gear such as nets, winches, and ropes become stronger.

The problem is that the numbers of fish are finite. The finite nature of fish stocks, combined with the improvements in catching efficiency and increasing numbers of harvesters, often set the stage for overfishing. In Alaska, one approach has been to regulate the efficiency of the harvesters, through such methods as:

- **Time-and-area closures.** These methods allow fishing during certain times or in certain areas, but not in others.
- **Restrictions on size of boats.** Certain fisheries have limits on the size of fishing boats; for instance, in the Bristol Bay salmon fishery, that limit is 32 feet.
- **Restrictions on type of fishing gear.** Virtually every fishery has limitations on fishing gear, such as the size, design, and use of each type of gear.
- **Gear prohibition.** Certain gear types are completely prohibited, such as pelagic longlines, sunken gillnets, and fish traps.

Another Alaska approach is to limit the number of harvesters in a fishery. Known widely as "license limitation," in Alaska it is termed "limited-entry" because it limits how many participants may enter a fishery. Alaska limited-entry salmon fisheries are protected from overcrowding, and thus are less difficult to manage than would be an unrestricted fishery. Similar license limitation programs exist for the federally managed Pacific cod fisheries.

An additional approach to fishery management is rationalization (also known as "rights-based" management), which refers to economic rationalization: granting ownership rights to a given fraction of an annual Total Allowable Catch. Some notable Alaska fisheries have been rationalized: Bering Sea/Aleutian Islands (BSAI) Alaska Pollock, halibut, sablefish (black cod), and most BSAI king and snow crab fisheries. Others are being considered. All rationalization programs involve some sort of Individual Fishing Quotas (IFQs) for harvesters, and some of them involve quotas for processors.

The fisheries can be modified "in-season," to adapt to the realities of the run, the weather, and other parameters. In federal fisheries, a fishery might be limited, modified, or stopped altogether, if a predetermined level of incidental catch (see Bycatch Reduction) is reached. In state-managed salmon fisheries, managers can open and close the fishery in response to the "run strength," the numbers of salmon returning to their natal streams.

STOCK ASSESSMENT AND QUOTA ESTABLISHMENT

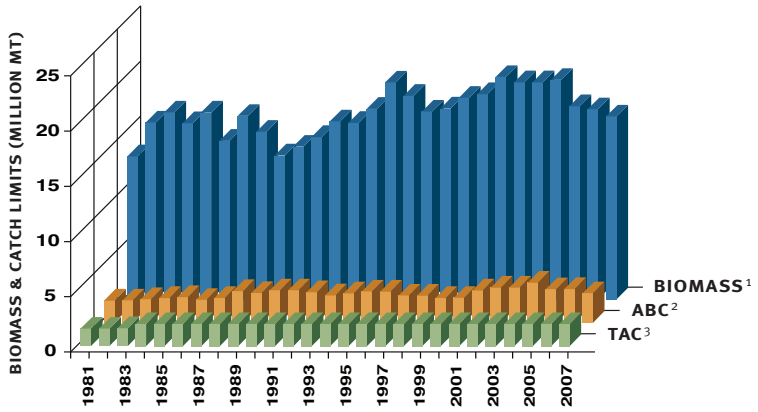
Central to the success of the Alaska fisheries management system is the use of the latest available scientific research to establish both the numbers and the health of each individual species.

Every year, scientists from the Alaska Department of Fish & Game, the National Marine Fisheries Service, and the International Pacific Halibut Commission conduct and analyze research on the fisheries resources within their individual authority—salmon, groundfish and crab, and halibut respectively—to arrive at the best available scientific evidence on the target resource. In addition, research is conducted on the climatic, environmental, and socio-economic factors that affect the fisheries. In every case, the studies consider the effects of the ecosystem on the stock, and the effects of the stock and the fisheries on the ecosystem.

In the case of groundfish, halibut, and most crab this process results in determining Total Allowable Catch (TAC) and other measures used to manage the fisheries.

Salmon must be managed differently. Salmon stocks have unique population characteristics in each river to which they return to spawn—unlike a groundfish stock, such as Bering Sea/Aleutian Islands Alaska Pollock, which can be studied and forecast as a unit. Each "run" of salmon in a particular river must be understood, forecast, and managed as an individual unit, not related to other runs of salmon in that river, or in nearby rivers. In the years since Alaska became a state, the Alaska Department of Fish & Game has compiled comprehensive data-bases on salmon runs. Department scientists use those data, plus in-season assessments of run strength (numbers of fish), to set escapement goals for the fisheries. "Escapement" means the annual estimated number of spawning salmon that escape capture in a fishery. Achieving the escapement goal is the main priority for fishery managers.

Bering Sea/Aleutian Islands (BSAI) Groundfish Catch Limits 1981-2007



SOURCE: North Pacific Fishery Management Council

[1] *Biomass: total amount of fish in the BSAI*

[2] *Acceptable Biological Catch: maximum fraction of the biomass that may be sustainably harvested; always a VERY small fraction of the total biomass*

[3] *Total Allowable Catch: maximum fraction of the ABC that may be legally harvested; almost always less than the ABC, NEVER greater*

Controlling the amount of fish harvested through quota establishment is one of the primary management measures that has proven to be effective in preventing the overfishing of fishery resources. The tools of this quota system are Total Allowable Catches for groundfish, halibut, and most crab, and escapement of salmon in a run. In every case, the top priority is to ensure the long-term sustainability of the fisheries.

The annual process of stock assessment and quota establishment (sometimes referred to as harvest strategy development) are interrelated. The goal of harvest strategy development is to provide a stable, quantitative set of control rules for operating the fisheries, and the goal of stock assessment is to use the best available scientific information to determine the status of the population. The process requires multiple levels of review and input, providing for a clear separation between conservation and allocation decisions.

A Note on Total Allowable Catches (TACs)

Fisheries management agencies around the world set TACs—not just Alaska's North Pacific Fishery Management Council. However, very few agencies use those TACs as unbreakable harvest limits; they are not "hard TACs." In many other areas of the world, when the TAC is reached the agency will not tell the fleet to stop fishing; it will simply reduce its performance by imposing limits on amounts landed, days at sea, areas of catch, and/or size of gear. But in the North Pacific, when a TAC is reached, the North Pacific Fishery Management Council orders the fishing stopped. This is far better and is another one of the strengths of the Alaska fisheries management system.

BYCATCH REDUCTION

Significant, effective bycatch reduction programs are enforced in all Alaska fisheries.

Bycatch, also called "incidental catch" or "incidental harvest," means the unintended capture of non-target species, including other fish species, marine mammals or sea birds.

In the groundfish fisheries, "prohibited species" including salmon, halibut, herring, trout, king crab, and snow crab must not be retained on board a groundfish vessel. When a predetermined amount of a prohibited species is taken, the fishery for the target species is closed, regardless of whether it has taken its own Total Allowable Catch. This strict rule provides a strong incentive for harvesters to "fish clean," minimizing bycatch of prohibited species.

In the case of marine mammals, National Marine Fisheries Service (NMFS) biologists and staff administer the Marine Mammal Protection Act, the Endangered Species Act, the Fur Seal Act, and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), working with other NMFS offices and the North Pacific Fishery Management Council to develop regulations and management measures to protect, conserve and restore populations.

In addition, all vessels that are permitted to directly fish for cod or Alaska Pollock must participate in the National Marine Fisheries Service Office Vessel Monitoring System, which transmits each vessel's location, by satellite, to the NMFS Office for Law Enforcement (OLE). This requirement is necessary to monitor fishing restrictions in Steller sea lion protection and forage areas.

The Alaska industry and NMFS have been actively addressing sea bird incidental take in long-line (hook-and-line) fisheries off Alaska since 1989, taking a proactive role in its coordination with local, regional, national, and international agencies, organizations, and experts.

COLLABORATION

Alaska maintains a clear and unbreakable separation of conservation from allocation.

History demonstrates that human use of Alaska's resources is sustainable. Collaboration between the various federal and state management agencies is one reason that the system works so well, even as these agencies maintain a clear and unbreakable separation of conservation from allocation.

The Magnuson-Stevens Fishery Conservation and Management Act gives the United States federal government management authority over the fisheries in the American Exclusive Economic Zone (EEZ), which extends to 200 nautical miles from shore. The State of Alaska has fisheries management authority in "internal" state waters, which are generally within three nautical miles of the shoreline. Waters beyond 200 miles, called the "high seas," are international.

In fact, there is frequent collaboration between the federal process and the state process. For example, the commissioner of the Alaska Department of Fish & Game has a permanent, voting seat on the North Pacific Fishery Management Council. The Council and the Alaska Board of Fisheries hold a formal joint meeting at least once per year, and informal coordination is routine. Because of their strong mutual interests in fishery conservation, and their adherence to the precautionary principle of fishery management, all parties view this cooperation as essential.

International cooperation in Alaska fisheries management is also a matter of course. Every year, Canadian and U.S. scientists from the International Pacific Halibut Commission (IPHC) set the Total Allowable Catch for the coming fishing season, and apportion those harvests to IPHC statistical fishing areas based on productive capacity of the stock in those areas. For halibut fisheries off the coast of Alaska, the allocation of those area-specific Total Allowable Catches is done by the Alaska Board of Fisheries and the North Pacific Fishery Management Council.

TRANSPARENT AND PUBLIC DECISION-MAKING

Once the process of allocation begins it becomes an arena for comprehensive, vigorous public scrutiny.

The agencies responsible for policy and allocation are structured so that fisheries conservation decisions are made by teams of scientists, without input or interference from harvesters or other stakeholders.

After the conservation decisions are made, the Alaska Board of Fisheries and the North Pacific Fishery Management Council make allocation and management decisions. The two steps of decision-making are clearly separate.

Stakeholders and members of the public may attend meetings concerning scientific review and quota recommendation, but are very rarely permitted to offer opinions. On the other hand, once the process of allocation begins it becomes an arena for comprehensive, vigorous public scrutiny and participation by harvesters, processors, and other stakeholders. The overall decision-making is quite transparent, and it strives to achieve timely, practicable solutions. For more than 30 years, it has proven to be both conservative and effective.

The Troopers operate 35 aircraft and 45 patrol vessels of various sizes and types.

REGULATORY ENFORCEMENT

Fishery management regulations and management decisions would not be effective without enforcement.

In Alaska, enforcement is performed at both the state and federal levels. The activities and operations of fish harvesters, seafood processors, recreational fishers, and other resource users are monitored and controlled in an appropriate fashion.

For state-managed fisheries, the regulatory enforcement arm is the Alaska Department of Public Safety's Wildlife Troopers. Through education, presence, and enforcement action, the Troopers are committed to enforcement of commercial fisheries, sport fisheries, and aquatic habitat regulations.

For fisheries under federal management, the National Marine Fisheries Service Office for Law Enforcement (NMFS OLE) has specified authority to enforce more than 37 federal statutes, as well as many treaties related to the conservation and protection of marine resources and other matters of concern to NMFS.

National Marine Fisheries Service officers also work closely with the At-Sea Observer Program. These civilian scientific observers are certified by NMFS, employed by private contractors, and placed aboard fishing vessels under mandates from the North Pacific Fishery Management Council. The observers collect fisheries data, and they also report suspected regulatory violations to the OLE. This results in roughly 300 investigations per year. NMFS has the power to seize and forfeit fishing vessels, fishing gear, and harvested product.

National Marine Fisheries Service Office for Law Enforcement also works very closely with the U.S. Coast Guard to enforce fisheries regulations. One of the Coast Guard's fundamental roles is to eliminate environmental damage and the degradation of natural resources associated with maritime transportation, fishing, and recreational boating.

HABITAT PROTECTION

The State of Alaska's fish habitat protection statutes date back to statehood.

Alaska is thousands of miles away from large industrial sources of pollution. These distances, combined with the earth's patterns of circulation of water and air, help to ensure that Alaska's own waters are among the cleanest in the world.

Alaska's population density is nearly the lowest of any in the United States, and is lower than most places in the world. Alaska has very little heavy industry, and development activities such as energy production, mining, road building, logging, and sewage treatment are subject to myriad protective regulations at the federal and state levels.

The federal government and the State of Alaska work closely together to monitor and protect this pristine environment. Through these multiple layers of governmental regulatory oversight, Alaska's aquatic habitats and ecosystems are protected from the impacts of development activities.

The State of Alaska's fish habitat protection statutes date back to statehood, and reflect Alaskans' belief that fish species and habitats are assets that must be protected from unnecessary or inadvertent disturbance or destruction from human activities, in order to continue to produce social and economic benefits for generations to come.

Alaska's marine habitats are protected from the impacts of commercial fishing as well. Marine Protected Areas (MPAs) are established to protect ecological structure and function, locate control sites for scientific research studies, conserve benthic (bottom) habitat, protect vulnerable stocks, and preserve cultural resources. Over 40 MPAs include almost all federal waters off Alaska, plus most state waters where commercial fishing occurs. All of the MPAs prohibit the use of certain fishing gear on a seasonal or year-round basis. Of these, 31 MPAs prohibit either all commercial fishing or all bottom contact gear, such as trawls.

The Endangered Species Act lists Steller sea lions as "threatened," and NMFS and NPFMC have taken measures to prevent harmful interaction between sea lions and commercial fishing operations. Approximately 58,000 square nautical miles of the Bering Sea, Aleutian Islands, and Gulf of Alaska have severe restrictions on the timing and type of fishing that may be conducted near sea lion habitat.

RECOGNITION

Alaska's system of precautionary, sustainable fisheries management meets or exceeds the requirements of outside, third-party certifiers or endorsements.

Alaska's approach has been validated in several ways. For example, the Monterey Bay Aquarium's Seafood Watch lists wild-caught Alaska salmon as the only salmon to earn a "Best" rating. And all five species of Alaska salmon appear on the "Smart Choices" list of Seafood Choices Alliance. Several other species of Alaska fish appear on both lists, too.

The Pew Ocean Commission, in an independent national fisheries management review published in 2003, praised the North Pacific Fishery Management Council (NPFMC) for its conservative approach to groundfish fisheries management, particularly its extensive use of at-sea observers and its conservative Total Allowable Catch.

The 2006 reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act—which governs all of the regional fishery councils—includes a number of provisions modeled after the NPFMC.

Three particular provisions modeled after the NPFMC were:

1) Giving greater attention to the structure of the Scientific and Statistical Committees (SSC), and how those bodies are used for independent assessment of the science underlying harvest quotas.
2) Establishing firm annual catch limits ("hard TACs"), whose determination is based on better science.
3) Improving accountability for how those catch limits are monitored.

More than a decade ago, the Food & Agriculture Organization (FAO) of the United Nations officially declared its Code of Conduct for Responsible Fisheries. This Code has become recognized internationally as a template for sound fisheries management, and it is used by other organizations that wish to evaluate the management of fisheries. Interestingly, Alaska has always met or exceeded the principles and criteria of the FAO Code.

ALASKA FAMILY & COMMUNITY SUSTAINABILITY

Entire communities have been intimately involved with the harvesting and processing of Alaska's commercial catch for generations.

The fisheries are not just a source of income. They are a way of life, representing a relationship with the land and sea and the connection with the fishing culture that defines the community. Members of the communities know that they cannot continue to exist as fishermen without a willingness to help enforce the sustainability practices mandated by the state. This commitment ensures that Alaska seafood will continue to be provided as a responsible seafood choice, and that Alaskans can continue a cherished lifestyle.

Thousands of families make their living from the resources of Alaska's rugged 34,000 miles of sparsely populated coastline. In fact, fishing and seafood processing employ more people than any other industry in Alaska. Family-owned businesses challenge the sea in order to harvest its abundant catch. For example, in the Southeastern Alaska town of Petersburg about 470 of the 3,100 residents (15%) hold commercial fishing permits. A still larger number, while not directly fishing themselves, rely on the fishing industry through support services and other businesses that provide for the fleet. For some families in rural Alaska, commercial fishing is earned income for an entire year.

Raised in the tradition of fishing and steeped in an intimate relationship with the sea, Alaskans understand the need to protect and maintain the fisheries and the surrounding habitat for future generations.

To learn more about Alaska seafood sustainability, please log on to www.alaskaseafood.org. In addition, download the "Checklist for fisheries resource management issues seen from the perspective of the FAO Code of Conduct for responsible fisheries".

Wild, Natural & Sustainable™

Alaska Seafood Marketing Institute
Marketing Office • 150 Nickerson Street, Suite 310 • Seattle, WA 98109 • 800-806-2497
Administrative Office • 311 N. Franklin St., Suite 200 • Juneau, AK 99801 • 800-478-2903
www.alaskaseafood.org