## Food Safety in the Seafood Industry

Para as Filipas e Pais

# Food Safety in the Seafood Industry

A practical guide for ISO 22000 and FSSC 22000 implementation

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## Foreword

In May 2014 I was contacted by one of the authors of this book, Nuno Soares (unknown colleague until that day), who asked to meet with me to present the idea of writing a new book. In our first meeting I heard his enthusiastic words and, as I do with almost all the people who contact me, I shared with Nuno some literature sources and several personal contacts. It seemed to me excellent that the authors of a book had, as a priority, the personal contact with experts in the topics covered and intended to collect, by live interviews, their testimonies.

About a year later Nuno contacted me again with two surprises: to inform me that the book was already in the phase of last corrections and to invite me to write the foreword. I felt honored by the invitation and accepted this challenge with pleasure, but also some apprehension. Pleasure because I always liked books, writing, and communication of ideas; apprehension because it does not seem easy to write an interesting foreword which contributes positively to the value of an international book, especially such a technical and practical book as that which the reader is holding.

This book covers recent management aspects of safety of seafood. Seafood is, without any doubt, one of the most important food groups that have a positive influence on human health (consequently, seafood is one of the food items of the future) and, simultaneously, one that includes the most diverse and most perishable foods. As a result, safety issues that seafood poses during its vast and complex production, processing, and distribution chains are very specific, very delicate, and require a multifaceted and complex approach and management.

In the seafood sector, as much or even more than in other food groups, the development, dissemination, and compliance with international standards has been undoubtedly one of the most effective ways to improve safety, in order to move it towards the theoretical maximum levels that are considered unattainable. At a very fast speed (I would say frightening), new international rules have been published. Despite the fact that many of these rules are mandatory, it is very difficult for industry professionals to be informed about all of them and to adapt themselves and their industry rapidly and adequately in order to work strictly within legal limits.

It is precisely for this particular reason that I believe this book is unique and very useful. Using simple and accessible language, supported by tables and images showing clear facts and figures, the reader is introduced to the current context of the seafood characteristics and its specific safety issues in the first two chapters. In the following chapters, the main current rules applicable to the fish sector are examined in a concise and practical way; the objective of the authors is always to make it easy for readers to understand and implement these rules. The authors also present insights about costs and benefits associated with the implementation of the covered standards, which greatly help managers. Without a clear understanding of the benefits to be gained, it is not easy to approve costs; benefits can be high, especially over the long term.

This book also contains testimonials from world-class experts in the topics discussed, interviewed expressly for this purpose, exploring the historical perspective and other details of the standards covered. For me, this is what makes this book significantly different from many other publications. The direct contact with experts from around the world (taking advantage of new forms of electronic communication) is irreplaceable and brings unique insights; the sharing of ideas and experiences and the discussion of problems and solutions, which would be more difficult by simple analysis of written elements, is invaluable. This book offers readers both possibilities: the reading of a clear text, and the contact with world-renowned experts on the covered themes.

Another interesting characteristic of this book is the appendix with a practical analysis of data collected directly from the Rapid Alert System of Food and Feed (RASFF), followed by identification of the real dangers and risks posed by seafood. This real-data-approach appendix is a very useful complement to the theoretical information presented in the main part of the book.

Readers therefore have in their hands a valuable aid that they can use in two ways: (1) as a reading book for general information and knowledge about the rules and their practical application, particularly suitable at an early stage of study and for a more theoretical approach; and also (2) as a rapid reference book, to answer questions posed during practical implementation and subsequent phases.

Since the definition of 'foreword' includes the word 'brief', I would like to end by congratulating the authors for the excellent idea, for the courage of the choice of a paper edition, and for the production of a useful and valuable book. I hope that our colleagues in the seafood area, all over the world, buy and use this working element, and thereby contribute to its commercial success. I am sure that the purchase of the book is a very small investment compared to the great benefit it certainly represents to its readers.

Happy reading and success to all.

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#### Disclaimer

The content of this book integrates the research and findings of the authors during the period 2014–2015 and their personal experience, and is provided without any liability whatsoever in its application and use. It is not intended to represent the view of Vanibru – Comércio de Produtos Alimentares Lda, SGS Portugal, or Universidade do Minho.

## Introduction

Most professionals in the seafood industry, even those with experience in quality management or education in the field, find it difficult to implement Food Safety Systems. Most companies need to recruit consultants to find this type of expertise, and it is often difficult to find someone with experience in this particular field. This book will provide a hands-on approach to the understanding and implementation of the standard ISO 22000 and the additional requirements needed to comply with the Food Safety System Certification 22000 (FSSC 22000) approach for ISO-based certification schemes. It will also briefly characterize the seafood industry and how ISO 22000 and FSSC 22000 can be important and valuable tools in its future. The objective was to provide, in a single document, fundamental information key to the understanding of ISO 22000 and FSSC 22000 and assistance to anyone who is implementing them, using non-technical language which is easily understandable by non-specialists while also being useful for food safety technicians. The book aims to be geographically global but industry specific.

The book is structured to be clear and assertive in key points, a powerful tool and a useful reference for professionals in the field, company managers, consultants, auditors, teachers, and students.

The book deals with three main subjects – seafood, ISO 22000, and FSSC 22000 – in five separate chapters. Chapter 1 presents a brief characterization of seafood and the seafood industry, followed by the identification and description of the most relevant hazards for seafood products. Food safety is the focus of Chapter 2 where, as well as an introduction to the *Codex Alimentarius* and hazard analysis and critical control points (HACCP; including the most fascinating contribution of Dr Sperber with some insights into the early days of HACCP), there is also a brief introduction to three of the most-used Food Safety Systems (BRC Global Standard for Food Safety, SQF Code, and IFS Food Standard) that, together with FSSC 22000, are Global Food Safety Initiative (GFSI) benchmarked.

In Chapter 3 ISO 22000 is introduced together with the challenges and drivers of its implementation. Chapter 3 also includes an interesting interview with William Marler, the most prominent foodborne illness lawyer in America, who describes the importance of food safety systems and third-party audits not only in terms of food safety but also as a valuable management defense if food safety issues arise.

All the clauses of ISO 22000:2005 are scrutinized and explained in Chapter 4 with the focus on how organizations can address them, considering both the approach of *ISO 22004: Guidance on the application of ISO 22000* (2014) and the personal experience of the authors.

Chapter 5 introduces FSSC 22000, its history and the additional requirements to ISO 22000:2005 that must be fulfilled to obtain certification.

The book has two appendices. The first is a comprehensive list of documents that need to be implemented and maintained according to ISO 22004:2014. The second is a compilation of the hazards notified to Food and Feed Safety Alerts (RASFF) related to seafood products, since this database was created by the European Commission.



This book is not an end in itself. It is a tool and a vehicle for further cooperation and information interchange related to seafood safety and food safety systems. QR codes can be found throughout the book; when scanned they will allow the reader to contact the authors directly, know their personal views on each chapter and even access or request more details on the book content. We strongly encourage the readers to use the QR codes or contact us through foodsafetybooks@gmail. com with comments, suggestions, or questions.