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FOOD AND AGRICULTURE
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COMMUNICATION FROM ISO*

(REPORT ON ACTIVITIES RELEVANT TO CODEX WORK)

1. The International Organization for Standardization (ISO) has prepared this information paper as part of ongoing updates and communication between the Codex Alimentarius Commission (CAC) Secretariat and the ISO Central Secretariat. It provides a summary of current work undertaken by ISO that may be of interest to the CAC and is intended to support and enhance dialogue and coordination between the two organizations.

International Organization for Standardization (ISO)

2. ISO is the International Organization for Standardization (<http://www.iso.org/>). ISO is a non-governmental organization established in 1947 with members consisting of the leading and recognized national standards organizations of 157 countries, on the basis of one member per country.

3. ISO has a Central Secretariat, based in Geneva, Switzerland, that employs 154 staff. However, most of the work in developing and maintaining the portfolio of some 17 000 technical International Standards is shared amongst the membership, with individual national members providing and financing the Chairmanships and Secretariats for one or more of the 193 technical committees and 540 subcommittees managing some 2 200 working groups.

4. Two ISO policy committees, DEVCO and COPOLCO, identify and monitor actions and programmes to encourage and facilitate the participation, respectively of developing countries and consumer interests, in standardization. A third ISO policy committee, CASCO, deals with conformity assessment matters; its work is discussed in greater detail further on in this document.

International Standards

5. While the most well known standard in the ISO portfolio is ISO 9001:2000, *Quality management systems — Requirements*, the great majority of ISO standards do not relate to management system requirements. Rather they include terminology, sampling, test and analytical methods, interoperability as well as specifications and performance requirements for industrial and agricultural products, equipment, processes and, to a growing extent, services.

6. The application of the International Standards that ISO produces starts out as being voluntary. In the majority of cases, these standards are needed and used voluntarily as references within commercial contracts between market players, for example in procurement contracts or as a basis for companies to develop, test and market their products.

* Document prepared by and under the responsibility of ISO

7. However, more and more standards are cited by regulators as a means to assist compliance with relevant governmental principles and/or technical regulations. This is recommended in the WTO TBT agreement and the SPS agreement (with regards specifically to CAC, OIE and IPPC) so as to reduce technical barriers to trade, and, for example, by the United Nations Economic Commission for Europe (UNECE) and the Asia Pacific Economic Cooperation Subcommittee on Standards and Conformance (APEC SCSC), in the context of implementing good regulatory practices. In 2007, ISO published a new informative brochure entitled “*Using and referencing ISO and IEC standards for technical regulations*” to describe certain advantages in using and referencing ISO and IEC standards. It provides examples in different sectors, and national and regional regulatory texts that refer to standards.

ISO's international status

8. ISO has a specific status with many UN agencies, including the WHO and FAO, and is an observer to the Codex Alimentarius Commission (CAC). It is also an observer at the WTO Committee on Trade and Environment (CTE), the Committee on Technical Barriers to Trade (WTO TBT) and the Committee on Sanitary and Phytosanitary Measures (SPS). In the area of technical assistance, ISO regularly cooperates with the WTO and ITC, and has entered into a Memorandum of Understanding with UNIDO.

9. In June 2007, ISO was invited to make a presentation during the informal session on private standards at WTO SPS. ISO also regularly participates in WTO SPS meetings and mentions its basic principles.

ISO status in CODEX

10. ISO's observer status to the CAC provides an opportunity for the coordination of issues related to a variety of ISO standards that are adopted and used by Codex in its work. According to document “*Recommended methods of analysis and sampling*” (CODEX STAN 234-1999), approximately 310 methods refer to ISO/TC 34 standards (*Food products*) (representing approximately 60 different ISO/TC 34 standards); 19 methods refer to ISO/TC 147 standards (*Water quality*); 5 methods refer to ISO/TC 47 standards (*Chemistry*), and 1 standard each refers to ISO/TC 24, *Sieves and other sizing methods*, ISO/TC 61, *Plastics* and ISO/TC 93, *Starch*. This list is also complemented by Codex's adoption of the CASCO standard ISO/IEC 17025 for testing and calibration laboratories.

11. The priority areas of mutual interest on which ISO would like to maintain and nurture dialogue with the CAC are the work of ISO/TC 34 on food products and the generic work of the ISO Committee on conformity assessment (ISO/CASCO). It should however be noted that other ISO Technical Committees are working in fields that could be of interest for CAC:

- ISO/TC 54, *Essential oils* for which CAC has a liaison;
- ISO/TC 93, *Starch (including derivatives and by-products)* for which CAC has a liaison (more details in point 42) (see [Annex 5](#) for the structure of ISO/TC 93);
- ISO/TC 134, *Fertilizers and soil conditioners* (see [Annex 6](#) for the scope and list of standards developed in ISO/TC 134);
- ISO/TC 147, *Water quality* for which CAC has a liaison with its SC 2 and SC 4 (more details in point 41) (see [Annex 4](#) for the structure of ISO/TC 147);
- ISO/TC 234, *Fisheries and aquaculture* (which is a new committee created in February 2007) for which CAC has a liaison (more details in point 38) (see [Annex 3](#) for the structure of ISO/TC 234).

Codex and ISO/TC 34 Cooperation

12. There is a long history of collaboration between the Codex Committees and ISO/TC 34, *Food products*. ISO/TC 34 supports the establishment of an ongoing and sustainable framework for collaboration between Codex and ISO, in order to enhance the mutual coordination of work and the elimination of duplication and contradictions.

13. Codex and ISO activities are complementary. Codex, as a governmental organization, prepares documents to assist governments in their statutory and regulatory work to protect their citizens from health hazards caused by food consumption. ISO, as a non-governmental organization, prepares standards on test methods to assist stakeholders along the whole food chain to fulfil both the statutory and regulatory requirements, as well as the requirements of consumers of these products.

14. Since its creation in 1947, ISO/TC 34 has published 720 ISO deliverables (International Standards, Technical Specifications and Technical Reports). 65 % of these documents are test methods. See Annex 1 for the structure of ISO/TC 34.

15. A dedicated Subcommittee on biomarkers, SC 16, was set up in March 2008 (see [Annex 1](#)).

16. Concerning its publications, ISO/TC 34 has already developed with the European Committee for Standardization (CEN) an entire set of standards on genetically modified organisms:

- ISO 24276:2006, *Foodstuffs — Nucleic acid based methods of analysis for the detection of genetically modified organisms and derived products — General requirements and definitions*
- ISO 21571:2005, *Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — Nucleic acid extraction*
- ISO 21569:2005, *Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — Qualitative nucleic acid based methods*
- ISO 21570:2005, *Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — Quantitative nucleic acid based methods*
- ISO 21572:2004, *Foodstuffs — Methods for the detection of genetically modified organisms and derived products — Protein based methods*

and an ISO Technical Specification (not developed with CEN):

- ISO/TS 21098:2005, *Foodstuffs — Nucleic acid based methods of analysis of genetically modified organisms and derived products — Information to be supplied and procedure for the addition of methods to ISO 21569, ISO 21570 or ISO 21571*

17. Concerning the current work programme of ISO/TC 34, in addition to dedicated work programmes dealing, for example, with *Fruit and vegetable products* (ISO/TC 34/SC 3), *Cereals and pulses* (ISO/TC 34/SC 4), *Milk and milk products* (ISO/TC 34/SC 5), *Animal and vegetable fats and oils* (ISO/TC 34/SC 11) and *Fresh, dry and dried fruits and vegetables* (ISO/TC 34/SC 14), several work items developed under the direct responsibility of ISO/TC 34 may also be of interest to Codex:

- ISO 22000:2005, *Food safety management systems — Requirements for any organization in the food chain*
- ISO/TS 22003:2007, *Food safety management systems — Requirements for bodies providing audit and certification of food safety management systems*
- ISO/TS 22004:2005, *Food safety management systems — Guidance on the application of ISO 22000:2005*
- ISO 22005:2007, *Traceability in the feed and food chain — General principles and basic requirements for system design and implementation*
- ISO/DIS 22006, *Guidelines on the application of ISO 9001:2000 for crop production* (under development)
- ISO/AWI 22008, *Food irradiation — Good processing practices for the irradiation of foods intended for human consumption* (under development)
- ISO/DIS 26642, *Food products — Determination of the glycemic index (GI) and relevant classification* (under development)

18. WG 8 prepared ISO 22000 and ISO/TS 22004, both published in 2005. The adoption of a food safety management system by an organization involved in the food chain is a useful tool for ensuring compliance with requirements specified by law, statute, regulation and/or customers. The design and implementation of an organization's food safety management system are influenced by varying factors, in particular food safety hazards, the products provided, the processes employed and the size and structure of the organization. ISO/TS 22004 gives generic guidance to small and large enterprises on the use of ISO 22000, which is based on the principles of HACCP as described by the Codex Alimentarius Commission and is designed to be applied together with relevant standards published by that organization.

19. The publication of ISO/TS 22004 followed that of ISO 22000:2005, which is based on a management systems approach (as in ISO 9001:2000), as well as on the Codex hazard analysis and critical control point (HACCP) system. The need for a new ISO International Standard arose from the fact that several national standards (Danish, Dutch, Australian, Irish, etc.) have been developed and from the fact that retailer organizations have prepared documents (BRC, EFSIS, IFS, etc.) for the establishment and auditing of food safety systems, possibly including HACCP requirements. In that context, ISO 22000 should help clarify and harmonize the present situation. ISO/TC 34 is currently working on its organization in order to ensure the long term management of this International Standard.

20. According to a recent survey, more than 70 countries have adopted ISO 22000 [including all the countries in the European Union as ISO 22000 was prepared in parallel with the European Committee for Standardization (CEN)]. More than 1 100 companies worldwide have now been certified to ISO 22000, including companies in the European Union, Australia, Canada, China, Czech Republic, Hong Kong, India, Indonesia, Japan, Jordan, Morocco, Pakistan, Philippines, Russia, Singapore, Slovakia, South Africa, South Korea, Sri Lanka, Switzerland, Taiwan, Tunisia and the USA. ISO 22000, and its associated conformity assessment, should have a positive impact on the harmonization and proper implementation of voluntary and mandatory food import and export requirements, inspection and certification systems.

21. The need for an international document containing requirements for bodies providing audit and certification of food safety management systems against ISO 22000 arose. However, to develop such a standard, the assistance of ISO/CASCO (Committee on conformity assessment) was needed. A Joint Working Group with ISO/CASCO (JWG 11) was established for the elaboration of ISO/TS 22003:2007, *Food safety management systems — Requirements for bodies providing audit and certification of food safety management systems*.

22. ISO/TS 22003:2007 is based on the generic standard that covers the area of certification and auditing of management systems, namely, ISO/IEC 17021:2006, *Conformity assessment — Requirements for bodies providing audit and certification of management systems*, and includes specific guidance on certification to ISO 22000. The final version was published in February 2007.

23. WG 9 has finished its work on ISO 22005, *Traceability in the feed and food chain – General principles and basic requirements for system design and implementation*. This document was developed in cooperation with the European Committee for Standardization (CEN). WG 9 also collaborated closely with Codex; this International Standard is intended to complement the Codex work on traceability as it explains the design of a suitable system to enable organizations to comply with the regulations set by Codex.

A traceability system is a useful tool to assist an organization operating within the feed and food chain to achieve defined objectives in a management system. However, the choice of a traceability system is influenced by regulations, the characteristics of the product and customer expectations.

ISO 22005 will assist feed and food organizations to document the history, application and location of a product or components.

24. WG 10 was established in 2005 and is working on ISO 22008, *Food irradiation — Good processing practices for the irradiation of foods intended for human consumption*.

This International Standard will specify requirements for good processing practices for the irradiation of foods intended for human consumption. It will apply to food products processed by gamma rays, X-rays or electron beam for the purpose of, among others, inhibition of the germination of bulbs, tubers and roots crops, phytosanitary treatment, delay of ripening and senescence of fruits and vegetables, reduction of microbial load and insect infestation, control of foodborne pathogens, sterilization of foodstuffs, e.g. for immunocompromised patients, and shelf life extension of perishable foods in general. It will also specify elements of a quality management system that are the minimum necessary to control the food irradiation process.

This project should be submitted to the DIS vote in June 2009.

25. To conclude on the work programme of the Working Groups directly reporting to ISO/TC 34, it should be noted that a new Working Group was established in 2005 (WG 12) to develop ISO 22006, *Guidelines on the application of ISO 9001:2000 for crop production*. This International Standard contains the text of ISO 9001 and adds additional requirements for agricultural production operators and for documents associated with a Farm Plan. It is currently at the Draft International Standard (DIS) stage.

26. Finally, ISO/TC 34 is developing ISO 26642, *Food products — Determination of the glycemic index (GI) and relevant Classification*. The development of this International Standard originated from a recognized need to standardize the determination of the glycemic index (GI) of foods for practice and research purposes, particularly with its increasing use as a nutrition claim. This document sets out a method for the determination of the glycemic index of carbohydrates in foods and the classification of foods into low, medium and high GI. The document will soon be voted on as a Draft International Standard (DIS).

27. In order to increase the coordination of the work done within all its structures, ISO/TC 34 decided to establish a Chairman Advisory Group (CAG) that first met in 2007. It has the task of assisting the Chairs and Secretaries of the Technical Committee and Subcommittees in the coordination, consistency, planning and steering of the ISO/TC 34 work or other specific tasks of an advisory nature. It also has the task of advising the Chairs and Secretaries of the Technical Committee and Subcommittees of ISO/TC 34 on: strategic and critical issues; newly identified development activities that may impact the topics of interest within the subject area; gaps between those developments and Committee's outcome.

ISO/TC 34 plans to hold a plenary meeting during the second semester of 2008 in France.

Concerning the work undertaken at the SC level, ISO/TC 34/SCs are currently working on the following main topics.

28. ISO/TC 34/SC 4, *Cereals and pulses*

The field of activity of ISO/TC 34/SC 4 covers standardization of cereals, pulses and their products in particular terminology, sampling, methods of test and analysis, product specifications and requirements for packaging, storage and transportation. There are 65 members in the Subcommittee: 17 Participating countries, 36 Observing countries and 12 international liaisons. Among these, CAC is the liaison that has most common interests with SC 4.

SC 4 has published 57 International Standards and has 17 ongoing projects.

The following projects might be of interest for CAC:

- ISO/DIS 24333, *Cereals and cereal products — Sampling*
- Revision of ISO 7301:2002, *Rice — Specification*
- ISO 6644:2002, *Flowing cereals and milled cereal products — Automatic sampling by mechanical means*
- ISO 16002:2004, *Stored cereal grains and pulses — Guidance on the detection of infestation by live invertebrates by trapping*

By developing closer relations and increasing cooperation with CAC, SC 4 members sincerely hope to promote the level of International standards of cereals and pulses.

29. ISO/TC 34/SC 5, *Milk and milk products*

The field of activity of ISO/TC 34/SC 5 covers standardization of methods of sampling and analysis in the field of milk and milk products.

With regard to analytical and test methods, ISO/TC 34/SC 5 and the International Dairy Federation (IDF) work together to prepare analysis methods that are published jointly. Most of these analysis methods are taken into account by the Codex Committee on Milk and Milk Products and are endorsed by the Codex Committee on Methods of Analysis and Sampling.

An important document is ISO/TS 22964:2006, *Milk and milk products — Detection of *Enterobacter sakazakii**. This bacterium has been found to exist in some infant formulations. The bacterium is thermotolerant and can remain after sterilization. After publication of the TS in 2006, the project was handed over to ISO/TC 34/SC 9 to prepare a horizontal International Standard for food products for the detection of *Enterobacter sakazakii*.

30. ISO/TC 34/SC 9, *Microbiology*

The field of activity of ISO/TC 34/SC 9 covers standardization of horizontal microbiological analysis methods for all food and animal feeding stuffs.

ISO/TC 34/SC 9 develops horizontal methods, applicable to all foods, feeds, samples from primary production and from processing environment, for the detection and/or enumeration of such food-borne pathogens as *Salmonella*, *Listeria monocytogenes*, *Bacillus cereus*, *Staphylococcus aureus*, thermotolerant *Campylobacter* and pathogenic *Vibrio*. A set of standards also deals with the use of polymerase chain reaction (PCR) for the detection of food-borne pathogens. Another set of standards is being developed on the validation of microbiological methods. AOAC International is in liaison with SC 9 and, in particular, has formally recognized the ISO *Salmonella* test method as being equivalent to the corresponding AOAC Official Method of Analysis.

31. ISO/TC 34/SC 11, *Animal and vegetable fats and oils*

The field of activity of ISO/TC 34/SC 11 covers standardization of methods of sampling and analysis of animal, marine and vegetable fats and oils.

ISO/TC 34/SC 11 has had a most satisfactory relationship with the Codex Committee on Fats and Oils (CCFO) for many years. ISO has observer status at the meetings and has usually been represented by the Chairman and the Secretary of SC 11, generally in dual capacities as their national delegates. This attendance is useful as there is usually a meeting on methods of analysis held during the meeting.

We are pleased to report that ISO Standards are the first choice for methodology within the CCFO Specifications. Participation also helps to keep the focus of methodology development on the requirements of international trade.

In particular, SC 11 is working on some of the key analytical parameters for the analysis of environmental food contaminants. Some of these, such as polycyclic aromatic hydrocarbons (PAH), can be reduced by changing the agricultural procedures which are used to dry the product. Others, such as dioxins, are almost entirely absorbed from industrial waste products which have not been disposed of to a satisfactory level. In summary, the relationship between Codex and SC 11 is both fruitful and complementary.

32. ISO/TC 34 will continue to offer its full support and cooperation to the Commission with a view to avoiding duplication of work and it will adopt, for its own documents, the conclusions of the Commission on all matters concerning food hygiene requirements.

Food safety — ISO publication

33. ISO and ITC have jointly published “*ISO 22000, Food safety management system, An easy-to-use checklist for small business, Are you ready?*”. This handbook on ISO 22000 will be of benefit to small businesses, especially in developing countries and transition economies, in their effort to improve their market share of food and agricultural products in the global market. A French version of the publication is also available. ISO has used this publication in various workshops it has conducted for developing countries.

34. This publication is a checklist consisting of questions covering various aspects of the setting-up, implementation and certification of a food safety management system according to ISO 22000:2005. It is aimed at small and medium enterprises both in developed and developing countries, and gives an overview of the requirements of ISO 22000. Working through the questions in a step-by-step manner will enable managers of an enterprise to determine the present status of their business and will help them identify main areas for improvement. It will therefore be of value even if the ultimate aim is not full certification of that enterprise.

ISO/DEVCO and food safety

35. Since 1960, ISO has had a policy development committee – DEVCO – that deals specifically with the needs of developing countries in standardization. Developing countries need to focus both on acquiring world-class technological competence and on achieving a good understanding of the technical requirements underlying global trade. For over 40 years, ISO has been assisting in both these areas through ISO/DEVCO, the ISO Committee on developing country matters. DEVCO's membership comprises over 120 national standards institutes from industrialized as well as developing countries.

36. The committee has four main objectives:

- to identify the needs and requirements of developing countries in the fields of standardization and related activities (i.e. conformity assessment including accreditation, quality and metrology) and to assist the developing countries, as necessary, in defining these needs and requirements;

- having established these needs and requirements, to recommend actions to assist the developing countries in meeting them;
- to monitor the implementation of *the ISO Action Plan for developing countries*;
- to provide a forum for the discussion of all aspects of standardization and related activities, and for the exchange of experience among developed and developing countries.

37. In 2007, ISO/DEVCO carried out 7 projects in relation to ISO 22000 technical assistance and has already planned 10 for 2008 (see [Annex 2](#)). The main objective is to improve awareness of key stakeholders in developing countries of the role of such standards in economic growth, world trade and their contribution to sustainable development.

Codex and ISO/TC 234 (see structure in [Annex 3](#))

38. The increasing importance of seafood as a protein source for the world population, and the increasing internationalization of both seafood production and trade, have led to a need for international standards to enable sustainable development and environmental compatibility of the fisheries and aquaculture sectors. The main objective of ISO/TC 234 is the development of standards to:

- improve the international surveillance and management of marine resources;
- provide exact specifications for technical equipment so that it fits local conditions and farmed species;
- improve the health and welfare of aquacultured species;
- reduce the impact of aquaculture and fisheries activities on sensible habitats;
- enable traceability of technical equipment with respect to production, trade and use;
- enable traceability of seafood from fjord to fork;
- provide the industries with tools for efficient registration, exchange and use of production data;
- ensure international agreement on methods for sampling and analyses;
- improve the safety for employees;
- ensure a precise multilingual terminology.

39. In the process leading to the establishment of ISO/TC 234, it was stressed that the work of the committee should be complementary to and not in competition with ongoing standardization under the auspices of other non-governmental or governmental organizations.

40. ISO/TC 234 held its first plenary meeting in Bergen, Norway in October 2007. Among the topics that were discussed were proposals from Norway and USA to develop standards within four areas:

1) Aquaculture technology

The increasing internationalization of aquaculture activities and related industry such as production and trading of aquaculture equipment has prompted the need for a global standard to ensure that equipment and aquaculture installations fit the requirements set by the different farmed organisms and the environmental conditions under which the equipment is used.

2) Aquaculture production data

All aquaculture activities, small scale or industrial, require the registration and monitoring of a number of physical, chemical and biological parameters. Today, there are few national and no global standards which describe the requirements for physical, chemical and biological registration in aquaculture. One potential standard could be a standard for biomass control to facilitate comparison, benchmarking and monitoring.

3) Traceability

As a result of the EU-funded TraceFish project ending in 2002, two documents, so-called workshop agreements (CWA's), were published by the European Committee for Standardization (CEN): CWA 14659 and CWA 14660, traceability of farmed fish products and wild fish products, respectively. It has been proposed that these CWAs provide background material for the development of an ISO standard on traceability of fish and other seafood products. The expected benefits of such an ISO standard include:

- improved food safety;
- improved documentation and transparency;
- reduced costs;
- improved chain communication and facilitation of trade;
- competitive advantage for seafood products.

4) Chemical use in aquaculture

There has been a proposal to develop ISO standards within this field; however, no detailed information has yet been distributed by the proposer (ANSI, USA). In aquaculture, chemicals are used as disinfectants (biological material, dams and equipment), as antifouling agents, for antiparasitic treatments, as feed additives and in other operations. International consensus regarding chemical use is needed to address the potential effects of these treatments and of the chemical residues on farmed organisms and surrounding ecosystems.

Codex and ISO/TC 147 (See structure in [Annex 4](#))

41. As water plays an important role in food processing (for all kinds of cleaning purposes, preparation of half-finished food products, production of beverages like beer and lemonades), many International Standards elaborated in ISO/TC 147/SC 2 and SC 4 are, or should be, taken into account.

Topics covered by ISO/TC 147/SC 2 range from metal determinations (single or multicomponent methods), anions, cations, to methods for organic substances such as plant treatment agents, or methods for ubiquitous pollutants like phthalates or polycyclic hydrocarbons, PAH.

In the investigations on the quality of food products, International Standards from ISO/TC 147 may be used as basic standards because water is – compared with all food products – the less difficult matrix to be investigated.

It should be stressed as well that all methods from ISO/TC 147/SC 2 have been validated by interlaboratory trials and are only accepted as standards if the results have been found satisfactory.

In addition, standards on analytical quality control are available.

In respect to microbiological methods (ISO/TC 147/SC 4), special importance is given to existing standards on the determination of *salmonella*, *coliforms* (*E.coli* and other substances), or e.g. methods on the investigation of microorganisms by culture. Special emphasis is laid on the preparatory work for a standard on the estimation of uncertainty in microbiological analysis.

Codex and ISO/TC 93 (See structure in [Annex 5](#))

42. Discussions at the 12th Plenary Meeting (held 18-19 March 2008 in Kingston Jamaica) proved that standards development was required for

- the terminology and definitions of starch,
- the sample/grain size, fineness, whiteness and brightness of starch,
- modification of test methods in existing standards,
- the viscosity of starch,
- health benefits gained from resistant starches which will be incorporated into the business plan (work plan) of the committee.

All of the above are deemed critical to the trade of starch and need to be reviewed within ISO/TC 93.

ISO's conformity assessment standards and their use in food safety

43. ISO is an International Standards developer and does not itself undertake assessments of conformity of products, management systems, processes or services against the requirements of the standards it produces.

44. ISO does however produce International Standards and Guides on how assessment of conformity should take place – this is the role of the ISO Policy Committee on Conformity Assessment ([ISO/CASCO](#)). It is this body within ISO that is closest to covering the same subject matter as the Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS).

45. As a consequence, ISO can be viewed as providing both International Standards that relate to the characteristics of specific products, as well as providing generic horizontal standards that document agreed procedures for the assessment of conformity (e.g. testing, inspection and certification) of products and processes.

46. In relation to ISO/CASCO, most of the conformity assessment Guides have been, or are in the process of being, turned into International Standards. [Annex 6](#) gives a list of documents and ongoing work. It is worth noting the work on ISO/IEC 17021-2, *Conformity assessment – Requirements for third party auditing of management systems*, and on ISO/IEC 17065, *Conformity assessment – General requirements for bodies operating product certification systems*.

Conclusion

47. It is recognized that the Commission's members, as governments, have the authority to regulate at the national level and that ISO, as a producer of voluntary International Standards, does not. In the framework of good regulatory practice, as promoted at international and regional levels, International Standards and Guides may be considered useful by regulators as effective and efficient tools to achieve important regulatory mandates, manage risk and address market confidence.

48. ISO considers that by using its International Standards, regulatory authorities will achieve their aims in public health and safety at less cost to manufacturers and consumers. Using International Standards also assists countries to meet their WTO TBT and SPS Agreement obligations.

49. For any further information on technical developments within ISO that have been reported in this paper, please do not hesitate to contact the following individuals:

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Structure of ISO/TC 34, *Food products*

ISO/TC 34 comprises 53 Participating countries and 54 Observing countries. ISO/TC 34 has established several substructures [14 Subcommittees (SC) and 5 Working Groups (WG)]; the development of important horizontal standards being under the responsibility of Working Groups directly reporting to ISO/TC 34. These substructures are the following:

- WG 8, *Food safety management systems (FSMS)* [with DS (Denmark) having the convenorship]
- WG 9, *Traceability system in the agriculture food chain* [with UNI (Italy) having the convenorship]
- WG 10, *Food irradiation* [with IRAM (Argentina) having the convenorship]
- JWG 11, *Requirements for bodies providing audit and certification of FSMS* [with DS (Denmark) having the convenorship] (Joint CASCO – TC 34 Working Group)
- WG 12, *Application of ISO 9001:2000 in the agriculture* [with ANSI (USA) having the convenorship]
- ISO/TC 34/SC 2, *Oleaginous seeds and fruits and oilseed meals* (secretariat held by France)
- ISO/TC 34/SC 3, *Fruit and vegetable products* (secretariat held by Poland)
- ISO/TC 34/SC 4, *Cereals and pulses* (secretariat held by China)
- ISO/TC 34/SC 5, *Milk and milk products* (secretariat held by The Netherlands)
- ISO/TC 34/SC 6, *Meat, poultry, fish, eggs and their products* (secretariat held by Botswana)
- ISO/TC 34/SC 7, *Spices, culinary herbs and condiments* (secretariat held by India)
- ISO/TC 34/SC 8, *Tea* (secretariat held by UK)
- ISO/TC 34/SC 9, *Microbiology* (secretariat held by France)
- ISO/TC 34/SC 10, *Animal feeding stuffs* (secretariat held by The Netherlands)
- ISO/TC 34/SC 11, *Animal and vegetable fats and oils* (secretariat held by UK)
- ISO/TC 34/SC 12, *Sensory analysis* (secretariat held by France and Argentina)
- ISO/TC 34/SC 14, *Fresh, dry and dried fruits and vegetables* (secretariat held by Turkey)
- ISO/TC 34/SC 15, *Coffee* (secretariat held by Brazil)
- ISO/TC 34/SC 16, *Horizontal methods for the detection of molecular biomarkers in: foods; seeds and propagules of food crops; commodity food crops; fruits; vegetables and derived foods* (which is a **new** Subcommittee created in March 2008, secretariat held by USA)

It can be noted that out of these 14 Subcommittees, only 3 are horizontal in scope (ISO/TC 34/SC 9, ISO/TC 34/SC 12 and ISO/TC 34/SC 16).

Selected ISO/TC 34 work items and publications of interest to Codex
(as of March 2008)

Project number	Title	Status
ISO 22000:2005	<i>Food safety management systems – Requirements for any organization in the food chain</i>	Published in September 2005.
ISO/TS 22003:2007	<i>Food safety management systems – Requirements for bodies providing audit and certification of food safety management systems</i>	Published in February 2007.
ISO/TS 22004:2005	<i>Food safety management systems – Guidance on the application of ISO 22000:2005</i>	Published in November 2005.
ISO 22005:2007	<i>Traceability in the feed and food chain – General principles and basic requirements for system design and implementation</i>	Published in July 2007.
ISO/DIS 22006	<i>Guidelines on the application of ISO 9001:2000 for crop production</i>	Draft International Standard under DIS vote in 2008.
ISO/AWI 22008	<i>Food irradiation – Good processing practices for the irradiation of foods intended for human consumption</i>	Work Item reregistered in 2007.
ISO/DIS 26642	<i>Food products – Determination of the glycemic index (GI) and relevant classification</i>	Draft International Standard to be sent to DIS vote in 2008.
ISO/TS 22964:2006	<i>Milk and milk products — Detection of Enterobacter sakazakii</i>	Published in January 2006. Note that a horizontal International Standard for food products for the detection of <i>Enterobacter sakazakii</i> is presently under development in ISO/TC 34/SC 9.

Annex 2

**Overview of ISO 22000 technical assistance projects carried out in 2007
and those planned for 2008**

ISO 22000 events carried out in 2007

Objective 1: Improve awareness of key stakeholders in developing countries of the role of standardization in economic growth, world trade and sustainable development					
Title	Venue/Host	Dates	Total participants	Sponsored participants	Beneficiary countries
Awareness raising national seminar on ISO 22000 — Food safety management system	Tripoli, Libya	25-27 February 2007	45	0	Libya
Awareness raising regional seminar on ISO 22000 — Food safety management system	Maputo, Mozambique	13-15 March 2007	68	0	Mozambique
Awareness raising regional seminar on ISO 22000 — Food safety management system	Astana, Kazakhstan	29-31 May 2007	45	4	Azerbaijan (1), Kyrgyzstan (2) and Uzbekistan (1)
National seminar on Food Safety Management Systems and ISO 22000	Sana'a, Yemen	5-7 August 2007	70	0	Yemen
EAC Regional Seminar on Food Safety Management Systems and ISO 22000	Kampala, Uganda	1-2 October 2007	32	0	Uganda
	Nairobi, Kenya	4-5 October 2007	27	0	Kenya
	Bujumbura, Burundi	8-9 October 2007	34	0	Burundi
	Kigali, Rwanda	11-12 October 2007	36	0	Rwanda
Regional workshop on Food Safety Management Systems and ISO 22000	Buenos Aires, Argentina	29-30 November 2007	20	7	Bolivia, Costa Rica, Cuba, Panama, Paraguay, Uruguay and Venezuela
ISO/GSO Seminar on Food Safety Management Systems and ISO 22000	Riyadh, Saudi Arabia	09-11 December 2007	124	0	Saudi Arabia

ISO 22000 events planned for 2008

Title	Region	Country
ISO 22000 Workshop	Arab and Mediterranean	Yemen
ISO 22000 Seminar	Africa, excluding the Arab countries	Ghana
ISO 22000 Regional Seminar	Arab and Mediterranean	Jordan
ISO 22000 Workshop	Africa, excluding the Arab countries	Zimbabwe
ISO 22000 Regional Seminar	Central and Eastern Europe	Armenia
ISO 22000 National Seminar	Central Asia	Uzbekistan
ISO 22000 Regional Seminar	South America	Venezuela
ISO 22000 Seminar with Training of Trainers (ToT)	East and South-East Asia	Philippines
ISO 22000 Seminar	East and South-East Asia	Vietnam
ISO 22000 Workshop	Caribbean and Central America	Guatemala

Structure of ISO/TC 234, *Fisheries and aquaculture*

ISO/TC 234, *Fisheries and aquaculture*, was established in 2007. The current list of member countries comprises 14 participating members and 18 observing members.

Participating members

Norway, (SN), secretariat	India (BIS)	Thailand (TISI)
Canada (SCC)	Malaysia (DSM)	USA (ANSI)
Fiji (FTSQCO)	New Zealand (SNZ)	United Kingdom (BSI)
France (AFNOR)	South Africa (SABS)	Viet Nam (TCVN)
Iceland (IST)	Spain (AENOR)	

Observing members

Argentina (IRAM)	Finland (SFS)	Montenegro (ISME)
Bosnia and Herzegovina (BAS)	Germany (DIN)	Netherlands (NEN)
Brazil (ABNT)	Israel (SII)	Poland (PKN)
Croatia (HZN)	Italy (UNI)	Sweden (SIS)
Cyprus (CYS)	Japan (JISC)	Switzerland (SNV)
Denmark (DS)	Malta (MSA)	Ukraine (DSSU)

Scope of the work of ISO/TC 234:

Standardization in the field of fisheries and aquaculture, including, but not limited to, terminology, technical specifications for equipment and for their operation, characterization of aquaculture sites and maintenance of appropriate physical, chemical and biological conditions, environmental monitoring, data reporting, traceability and waste disposal.

Excluded:

- methods of analysis of food products and traceability covered by ISO/TC 34;
- personal protective clothing covered by ISO/TC 94;
- environmental monitoring covered by ISO/TC 207.

The work of this committee should be complementary to and not in competition with ongoing standardization under the auspices of other non-governmental or governmental organizations.

Structure of ISO/TC 147, *Water quality*

ISO/TC 147 comprises 32 Participating countries and 52 Observing countries

ISO/TC 147 consists of the following:

- WG 4, *Radiological measurements* [with AFNOR (France) having the convenorship]
- SC 1, *Terminology* (secretariat held by South Africa)
- SC 2, *Physical, chemical and biochemical methods* (secretariat held by Germany)
 - WG 17 *Phenols* [with DIN (Germany) having the convenorship]
 - WG 19 *Polycyclic aromatic hydrocarbons (PAH)* [with NEN (The Netherlands) having the convenorship]
 - WG 33 *Ion chromatography methods* [with DIN (Germany) having the convenorship]
 - WG 38 *Flow analysis methods* [with DIN (Germany) having the convenorship]
 - WG 47 *Microcystins* [with DIN (Germany) having the convenorship]
 - WG 48 *Precision and accuracy* [with DIN (Germany) having the convenorship]
 - WG 52 *Antimony, arsenic and selenium* [with BSI (UK) having the convenorship]
 - WG 53 *GC-MS for groups of non-polar substances* [with NEN (The Netherlands) having the convenorship]
 - WG 54 *Alkalinity in marine water* [with JISC (Japan) having the convenorship]
 - WG 55 *Glyphosate and AMPA* [with AFNOR (France) having the convenorship]
 - WG 56 *PFOS and PFOA* [with JISC (Japan) having the convenorship]
 - WG 57 *SPME* [with DIN (Germany) having the convenorship]
 - WG 58 *pH measurement* [with DIN (Germany) having the convenorship]
- SC 4, *Microbiological methods* (secretariat held by Germany)
 - WG 2 *Coliforms (E. coli and other coliforms)* [with DIN (Germany) having the convenorship]
 - WG 7 *Salmonella* [with BSI (UK) having the convenorship]
 - WG 10 *Legionella* [with NEN (The Netherlands) having the convenorship]
 - WG 12 *Analytical quality control of microbiological media* [with AFNOR (France) having the convenorship]
 - WG 13 *Cryptosporidium/Giardia* [with BSI (UK) having the convenorship]
 - WG 15 *Uncertainty of measurement* [with SFS (Finland) having the convenorship]
 - WG 16 *Sampling for microbiological analysis* [with AFNOR (France) having the convenorship]
- SC 5, *Biological methods* (secretariat held by Germany)
- SC 6, *Sampling* (general methods) (secretariat held by UK)

Structure of ISO/TC 93, *Starch, derivatives and by-products*

The Bureau of Standards Jamaica (BSJ) has hosted the Secretariat for ISO/TC 93 since 2004.

Scope of ISO/TC 93

Standardization of terminology, methods of sampling, and methods of analysis and examination of starch. The field of activity covers native starch extracted from agricultural products (raw materials), starch which has been chemically or physically modified, starch derivatives such as sorbitol, dextrans, isoglucose and glucose syrups and starch by-products including glutens.

Main objectives of ISO/TC 93

- Harmonization of international standards for starch, derivatives and by-products in order to facilitate trade of these products
- To encourage research, development and further interest in starch production, processing, use and trade
- To facilitate discussion between member countries on the necessity for international standards within the scope of the committee
- To ensure that standards which have been published by the committee are up-to-date
- To provide internationally accepted methods of examination and sampling of starch, starch derivatives and starch by-products and also to investigate any added benefits and new use of the same
- To provide and promote the use of standard terminology for starch, derivatives and by-products
- Co-operation with the international organizations in liaison with the technical committee
- To develop a work programme which ensures that market needs are met

Members

The committee comprises 9 Participating countries (P-Members) and 30 Observer countries (O-Members).

P-Members: China, Cuba, France, Jamaica, Netherlands, Republic of Korea, Saint Lucia, Spain and Trinidad and Tobago

O-Members: Austria, Belgium, Cameroon, China, Croatia, Côte-d'Ivoire, Estonia, Ethiopia, Finland, Germany, Greece, Hungary, India, Indonesia, Ireland, Italy, Japan, Lebanon, Nigeria, Poland, Portugal, Saudi Arabia, Serbia, Slovakia, Sri Lanka, Switzerland, Thailand, Tunisia, Turkey and the United Kingdom.

Liaison groups

The groups which are in liaison with ISO/TC 93 include:

ISO/TC 34 (*Food products*), Association of Cereal Starch Producers in the EU, AOAC International, Codex Alimentarius Commission, European Commission, Food and Agriculture Organization of the United Nations, International Association for Cereal Science and Technology, International Commission for Uniform Methods of Sugar Analysis, International Office of Cocoa, Chocolate and Sugar Confectionery, International Organization of Legal Metrology, Union of Potato Starch Factories of the European Union, World Customs Organization.

Structure of ISO/TC 134, *Fertilizers and soil conditioners*

The main objective of this technical committee is the development of globally relevant International Standards, in order to promote the quality and safety of fertilizers and soil conditioners and facilitate world trade.

ISO/TC 134 will hold a meeting in Barcelona on 3 July 2008.

Scope of ISO/TC 134

Standardization in the field of fertilizers and soil conditioners, that is, materials whose addition is intended to ensure or improve the nourishment of cultivated plants and / or to improve the properties of soils.

List of standards developed by ISO/TC 134

- ISO 3944:1992, *Fertilizers — Determination of bulk density (loose)*
ISO 3963:1977, *Fertilizers — Sampling from a conveyor by stopping the belt*
ISO 5306:1983, *Fertilizers — Presentation of sampling reports*
ISO/TR 5307:1991, *Solid fertilizers — Derivation of a sampling plan for the evaluation of a large delivery*
ISO 5308:1992, *Solid fertilizers — Method of checking the performance of mechanical devices for sampling of product moving in bulk*
ISO 5311:1992, *Fertilizers — Determination of bulk density (tapped)*
ISO 5313:1986, *High nitrogen content, straight ammonium nitrate fertilizers — Determination of oil retention*
ISO 5314:1981, *Fertilizers — Determination of ammoniacal nitrogen content — Titrimetric method after distillation*
ISO 5315:1984, *Fertilizers — Determination of total nitrogen content — Titrimetric method after distillation*
ISO 5316:1977, *Fertilizers — Extraction of water-soluble phosphates*
ISO 5317:1983, *Fertilizers — Determination of water-soluble potassium content — Preparation of the test solution*
ISO 6598:1985, *Fertilizers — Determination of phosphorus content — Quinoline phosphomolybdate gravimetric method*
ISO 7407:1983, *Fertilizers — Determination of acid-soluble potassium content — Preparation of the test solution*
ISO 7408:1983, *Fertilizers — Determination of ammoniacal nitrogen content in the presence of other substances which release ammonia when treated with sodium hydroxide — Titrimetric method*
ISO 7409:1984, *Fertilizers — Marking — Presentation and declarations*
ISO 7410:1983, *Fertilizers and soil conditioners — Final samples — Practical arrangements*
ISO 7497:1984, *Fertilizers — Extraction of phosphates soluble in mineral acids*
ISO/TR 7553:1987, *Fertilizers — Sampling — Minimum mass of increment to be taken to be representative of the total sampling unit*
ISO 7742:1988, *Solid fertilizers — Reduction of samples*
ISO 7837:1992, *Fertilizers — Determination of bulk density (loose) of fine-grained fertilizers*
ISO 7851:1983, *Fertilizers and soil conditioners — Classification*
ISO 8157:1984, *Fertilizers and soil conditioners — Vocabulary*
ISO 8358:1991, *Solid fertilizers — Preparation of samples for chemical and physical analysis*
ISO 8397:1988, *Solid fertilizers and soil conditioners — Test sieving*
ISO 8398:1989, *Solid fertilizers — Measurement of static angle of repose*
ISO 8633:1992, *Solid fertilizers — Simple sampling method for small lots*
ISO 8634:1991, *Solid fertilizers — Sampling plan for the evaluation of a large delivery*
ISO 10084:1992, *Solid fertilizers — Determination of mineral-acid-soluble sulfate content — Gravimetric method*
ISO 10248:1996, *Fluid fertilizers — De-aeration of suspension samples by film disentrainment*
ISO 10249:1996, *Fluid fertilizers — Preliminary visual examination and preparation of samples for physical testing*

Annex 7

List of CASCO Guides and Standards by field of application

Vocabulary, principles and common elements of conformity assessment	ISO/IEC 17000: 2004	<i>Conformity assessment — Vocabulary and general principles</i>
	ISO PAS 17001: 2005	<i>Conformity assessment — Impartiality — Principles and requirements</i>
	ISO PAS 17002: 2004	<i>Conformity assessment — Confidentiality — Principles and requirements</i>
	ISO PAS 17003: 2004	<i>Conformity assessment — Complaints and appeals — Principles and requirements</i>
	ISO PAS 17004: 2005	<i>Conformity assessment — Disclosure of information — Principles and requirements</i>
Writing specifications for use in conformity assessment	ISO/IEC Guide 7: 1994	<i>Guidelines for drafting of standards suitable for use for conformity assessment</i>
Product certification	ISO/IEC Guide 23: 1982 Reconfirmed in 2003	<i>Methods of indicating conformity with standards for third-party certification systems</i>
	ISO/IEC Guide 28: 2004	<i>Conformity assessment — Guidance on a third-party certification system for products</i>
	ISO/IEC Guide 53: 2005	<i>Conformity assessment — Guidance on the use of an organization's quality management system in product certification</i>
	ISO/IEC Guide 65: 1996	<i>General requirements for bodies operating product certification systems</i>
	ISO/IEC Guide 67: 2004	<i>Conformity assessment — Fundamentals of product certification</i>
Code of good practice for conformity assessment	ISO/IEC Guide 60: 2004	<i>Conformity assessment — Code of good practice</i>
Mutual Recognition Arrangements (MRAs)	ISO/IEC Guide 68: 2002	<i>Arrangements for the recognition and acceptance of conformity assessment results</i>
Accreditation	ISO/IEC 17011: 2004	<i>Conformity assessment — General requirements for accreditation bodies accrediting conformity assessment bodies</i>
Inspection	ISO/IEC 17020: 1998 Reconfirmed in 2002	<i>General criteria for the operation of various types of bodies performing inspection</i>
System certification	ISO/IEC 17021:2006	<i>Conformity assessment — General requirements for bodies providing audit and certification of management systems</i>
Certification of persons	ISO/IEC 17024: 2003	<i>Conformity assessment — General requirements for bodies operating certification of persons</i>
Testing/calibration	ISO/IEC 17025: 2005	<i>General requirements for the competence of testing and calibration laboratories</i>
	ISO/IEC Guide 43-1: 1997	<i>Proficiency testing by interlaboratory comparisons – Part 1: Development and operation of proficiency testing schemes</i>
	ISO/IEC Guide 43-2: 1997	<i>Proficiency testing by interlaboratory comparisons – Part 2: Selection and use of proficiency testing schemes by laboratory accreditation bodies</i>
Marks of conformity	ISO Guide 27: 1983 Reconfirmed in 2003	<i>Guidelines for corrective action to be taken by a certification body in the event of misuse of its mark of conformity</i>
	ISO/IEC 17030: 2003	<i>Conformity assessment — General requirements for third-party marks of conformity</i>

<i>Peer assessment</i>	ISO/IEC 17040: 2005	<i>Conformity assessment — General requirements for peer assessment of conformity assessment bodies and accreditation bodies</i>
<i>Supplier's Declaration of Conformity (SDoC)</i>	ISO/IEC 17050-1: 2004	<i>Conformity assessment — Supplier's declaration of conformity - Part 1: General requirements</i>
	ISO/IEC 17050-2: 2004	<i>Conformity assessment — Supplier's declaration of conformity - Part 2: Supporting documentation</i>

List of CASCO projects underway

<i>Common elements of conformity assessment</i>	ISO PAS 17005 [CASCO WG 23] FDPAS in progress.	Conformity assessment - Use of management systems in conformity assessment - Principles and requirements
<i>Writing specifications for use in conformity assessment</i>	ISO/IEC 17007 [CASCO WG 27] Revision of ISO/IEC Guide 7:1994 Committee Draft launched for consultation, closing on 2008-02-26.	Conformity assessment - Guidelines for drafting standards and specified requirements suitable for use for conformity assessment
<i>Auditing competence</i>	ISO/IEC 17021 Part 2 [CASCO WG 21] Working Draft in progress.	Conformity assessment – Requirements for third party auditing of management systems
<i>Proficiency testing</i>	ISO/IEC 17043 [CASCO WG 28] Revision of ISO/IEC Guide 43:1997 Working Draft in progress.	Conformity assessment – General requirements for proficiency testing
<i>Product certification</i>	ISO/IEC 17065 [CASCO WG 29] Revision of ISO/IEC Guide 65:1996 Working Draft in progress.	Conformity assessment – General requirements for bodies operating product certification systems