Status of women employed in seafood pre-processing units of Alapuzha, Kerala

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Focal Points at a Glance
In this write-up the author presents an excellent account of the problems of women workers in seafood pre-processing units located at Alapuzha and the details presented are well applicable, with minor variations, for the streamlining and upgradation of the status of women workers at the pre-processing plants located mostly along the coastline of the country. The details given can be of considerable benefit to those in charge of aqua products pre-processing plants of the country.

Abstract
The fisheries sector in India plays a vital role in the Indian economy. Although the fishing and fish processing industry has experienced enormous growth in recent years, none of the workplaces has industrial hygiene or surveillance programmes to evaluate the effects of exposure to seafood and work in a cold environment. There are a number of issues faced by women workers in the pre-processing and processing units which remain unaddressed due to various social and economic considerations. It is recommended that further epidemiological studies need to focus on quantifying the disease burden attributed to seafood exposure and identify specific risk factors for allergic sensitisation to occupational seafood allergens.

Key words: Fisheries, Fish processing, Seafood, Women

Introduction
Fisheries seem to be a female domain, if viewed from their roles of cleaning, trading, processing and fishing. To understand employment in this sector fully, a livelihood approach that enables an analysis of how work is embedded in other social, cultural, economic, political and ecological structures and processes which shape gender disparities (Long 2000; Allison and Ellis 2004) should be adopted. According to a UN report, women work for two-thirds of the world’s income and own only 1% of the total assets (Ashalatha et al., 2002). In India, there is a great contradiction between the idealised concept of women and their real life situation. After agriculture, fisheries are the traditional occupation of women in India for many centuries. The sector contributes to income generation directly or indirectly. India ranks second in the aquaculture production and third in fisheries production and we are one of the leading nations in marine products exports. Marine sector occupies a very important place in the socio-economic development of the country. Frozen shrimp constitutes over 80% of our marine products export earnings. In India, export of frozen shrimp increased from $839 million in 2008-2009 to $883 million in 2009-2010 and further to $1261 million in 2010-2011. Recent years have seen increased levels of production and consumption of seafood, leading to more frequent reporting of allergic reactions in occupational and domestic settings. In the fisheries sector, women play an active role with extensive involvement especially in the post-harvest operation, where they constitute almost half of the workforce. Allergy to fish is common among fish eating populations and in fish processing communities. The prevalence of immediate type fish allergy is higher when intake of fish...
constitutes a greater part in the diet of the community.

There are about 0.5 million fisher households all along the Indian coasts and a total of 3 million fisher folk inhabiting the coastal villages. The entire processing sector is highly dependent on women as women comprise more than 90% of the workforce in shrimp peeling and 70% in the processing of other fish products (Kohli et al., 1999). The quantum of work in the seafood industry is directly related to the availability of raw material and tends to be seasonal (Anon, 2002). On the community management role of fisher women, it is stated that women play an indispensible role in maintaining the social and cultural foundation of fishing community in Kerala. In the present study, it has been observed that the peak period of fisheries activities is from September to April and the lean season from June to August. The pre-processing work includes grading, sorting, distribution, evisceration, cutting, slicing and cleaning in the case of fish, peeling, cleaning and grading in the case of shrimp, evisceration, cleaning and grading in the case of cephalopods and cleaning of the processing hall. The main objectives of the study were to characterise the demographic profile of seafood processing work places in Kerala, a State in the south-west coast of India, to understand the socio-economic background of the women employed in pre-processing units, to identify the factors contributing to the low status of women in pre-processing units, to determine the level of occupational health service provision with specific reference to the medical surveillance of workers in various workplaces, and to develop suitable recommendations for upgrading the living conditions of women workers in the pre-processing.

Methods

The major sea food pre-processing units in Kerala are located in Alappuzha and Chandroor (Figure 1) in Alappuzha district. Peeling of shrimp is highly labour-intensive and some of the major pre-processing activities are done exclusively by women. The database for the present study was created by sampling from representative centres in Alappuzha and Chandroor, the two leading pre-processing centres and 100 women workers (random sample) constituted the sample of the study (Figure 2). A questionnaire was developed and used for collecting the required information from the women workers of pre-processing units. The questionnaire covered several aspects including demographic details of workforce, concerning wages, service conditions, occupational, environmental and health related issues. The other aspects included in the present study were questions on perceived health status, physical activity at work, work in cold environment and working practice.

Results

The study on the socio-economic status of women labourers in seafood pre-processing units of Alappuzha district indicates that most of the women belong to Hindu community (85.71%) followed by Muslims (10%) and Christians (4.29%). This selection is unbiased and the majority is due to the outnumbering of Hindu community in the district. The marital status of women workers in the pre-processing unit is given in the Table 1. Married women outnumber all the categories (79%) followed by unmarried (18.57%) and widowed persons (2.87%). Widowed persons occupy a considerable proportion (7.14%) compared to divorced and separated. Most of the labourers belong to the age group of 31-40 (42.86%), which is followed by 41-50 age group categories (25.71%) and the least frequent group is 10-20 (2.86%).

Regarding the type of support extended by the husbands towards the working wives, most of them (72.92%) receive moral support from their husbands. Most of the women (82.46%) opine that they are not getting enough time to look after their children and only 17.54% getting time to care for their children. But, contrary to this, 65.45% is of the opinion that their children are suffering because of their long absence. 36.53% did not share this view, perhaps due to other factors such as the joint family, help from the husband, etc. The husbands are making the decision in the family in 44.29% cases and in 21.43% cases, husbands consult the wives in the decision making. About 10% of women take decisions themselves (Figure 3). The major areas of decision are family budget, education of children, marriages and others. The survey reveals that most of them (54.28%) concentrate on family budget, education of children and marriage.

As many of the women workers are working under a contractor and getting only a meagre daily wages, they cannot save much for future. Further, they are also not covered under any insurance schemes. Among the women labourers, only 15.71% have the provident fund facility and the remaining have no such facility. About 22.9% of the women workers meet with accidents during their work. The working environment is not very congenial in the case of many pre-processing centres (Figure 5). Further, the contractors do not provide the basic amenities. Regarding the health condition, most of them are unhealthy (61.76%) and suffer from back pain, arthritis, ulceration and other occupational hazards. The women employed in the pre-processing units experience certain job-related ailments. The long working hours and the constant exposure to cold water and chlorine result in muscle cramp, skin irritation, eczema, respiratory problems, allergy, back pain and rheumatism (Figure 6). Lengthy isolation from their families leads to depression in many women. The industrial units provide no medical facilities or other benefits to these labourers. Only 6.17% receive some kind of training from different sources. Though majority of them are trained, none of them wears gloves or follow any other precautionary measures. Income earned ranges from Rs.20 to 100 per day, but most of them (40%) earn Rs.50-60 per day. Very few (2.87%) receive the low category of wages - Rs.20-30 per day. The maximum income per day is Rs.100 and that too earned by very few such
### Table 1: Average employment days, experience and income of the women labourers

<table>
<thead>
<tr>
<th>No. of Days employment</th>
<th>Percentage</th>
<th>Experience</th>
<th>Wage Low (20-45)</th>
<th>Medium (46-70)</th>
<th>High (&gt;71)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-150</td>
<td>20</td>
<td>1 to 5</td>
<td>9</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>150-200</td>
<td>18.57</td>
<td>6 to 10</td>
<td>0</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>200-250</td>
<td>15.71</td>
<td>11 to 15</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>250-300</td>
<td>21.43</td>
<td>16 to 20</td>
<td>1</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>300-350</td>
<td>24.29</td>
<td>21 to 25</td>
<td>0</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>350-400</td>
<td>27.16</td>
<td>26 to 30</td>
<td>2</td>
<td>8</td>
<td>0</td>
</tr>
</tbody>
</table>

Most of them (54.29%) responded in the negative when asked whether they are satisfied with the present income. However, they would like to continue with the present job, because of unemployment and nearness to home. Low education status also makes them to continue in the current job. Very few workers feel that the present job is better than any other jobs they can have. It is obvious from the survey that a pre-processing unit does not provide the basic amenities such as the latrine, washing facilities, drinking water supply and day-care for children. Nearly 36.23% of women labourers are working in the units without even the latrine facility.

The women workers also have no job security even after putting in several years of service in the same pre-processing units. A large number of them are not aware of their legal rights for job, their security and facility for creche, bathroom, etc.

Earlier, there were few attempts to educate the workers on their legal rights. The State government has initiated many schemes to alleviate the problems faced by these women workers, but the situation remains more or less same in the case of many of the pre-processing centres.

**Discussion**

Women play an important role in fisheries development in the country and this study underscores the fact that the women labourers working in the pre-processing centres contribute significantly to the seafood export industry of Kerala. From the study, it is obvious that most of the women labourers possess good experience and have excellent skill in the shrimp peeling work. Like other labour-intensive, export-oriented sectors, there is a distinct preference for young, unmarried women in fish processing at the floor level (Hisano 2000). The average age of women workers is 35 in the pre-processing units and 42.86% of the respondents are below 40 years ago. A very few have the higher education and out of the age group 31-40 having the primary and secondary education, many of them are drop outs.

This is the first detailed study to document work-related symptoms and allergic health problems among workers in the seafood pre-processing units of Alapuzha district, Kerala. Walk-through inspections of a number of facilities suggest that inadequate control of inhalational and skin exposure, which is especially common in small and medium-sized workplaces, may be contributing to the burden of disease. Major activities that provide a potential source for sensitisation through inhalation of aerosols are cutting, scrubbing or cleaning, and drying activities. Unprotected skin exposure, due to the lack of personal protective devices
Vivek Vartak honoured with “Dr. Hiralal Chaudhuri Young Scientist Award”

Central Institute of Fisheries Education (CIFE) (ICAR, New Delhi) Mumbai honoured Mr. Vivek Rohidas Vartak with ‘Dr. Hiralal Chaudhuri Young Scientist Award’ for his significant contribution in fisheries on ‘Fish Farmer’s Day’ celebrated on 10th July 2013 at CIFE, Mumbai. The award is given every year to one fishery scientist chosen from all over the country. The award is given by Padmabhushan Dr. R.B.Singh, President National Academy of Agricultural Sciences, New Delhi in the presence of eminent Scientist Dr. Madan, Dr Tripathi, Ex-Director CIFE, Dr. Lakra, Director & Vice Chancellor and Dr. Pal Joint Director CIFE, Mumbai. Shri Vartak is distinguished postgraduate of the Konkan Agricultural University, Dapoli in Fisheries Science with specialization in Aquaculture and working as Scientist in Khar Land Research Station, Panvel under Dr. B. S. Konkan Agricultural University, Dapoli. He is accomplished scientist who has received research fellowship of Indian Academy of Sciences, national/ state level awards and felicitation from his University for his research contributions. He has published 21 research papers in peer reviewed national/ international journals and 25 technical articles related to fisheries science. He wrote 5 books related to freshwater fish, sea bass, fish food products and crab farming in local language and documented 25 ITK’s in Indigenous Technical Knowledge book. He has given 5 research recommendations to fish farmers in joint AGRESCO on fisheries. He has developed low cost Asian sea bass farm feed with incorporation of dried Bombay duck powder as an attractant. He has developed low cost crab fattening and farming of crabs in cages, tanks and ponds. He has undertaken 12 institutional research projects as Principal Investigator and worked in 5 externally funded projects by ICAR, FAO and Government of Maharashtra. He has conducted 10 training programmes for the rural unemployed youth and fishermen community. He is editor of the peer reviewed journals like Aquaculture and Indian Journal of Fisheries. The success story based on the activities related to crab fattening and farming carried by him on Konkan coastal region was submitted to ICAR through Director of Extension Education, BSKKV, Dapoli. He has given 11 lectures/interviews on All India Radio and 4 interviews on Doordarshan on various fisheries related topics. His passion for the fisheries profession and his commitment to mentoring has made a tremendous impact on the vitality, perception, and future of fishermen community in Konkan coastal region of Maharashtra. He is a visionary Scientist whose innovative approach to research problems led to develop sustainable aquaculture of sea bass and crab. This award is bestowed for his outstanding contribution to fisheries research outreach and extension activities.