

# Can Sustainable Fisheries Management Add Value in Japan? The Case of Bigeye Tuna

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## 1. Introduction

The 2022 Basic Plan for Fisheries has promoted the acquisition of seafood ecolabel certification in Japan. The Marine Stewardship Council (MSC), which has the largest market share and is leading the world, currently accounts for more than 15% of the world's natural catch from MSC-certified fisheries. Japan also has its own seafood ecolabel, MEL (Marine Eco Label Japan). However, while the acquisition of seafood ecolabel certification in Japan is progressing for MEL, it is not progressing for overseas certifications such as MSC. One of the factors hindering this is the high costs for certification and maintenance. The more reliable the third-party audit, the more scientific research is required, and the higher the assessment costs tend to be. As a result, it is economically difficult to maintain MSC certification in the long run, and these certification acquisitions are dependent on subsidies (Wakamatsu and Wakamatsu, 2017).

One possible option to address this issue is the Fishery Improvement Project (FIP). FIP is not a certification system, but a voluntary project based on private governance that provides plans to improve sustainable fisheries for fisheries that are considering acquiring seafood ecolabel certification (Crona et al., 2019). It is not limited to fisheries, but a series of stakeholders, including retailers, distributors, NPOs, processors, and fishery companies, cooperate to create added value for sustainability efforts. FIP is a more affordable and accessible option than seafood ecolabel certification such as MSC. If FIP is valued by consumers, it is possible that more fisheries will consider acquiring seafood ecolabel certification. This study will conduct a web survey to investigate consumer preference for seafood ecolabels and FIPs, and estimate how much consumers are willing to pay for seafood from FIP fisheries, and examine whether FIP has added value compared to other seafood.

## 2. Method

This study investigated bigeye tuna sashimi products. The product in Figure 1 is a 100-gram package of medium fatty bigeye tuna from Seychelles, with Spain as the country of origin. The product was purchased on the same day at a supermarket in Tokyo for 798 yen (as of December 8, 2022). Bigeye tuna is popular in Japan because it has a similar taste to high-end bluefin tuna. Moreover, it is inexpensive and claims the second-largest supply in Japan after yellowfin tuna. Bigeye tuna is also caught in the Pacific Ocean, Indian Ocean, Atlantic Ocean, and along the coast of Japan, and is available both domestically and imported, both fresh and frozen. It is a fish species that is familiar to many consumers, and thus is a suitable fish species for this study.



Figure 1. Images of bigeye tuna used in discrete choice experiment

## 3. Results

The survey obtained 2,875 valid responses. The households of the respondents generally reflected the median of Japanese consumers. The household income of the respondents was at the national average, with 17% being housewives. Nearly 60% had children, 4% had more than a master's degree. The rates of recognition are 10% for MSC, 10% for MEL, 7% for ASC, and 6% for FIP.

The analysis also resulted in added value for each purchasing factor, as shown in Figure 2.

On average, the basic price of bigeye tuna (unlabeled, thawed, imported) was estimated to be 602 yen. In contrast, domestic brands (Kagoshima, Shizuoka, Miyagi, and Kochi) were evaluated 76, 83, 72, and 91 yen higher than imported, and MSC, MEL, and FIP were evaluated 13, 32, and 17 yen higher than unlabeled. In addition, fresh was evaluated 67 yen higher than thawed.

## 4. Conclusion

This study investigated whether seafood ecolabels and FIPs have added value for bigeye tuna sashimi products in Japan. The study found that there is a significant positive price premium of 17 yen for FIP products, suggesting that Japanese consumers are willing to pay for sustainable fisheries management practice, just like for certified fisheries (MSC 13 yen, MEL 32 yen). The price premium of 17 yen for FIP products is equivalent to 3% of the basic price. This means that consumers are willing to pay 3% more for seafood products based on FIP. This suggests that fishermen can earn 3% profit by simply informing consumers

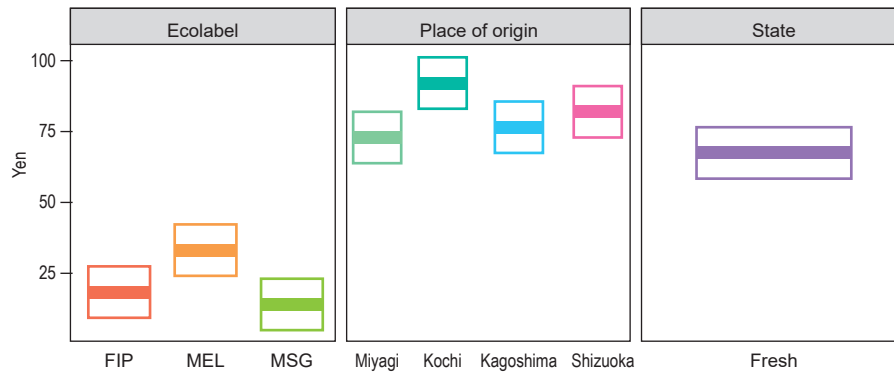


Figure 2. Consumers' willingness to pay for attributes sorted by purchasing factors

that they are participating in FIP, even before they obtain certification.

In this study, sustainability (ecolabels, FIP) was not highly valued compared to other purchasing factors (origin, thawed or not). This is mainly because the image of the ecolabel was not provided in order to compare FIP with other ecolabels. On the other hand, there are reports that the power of the logo creates the high valuation (Janssen and Hamm, 2012), and it is a reasonable result that the evaluation would be low if the logo was not displayed. Other ecolabels, MSC and MEL, had added value of 2.2% and 5.3%, respectively. However, considering that the price premium for bluefin tuna was more than 30% in previous studies (Hori et al., 2020), this difference is also attributed to the lack of visual value of the logo.

The study suggests that FIP could provide economic incentives for fisheries, but it is important to note that this does not necessarily contribute to the improvement of sustainable fisheries. This is because certification of seafood ecolabels is based on the results of strict assessment, while participation in FIP does not require an assessment, making it easier for unsustainable fisheries to participate.

Many fisheries participating in FIP have been participating for less than two years, and it is possible that they have not been adequately evaluated. There are also many fisheries that cannot be evaluated due to lack of data. Some fisheries participate in FIP for the added value only because of the low entry barrier (Deighan and Jenkins, 2015), and many reports have shown that these fisheries have improved their management and sustainability performance. On the other hand, if FIP is abused as a convenient means to secure profits with a low entry barrier, it could damage the value of FIP as a legitimate sustainability practice.

To address this concern, the Conservation Alliance is urging consumers not to purchase products that are unlikely to improve even with FIP. At the same time, it is necessary to ensure a transparent evaluation system that allows consumers to choose seafood products from fisheries that are committed to improving sustainability, while informing consumers of the sustainability performance of fisheries.

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