



Training Manual
on
**ISO-22000/HACCP FOR FISH PROCESSING
ESTABLISHMENTS**

(Under ITEC, Ministry of External Affairs, Govt. of India)



15-27 November 2019



ICAR - CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY

(ISO/IEC 17025:2005 NABL Accredited & ISO 9001:2015 certified)

CIFT junction, Matsyapuri, P. O., Willingdon Island, Kochi - 682029, Kerala, India

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Venue: ICAR-Central Institute of Fisheries Technology, Cochin, Kerala, India

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FOREWORD

Food safety at any point in the food chain from producer to consumer is a global concern. Food safety hazards may be introduced at any stage, therefore adequate control throughout the production process is very much essential. Outbreaks of contagious diseases in livestock, such as foot and mouth disease, and of micro-organisms like salmonella and listeria have highlighted the risks of food contamination. Unsafe food is a risk for all- for consumers it is a health concern while for the industry it may lead to costly corrective actions. Since inception, ICAR-Central Institute of Fisheries Technology has been working on the safety and quality of water, fish and fishery products. ICAR-CIFT was the driving force for setting the standards for packaged drinking water in India. The pioneering work done by Central Institute of Fisheries Technology in area of seafood quality assurance stands as a milestone in the history of pre-shipment system in India. A major technological intervention brought about CIFT was facilitating implementation of Hazard Analysis and Critical Control Point (HACCP) based quality assurance system in fish processing industry throughout the country. ICAR-CIFT is working along with Food Safety Standards Authority of India to set standards for Fish and Fishery products. Infact, ICAR-CIFT has recognised as the national referral laboratory as well as National Reference Laboratory of FSSAI for Fish and fishery products. ICAR-CIFT has provided exclusive support to FSSAI in development of food safety standards and development of code of practices. Technologies developed by the Institute have played a vital role in modernizing the harvest and post-harvest fishery sectors of India and help making it a major exporter of processed fish and fish products.

The international training on 'ISO 22000/HACCP for fish processing establishments' sponsored by Indian Technical & Economic Cooperation Programme (ITEC), Ministry of External Affairs, Government of India, assumes a greater importance as the technical expertise developed over many decades by the institute could be shared with researchers and officials from other countries. Over duration of thirteen days, eleven participants from different countries were exposed to HACCP, ISO 22000, Food Safety Management System, technologies of seafood processing and implementation of HACCP. The topics for the programme were selected to give a comprehensive knowledge on Food safety management systems. This training manual consists of 19 chapters which cover different aspects food safety and management systems. The topics include food safety and regulatory requirements, different hazards associated with seafood processing and control measures, requirements and role of Food Safety Management Systems, export and trade related issues, and different extension approaches for sustainable technology dissemination. I am sure that this training manual will be very useful for the researchers and entrepreneurs working in the areas of food safety management. The knowledge about ISO 2000/HACCP in food safety management system will help to ensure food safety along the entire food chain, and safe food to consumers.

25.11.2019



Dr. Ravishankar, C. N.
Director

ICAR-Central Institute of Fisheries Technology

PREFACE

Food safety is very much crucial to the society due to its direct effect on human health. Because of that any business working in the food chain should have an effective food safety management system in place to eliminate/reduce the risk of contamination and consequent health risks associated with. The vital tools commonly used to define the requirements for an effective Food Safety Management System are ISO22000 and HACCP (Hazard Analysis and Critical Control Points). These are the basis for Food Safety principles defined by Codex Alimentarius Commission of World Health Organization. HACCP is an internationally recognized risk management tool, which is proactive in nature, while ISO22000 is a complete food safety management system, enabling continual improvement of performance. ISO 22000 incorporates HACCP principle and covers the entire food chain i.e. from farm to fork. Food producers in all parts of the food chain around the world have adopted ISO 22000 as a new global food safety standard. It is important to create a common understanding of the benefits of building a food safety management system based on ISO 22000, especially for developing and under developed countries. The proliferation of diverse food safety management standards and practices has created a situation that is often characterized by a lack of clarity. The training programme on ISO22000/HACCP for fish processing establishments is an attempt to make clear picture about role of ISO 2000/HACCP in food safety management system to ensure safe food to consumers. This book, through its various chapters discusses food safety scenario and regulatory requirements, different hazards associated with seafood processing and control measures, requirements and role of Food Safety Management Systems, export and trade related issues, and different extension approaches for sustainable technology dissemination. Like ISO 22000 covering food safety issues from farm to table, the manual also covers hazards, risk and management system to provide an elaborate picture about Food Safety Management System. We would like to acknowledge the Ministry of External Affairs and ICAR for giving us an opportunity to conduct this training programme. We acknowledge the entire resource persons for immensely contributing for this manual. Infact the entire manual was prepared during the training programme itself and without the support of all faculty it would not have been possible. We would like to acknowledge the programme director, Dr C N Ravishankar, Director, ICAR-CIFT for all the support, guidance and encouragement given for the successful completion of this training programme as well as training manual. We hope that this publication will serve as guide for academicians, technologists and entrepreneurs engaged in the food safety management system.

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Ms. Priya, E. R.

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