

Impact of the X-Press Pearl ship fire on domestic marine fish consumption in Western, North Western and Southern provinces: A case study

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1. Introduction

Fish has been consumed by Sri Lankans for many centuries. Fish provides protein for humans not otherwise available (Burger & Gochfeld, 2006). According to statistics, more than 400 000 metric tons of fish have been produced by the marine fisheries sector and 90 000 metric tons by inland fisheries and aquaculture sector (Ministry of Fisheries, 2020).

On the 20th of May 2021, X-Press Pearl, a 186 meter-long Singapore-registered container ship caught fire while anchored off the coast of Sri Lanka, near the capital city of Colombo (Oceanswell, 2021). The vessel was carrying many containers of bunker fuel oil, gas oil, nitric acid, lubricating oil, chemicals, cosmetics, millions of plastic pellets, and shopping bags. The leakage of dangerous compounds such as nitric acid, sodium dioxide, copper, and lead raised concerns. Carcasses of dead marine animals were frequently reported soon after the incident. Dead fish washed up with bloated bellies and plastic pellets.

This marine accident caused a major blow to the livelihoods of fishermen in the country. Many fishing families lost their income overnight and were forced to find alternative sources of income. Additionally, fish consumption among the general public was affected due to various claims of potential oceanic pollution. This disaster had a major impact on the livelihoods of people residing in the western province, north western province, and southern province. However, no studies have been published yet to understand the impact of the X-Press Pearl disaster on domestic fish consumption. This study aims to provide an insight into this by studying the fish consumption patterns of the people living in the western province, north western province, and the southern province before and after the disaster.

2. Materials and Methods

The study was carried out from June 2021 to July 2021. Questionnaires were distributed among the individuals residing in the western province, north western province, and southern province, the major provinces affected by the disaster. A total of 1255 individuals responded to the questionnaire provided. Individuals in this study represented the study areas as follows: 533 (42.47%) in the western province, 322 (25.66%) in the north-western province, and 400 (31.87%) in the southern province.

The questionnaire was used to understand the awareness levels of the X-press pearl ship fire among the residents in the study areas and changes in fish consumption patterns. In addition to this, data related to monthly income, knowledge on fish landing sites and preferred species for consumption were collected. Collected data were analysed using SPSS statistical package (version 23) and MS Excel.

3. Results and Discussion

Monthly income level and fish consumption pattern

The monthly income level of the respondents showed a majority of them (38.17 %) earning above Rs. 50,000 per month. A smaller proportion of the respondents earned a monthly income of less than Rs. 10,000 (14.50 %). Among the 1255 individuals, the majority (93.86 %)

consume fish very often while only 4.78 % of them consume fish once a month. It was evident that most of the respondents are regular consumers of fish.

Knowledge about the fish landing site and preference of species

When inquired about the location of fish caught, most of the individuals (54.82 %) have awareness about the landing site of the fish they purchase. Most of the respondents (66.14 %) prefer to consume marine fish species while 32.11 % prefer both freshwater and marine species.

Reasons for fish consumption

Data collected from the respondents proved that most of them were aware of the nutritional benefits associated with fish consumption. A majority of the respondents (83.43 %) consume fish to obtain protein and other nutrients. Only a smaller proportion of individuals reported that they consume fish for habitual reasons (33.63 %).

Awareness regarding the X-Press Pearl disaster and subsequent behaviour in fish consumption

Among the individuals considered for this study, most of them responded that they have a clear understanding of the recent X-Press Pearl ship fire (90.04 %) followed by 9.40 % of respondents reporting a moderate level of awareness regarding the incident. Less than one percent (0.56 %) were unaware of the ship fire. Most of the individuals did not consider consuming fish due to associated risks of contamination by the ship fire (Figure 1).

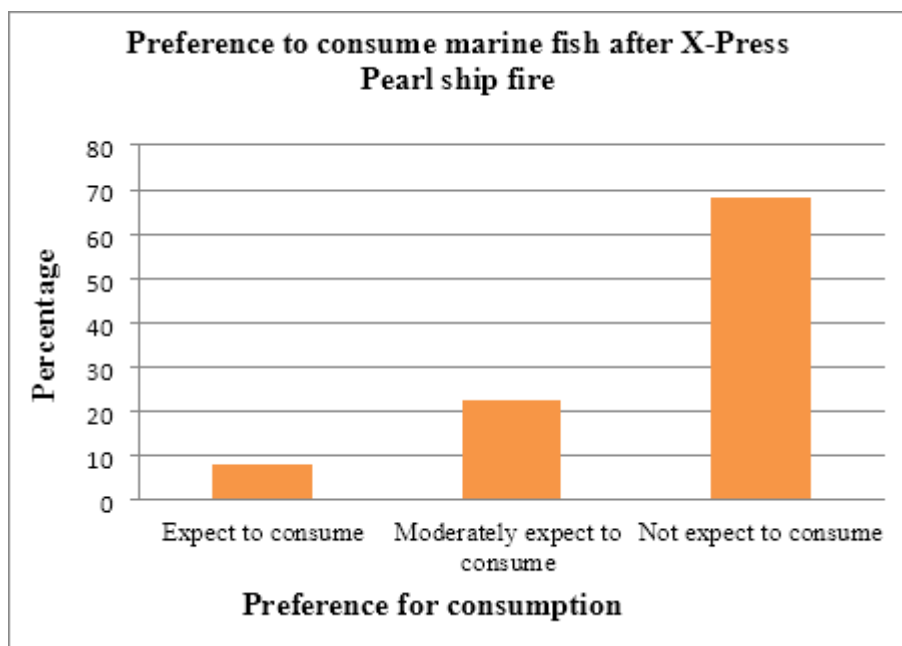


Figure 1. Preference among the residents regarding consumption of marine fish after the X-Press Pearl ship fire. Most respondents (68.29 %) did not expect to consume marine fish, indicating a negative impact of the ship fire in local fish consumption.

Perception towards impacts of X-Press Pearl disaster on fish consumption

When inquired about the impact of the X-Press Pearl incident on fish consumption among the residents of the western province, north western province and the southern province, 90.6 % of respondents agreed that this incident will affect fish consumption. Among the respondents, 88.69 % believed that consuming fish will lead to adverse health effects. Furthermore, 78.01

% of respondents believed that this marine disaster will lead to changes in the nutritional value of the food fish. A majority of respondents (90.99 %) believed that the incident will affect the future market demand for food fish. In addition to this, a considerable number of individuals (79.13 %) believed that the demand for alternative protein food sources will rise in the future. Among the respondents having awareness of the accident, 68.29 % did not expect to consume fish. Inferential statistical analysis revealed that there was a significant relationship between the awareness of the X-Press Pearl disaster and preference for consuming fish ($\chi^2 = 72.633$, $p < 0.05$).

4. Conclusions

Due to the widespread belief that consuming fish during this marine disaster may lead to adverse health effects and lead to changes in the nutritional value of the food fish, the majority of people in western province, north western province, and southern province have decided not to consume marine fish. The majority of them had an awareness of the X-Press Pearl ship fire and it led to increased negative perception towards fish consumption.

5. References

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