

## **An assessment of the bacterial quality of water, ice and fish in a fishery harbour in Southern Sri Lanka**

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The fisheries sector plays an important role in the Sri Lankan economy. However, the post-harvest quality of our local fish production seems unsatisfactory. Furthermore, the sanitary conditions of the fishery harbours and the fish landing sites also appear to be unhygienic. The objective of this study was to assess the bacterial quality of water, ice and fish at a fishery harbour located in the Southern region of Sri Lanka. Water samples were collected from the jetty area (A), oil-spilled area (B), tap water (C) and area where single-day boats were landed (D). Fish samples (n=8) were collected from single-day boats and multi-day boats. All three types of samples were collected during the period from June to July, 2013. The degree of bacterial contamination of harbour water at different locations was statistically analyzed. *Escherichia coli* (*E. coli*), other coliforms, *Pseudomonas* and *Bacillus* spp. were isolated from the harbour water. The bacterial contamination of A was significantly ( $p < 0.05$ ) higher compared to that of B and D. Interestingly, there was no significant difference between the bacterial contamination of jetty-water and that of tap water. Bacterial counts carried out with tap water showed very high bacterial counts and were positive for *E. coli*, which proved unacceptable for drinking. The bacterial contamination of ice was also significantly ( $p < 0.05$ ) higher compared to that of harbour water. Thus ice produced at the harbour can be a potential source of bacterial contamination for post-harvest fish. Fish from both single-day boats and multi-day boats (before and after washing) showed very high bacterial contamination. Washing with harbour water does not help to reduce the bacterial contamination of post-harvest fish.

Key words: bacterial contamination, harbour-water, post-harvest fish

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