Exhibit 2

CALIFORNIA VOLUNTARY SUSTAINABLE SEAFOOD PROGRAM PROTOCOL
DECEMBER 2011

I. California Program - Protocol

Summary:

The California voluntary sustainable seafood program protocol consists of meeting the following standards:

1. The Marine Stewardship Council (MSC) fishery certification program for sustainable seafood.
2. A higher-than-MSC standard with respect to two performance indicators: 1) stock status and 2) by-catch of ETP (endangered, threatened, and protected) species. California-certified fisheries will have to obtain a score of at least 80% (as opposed to 60%) for these two performance indicators.
3. Additional independent scientific review.
4. Additional traceability components.

In addition, although not specifically called for in AB 1217, staff will work with partner agencies to ensure that the best information available on marine fisheries toxicity is made accessible to the public because toxicity is an important part of consumer choice (see the "California Program: Toxicity" section below).

MSC Program

The MSC is a non-profit, non-governmental, international organization established in 1996 by a partnership between the World Wildlife Fund and Unilever Corporation as a way to reduce overfishing through market incentives.[8] The MSC works with experts to develop standards ("Principles and Criteria") for sustainable fishing and to develop seafood traceability programs to ensure MCS-certified fish are in fact caught from and can be traced back to the certified sustainable fishery. The MSC has developed a logo that informs consumers that they are supporting fisheries that meet their criteria for sustainable seafood.

MSC Program: Principles, Criteria, and Attributes: MSC certification is based on three principles, presented below, which are represented through 31 performance indicators. See Figure 1, "MSC Assessment Tree" (below), and Exhibit 2, Attachment 1, "MSC Principles and Criteria for Sustainable Fishing," for more detail.

> *Principle 1: Stock Assessment and Stock Status: A fishery must be conducted in a manner that does not lead to overfishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably*

[8] Roeim C, Thalassorama. *Early Indications of market impacts from the Marine Stewardship Council's eco-labelling of seafood.* Marine Resource Economics, 2003. Volume 18, pp. 95–104.

leads to their recovery. The intent of this principle is to ensure that a fishery's productive capacities are maintained at high levels and not sacrificed in favor of short-term interests. Thus, exploited populations would be maintained at high levels of abundance designed to retain their productivity, provide margins of safety for error and uncertainty, and restore and retain their capacities for yields over the long term.

Principle 2: Ecosystem Impacts: Fishing operations should allow for the maintenance of the structure, productivity, function, and diversity of the ecosystem, including habitat and associated dependent and ecologically-related species on which the fishery depends. The intent of this principle is to encourage the management of fisheries from an ecosystem perspective under a system designed to assess and restrain the impacts of the fishery on the ecosystem.

Principle 3: Fishery Management System: The fishery is subject to an effective management system that respects local, national, and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable. The intent of this principle is to ensure that there is an institutional and operational framework for implementing Principles 1 and 2, appropriate to the size and scale of the fishery.

In September 2006, the MSC program achieved full consistency with the "Guidelines for the Eco-labeling of Fish and Fishery Products from Marine Capture Fisheries," an internationally-agreed upon set of principles for a credible fishery certification and eco-labeling scheme. Key points of these guidelines are that eco-labeling programs have:

- Objective, third-party fishery assessment using scientific evidence;
- Transparent processes with built-in stakeholder consultation and objection procedures;
- Standards based on three factors: Sustainability of target species, ecosystems, and management practices.

In addition, the MSC program is the only existing seafood certification program that is also consistent with "The Code of Conduct for Responsible Fishing (UN FAO)," [9] "The Code of Good Practice for Setting Social and Environmental Standards" (ISEAL), and the "World Trade Organization Technical Barriers to Trade Agreement."[10]

The MSC program contains the following attributes:

- Includes third-party verification, and is set up such that the development of a standard is completely independent from the assessment of the fishery against that standard.
- Uses a completely open and transparent process.
- Maintains and regularly improves certification status and performance indicators.
- Has been established for over a decade and has been noted in several scientific studies as the most credible, robust assessment of sustainability- and well-managed fisheries.

[9] Note that the FAO "Code of Conduct for Responsible Fishing" only provides guidelines, not an established standard with a methodology and certification program requirements.
[10] http://www.msc.org/about-us/credibility/how-we-meet-best-practice

- Helps avoid consumer confusion, and is likely to have the greatest impact on improving fishery and marine ecosystem health.

MSC Program: Scoring Process: In order to be eligible for and receive MSC certification, a fishery must meet or exceed minimum standards set by the MSC concerning the three program principles: 1) stock assessment and stock status, 2) ecosystem impacts, and 3) fishery management system.

Scoring takes into account the three program principles and 31 performance indicators (see Figure 1, below). The highest mark available is 100%; a score of 80% is the level of acceptable performance for an indicator, and a score of 60% is the minimal threshold allowable in an MSC evaluation. In order to be certified, a fishery must have an aggregate score of 80% or more for each of the three program principles and a score of 60% or more for each and every performance indicator.

If a fishery receives a score for any performance indicator of at least 60% but less than 80%, the certifier will set one or more conditions for continuing certification and specify desired outcomes or targets. In the absence of exceptional circumstances, the condition(s) shall improve performance of the fishery to at least the 80% level within a period set by the certifier (but not longer than the term of the certification). The certifier's role is to offer guidance and make clear to the fishery the required outcome rather than prescribe actions that should be taken; it is the fishery's responsibility to determine how to achieve the desired outcomes.[11]

If a fishery receives a score for any performance indicator of less than 60%, there is a major deficiency in the fishery that needs corrective action.

MSC Program: Chain of Custody: MSC certification addresses the movement of fish through the supply chain, from catch to retail sale. After a certain point in time (e.g., the first point of landing (usual) or first point of sale), the process is covered by a Chain of Custody certificate. The MSC program's "chain of custody" standard for seafood traceability ensures that the MSC eco-label is only displayed on seafood from an MSC-certified sustainable fishery (See Exhibit 2, Attachment 2, "MSC Chain of Custody Standard," for more detail). Each company in the supply chain must get a certificate from an independent, third-party certifier if the product will ultimately display the MSC eco-label.

To get "chain of custody" certification, businesses must be audited to show they have effective storage and record-keeping systems that prove that only seafood from a certified fishery carries the MSC eco-label. For example, companies have to show that they keep certified fish separate from non-certified fish, and that they can trace every delivery of certified fish to a "chain of custody"-certified supplier. Every business with a valid "chain of custody" certificate is given a unique code which must be displayed on certified seafood products to show buyers and consumers that they are buying from an approved supplier.

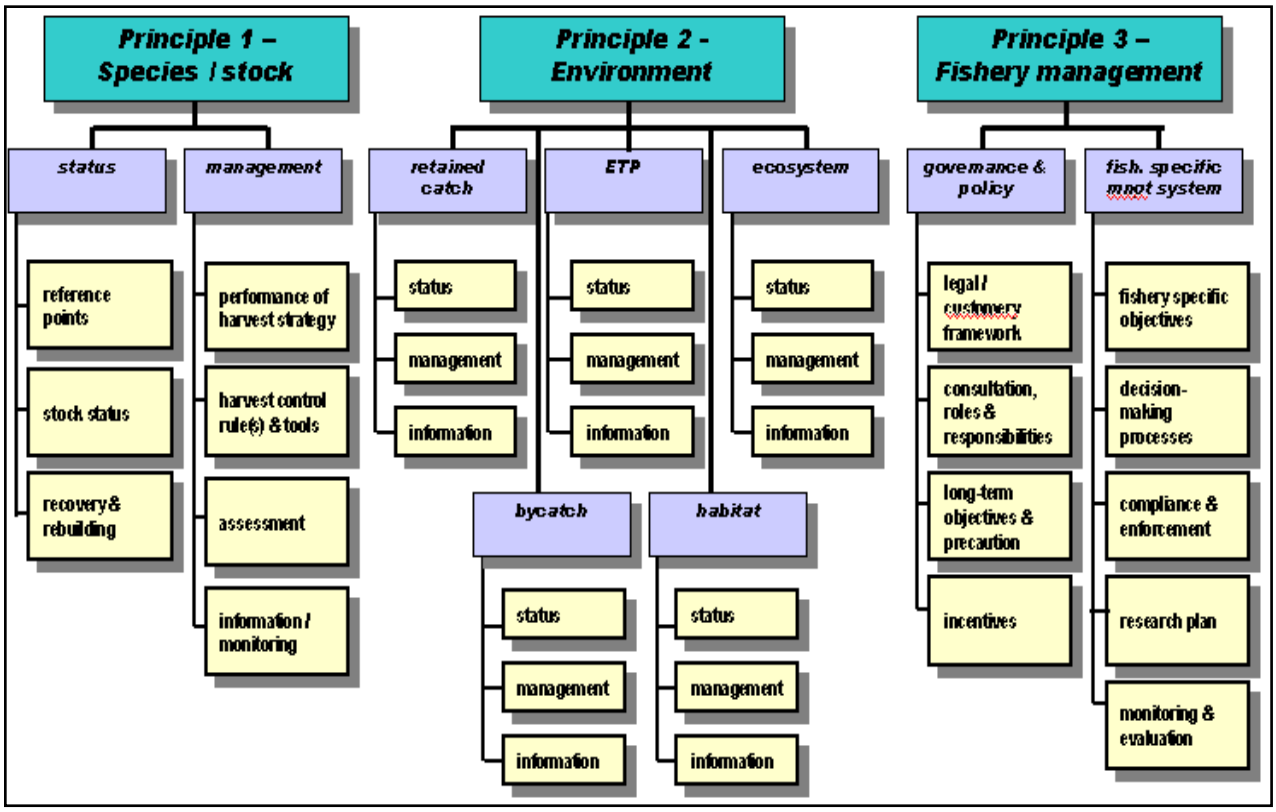
MSC Program: Ecolabel: The MSC eco-label is a registered trademark owned by the MSC and an organization must have an eco-label license to use it. Use of the eco-label is not mandatory.

[11] Get Certified! Fisheries, © Marine Stewardship Council, 2009

If an entity chooses to use the eco-label, it may need to pay annual fees or royalties (a one-time payment during any single supply chain) based on the following three categories of use:[12]

- *Consumer-facing*: Examples include retail and independent brand MSC-labeled seafood products, menus in food service outlets and "direct to consumer" websites;
- *Non-consumer-facing*: Examples include bulk packaging for certified seafood, food service caterer price lists and websites; and
- *Non-commercial*: Examples include use of the eco-label by media, charitable and educational organizations, fishery marketing and representative bodies, accredited certifiers and authors of books.

Figure 1: MSC Assessment Tree[13]



California Program

California Program: Higher Threshold for Two Performance Indicators: As recommended by many members of the public advisory panel convened by the OPC to help develop California's program, fisheries seeking certification under California's protocol would have to meet all the standards and thresholds of the MSC program, plus achieve higher scores (80% instead of 60%) on the following two performance indicators: Stock status and by-catch of ETP [endangered,

[12] http://www.msc.org/documents/logo-use

[13] From: Dapling et al. '*Navigating the Future*'. *Developing Sustainable Inshore Fisheries. The UK Inshore Fisheries Sustainability Project Summary Report.* Sussex Sea Fisheries Committee, Shoreham-by-Sea. Sussex.

threatened, or protected] species.

The "stock status" performance indicator falls under MSC Program Principle 1, "Stock Assessment and Stock Status," and indicates that the stock is at a level which maintains high productivity and has a low probability of recruitment overfishing. A score of 100% indicates "a high degree of certainty" that over recent years the stock is above the point where recruitment would be impaired, has been fluctuating around its target reference point, or has been above its target reference point. A score of 80% indicates it is "highly likely" that the stock meets this indicator, and a score of 60% indicates that it is just "likely." The California protocol requires a score of at least 80%.

The "by-catch of ETP" performance indicator falls under MSC Program Principle 2, "Ecosystem Impacts," and indicates that the fishery meets national and international requirements for protection of ETP species, that the fishery does not pose a risk of serious or irreversible harm to ETP species, and does not hinder recovery of ETP species. A score of 100% indicates "a high degree of certainty" that the effects of the fishery are within limits of national and international requirements for protection of ETP species, and a"high degree of confidence" that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species. A score of 80% indicates the effects of the fishery are known and are "highly likely" to be within the specified limits, and that direct effects are "highly unlikely" and indirect effects are "thought to be unlikely" to create unacceptable impacts to ETP species. A score of 60% indicates that known effects of the fishery are "likely" to be within the specified limits, and known direct effects are "unlikely" to create unacceptable impacts to ETP species. The California protocol requires a score of at least 80%.

California Program: Additional Independent Scientific Review: The OPC Science Advisory Team will be engaged in the certification process through early consultation in reviewing minimum eligibility criteria, and review of the MSC-required pre-assessments and full assessments. These reviews will be sought in consultation with the OPC Science Advisor. The reviews will be conducted in addition to MSC's peer review, thus bringing additional credibility, transparency, and independence to California's certification process. The team may also be engaged to help prioritize fisheries for certification assistance.

California Program: Additional Traceability Components: Verifying the seafood industry supply chain is a critically important component to any "eco-label" program. In order for California to have a robust and transparent seafood certification program, being able to trace the fish back to the fishery is paramount. The commercial fish distribution chain is complex and poorly understood by most Americans. Fish being sold in the United States is often caught, trans-shipped at sea, landed in a port, sent to another country for processing, reloaded on a cargo ship, and sent to another country for post-processing before finally arriving at a local distributor to sell to a local market.[14] Such complexity has created a situation where it is difficult to know whether fish being sold as "sustainable" is in fact derived from a sustainably-managed stock. Thoughtful design and management of traceability and a fish tracking system are not only

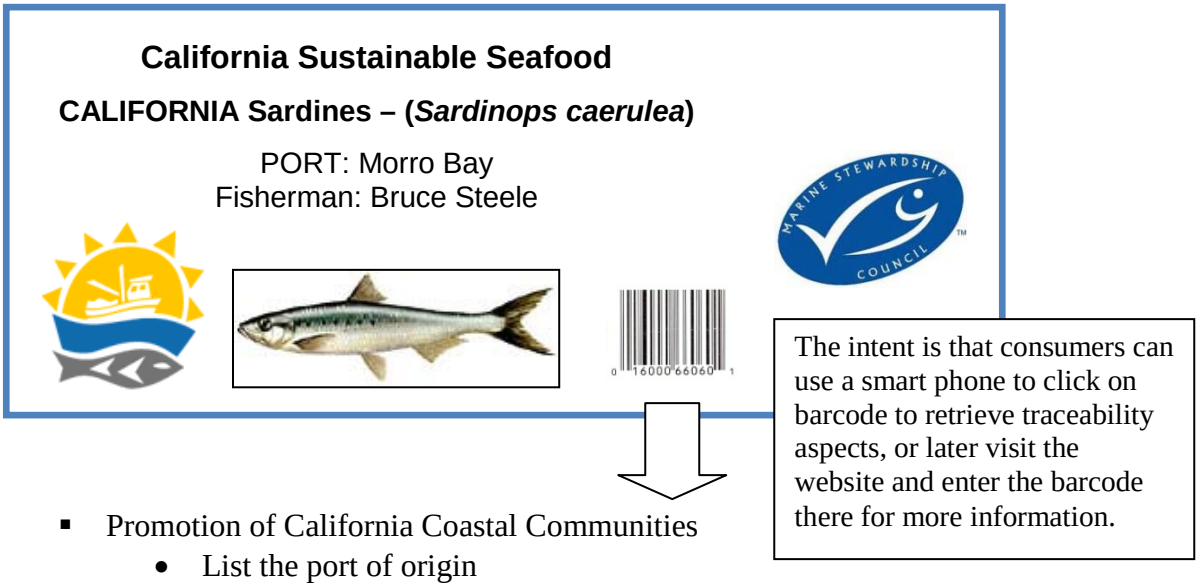
[14] Hepp, Jill. "Understanding the role of fisheries traceability and the connection to certification in light of recent IUU policy developments." Paper presented at the annual meeting of the International Marine Conservation Congress, George Madison University, Fairfax, Virginia, May 2009.

important for a robust certification system, but also to bolster consumer confidence and knowledge in addition to maintaining standards.

California fisheries that are certified as sustainable will comply with the MSC "chain of custody" standards for traceability.[15] The California program will also include an innovative and additional traceability component that will distinguish California fisheries from other MSC certified fisheries on the basis of increased tracking and data transparency from ship to plate. It is envisioned that one of the mechanisms for tracking traceability will be a unique barcode on each certified California fishery package. This barcode can be either scanned by a smart-phone or linked to a website that will reveal a host of details, such as the name of the vessel or fisherman who caught the fish, what type of gear was used to catch the fish, the port it was landed in, scientific name of the fish, and other unique information about the fishery. The OPC will also make available information to be displayed at retail seafood counters or other appropriate venues to help inform consumers about the sustainable seafood product.

California Program: Eco-Label/Logo: The California label may include the MSC label, an indicator that the product is from California, and additional traceability information such as the name of the port where the seafood was landed. Staff anticipates that information will be available on a website and accessible via a bar code on each California Sustainable Seafood Program-Certified product or package. OPC staff will consider requiring fees and royalties, similar to the MSC program described above. Revenue generated from the program may be used to continue assistance with certifications. Staff will bring any proposal for use of revenue generated from the program back to the OPC for concurrence.

The graphic below provides an example of the type of information that may be shown on the California label. The graphic is not intended to represent the actual label or logo; elements may be used as a starting point to develop the logo, the design of which will be selected by the Council Secretary with input from the advisory panel.



- Promotion of California Coastal Communities
  - List the port of origin

[15] MSC Chain of Custody Standards, Date of issue: 1 May 2010

- Landed in California/California permit holder
- Links to a community fishing organization (CFA)

- Fishing technique used/gear type
  - Hook and line, traps, selective trawl, etc
  - Area where fish was caught
- Who caught the fish
  - Name the captain, and/or fisherman /vessel
  - Link to Community Fishing Association website
  - Link to fishery website
- Date caught
- Species Information
  - Scientific name/more specific information about the fish caught
    For example: California Chinook Salmon – *Oncorhynchustshawytscha*
- Food Safety Information
  - OPC staff will work with staff from the Office of Environmental Health Hazard Assessment, the Department of Public Health, the Department of Fish and Game, the State Water Resources Control Board and others to provide information that informs the public about seafood toxicity issues
- Links to social media and websites
  - Link to a Facebook page where the consumer can become a "fan" of CA fish
  - Links to research on fisheries issues
  - Link to state and federal fishery regulations

California Program: Marketing Assistance

As specified in AB 1217, the California program will assist certified fisheries in marketing their products. OPC staff will develop the marketing assistance program for California-certified fisheries in consultation with the California Department of Food and Agriculture. This protocol will be updated to provide details about this program once it is developed.

California Program: Toxicity: According to the Institute of Medicine of the National Academies, fish and shellfish are low in saturated fat, contain omega-3 fatty acids, and are an important part of a healthy diet that can contribute to heart health and proper growth and development in children. However, there are a number of contaminants that may be associated with seafood, including chemicals, metals, and potentially harmful microbes.[16] Acute toxicity could result from consuming shellfish or finfish that have ingested naturally-occurring marine toxins (produced by phytoplankton) such as paralytic shellfish poisoning (PSP) toxins and domoic acid.[17] Although they result in immediate and severe consequences (such as vomiting, diarrhea, numbness, dizziness, paralysis, coma, or even death), cases of acute toxicity from ingesting seafood are relatively rare.[18] Cumulative toxicity could result from ingesting

[16] http://www.iom.edu/Reports/2006/Seafood-Choices-Balancing-Benefits-and-Risks.aspx
[17] http://www.whoi.edu/fileserver.do?id=47319&pt=10&p=18553
[18] For example, see the following article containing statistics for cases in Alaska: Dr. Brad Gessner, "Epidemiology of Paralytic Shellfish Poisoning Outbreaks in Alaska," Section of Epidemiology, Alaska Department of Health and Social Services (http://seagrant.uaf.edu/features/PSP/PSP.pdf).

contaminants such as mercury over time, which can bioaccumulate and eventually lead to adverse health effects. This type of toxicity can be avoided through development and application of guidelines (e.g., the EPA and FDA determine threshold amounts tailored to the various sectors of the human population) and warning labels.[19] It is worth noting that the vast majority of illness from ingesting seafood results from improper handling of food which allows harmful bacteria to grow.[20]

Currently, there is no consistent statewide monitoring system in place to test for most of the toxins that could cause a health concern to humans. Although not specifically called for in AB 1217, staff will work with the state and federal agencies that have the regulatory authority for and knowledge of addressing toxicity issues to ensure that the best information available on marine fisheries toxicity is made accessible to the public because toxicity is an important part of consumer choice. Specifically, OPC staff will work with staff from the Office of Environmental Health Hazard and Assessment (OEHHA), which already provides fish consumption advice for many water bodies in California (http://www.oehha.ca.gov/fish.html), the Department of Public Health (DPH), the Department of Fish and Game (DFG), the State Water Resources Control Board (SWRCB) and others to provide information that informs the public about seafood toxicity issues (e.g., through scanning a barcode on the California eco-label, which would provide links to additional detailed information on toxins using the best available information).

OPC staff will also use the best information available to date to consider toxicity when initially evaluating eligibility for certification under California's program. Generally, fisheries will be eligible for certification under California's program if there are no known reasons to expect significant and unavoidable toxicity issues (e.g., the fishery represents species that are low on the food chain and do not present bioaccumulation concerns, or potential toxicity can be decreased to levels that are insignificant via adherence to consumption guidelines). Staff will refer to federal or state standards when and where they are available, and will consult with experts from or directed by the OPC's Science Advisory Team. If a program that tests marine fish is eventually developed, results from that program will be factored in once the program is developed and can provide adequate data, but implementation of AB 1217 will not be put on hold until such results are available.

California Program: Eligibility and Limitations

Eligibility for certification under California's program extends to fish landed in a California port by a California commercially-licensed fisherman. Any fish landed outside California will not be eligible for the California label. This eligibility criterion considers the benefit to California's shoreside communities as well as its fishermen.

Per Public Resources Code Section 35617(c), seafood produced through aquaculture or fish farming will not be eligible for certification under the California protocol until nationally- or internationally-accepted sustainability standards have been developed and implemented.

[19] See the following examples: (1) http://www.fda.gov/Food/FoodSafety/Product-SpecificInformation/Seafood/FoodbornePathogensContaminants/Methylmercury/ucm115662.htm. (2) http://www.epa.gov/mercury/advisories.htm.

[20] http://foodsafety.gov/poisoning/causes/index.html.

California Program: Updates
The MSC program requires that a fishery become re-certified every five years. In addition, this protocol may be revised periodically.

California Program: OPC's Role:
Public Resources Code Section 35617 states that the OPC shall develop and implement a voluntary sustainable seafood program for California. In addition to a California protocol, the program is to consist of a competitive grant and loan program in years when funds are available to assist qualified California fisheries in obtaining the California voluntary sustainable seafood program certification (e.g., assistance with pre-assessments, initial certification, and/or re-certification) and in marketing their products. In providing funds, the OPC may serve as a co-client with a fishery in seeking a pre-assessment or full assessment under the program. As such, the OPC would have a voice in selecting the certifier and in the development and implementation of the assessment.

In addition, OPC staff anticipates leading design of a traceability program and label or labels that may be used exclusively to identify seafood certified under the California protocol, and developing the marketing assistance program for California-certified fisheries in consultation with the California Department of Food and Agriculture. OPC staff may also assist with facilitating independent scientific review as part of the certification process.

The OPC will vote to authorize funding for grant and loan programs, to concur with grant and loan awards, to become a co-client, and to certify or recertify any particular fishery. All authorizations and actions will be made in a public meeting (which will be properly noticed and will provide opportunity for public comment on the fishery).

II. California Program - Process For Certification

Step 1: Evaluation to meet a minimum criteria
Potential OPC Role: Staff assistance and/or funds toward completing the evaluation

Prior to initiating the MSC certification process, OPC staff will work with specific fisheries to evaluate whether they meet the following minimum criteria:

- Support from the state or federal management agency: California Department of Fish and Game (CDFG) and/or the Pacific Fishery Management Council (PFMC);
- Existence of a feasible organizational structure: For example, a Community Fishing Association (CFA) or similar entity that can serve as a co-client with the OPC to the MSC
- Fish is landed in California and the fishermen hold California commercial fishing permits
- Fishery is not listed on a federal- or state-endangered or threatened species list.
- There are no known reasons to expect significant and unavoidable toxicity issues (e.g., the fishery represents species that are low on the food chain and do not present bioaccumulation concerns, or potential toxicity can be decreased to levels that are insignificant via adherence to consumption guidelines).

If a fishery meets all of these minimum criteria, it can move on to Step 2, "Become Certified under the California Program."

Step 2: Become Certified under the California Program (which incorporates the MSC Program)
Certification to the MSC environmental standard is a multi-step process that is carried out by an independent organization known as a certifier (also called a third party certification body). Certifiers must be accredited by Accreditation Services International, and are appointed by the fishery. Once appointed, the assessment process can proceed as follows.[21]

Step 2.1: Pre-Assessment

Potential OPC Role: Action at an OPC meeting to authorize funds for grants or loans; action at an OPC meeting to concur with grant or loan award selection, and possibly serve as a fishery co-client. (Note: Although pre-assessment reports are generally kept confidential when fisheries are undergoing the MSC certification process, they may be subject to public disclosure if publicly-funded).

The fishery will undergo a pre-assessment in which third-party certifiers evaluate at a provisional level a fishery's performance against the MSC fisheries standards and the more stringent California standard set for the performance indicators of "stock status" and "by-catch of ETP species." The pre-assessment identifies potential issues in a fishery's performance, and enables potential fishery clients to prepare accordingly for a full assessment. The resulting report prepared by the certifier indicates whether the fishery is ready for full assessment, could be made ready, or requires significant reforms. At a minimum, the report will provide the following information: A preliminary assessment of the extent to which the fishery meets the MSC standard, an evaluation of the fishery's state of preparedness for full assessment, a review of the availability of required fishery data and information, identification of stakeholder interests that should be considered in a full assessment, a determination of the scope of the full assessment, a description of the unit of certification, and a description of potential obstacles or problems that may present a barrier to certification. The pre-assessment process will include additional review coordinated by the OPC Science Advisor, and engagement of the OPC Science Advisory Team, where appropriate.

Step 2.2: Full Assessment

Potential OPC Role: Action at an OPC meeting to authorize funds for grants or loans; action at an OPC meeting to concur with grant or loan award selection, and possibly serve as a fishery co-client.

The fishery will undergo a full assessment, which is the detailed, public, rigorous process that a third-party certifier will follow to determine whether the fishery meets the MSC standards and the more stringent California standard set for the performance indicators of "stock status" and "by-catch of ETP species". The process starts when the fishery client (the OPC and a fishery may serve as co-clients) signs a contract with the certifier and the certifier notifies the MSC that the fishery is entering full assessment. The full assessment process will include additional

[21] See the MSC website (http://www.msc.org/) for more detailed information on their certification process, particularly their guidance brochure entitled *Get Certified! Fisheries: A practical guide to the Marine Stewardship Council's fishery certification process.*

review coordinated by the OPC Science Advisor, and engagement of the OPC Science Advisory Team, where appropriate. Steps through the full certification process are as follows.

- Preparation: The MSC recommends a fishery prepare for full assessment by communicating with colleagues, agencies and buyers; applying for grants; appointing a project manager or steering group; and making contact with stakeholders to encourage participation in the assessment process.

- Full assessment: This is a seven-step process to determine whether the fishery meets the MSC standard. The process is led by the appointed certifier and its expert assessment team. It involves consulting with stakeholders, reviewing performance indicators, scoring the fishery, identifying ways that the fishery can strengthen its performance (if needed), peer review, and making a final determination about whether the fishery meets the MSC standard. Step seven consists of the certifier issuing a public certification report and receipt of the MSC certificate. This is an intensive process that calls for a high level of information to be provided by the fishery and others.

- Post-Assessment: The fishery must arrange for an annual audit of the fishery over the five-year period of fishery certification.

Step 2.3: OPC Concurrence

Potential OPC Role: Action at an OPC meeting to concur with a fishery's certification under the California program.

The fishery's certification under the California program will come before the Council at one of its regularly-scheduled meetings for concurrence. The item will be properly noticed consistent with OPC meeting protocol, and time for public comment will be provided at the meeting.

Step 3: Traceability

Potential OPC Role: Development of a traceability program and California eco-label; authorization of funds to administer the program.

The fishery must participate in the traceability program developed by OPC staff (e.g., work within specified program requirements for providing port, landing, and other data). This protocol will be updated to include more specific information about participation once the traceability program and eco-label are developed.

Step 4: Marketing (Optional for Fisheries)

Potential OPC Role: Development of a marketing assistance program in consultation with the California Department of Food and Agriculture; authorization of funds to administer the program.

The California-certified fishery may choose to apply for assistance in marketing its products. This protocol will be updated to provide details about this marketing assistance program once it is developed.

Step 5: Recertification

Potential OPC Role: Action at an OPC meeting to authorize funds for grants or loans; action at an OPC meeting to concur with grant or loan award selection, and possibly serve as a fishery co-client.

A recertification assessment typically begins about four years after the fishery's certification. The recertification assessment process follows the same steps as the fishery's original assessment process.

Marine Stewardship Council

MSC Fishery Standard

Principles and Criteria for Sustainable Fishing

Version 1.1 – 1st May 2010

Committees responsible for this Standard

This standard is intended to be used on a global basis by MSC accredited third party certifiers to undertake the certification of fisheries to the MSC Principles and Criteria for well managed fisheries.

This standard is intended to be a living document and will be reviewed from time to time.

The MSC environmental standard was developed following an international consultation with stakeholders between 1997 and 1999. This consultation included eight regional workshops and two expert drafting sessions and involved more than 300 organisations and individuals around the world.

Amendments Issued Since Publication		
Version	Date	Description Of Amendment
Draft placed in public domain December 1999		
1	November 2002	Issue 1 - Formal issue
1.1	1st May 2010	Formatting changes, insertion of copyright and document management information

MSC Principles and Criteria for Sustainable Fishing

At the centre of the MSC is a set of *Principles and Criteria for Sustainable Fishing* which are used as a standard in a third party, independent and voluntary certification programme. These were developed by means of an extensive, international consultative process through which the views of stakeholders in fisheries were gathered.

These Principles reflect a recognition that a sustainable fishery should be based upon:

- The maintenance and re-establishment of healthy populations of targeted species;
- The maintenance of the integrity of ecosystems;
- The development and maintenance of effective fisheries management systems, taking into account all relevant biological, technological, economic, social, environmental and commercial aspects; and
- Compliance with relevant local and national local laws and standards and international understandings and agreements

The Principles and Criteria are further designed to recognise and emphasise that management efforts are most likely to be successful in accomplishing the goals of conservation and sustainable use of marine resources when there is full co-operation among the full range of fisheries stakeholders, including those who are dependent on fishing for their food and livelihood.

On a voluntary basis, fisheries which conform to these Principles and Criteria will be eligible for certification by independent MSC-accredited certifiers. Fish processors, traders and retailers will be encouraged to make public commitments to purchase fish products only from certified sources. This will allow consumers to select fish products with the confidence that they come from sustainable, well managed sources. It will also benefit the fishers and the fishing industry who depend on the abundance of fish stocks, by providing market incentives to work towards sustainable practices. Fish processors, traders and retailers who buy from certified sustainable sources will in turn benefit from the assurance of continuity of future supply and hence sustainability of their own businesses.

The MSC promotes equal access to its certification programme irrespective of the scale of the fishing operation. The implications of the size, scale, type, location and intensity of the fishery, the uniqueness of the resources and the effects on other ecosystems will be considered in every certification.

The MSC further recognises the need to observe and respect the long-term interests of people dependent on fishing for food and livelihood to the extent that it is consistent with ecological sustainability, and also the importance of fisheries management and operations being conducted in a manner consistent with established local, national, and international rules and standards as well as in compliance with the MSC Principles and Criteria.

Preamble

The following Principles & Criteria are intended to guide the efforts of the Marine Stewardship Council towards the development of sustainable fisheries on a global basis. They were developed assuming that a sustainable fishery is defined, for the purposes of MSC certification, as one that is conducted in such a way that:

- it can be continued indefinitely at a reasonable level;
- it maintains and seeks to maximise, ecological health and abundance,
- it maintains the diversity, structure and function of the ecosystem on which it depends as well as the quality of its habitat, minimising the adverse effects that it causes;
- it is managed and operated in a responsible manner, in conformity with local, national and international laws and regulations;
- it maintains present and future economic and social options and benefits;
- it is conducted in a socially and economically fair and responsible manner.

The Principles represent the overarching philosophical basis for this initiative in stewardship of marine resources: the use of market forces to promote behaviour which helps achieve the goal of sustainable fisheries. They form the basis for detailed Criteria which will be used to evaluate each fishery seeking certification under the MSC programme. Although the primary focus is the ecological integrity of world fisheries, the principles also embrace the human and social elements of fisheries. Their successful implementation depends upon a system which is open, fair, based upon the best information available and which incorporates all relevant legal obligations. The certification programme in which these principles will be applied is intended to give any fishery the opportunity to demonstrate its commitment to sustainable fishing and ultimately benefit from this commitment in the market place.

Scope

The scope of the MSC Principles and Criteria relates to marine fisheries activities up to but not beyond the point at which the fish are landed. However, MSC-accredited certifiers may be informed of serious concerns associated with post-landing practices. [1]

The MSC Principles and Criteria apply at this stage only to wildcapture fisheries (including, but not limited to shellfish, crustaceans and cephalopods). Aquaculture and the harvest of other species are not currently included.

Issues involving allocation of quotas and access to marine resources are considered to be beyond the scope of these Principles and Criteria.

[1] Other complementary certification programmes (e.g., ISO 14000) provide opportunities for documenting and evaluating impacts of post landing activities related to fisheries products certified to MSC standards. Constructive solutions to address these concerns through appropriate measures should be sought through dialogue with certification organisations and other relevant bodies.

PRINCIPLE 1

A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery [2]:

Intent:

The intent of this principle is to ensure that the productive capacities of resources are maintained at high levels and are not sacrificed in favour of short term interests. Thus, exploited populations would be maintained at high levels of abundance designed to retain their productivity, provide margins of safety for error and uncertainty, and restore and retain their capacities for yields over the long term.

Criteria:

1. The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.
2. Where the exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level consistent with the precautionary approach and the ability of the populations to produce long-term potential yields within a specified time frame.
3. Fishing is conducted in a manner that does not alter the age or genetic structure or sex composition to a degree that impairs reproductive capacity.

PRINCIPLE 2:

Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Intent:

The intent of this principle is to encourage the management of fisheries from an ecosystem perspective under a system designed to assess and restrain the impacts of the fishery on the ecosystem.

Criteria:

[2] The sequence in which the Principles and Criteria appear does not represent a ranking of their significance, but is rather intended to provide a logical guide to certifiers when assessing a fishery. The criteria by which the MSC Principles will be implemented will be reviewed and revised as appropriate in light of relevant new information, technologies and additional consultations

1. The fishery is conducted in a way that maintains natural functional relationships among species and should not lead to trophic cascades or ecosystem state changes.

2. The fishery is conducted in a manner that does not threaten biological diversity at the genetic, species or population levels and avoids or minimises mortality of, or injuries to endangered, threatened or protected species.

3. Where exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level within specified time frames, consistent with the precautionary approach and considering the ability of the population to produce long-term potential yields.

PRINCIPLE 3:

The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

Intent:

The intent of this principle is to ensure that there is an institutional and operational framework for implementing Principles 1 and 2, appropriate to the size and scale of the fishery.

A. Management System Criteria:

1. The fishery shall not be conducted under a controversial unilateral exemption to an international agreement.

The management system shall:

2. demonstrate clear long-term objectives consistent with MSC Principles and Criteria and contain a consultative process that is transparent and involves all interested and affected parties so as to consider all relevant information, including local knowledge. The impact of fishery management decisions on all those who depend on the fishery for their livelihoods, including, but not confined to subsistence, artisanal, and fishing-dependent communities shall be addressed as part of this process;

3. be appropriate to the cultural context, scale and intensity of the fishery – reflecting specific objectives, incorporating operational criteria, containing procedures for implementation and a process for monitoring and evaluating performance and acting on findings;

4. observe the legal and customary rights and long term interests of people dependent on fishing for food and livelihood, in a manner consistent with ecological sustainability;

5. incorporates an appropriate mechanism for the resolution of disputes arising within the system[3];

6. provide economic and social incentives that contribute to sustainable fishing and shall not operate with subsidies that contribute to unsustainable fishing;

7. act in a timely and adaptive fashion on the basis of the best available information using a precautionary approach particularly when dealing with scientific uncertainty;

8. incorporate a research plan – appropriate to the scale and intensity of the fishery – that addresses the information needs of management and provides for the dissemination of research results to all interested parties in a timely fashion;

9. require that assessments of the biological status of the resource and impacts of the fishery have been and are periodically conducted;

10. specify measures and strategies that demonstrably control the degree of exploitation of the resource, including, but not limited to:

    a) setting catch levels that will maintain the target population and ecological community's high productivity relative to its potential productivity, and account for the non-target species (or size, age, sex) captured and landed in association with, or as a consequence of, fishing for target species;
    b) identifying appropriate fishing methods that minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;
    c) providing for the recovery and rebuilding of depleted fish populations to specified levels within specified time frames;

    d) mechanisms in place to limit or close fisheries when designated catch limits are reached;
    e) establishing no-take zones where appropriate;

11. contains appropriate procedures for effective compliance, monitoring, control, surveillance and enforcement which ensure that established limits to exploitation are not exceeded and specifies corrective actions to be taken in the event that they are.

[3] Outstanding disputes of substantial magnitude involving a significant number of interests will normally disqualify a fishery from certification.

B. Operational Criteria

Fishing operation shall:

12. make use of fishing gear and practices designed to avoid the capture of non-target species (and non-target size, age, and/or sex of the target species); minimise mortality of this catch where it cannot be avoided, and reduce discards of what cannot be released alive;

13. implement appropriate fishing methods designed to minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;

14. not use destructive fishing practices such as fishing with poisons or explosives;

15. minimise operational waste such as lost fishing gear, oil spills, on-board spoilage of catch, etc.;

16. be conducted in compliance with the fishery management system and all legal and administrative requirements; and

17. assist and co-operate with management authorities in the collection of catch, discard, and other information of importance to effective management of the resources and the fishery.

Marine Stewardship Council

MSC Chain of Custody Standard

Version 2.1 – 1st May 2010

Committees responsible for this Standard

This standard is intended to be used on a global basis by MSC accredited third party certifiers to undertake the certification of chain of custody verification for fish and fish products originating from fisheries certified to the MSC Principles and Criteria for well managed fisheries.

This standard is intended to be a living document and will be reviewed from time to time.

This standard was prepared by the MSC Executive and first published as a draft document in December 1999. The MSC Technical Advisory Board is the committee with the overall authority for the issuing and amendment of this manual.

Amendments Issued Since Publication		
Version	Date	Description Of Amendment
Draft placed in public domain December 1999		
1	August 2000	Issue 1 - Formal issue
2	August 2005	Major review of requirements
2.1	1st May 2010	Change to file name, insertion of copyright and document management information

Contents

Definitions

For all definitions refer to ISO 9000:2000 and MSC Definitions

Abbreviations Used

CoC: Chain of Custody

References

MSC Principles and Criteria
MSC Fisheries Certification Methodology
MSC Chain of Custody Certification Methodology
MSC Definitions
ISO 9000:2000 Quality Management Systems – Fundamentals and Vocabulary
ISO9001:2000 Quality Management Systems – Requirements
Codex Alimentarius Recommended International Code of Practice General Principles of Food Hygiene

Foreword

The objective of chain of custody certification is to provide an assurance for suppliers to demonstrate and claim that products originate from an MSC certified fishery and minimise the risk of public confusion between fish and fish products that have not.

To achieve this a full product traceability system is required so products can be traced from their suppliers and tracked to their buyers.

This standard is designed to provide a high level of confidence that products carrying the MSC Logo originate from an MSC Certified Fishery while not imposing unreasonable compliance costs on the industry.

The scope of this standard is the requirement for maintaining the chain of custody for products from fisheries certified to the MSC Standard. It does not cover issues such as food safety or quality.

MSC encourages all organisations to implement and maintain the appropriate food safety and quality programmes based on international models such as the Codex Alimentarius Recommended International Code of Practice General Principles of Food Hygiene, including HACCP, and / or ISO 9001:2000, Quality Management Systems – Requirements.

Section 1: Control system

1.1 The organisation shall have a management system which addresses all the sections below.

1.2 Unless specifically required in later sections, the management system does not have to be documented, unless the absence of documentation will create a risk to determining the certified status of the product.

1.3 The organisation shall be responsible for any work conducted by its subcontractors and shall retain full control over work performed by them and be able to demonstrate that traceability has been maintained and the requirements of this standard are met

Note: A management system is defined as a set of interrelated or interacting elements to establish policy and objectives and achieve those objectives (from ISO 9000:2000).

Section 2: Confirmation of inputs

2.1 The organisation shall operate a system for assuring that where specified, received products are certified as coming from a fishery certified to the MSC Standard or a CoC certified supplier.

2.2 A record of all MSC certified inputs received shall be maintained, showing the name of the supplier, their MSC CoC certificate number, evidence of certificate validity and sufficient other details to allow the tracing of those inputs back to their supplier if required.

Section 3: Separation and/or demarcation of certified and non-certified fish inputs

3.1 The organisation shall operate a system to ensure that when certified fish inputs are received they are clearly identified at all stages of their storage, processing, packaging, labelling or handling.

3.2 Certified fish inputs shall be kept separate from non-certified fish inputs throughout processing or manufacturing. This may be achieved by:

3.2.1 physical separation of certified and non-certified production lines;

3.2.2 temporal separation of certified and non-certified production runs;

3.3 Certified and non-certified fish inputs shall not be mixed.

3.4 Flavourings[1] made of non-certified fish inputs may be used where flavourings made from certified fish inputs are not commercially available[2]. Should non-certified fish flavourings be used, the maximum amount of fish flavouring that is allowed is 2% of the total fish content of the finished product. The method of calculating the percentages of ingredients is set out in Annex 1 of this Standard.

3.5 Where non-certified fish flavourings are used, the product name shall not refer to the name of the non-certified species.

3.6 Data shall be recorded to allow confirmation of the volumes and/or weights of certified and non-certified fish inputs and outputs over a specified production period.

Section 4: Secure product labelling

4.1 The organisation shall operate a secure system for the production, storage and application of product labels bearing a claim of MSC certified status or the MSC Logo, and will ensure that only MSC certified product is labelled as such.

Section 5: Identification of certified outputs

5.1 Certified fish and fish products shall be labelled or otherwise be identified (including the organisation's Chain of Custody Certificate number) in a manner that ensures traceability is maintained during packaging, storage, handling and delivery.

5.2 The organisation shall operate a system that allows any product or batch of products sold by the organisation as certified to be tracked to a sales invoice issued by the organisation.

5.3 The organisation shall operate a documented system to ensure that certified fish and fish products have information related to the product that allows full tracing and tracking of the product, including:

[1] flavouring: an input added to food primarily for the savour it imparts
[2] commercially available: the ability to obtain a production input in the required form, quality and quantity

5.2.1 a description of the product(s) and, where appropriate, batch identifiers;

5.2.2 a record of the volume/quantity of the product(s) and to whom it was sold or shipped and the date of shipment or sale.

Section 6: Record keeping

6.1 The organisation shall maintain appropriate records of all inputs, processing and outputs of certified fish and fish products.

6.2 The records shall be sufficient to trace back from any given certified output to the certified inputs.

6.3 The records shall be sufficient to allow the conversion rates for the manufacture of certified outputs from given certified inputs over any given period to be determined.

6.4 Records shall be maintained for a minimum of three years.

ANNEX 1: Calculation of percentage of certified and non-certified fish inputs (for flavouring purposes)

The percentage of non-certified fish flavouring ingredients in a product carrying the MSC label shall be calculated by:

a) Dividing the total net weight (excluding water and salt) of non-certified fish flavouring ingredients by the total weight (excluding water and salt) of the combined certified fish and non-certified fish flavourings in the finished product; or
b) Dividing the fluid volume of all non-certified fish flavouring ingredients (excluding water and salt) by the fluid volume of the combined certified fish and non-certified fish flavourings in the finished product (excluding water and salt) if the product and ingredients are liquid. If the liquid product is identified as being reconstituted from concentrates, the calculation should be made based on single-strength concentrations of the ingredients and finished product;
c) For products containing non-certified fish flavouring ingredients in both solid and liquid form, dividing the combined weight of the non-certified fish flavouring's solid ingredients and the weight of the liquid ingredients (excluding water and salt) by the total weight (excluding water and salt) of the combined certified fish and non-certified fish flavourings in the finished product;
d) The percentage of all non-certified flavouring ingredients in a seafood product shall be rounded up to the nearest whole number;
e) The percentage shall be determined by the organisation who affixes the MSC label on the consumer package. The organisation may use information provided by other suppliers in determining the percentage.

Products with multiple ingredients shall not include certified and non-certified forms of the same flavouring ingredient. They shall not be produced using non-certified fish flavouring ingredients if certified fish flavouring ingredients are commercially available.