

Thalassorama

Early Indications of Market Impacts from the Marine Stewardship Council's Ecolabeling of Seafood

CATHY A. ROHEIM
University of Rhode Island

Key words Ecolabeling, seafood, sustainable fishing.

JEL Classification codes Q22, Q13.

Introduction

Fish is the major source of protein for over one billion people around the world. Between 1950 and 2000 world catch of wild fish for human consumption increased from 20 to 95 million tons. As demand for seafood has risen, there has been a race to increasingly exploit known fish stocks and to find and develop new stocks (McIlgorm 1999). There is a general consensus that fish stocks worldwide have declined in the past several decades (FAO 1995).

Concern over the status of fish stocks, combined with well-known limitations of command-and-control management mechanisms (Hannesson 1996), has led to initiatives to provide consumers with more information regarding the production process of seafood products. A recent *Wall Street Journal* article reports that “restaurants hook diners with vivid accounts of a fish’s final moments” (McLaughlin 2002). Restaurant menus more and more frequently provide information on the catch method (line caught, troll caught, traps, etc.) An alternative method of providing consumers with information on the production process of seafood products is to use ecolabeling programs. In general, ecolabeling programs evaluate the production process with regard to established environmental standards set by an independent third party. If the process meets these standards, the producer or marketer may buy a license to use a specific ecolabel in its marketing. The label conveys to the consumer otherwise unobservable information concerning a product’s environmental impact. In the case of seafood markets, consumers who prefer seafood products that are sustainably caught provide a market-based signal to resource managers, creating an incentive to maintain sustainable fisheries resources.

The objective of this case study is to provide early indicators of the benefits of seafood ecolabeling, and in particular, the impact of the Marine Stewardship Council’s (MSC) fisheries certification program and ecolabel. The impacts of the MSC program are relevant to two broad groups: (i) the seafood market, including the fishers, processors, wholesalers, importers/exporters, and the retail, foodservice, and restaurant sectors; and (ii) fisheries, by promoting their sustainability, and soci-

Cathy A. Roheim is a professor in the Department of Environmental and Natural Resource Economics, University of Rhode Island, Kingston, RI 02881 USA, email: crw@uri.edu.

ety at large, including fishing communities and those in society who value sustainable fisheries.

There are a variety of effectiveness measures of the MSC certification program. For example, direct effects on the seafood industry might include greater profits from the higher prices consumers are willing to pay for seafood certified as coming from a sustainable fishery. Another indicator would be an increase in market share for those seafood products that are certified as sustainable, relative to those not certified. It may also open the product to new markets domestically and overseas. For the fishing industry, in addition to higher prices, permit and/or quota holders may experience an increase in the value of those permits and/or quotas. Consumers benefit from the value of additional information on the products they demand. Consumers may be concerned about the impact of fishing practices on dolphins, seals, sea lions, or other marine mammals, and be willing to search for and possibly pay more for seafood products that do not impact these animals. In general, consumers benefit by knowing that by buying products with an MSC label, they are supporting healthier ecosystems.

This case study focuses specifically on market effects, seeking to describe the impacts of MSC certification on all levels of the market. This is a difficult task, as the first fishery of the six currently certified was certified in 2000. Thus, very little time has passed from which to draw empirical conclusions. As a result, this case study will provide anecdotal evidence only. As time goes by, more fisheries will become certified and more data will be available, at which point empirical analysis may be conducted.

The remainder of the case study will begin by describing the MSC itself, its principles, goals, and practices. This is followed by a general overview of market effects, followed by a section in which anecdotal evidence specifically in each of the six certified fisheries is presented. Finally, implications are presented.

Marine Stewardship Council

The Marine Stewardship Council (MSC) is a non-profit, non-governmental, international organization established to promote sustainable fisheries and responsible fishing practices worldwide. The MSC has developed a logo that informs consumers that when they buy seafood products with the MSC logo, they are supporting healthier oceans and a healthier environment (www.msc.org). Only products from fisheries certified to be sustainable will bear that logo.

The World Wildlife Fund (WWF) teamed up with Unilever, a multi-national corporation, to create the MSC in 1996. The purpose of the MSC is to reward environmentally responsible fisheries management and practices. Those that are certified have the right to place a label on their products informing consumers that this product was caught from a well-managed and sustainable fishery. The goal of the MSC is to provide a market-based set of incentives for better management of the world's fisheries to achieve sustainable seafood production, in contrast to the current prevalence of command-and-control fisheries management.

The MSC's mission is to safeguard the world's seafood supply by promoting the best environmental choice. The MSC works toward sustainable marine fisheries by promoting responsible, environmentally appropriate, socially beneficial, and economically viable fisheries practices, while maintaining the biodiversity, productivity, and ecological processes of the marine environment through three principles:

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.

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.

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.

Based on this mission and the three principles noted above, the MSC has created standards which fisheries must meet before they can become certified. Certification is completely voluntary. Having set those standards, the MSC has accredited a number of certification firms (third-party independent entities) that then judge the fishery against the standard. Once the fishery is certified, then the MSC's trading company, MSCI, licenses the use of the MSC logo. Fisheries certified to date are Western Australian rock lobster, Thames (UK) herring, Burry Inlet (UK) cockles, Alaskan salmon, New Zealand hoki, and the South West (Cornwall – UK) mackerel handline fishery. Seven fisheries are currently in full assessment and more than two dozen fisheries are at other points in the process — among them, the South Georgia toothfish fishery and the largest fishery in the US, the Alaska pollock fishery.

Market Impacts

The first portion of this section describes consumers' current access to MSC-labeled seafood products. Consumer access to the product is key to the effectiveness of the ecolabel. The effectiveness of ecolabels also depends on consumer awareness of the label and consumer acceptance of the label (trust and understanding). Awareness is generally the result of a successful promotion. Acceptance depends on: (i) public understanding of the relevant issues; (ii) public understanding of the connection between relevant issues and product choices; (iii) an accurate and clearly understood presentation of the product attributes; and (iv) an understanding of what specific actions (*e.g.*, purchase decisions) individuals can take in response to the information provided by the labeling program. A labeling program is also more likely to be accepted if it is offered by a credible source.

The second portion of this section looks at each of the certified fisheries individually. Some of the effects of the MSC label differ between fisheries.

Consumer Access to MSC-labeled seafood products

Over 105 product lines in 10 countries around the world now carry the MSC label (Humphries 2002). Consumers' access to MSC product is significant, particularly in the US and Western Europe. Consumer access to MSC-certified Alaskan salmon is especially good, as this is the largest fishery certified thus far, with landings of 722 million pounds in 2001 (NMFS 2002). Therefore, it has the most product quantity available for distribution in retail outlets.

In the US, Whole Foods Market is the nation's leading natural foods grocer currently selling MSC-labeled products in more than 130 stores nationwide. Whole Foods' vice president, Ms. Margaret Wittenberg, is quoted in the MSC Annual Re-

port 2001/2002 as stating, "We applaud the MSC certification programme as it gives our customers confidence that purchasing seafood from certified sustainable fisheries will not contribute to overfishing or the harming of marine ecosystems."

Norm Thompson outfitters ship smoked salmon with the MSC logo through *Norm Thompson* holiday catalogs. SeaBear sells two MSC-labeled smoked Alaska salmon products in the US. Also, Vital Choice Seafoods and Wildcatch sell MSC-labeled canned Alaskan salmon products in the US. Internationally, the MSC program is used by the Unilever Corporation (the world's largest food company) and the five largest Alaskan salmon producers: Trident Seafoods, Ocean Beauty Seafoods, Wards Cove Seafoods, Peter Pan, and Icicle Seafoods. Youngs Bluecrest and Interocean Seafoods also support the MSC program. Major international retail support comes from Migros Cooperative and Coop Schweitz in Switzerland; Delhaize based in Belgium; and Tesco, Marks and Spencers, and Sainsburys in the United Kingdom. Gottfried Friedrichs in Germany began to market MSC products in October 2002.

Migros, the first supermarket chain in continental Europe to sell MSC products, reports that they currently have 27 MSC-labeled items in their assortment of products, with about 6% of the value of all fish sales in 2001 (Fehr 2002). This is approximately a 20% increase above 2000. Migros has conducted several aggressive product promotions of the MSC product to their consumers, building consumers' recognition of the logo and the logo's meaning.

Delhaize, which has 117 supermarkets in Belgium, with 183 affiliated supermarkets and 148 smaller neighborhood grocery stores, sells many environmentally responsible products and is enthusiastic about including MSC products in their product line (Haest 2002). Other environmentally responsible products it carries include Forest Stewardship Council (FSC)-labeled wood products, organic and fair-trade products. Eighty-five percent of Delhaize's product turnover comes from abroad, predominately the US, with 5.1% of turnover in Central Europe and 0.9% in East Asia (Haest 2002). Delhaize has the third largest number of supermarkets in New England (Hannaford Brothers) with 86 stores and 9% of the market (WorldCatch Wave 2002).

Two leading supermarket chains in the UK, Tesco and Sainsburys, competed to become the first to have newly certified product on their shelves. Sainsburys, the UK's largest fish retailer, was an early supporter of the MSC and the first UK supermarket to stock MSC-labeled seafood products. Sainsburys sells Thames herring and Cornish mackerel in season, and has stocked Alaskan salmon since the summer of 2002. Several other products are sold, such as New Zealand hoki sold as breaded fillets. Turnover in MSC-certified fish increased by 25% last year (Gieve 2002). East (2002) reported that Sainsburys is helping test the market for sustainable tuna. Tuna comprises 4% of Sainsburys' fresh fish sales, and this percentage is rising. The company is funding research focusing on the certification potential for the primary commercially exploited species (yellowfin and skipjack tuna) in the Pacific region (East 2002). Marks and Spencers have stocked MSC products at various times, with the exception of cockles and herring because they believe there is little demand for these products. They currently sell three MSC-labeled products (breaded New Zealand hoki, smoked Alaska salmon, and fresh South West mackerel).

One producer, Young's Bluecrest, the largest seafood producer in the UK, having recognized the potential value of the MSC label, has created an entirely new brand based around the MSC label. The MSC Annual Report states that Young's Bluecrest has introduced a breaded New Zealand hoki product as the first in a new seafood range called 'Fish for Life,' highlighting fish which have been independently assessed as coming from properly managed and sustainable sources. A second product in this range, a value-added Alaskan salmon product, has recently been

launched. The 'Fish for Life' brand is designed to promote the health benefits of fish to the consumer and assure them that by buying these products they have not contributed to the global problem of overfishing.

In the foodservice sector, there has been a growing interest in the MSC program. Currently, two UK chains are using the MSC logo, the Fish! chain of restaurants and Little Chef (MSC 2002).

In summary, consumer access to MSC-certified products is large and growing. Many seafood buyers for grocery corporations have indicated that they look forward to when there is a wider choice of MSC-certified products available so that they can increase the range of offerings to their customers. To this point, it appears that there is a significant amount of receptiveness of MSC products in the market, which bodes very well for the future of certified seafood.

To see how individual certified fisheries have fared, the next sections focus specifically on a case-by-case basis.

Effects in Specific Fisheries

WESTERN AUSTRALIAN ROCK LOBSTER — CERTIFIED MARCH 2000

Lobster Australia exports AU\$30 million (approximately US\$17 million) of live lobster per year. There has been an increase of 20–25 new enquiries to the Western Rock Lobster Development Association since the successful MSC certification of the fishery was announced in March 2000 (Khawam 2002). This represents a 15% increase from the previous year.

The primary market for this product is Asia, such as Japan, Taiwan, and Singapore, where consumers are reportedly not as interested in environmental attributes of products. However, the European Union (EU) market has increased its demand for Western Australian rock lobster somewhat. The Australians hope that the MSC label can help them overcome the depressing effects on demand from the 12% tariff barrier the EU places on Australian product. The competition in this market for lobster is tough, especially when Canadian lobster faces an 8% tariff while Cuban product has no tariff placed on its imports by the EU (Gibson 2002).

THAMES HERRING — CERTIFIED MARCH 2000

Local fishermen have reported that as the likely certification of this fishery became known, there was an immediate rise in the price for their herring. A driftnet fisherman was quoted at the time of certification as saying, "Even before the certification was granted, a buyer called and wanted to buy it all and the selling price also went up from £2.00/14 lb. (US\$3.20/14 lb.) to £3.00/14 lb. (US\$4.80/14 lb.) immediately" (Khawam 2002). In the first year of its certification, the level of interest from the retail sector increased and prices paid to the herring fishermen rose by up to 50%. Many retailers had never stocked Thames herring before they carried the MSC label.

NEW ZEALAND HOKI — CERTIFIED MARCH 2001

Soon after certification of the New Zealand hoki fishery, Unilever began to purchase it for the first time, the value of which was thought to be in excess of US\$3 million. Unilever indicated that it would take at least 4,000 tonnes a year from local hoki stocks, which means the industry benefits by as much as US\$10 million (Khawam 2002).

The share prices of New Zealand's largest fishing company, Sanford Group Ltd., which is the main fishing company associated with the hoki fishery, have risen steadily. The shares were at an all-time high after the hoki fishery gained MSC certification as a profit increase was predicted.

Sealord Group Ltd. reports that there are a number of hoki products sold with the MSC label. The greatest volume comes from frozen-at-sea fillet blocks that are sold to major European seafood processors. Through 2001, nine major European processors signed up for MSC hoki products, and in 2002 there were 13 products registered with major brands like Iglo, Birdseye, Young's Bluecrest, and Sainsburys. Sainsburys had dropped hoki from product selection, but reintroduced it once it was certified (Loveridge 2002).

An estimate of the value of MSC-labeled hoki was to NZ\$50 million (approximately US\$25 million) for 2002. While it is difficult to separate out cause and effect, the price of hoki blocks has risen around 10% over the last year, since certification (Loveridge 2002). Furthermore, while it is always hard to assign particular outcomes to single dimensions, the expectation and achievement of MSC certification for hoki has been a major contributor to the stability of the industry over the last two years. With species branding (selling hoki as hoki rather than whitefish), MSC labelling, and the commitment of the major processors/marketers, it is anticipated that some of the volatility of the generic whitefish market will be avoided.

A reduction in price volatility is a measure of success for ecolabeling. For example, retailers committed to MSC product have very few substitutes within the MSC-labeled product category, and cannot substitute to others even if prices of the substitutes decline. This is particularly true for whitefish, such as hoki. Companies, such as Unilever, usually switch between whitefish categories (haddock, cod, pollock) to use in fish sticks with changes in price (Nag 2002). Now they are committed to whitefish from sustainable sources, and as a result are not as easily able to switch between whitefish products. This results in lower price volatility. However, we should keep in mind that as more whitefish products become certified (*e.g.*, Alaska pollock) this reduction in price volatility will likely decrease.

SOUTH WEST MACKEREL HANDLINE FISHERY (UK) — CERTIFIED MAY 2001

The only market anecdote uncovered for this fishery was that the following products are now for sale on a seasonal basis: Tesco fresh mackerel, Migros fresh mackerel, Migros smoked mackerel, and Marks and Spencer fresh mackerel.

BURRY INLET COCKLES (UK) — CERTIFIED APRIL 2001

Similar to the Cornish mackerel fishery, there is little information available on market impacts. The fishery was certified as sustainable; however, there are public health and product quality issues that detract from its MSC certification and prevent it from appearing in the marketplace (Khawam 2002).

ALASKA SALMON — CERTIFIED SEPTEMBER 2000

The Alaskan salmon fishery, including all five Pacific species (chinook, coho, sockeye, chum, and pink) and all gear types, was certified in September 2000, although it was 2002 before a significant number of companies were certified to sell MSC-labeled product. For that reason, there is very little anecdotal or empirical information on the market impacts of MSC ecolabeling on this product.

At present, there are over 60 companies that have MSC chain-of-custody certification, including the five largest producers: Trident Seafoods, Peter Pan, Icicle Seafoods, Ocean Beauty Seafoods, and Wards Cove Seafoods (Humphries 2002).

Whole Foods Markets kicked off sales of labeled Alaskan salmon in its stores with a big promotion in June and July 2002 called "Fish For Our Future." The Fish For Our Future educational awareness campaign highlighted wild Alaska salmon, the first North American seafood species to earn an ecolabel from the MSC. They have reported strong interest and strong sales during the promotions. They are currently planning for a 2003 promotion (Fleming 2002).

In the summer of 2002, Washington-based SeaBear was the first US firm to apply the MSC's ecolabel to nationally distributed smoked salmon products. The logo is featured on their top-selling Copper River smoked salmon. SeaBear ships wild salmon direct to customers across the country and also sells its products through high-quality retailers including Thriftway, Hannaford Brothers, QFC, and Larry's (Khawam 2002).

In November 2001, Norm Thompson Outfitters of Portland, OR, became the first catalog company in the world to offer smoked salmon products bearing the MSC label (Humphries 2002).

John West® canned salmon is the market leader in Australia and New Zealand, and bears the MSC logo in Australia (Lees 2002). Unilever is the owner of the John West® brand.

Ecofish, Inc. is a company in Portsmouth, NH, (US) that sells vacuum-packed and frozen seafood directly to natural foods retailers and restaurants, and selected products are also sold directly to consumers over the internet. The company relies on an advisory board to inform them which fisheries are sustainable, and only products from those fisheries are sold. Interestingly, EcoFish.com sells Alaskan coho, but according to owner Henry Lovejoy, they do not place the MSC logo on that product for two reasons. First, Alaskan salmon is the only product in their selection currently certified to carry the logo, and lack of its appearance on the other "sustainable" products they carry, which have not been assessed by the MSC, might be construed negatively. Second, since EcoFish.com has not applied for MSC chain-of-custody certification, it is not legally able to display the MSC logo (Lovejoy 2002).

Given that there is not much information to date on actual impacts of the MSC label on Alaskan salmon, it is worth emphasizing that the potential market impacts of MSC certification of the Alaskan salmon fishery are significant. Potential market impacts of certification may: (i) create an increase in prices; (ii) reverse the decline in market share in domestic and overseas markets; and (iii) make inroads into new markets. Taking each of these in turn, it can be shown that Alaskan salmon is in a market position in which the MSC label may well have a positive effect.

Reverse the decline in market share in key markets: Alaskan salmon's market share in key markets (domestic, Japan, Europe) has declined in the last decade. A portion of this decline is explained by a supply effect: production of farmed salmon has overtaken the supply of wild salmon. In 1980, wild salmon supplies were nearly 100% of worldwide production of salmon. As production of farmed salmon increased over the next two decades, wild salmon constituted only 50% of worldwide salmon production by 2001 (Johnson 2002). The other portion of the loss in market share is a demand effect: advertising and promotion of farmed salmon has been very effective, and has generated new markets for salmon in southern Europe, as well as flooding established markets such as Japan and northern Europe. As a result, market shares in key export markets have also declined, even in markets formerly purchasing only wild salmon. Exports of fresh/frozen, eviscerated salmon from the US to

Japan have steadily dropped from 176 million pounds in 1996 to 84 million pounds in 2000 (NMFS 2002). Among its suppliers, Japan has reduced its imports of salmon from the US and increased its imports of farmed salmon and salmon trout from Chile.

MSC certification of Alaskan salmon is one means to increase the differentiation of wild salmon from farmed salmon, and may have a positive demand effect on its own. If certification has a positive impact on demand, we would expect to see consumers turning from farmed to Alaskan wild salmon. Since certification in 2000, there are indeed reports that sellers of Alaskan salmon are finding buyers in Europe for MSC-labeled Alaskan salmon, and that these sales are recapturing sales that were previously lost to farmed Atlantic salmon, particularly in the smoked markets. The interest in MSC-labeled Alaskan salmon seems to be driven by a desire to have natural products that can more easily sit side-by-side with organic and natural foods than farmed fish (Haest 2002).

Make inroads into new markets: In some foreign markets where salmon consumption was historically very low, farmed salmon promotions created new markets for salmon – but only for farmed salmon. This is true in such European nations as Italy and Poland. Concentrated promotions of wild, MSC-labeled Alaska salmon, such as those conducted by major retailers in other parts of Europe and the US, may help to create market share in markets such as these.

Create an increase in prices: Prices of Alaskan salmon have declined in real terms over the past two decades, in large part because world supply of salmon has outstripped demand, creating a market where producers of farmed and wild salmon are price-takers. MSC certification provides the producers of Alaskan salmon to differentiate their product, potentially transforming Alaskan salmon from a commodity to a niche market product.

As the presence of the MSC label increases and consumer education on sustainable fisheries continues for Alaskan salmon, this will provide marketers of Alaskan salmon with a valuable opportunity. This is particularly true as consumers are faced with more questions regarding the quality of farmed salmon (use of vaccines and antibiotics), as well as the impact of farming practices on the environment. As consumer demand for Alaskan salmon increases due to certification, particularly for fresh/frozen and smoked salmon, there may be corresponding increases in prices, most likely for chinook, coho, and sockeye salmon.

Implications for the Future of MSC-certified Seafood

The primary difficulty retailers have in supporting the MSC program and providing MSC-labeled product to consumers is the limited availability of MSC-labeled products. In part, this is because many of the fisheries certified to date are seasonal in nature, and high-quality product is not available during the entire year. A few of the fisheries presently certified are too small to provide an abundance of product to the market; *e.g.*, Burry Inlet cockles and Thames herring. Thus, certification of additional fisheries is necessary in order to increase availability of product for the market and to help ensure the effectiveness of the MSC certification program.

The implications of an increased number of certified fisheries are twofold. First, more product in supermarkets and restaurants and product promotions will increase consumer awareness of positive fisheries management efforts around the world and what role they as consumers are able to play. As long as retailers and restaurants are

willing to team up with the MSC and conduct product promotions, such as those done by Whole Foods Markets in the US, sales will likely grow. This is a necessary condition to maintain interest in the retail industry and firms down the market chain. Second, an increased number of certified fisheries has the intended effect of improving fish stocks. There seems to be a trend emerging whereby once a fishery has been certified, other fisheries of similar species seek certification. For example, two lobster fisheries have come forward for certification after the Western Australian rock lobster fishery certification was announced. Similarly, soon after the Alaska salmon fishery was certified, the salmon industry in British Columbia requested that its fishery proceed with the certification process.

The major markets for MSC-labeled product will likely remain in North America, Australia/New Zealand, and Europe for the near future, as consumers in these regions are also more disposed toward purchasing low environmental impact products, such as organic foods, FSC-labeled wood products, and less well-known fair trade products.

This does not mean that developing nations are being left behind. There is concern that developing nations will not be able to gain access to these markets, as it is financially difficult to certify fisheries in their countries (OECD 2002). However, efforts are underway within and outside the MSC to encourage and help fund certification of fisheries in countries around the world, including those in developing nations. This, in turn, will provide a wider variety of MSC-labeled products with the benefits discussed above.

In sum, based on the information conveyed in this case study, the market for MSC-labeled products appears bright. The real test is whether a market for MSC-labeled seafood results in meeting the goals of the MSC: healthier fisheries and ecosystems as a result of market-based incentives for better management of the world's fisheries. It may be some time before we are able to assess this.

References

- East, R. 2002. Bigger Fish to Fry. *Green Futures* November/December:50.
- Fehr, M. 2002. Migros Genossenschaftsbund, personal communication.
- Fleming, L. 2002. Alaska Seafood Marketing Institute, personal communication.
- Food and Agriculture Organization of the United Nations (FAO). 1995. *The State of World Fisheries and Aquaculture*. Rome, Italy.
- Gibson, T. 2002. Western Australian Rock Lobster Development Association, personal communication.
- Gieve, C. 2002. Marine Stewardship Council (MSC), personal communication.
- Haest, C. 2002. Delhaize, personal communication.
- Hannesson, R. 1996. *Fisheries Mis-management: The Case of the North Atlantic Cod*. Oxford, UK: Fishing News Books.
- Humphries, J. 2002. Marine Stewardship Council (MSC), personal communication.
- Johnson, H.M. 2002. *2001 Annual Report on the United States Seafood Industry*. Bellevue Washington.
- Khawam, H. 2002. Marine Stewardship Council (MSC), personal communication.
- Lees, G. 2002. Alaska Seafood Marketing Institute, personal communication.
- Lovejoy, H. 2002. EcoFish, Inc., personal communication.
- Loveridge, R. 2002. Sealord Group Ltd., personal communication.
- Marine Stewardship Council (MSC). 2002. *Annual Report 2001/2002*. London.
- McIlgorm, A. 1999. Fisheries Trade and the Marine Environment. Keynote address, Pacific Economic Consultative Committee Task Force on Fisheries Development and Cooperation. Wellington, New Zealand.

- McLaughlin, K. 2002. Menu Oversharing: How Your Dinner Died. *Wall Street Journal*, October 17:D3-D4.
- Nag, A. 2002. Creating a Business Case for the Marine Stewardship Council's Certification and Ecolabeling Program. Northwestern University School of Business. August.
- National Marine Fisheries Service (NMFS). 2002. *Fisheries of the United States, 2001*. Silver Spring, MD.
- Organization for Economic Cooperation and Development (OECD). 2002. Private Certification of a Fishery as Sustainable. Global Forum on Trade Case Study Documentation for the Workshop on Environmental Requirements and Market Access: Addressing Developing Country Concerns. <http://webdomino1.oecd.org/comnet/ech/tradeandenv.nsf>
- WorldCatch Wave. 2002. Who's King of the Hill in New England Grocery Market? Nov. 12.