

Quality Certifications Relevant to Seafood Trade

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The fisheries trade is very much linked with various types of certifications to meet different legal, market and customer requirements. This paper contains basic information on relevant certifications in the seafood trade with the broad context of quality, which essentially include environment and safety also.

I. Hazard Analysis and Critical Control Point (HACCP) System

1. Name of the standard : Hazard Analysis & Critical Control Points (HACCP)
2. Who created it ? In the early 1960's, a collaborated effort between the Pillsbury Company, NASA, and the U.S. Army Laboratories began with the objective to provide safe food for space expeditions. Using the traditional end product testing method, it was soon realized that almost all of the food manufactured was being used on testing and very little was left for actual use. It was realized that a new approach was needed.
3. What is it ? HACCP is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product. This generally comprise of 3 parts such as
 - I) Good Manufacturing Practices
 - II) Sanitation Standards Operating Procedures
 - III) HACCP principles : there are 7 principles
 - a. Principle 1: Conduct a hazard analysis. – Plans determine the food safety hazards and identify the preventive measures the plan can apply to control these hazards. A food safety hazard is any biological, chemical, or physical property that may cause a food to be unsafe for human consumption.
 - b. Principle 2: Identify critical control points. – A critical control point (CCP) is a point, step, or procedure in a food manufacturing process at which control can be applied and, as a result, a food safety hazard can be prevented, eliminated, or reduced to an acceptable level.
 - c. Principle 3: Establish critical limits for each critical control point. – A critical limit is the maximum or minimum value to which a physical, biological, or chemical hazard must be controlled at a critical control point to prevent, eliminate, or reduce to an acceptable level.
 - d. Principle 4: Establish critical control point monitoring requirements. – Monitoring activities are necessary to ensure that the process is under control

at each critical control point. In the United States, the FSIS is requiring that each monitoring procedure and its frequency be listed in the HACCP plan.

- e. Principle 5: Establish corrective actions. – These are actions to be taken when monitoring indicates a deviation from an established critical limit. The final rule requires a plant's HACCP plan to identify the corrective actions to be taken if a critical limit is not met. Corrective actions are intended to ensure that no product injurious to health or otherwise adulterated as a result of the deviation enters commerce.
- f. Principle 6: Establish procedures for ensuring the HACCP system is working as intended. – Validation ensures that the plants do what they were designed to do; that is, they are successful in ensuring the production of a safe product. Plants will be required to validate their own HACCP plans. FSIS will not approve HACCP plans in advance, but will review them for conformance with the final rule.
- g. Verification ensures the HACCP plan is adequate, that is, working as intended. Verification procedures may include such activities as review of HACCP plans, CCP records, critical limits and microbial sampling and analysis. FSIS is requiring that the HACCP plan include verification tasks to be performed by plant personnel. Verification tasks would also be performed by FSIS inspectors. Both FSIS and industry will undertake microbial testing as one of several verification activities. Verification also includes 'validation' – the process of finding evidence for the accuracy of the HACCP system (e.g. scientific evidence for critical limitations).
- h. Principle 7: Establish record keeping procedures. – The HACCP regulation requires that all plants maintain certain documents, including its hazard analysis and written HACCP plan, and records documenting the monitoring of critical control points, critical limits, verification activities, and the handling of processing deviations.

4. What are the benefits ?

- a. focuses on identifying and preventing hazards from contaminating food
- b. is based on sound science
- c. permits more efficient and effective government oversight, primarily because the recordkeeping allows investigators to see how well a firm is complying with food safety laws over a period rather than how well it is doing on any given day
- d. places responsibility for ensuring food safety appropriately on the food manufacturer or distributor
- e. helps food companies compete more effectively in the world market
- f. reduces barriers to international trade.

II. ISO 9001:2008

1. Name of the standard : ISO 9001:2008
2. Who created it ? ISO (from Greek 'isos' means 'equal') officially began in 1947

ISO (International Organization for Standardization) is the world's largest developer of voluntary International Standards. International Standards give state of the art specifications for products, services and good practice, helping to make industry more efficient and effective. Developed through global consensus, they help to break down barriers to international trade.

3. What is it ? ISO 9001 is by far the world's most established quality framework, currently being used by 1,064,000 organizations in 178 countries worldwide and sets the standard not only for quality management systems, but management systems in general. ISO 9001 is one of a series of quality management system standards. It can help bring out the best in the organization by enabling you to understand your processes for delivering your products/services to your customers.
4. What are the benefits? The benefits include the following :
 - a. Strong customer focus (customer satisfaction)
 - b. The motivation and implication of top management
 - c. Staff consideration and motivation
 - d. The Process approach
 - e. Continual improvement.

Using ISO 9001:2008 helps ensure that customers get consistent, good quality products and services, which in turn brings many business benefits.

III. ISO 22000: 2005

1. Name of the standard : ISO 22000:2005
2. What is it ? ISO 22000:2005 specifies requirements for a food safety management system where an organization in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption. It is almost an integration of ISO 9001 and HACCP system. It includes interactive communication, system management, prerequisite programs and HACCP principles. It is applicable to all organizations, regardless of size, which are involved in any aspect of the food chain and want to implement systems that consistently provide safe products. The means of meeting any requirements of ISO 22000:2005 can be accomplished through the use of internal and/or external resources.
3. Who created it? (Already explained in ISO 9001)
4. What are the benefits? ISO 22000:2005 specifies requirements to enable an organization
 - a. to plan, implement, operate, maintain and update a food safety management system aimed at providing products that, according to their intended use, are safe for the consumer,
 - b. to demonstrate compliance with applicable statutory and regulatory food safety requirements,
 - c. to evaluate and assess customer requirements and demonstrate conformity with those mutually agreed customer requirements that relate to food safety, in order to enhance customer satisfaction
 - d. to effectively communicate food safety issues to their suppliers, customers and relevant interested parties in the food chain,
 - e. to ensure that the organization conforms to its stated food safety policy,
 - f. to demonstrate such conformity to relevant interested parties, and
 - g. to seek certification or registration of its food safety management system by an external organization, or make a self-assessment or self-declaration of conformity to ISO 22000:2005.

IV. ISO 14000: 2004

1. Name of the standard : ISO 14001:2004
2. Who created it ? ISO (Already explained in ISO 9001:2008)
3. What is it ? ISO 14001:2004 sets out the criteria for an environmental management system and can be certified to. It maps out a framework that a company or organization can follow to set up an effective environmental management system. It can be used by any organization regardless of its activity or sector. Using ISO 14001:2004 can provide assurance to company management and employees as well as external stakeholders that environmental impact is being measured and improved.
4. What are the benefits ? The benefits of using ISO 14001:2004 can include:
 - a. Environmental protection
 - b. Reduced cost of waste management
 - c. Savings in consumption of energy and materials
 - d. Lower distribution costs
 - e. Improved corporate image among regulators, customers and the public

V. ISO 26000

1. Name of the standard : ISO 26000 – Social Responsibility It is also called ISO SR.
2. What is it ? Business and organizations do not operate in a vacuum. Their relationship to the society and environment in which they operate is a critical factor in their ability to continue to operate effectively. It is also increasingly being used as a measure of their overall performance. ISO 26000 is an international standard launched by International Organization for Standardization, has launched providing guidelines for social responsibility (SR) . ISO 26000 provides guidance on how businesses and organizations can operate in a socially responsible way. This means acting in an ethical and transparent way that contributes to the health and welfare of society.
3. Who created it ? (ISO – already explained about ISO)
4. What are the benefits ? The perception and reality of an organization's performance on social responsibility can influence, among other things:
 - a. Competitive advantage
 - b. Reputation
 - c. Ability to attract and retain workers or members, customers, clients or users
 - d. Maintenance of employees' morale, commitment and productivity
 - e. View of investors, owners, donors, sponsors and the financial community
 - f. Relationship with companies, governments, the media, suppliers, peers, customers and the community in which it operates.

VI. British Retail Consortium (BRC) Global Standard

1. Name of the standard : British Retail Consortium (BRC) Global Standards

2. What is it ? The BRC Global Standards are a leading global safety and quality certification programme, used throughout the world by over 17,000 certificated suppliers in 90 countries through a network of over 80 accredited and BRC recognised Certification Bodies. The BRC Global Standards are widely used by suppliers and global retailers. The standards provide the following
 - a. Standardization of quality criteria
 - b. Standardization of safety criteria
 - c. Standardization of operational criteria
 - d. Manufacturers' fulfillment of legal obligations
 - e. They also provide protection to the consumer

3. Who created it ? In 1998 the British Retail Consortium (BRC), responding to industry needs, developed and introduced the BRC Food Technical Standard assisting retailers and brand owners to produce food products of consistent safety and quality and comply with the requirements of the enforcement authorities.

Following the success and widespread acceptance of the BRC Food Technical Standard, the BRC published the first issue of the Packaging Standard in 2002, followed by Consumer Products Standard in August 2003, and finally by the BRC Global Standard - Storage and Distribution in August 2006 . In 2009, the BRC partnered with the Retail Industry Leaders Association (RILA) to develop the Global Standard for Consumer Products North America edition. Each of these Standards is regularly reviewed revised and updated at least every 3 years after extensive consultation with a wide range of stakeholders.

4. What are the benefits ?
 - a. CONFIDENCE - Developed by retailers and driven by retailers, BRC Global Standards are a market leading global brand that helps build confidence in the food safety industry.
 - b. CREDIBILITY - Now celebrating its tenth anniversary, the BRC Global Standard for Food Safety was the first Standard in the world to be approved by the Global Food Safety Initiative (GSFI) benchmarking committee.

 - c. COLLABORATION AND CONTINUOUS IMPROVEMENT - Expert International Technical Committees are fully engaged to ensure the ongoing development of the Standards through a process of collaboration and continuous improvement. The BRC provides a web-based, fully interactive database of information about BRC certificated suppliers giving immediate access to audit reports, audit data, management reporting and notification of remedial actions. The Global Standards Directory puts the BRC right at the heart of effective supply chain management.

 - d. CONSISTENCY - A global training infrastructure ensures that suppliers are well informed about how to implement the Standard, prepare for their audit and achieve certification. The BRC Food Standard is currently available in ten languages with additional translations being developed to facilitate understanding and consistency throughout the world.

 - e. COMPETENCE - The BRC's Compliance Team is developing robust performance monitoring assessment tools to help ensure that Certification Bodies carry out BRC audits to the highest possible standard. An established and transparent complaints procedure helps ensure that all customer referrals are investigated and vigorously followed up. Rigorous requirements around the competence, qualifications and experience of auditors help ensure that audit standards are stringently maintained.

f. COST EFFECTIVE - The BRC's straight forward certification process ensures that there are no hidden costs or added costly hurdles for sites wanting certification. For sites that are properly prepared and confident in their safety management systems the only cost is that of the audit.

VII. Marine Stewardship Council (MSC) certification

1. Name of the standard : MSC (Marine Stewardship Council) Certification
2. What is it ? MSC has two certification programs
 - a. MSC environmental standard for sustainable fishing
 - b. MSC chain of custody standard for seafood traceability
3. Who created it ? The MSC is an international non-profit organization committed to the values of independence, transparency, impartiality and stakeholder participation. MSC is working with fisheries, seafood companies, scientists, conservation groups and public promote the best environmental choice in seafood.
4. What are the benefits ?
 - a. Fisheries can demonstrate that their practices are sustainable and access market benefits by getting certified to the MSC standard for sustainable fishing.
 - b. When seafood is sold with the MSC ecolabel every business in the supply chain must have undertaken a detailed traceability audit against the MSC Chain of Custody standard. This ensures that only seafood from a certified fishery is sold with the MSC ecolabel

VIII. Best Aquaculture Practice (BAP) Certification

1. Name of the standard : The Best Aquaculture Practices (BAP) standards
2. What is it ? BAP standards address environmental and social responsibility, animal welfare, food safety and traceability in a voluntary certification program for aquaculture facilities. BAP certification defines the most important elements of responsible aquaculture and provides quantitative guidelines by which to evaluate adherence to those practices. The BAP program outlines standards for each type of facility, from hatchery and feed mill to farm to processing plant. It currently certifies shrimp farms and hatcheries; salmon, tilapia, channel catfish and *Pangasius* farms; seafood processing plants and feed mills.

The current BAP standards and guidelines includes

- a. BAP Seafood Processing Plant Standards
 - b. BAP Shrimp Farm Standards
 - c. BAP Tilapia Farm Standards
 - d. BAP Channel Catfish Farm Standards
 - e. BAP *Pangasius* Farm Standards
 - f. BAP Salmon Farm Standards
 - g. BAP Shrimp Hatchery Standards
 - h. BAP Feed Mill Standards
3. Who created it ? The BAP standards are formed by GAA - The Global Aquaculture Alliance, which is an international, non-profit trade association dedicated to advancing environmentally and socially responsible aquaculture. Under GAA the certification is carried out by Aquaculture Certification Council (ACC) Drafted by

technical committees with broad stakeholder representation and overseen by a Standards Oversight Committee of ACC, Through the development of its Best Aquaculture Practices certification standards, GAA has become the leading standards-setting organization for aquaculture seafood.

4. What are the benefits ? The benefits of BAP standards are the following
 - a. They are comprehensive and specific to aquaculture systems
 - b. Individual standards gives detailed attention to specific type of operation
 - c. All BAP standards address community and employee relations
 - d. The Standards covers conservation of biodiversity, soil and water management
 - e. The standards also attend to drug and chemical management.

By implementing BAP standards, program participants can better meet the demands of the growing global market for wholesome seafood produced in an environmentally and socially responsible manner.

IX. Other Certifications

1. Organic Certification - <http://www.ifoam.org>
2. Safe Quality Food (SQF) - <http://www.sqfi.com>
3. Six Sigma - <http://www.isixsigma.com>
