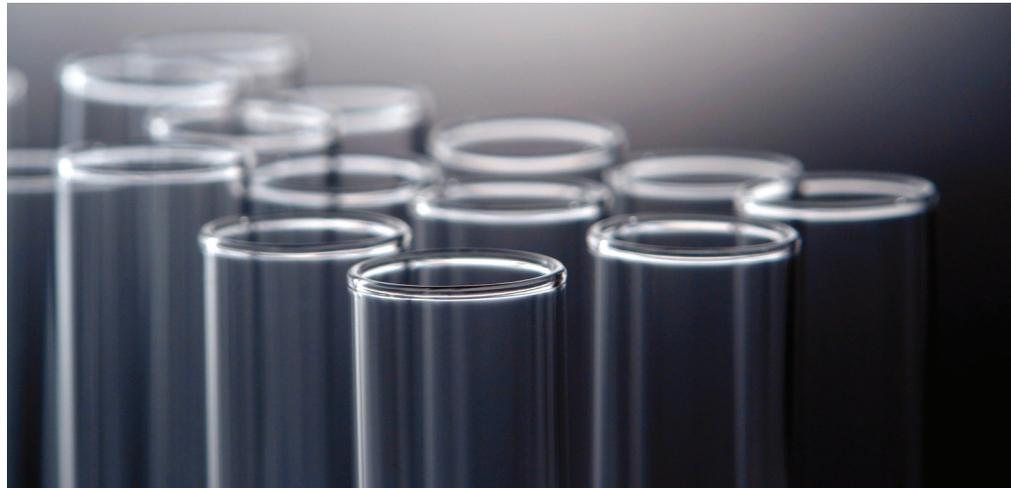


INTERNATIONAL

FOOD RISK ANALYSIS JOURNAL

Proceedings of the Special Session on Codex at the China International Food Safety and Quality Conference



INTECH



Special Issue Guest Editor

Samuel Godefroy Director General, Food Directorate,
Health Canada, Canada

Editor-in-Chief

Samuel Godefroy Director General, Food Directorate,
Health Canada, Canada

Paul Brent Chief Scientist, Food Standards
Australia New Zealand, New-Zealand

Sébastien La Vieille Senior Scientific Advisor,
Food Directorate, Health Canada, Canada

Food Risk Analysis Communications Board

Samuel Godefroy Co-Editor in chief,
Director General, Food Directorate

Sébastien La Vieille Co-Editor in chief, Senior Advisor,
Food Directorate: Scientific and Medical

Michael Masotti Senior Advisor
to the Director General, Food Directorate

Martin Duplessis Senior Science Advisor and Head,
Food Emergency, Food Directorate

William Yan Director, Bureau of Nutritional Sciences

Jeffery Farber Director Bureau of Microbial Hazards

Danielle Brulé Director, Bureau of Food
Surveillance and Science Integration

Barbara Lee Director, Bureau of Chemical Safety

Mark Feeley Chief, Food Toxicologist
and Associate Director, Bureau of Chemical Safety

Maya Villeneuve Associate Director,
Bureau of Nutritional Sciences

Editorial Board

Robert C. Burk Associate Professor and Chair Chemistry,
Carleton University, Ottawa, Canada

Michael Masotti Senior Advisor, Food Directorate,
Health Canada

Andrew Bartholomaeus General Manager Risk Assessment,
Food Standard Australia New Zealand (FSANZ)

Nega Beru Director, Office of Food Safety, Center
for Food Safety and Applied Nutrition, U.S. Food
and Drug Administration

Kevin Cockell Chief, Nutrition Research Division,
Bureau of Nutritional Sciences, Food Directorate,
Health Canada

Mark Feeley Associate Director, Bureau of Chemical Safety,
Food Directorate, Health Canada

Steve Hathaway Director, Science, Information and Risk,
Ministry of Agriculture and Forestry, New-Zealand

Djien Liem European Food Safety Authority,
Head of the Scientific Committee Unit,
European Food Safety Authority

Dorothy Mackerras Chief Public Health Advisor,
Food Standard Australia New Zealand (FSANZ)

Rekha Mehta Chief, Toxicology Research Division, Bureau
of Chemical Safety, Food Directorate, Health Canada

David Mortimer Policy Lead, Environmental
Contaminants, Chemical Safety Division,
UK Food Standards Agency

Trevor Webb Principal Social Scientist, Food Standard
Australia New Zealand (FSANZ)

INTECH

open science | open minds



International Food Risk Analysis Journal | Volume 4

Proceedings of the Special Session on Codex at the China International Food Safety and Quality Conference Codex Alimentarius Commission at 50, Accomplishments and Future Challenges

In recognition of the 50th anniversary of the Codex Alimentarius Commission



Abstracted/Indexed in

Scirus, EBSCO - A-to-Z, WorldCat, BASE - Bielefeld Academic Search Engine, Google Scholar, Hrcak

Published by InTech

Janeza Trdine 9, 51000 Rijeka, Croatia

Identification Statement

Online ISSN 1848-2368

Abbreviated key title: Int Food Risk Anal J

Start Year: 2011

Copyright © 2014 InTech

All articles are Open Access articles distributed under the Creative Commons Non Commercial Share Alike Attribution 3.0 license, which permits to copy, distribute, transmit, and adapt the work in any medium, so long as the original work is properly cited. After this work has been published by InTech, authors have the right to republish it, in whole or part, in any publication of which they are the author, and to make other personal use of the work. Any republication, referencing or personal use of the work must explicitly identify the original source.

As for readers, this license allows users to download, copy and build upon published articles as long as the author and publisher are properly credited.

Notice

Statements and opinions expressed in the papers are these of the individual contributors and not necessarily those of the editors or publisher. No responsibility is accepted for the accuracy of information contained in the published articles. The publisher assumes no responsibility for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained in the journal.

Cover Image Copyright Used under license from Shutterstock.com

Contact

You can contact us at
ifraj@intechopen.com

A free online edition of this journal is available at www.intechopen.com

Contents

Preface: Why Should Anyone Care About Codex? 1

Karen Hulebak

50 Years of Codex: Fostering Harmony for Better Food Safety 5

Sanjay Dave

Theme 1: Importance of Science in Support of Codex Standards

Science-based Standards for the Global Marketplace: Codex Alimentarius 9

Mary Frances Lowe

Scientific Assessment Activities Conducted by Food Safety

Agencies to Support Domestic and International Standards Development 13

Rozenn Saunier

Theme 2: Codex in Asia - Asia Pacific Region

China's Contribution to Codex Standard Setting 17

Junshi Chen

The Contribution of the Asia Region to the Codex

Standard Setting Process: Accomplishments and New Horizons 19

Yayoi Tsujiyama

Codex Alimentarius Commission: Its Importance in Chile's Food Safety History 21

Nuri Gras and Constanza Miranda

The Importance of Hosting a Codex Committee

in Advancing Codex's Strategic Vision and Core Values 25

Ann Backhouse

Theme 3: Current, Emerging Issues and Future Direction for Codex

The Role of Codex in Food Import, Export, Inspection and Certification Systems 27

Greg Read

New Opportunities for International Harmonization:

The New Codex Committee for Spices and Culinary Herbs 29

Gaurav Dwivedi

Codex Alimentarius Commission at 50: Major Achievements and Challenges Ahead 33

Samuel Benrejeb Godefroy

Agenda of the Special Session on Codex held during

the China International Food Safety and Quality Conference 41

Introduction by the Editor

Samuel Benrejeb Godefroy¹

¹ Director General, Food Directorate, Health Canada
Vice Chairperson Codex Alimentarius Commission, 2011-14

This special issue of the International Food Risk Analysis Journal (IFRAJ) offers the proceedings of the special session dedicated to celebrate the 50th anniversary of the Codex Alimentarius Commission (Codex), organized as part of the China International Food Safety and Quality Conference (CIFSQ) in Beijing, China from 6-7 November 2013.

The special “Codex” session had the following theme: “Codex Alimentarius Commission at 50, Accomplishments and Future Challenges”. The session gathered key opinion leaders and contributors to Codex from around the world and particularly from the Asia-Pacific Region. It aimed at highlighting the accomplishments of the Codex Alimentarius Commission over the past 50 years as the preeminent food standard setting body internationally, its future challenges and areas of focus both internationally and for the Asia – Asia-Pacific region in particular. The session also highlighted the critical nature of the availability of scientific advice delivered by the expert advisory bodies

to Codex led by the World Health Organization and the United Nations Food and Agriculture Organization, as well as the importance of availability of data from countries and organizations to inform the development of such scientific advice. The session discussed the contribution of scientific and regulatory institutions in the region and elsewhere to generate and foster the availability of scientific information critical to standard setting domestically and internationally.

As organizer of this special session at CIFSQ and editor of this special issue of the IFRAJ dedicated to Codex, I would like to thank all speakers that have kindly agreed to contribute to this issue. My thanks go to the current chair of the Commission, Dr. Sanjay Dave, for his support to the organization of this session as well as for his participation and his contribution with a paper to this special issue. A special thanks goes to former Chair Dr. Karen Hulebak for agreeing to preface this special issue.

Preface: Why Should Anyone Care About Codex?

Karen Hulebak¹

¹ Former Chairperson of the Codex Alimentarius Commission (2008-2011)

© 2014 Hulebak; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Summary

In the half century since its founding, the Codex Alimentarius Commission, or simply Codex, has established thousands of global standards that allow for food trade to move smoothly, even as world food production and trade have become hugely more complex than they were at the time of Codex's founding. Codex's success is due, certainly in part, to a set of ground rules and procedures that member countries agree to abide by when they become members. Collaboration and honest negotiation in good faith become more and more important as the membership demographics of Codex become more and more diverse – and as they more truly reflect the demographics of those countries that trade food globally. Continued good faith and increasing policy sophistication will be necessary to keep Codex on a necessarily continual growth curve.

2. The Codex Mandate and Ground Rules

The United Nations' Food and Agriculture Organization (FAO) and the World Health Organization (WHO) established the Codex Alimentarius Commission (CAC) as a joint program in 1964. The new Commission was given a two-part mandate: Codex standards were to protect the health of consumers and to ensure global fair food trade practices. The hope was that, through accomplishment of these two goals, international trade in food (in Codex-compliant safe food) would become harmonized.

The fundamental concept undergirding this hope was that, if Codex could produce standards that all countries could use, then standards would become harmonized around the world and world trade in food would be facilitated through lowering or abolishment of non-tariff trade barriers (non-tariff trade barriers are defined as trade barriers that restrict imports but are not in the usual form of a tariff). By requiring that Codex standards be based on independent evaluations of science and risk assessments, the founding organizations hoped to avoid the imposition of non-tariff trade barriers that, for example, masqueraded as science-based public-health measures which were actually designed to protect a country's agricultural industry.

In 1996, largely through the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Technical Barriers to Trade (TBT Agreement), Codex standards became the World Trade Organization's "gold standards." Through these treaties, the World Trade Organization (WTO) (the international court that judges trade disputes between countries) established its intention to use Codex standards as the metrics against which to evaluate the claims or standards of parties in a trade dispute. Although adoption of Codex standards by countries is voluntary, the adoption of Codex standards confers the benefit of assumed WTO compliance, which is of obvious value to countries. Countries may adopt or not adopt Codex standards in their own food safety regulatory regimes, but countries that choose not to adopt Codex

standards must - if trading partners challenge their non-Codex-based standard(s) - be able to demonstrate with solid science and a health risk assessment that their regulations are better suited to their citizens than the Codex standard. In addition, countries must be able to demonstrate that their non-Codex-based standard(s) are consistent with the science and risk-based approach that they take generally to other foodborne hazards in their country's food safety regulatory regimes.

If a country fails to demonstrate that its non-Codex-based standard passes these tests, then the WTO may conclude that the country's non-Codex-based standard is arbitrary and capricious (i.e., it is not consistent with the general regulatory approach of the country) and may be a trade barrier intended to block imports from other countries.

All countries would like to be able to trade their agricultural products without facing protectionist trade barriers. Trade disputes are, however, seemingly inevitable and therefore, in order to judge trade disputes among countries fairly and without bias, an independent court accepted by all countries is necessary; this is the role of the WTO. Also necessary are globally agreed upon food safety and quality standards based on independent, globally accepted science and health risk assessments for use by that court (i.e., Codex standards).

Indeed, if the WTO did not exist and Codex standards did not exist to assist the WTO in its case reviews, countries trading food internationally would face the situation that existed before the WTO was created: trade would be unstable, undependable, and unpredictable, difficult trading conditions would harm countries' economies and there would be no way to settle trade disputes. The WTO was created to improve this situation and Codex standards were identified to help the court make fair judgments.

Just how important trade relations are is illustrated by the success story of the European Union (EU). World Wars I and II caused great loss of life; between 1914 and 1945 Europe alone lost between 50-70 million people to war and some estimates are even higher. Economies all over the world suffered, even if they were not directly involved in the warfare. The founding of the European Coal and Steel Community (a fair trade agreement) in 1950 was the first major step towards achieving economic stability and, therefore, political stability. From that point forward, the greater EU was developed.

All durable agreements – be they trade agreements, labor management agreements or peace treaties – depend on trust. For any agreement to be durable (i.e., stable and workable over the long term), all parties to the agreement must accept and abide by its terms and rules. Codex also

operates by a set of agreed upon principles which are the operating rules and procedures established in the Codex Procedural Manual. Codex member countries may disagree with aspects of the Procedural Manual, but they are bound to follow the Manual's rules until the rules or procedures of the Manual are changed.

The Procedural Manual states that Codex standards are to be based on the scientific evaluations and health risk assessments produced by scientific expert panels jointly appointed and managed by WHO and FAO and on the most globally representative data available. These scientific expert panels are *independent of Codex* and WHO and FAO are careful to ensure that independence. The Procedural Manual allows for consideration of no scientific analyses other than those of WHO and FAO scientific expert panels, excepting contributions from the International Atomic Energy Agency and the World Organization for Animal Health.

The Procedural Manual also states that Codex member countries may disagree with the content of a draft standard and, in such cases, members "may abstain from acceptance of the standard without necessarily preventing the decision [adoption] by Codex".

3. Are Codex Standards Important in the Real World?

Codex member countries are Codex's risk managers. The country delegates' role is to use the scientific expert panels' recommendations to develop practical, realistic standards that can be used by food industries to ensure that the food they produce is safe to consume and that can be used by governments to guide effective inspection of foods, both domestic and imported.

An independent external evaluation of Codex in the early 2000s found that low- and middle-income countries viewed Codex standards as very important for trade facilitation (primarily food exports). High-income countries found Codex standards most valuable for ensuring the safety of food imports.

Codex standards are referenced in more than 15 bilateral and pluri-lateral trade agreements. APEC (Asia-Pacific Economic Cooperation), NASTA (North American Free Trade Agreement), and MERCOSUR (The Southern Common Market of South America) all have adopted measures that relate to Codex standards. Trade agreements are all about business; if Codex did not matter to the business world, trade agreements wouldn't reference Codex.

4. The World is Changing: Codex Must Change With It

Codex began in the 1960s with a few member countries, all rich and industrialized with the exception of Thailand,

the sole developing-country initial member. However, over the years, Codex's membership has changed dramatically and it now has a very diverse membership of large to very small economies, from highly industrialized economies to predominantly rural economies. Developing countries are more coordinated and better networked than ever before and have increasingly strong and respected voices in Codex. In addition, food trade issues are more complicated than ever before with many new issues that didn't exist 15-20 years ago (e.g., the so-called "private standards;" unusually and persistently high food prices; widely prevalent food insecurity).

5. Codex Today

Although Codex was intended to be a non-political organization, Codex is currently facing political challenges. Regional political positions are increasingly distorting decision making at the cost of the credibility of the independent expert scientific evaluations and risk assessments. Trade and economic issues are also increasingly distorting Codex decision making even though Codex was intended to be based predominantly on science and risk management. New trade tensions are emerging, adding to the traditional North-South tensions, with new tensions developing between emerging economies and less-developed countries. Finally, new scientific challenges demand an evolution in Codex risk assessment and risk management paradigms (e.g. increasing use of high-throughput, in vitro chemical screening system; climate change is beginning to introduce new food safety hazards in geographical areas in which they have not heretofore existed).

6. Codex Tomorrow: Leading with Standards for the 21st Century

Codex member countries must start thinking about the following issues (as a minimum set):

Global food insecurity is likely to remain a constant threat. The availability of safe food directly relates to greater food security. Codex standards can ensure the safety of food and, therefore, can contribute towards global food security.

Global food insecurity will likely require or result in changes in the way that modern agriculture is practiced. Some current agricultural practices may not be sustainable over the long term. As concern about high-production agriculture has grown, so has the concept of "sustainably intensive agriculture" practices designed to maximize productivity while minimizing the environmental impacts of production. As sustainably intensive agriculture gains practical applications, Codex

will need to consider how new practices may affect Codex standards and, in addition, how concepts or codes of practice long accepted in Codex may need to change to facilitate more sustainably intensive agriculture.

Climate change is now a well-documented and widely accepted phenomenon. There are already instances of climatic change that have had significant effects on local agricultural conditions. Codex must consider how climate change may affect the safety of foods and how standards might need to change to reflect changing pest population patterns; the effects of changing heat, humidity, drought, and rainfall on toxic molds and other contaminants; how water shortages might change water use and re-use patterns in food processing; and other issues too numerous to name.

7. What Does Success Look Like for Codex?

Codex today is a far different body than the one established just 50 years ago – indeed, its demographics are quite different from those of even 15 years ago. Developing countries and countries with emerging economies have much louder voices and are far more influential in shaping debate than they were formerly. This more diverse membership has resulted in a more complex debate with greater diversity of opinion and perspective than was formerly the case. In a process that allows all voices to be heard, this greater complexity means that Codex discussions more accurately reflect the range of opinions globally, but it also can add to the difficulty of finding consensus and the length of time required to reach a consensus.

In addition, the politics of the global food trade have had a steadily increasing – and distorting - effect on Codex debates and on its decision-making processes. There have been recent instances in which a country-level scientific evaluation has been used to argue that a WHO/FAO scientific expert panel evaluation was incorrect or invalid. Such situations are troublesome for several reasons. In the first case, the Procedural Manual does not allow the consideration of scientific evaluations from sources other than the globally balanced and rigorously independent products of the panels overseen by the WHO and the FAO. In the second case, the Procedural Manual makes it clear that countries may disagree with the content of a Codex standard and formally register their disagreement, yet not stand in the way of or block consensus adoption. When Commission decisions are taken through processes not allowed by the Manual, several consequences ensue: first, the validity of the Procedural Manual is implicitly challenged; second, the foundational agreement to abide by the Procedural Manual that is entered into by all countries when they become Codex members is flouted, and finally, countries, especially those new to Codex, may

become confused about Codex ground rules or worse, lose faith that there *are* consensus, consistent, and consistently applied ground rules.

A successful Codex will be an organization in which member countries work through positive, collaborative partnerships with other countries and build leadership and influence by listening, genuinely trying to learn and understand the basic interests of other countries and working with other member countries through effective

and fair negotiation. A successful Codex means that consumer health is protected and fair trade in safe food is facilitated. It means that Codex members can find solutions by understanding the fundamental needs of other parties in a dispute and then find creative ways to address those needs through negotiation. Codex celebrates its 50th birthday in 2014, but the problems that it must address demand that its zest for growth and change be ever young.

50 Years of Codex: Fostering Harmony for Better Food Safety

Sanjay Dave¹

¹ Chairperson, Codex Alimentarius Commission, 2011-2014

© 2014 Dave; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. What is Codex?

The Codex Alimentarius Commission (CAC), commonly referred to as “Codex”, is an intergovernmental body established by the Food and Agricultural Organization (FAO) of the United Nations and the World Health Organization (WHO) in 1963 and currently consists of 185 member governments and 1 member organization. The CAC develops and adopts international science-based food safety and quality standards and guidelines under the Joint FAO/WHO Food Standards Program to protect the health of consumers and ensure fair practices in the food trade. The Codex Alimentarius, or The Food Code, has become the international reference point for matters concerning food quality and safety for consumers, food producers, national governments and for ensuring fair practices in the international food trade.

Codex is one of “the three sisters” recognized under the World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), which also includes the World Organization for Animal Health (OIE) and the International Plant Protection Convention (IPPC). The SPS Agreement encourages global harmonization of food standards and cites international standards, guidelines and recommendations as the preferred measures for facilitating international trade in food. As a result, Codex standards have become important international benchmarks against which national food regulations and other measures are evaluated within the context of the WTO Agreements.

Codex standards are also considered to be consistent with the WTO Technical Barriers to Trade Agreement.

2. Relevance of Codex

The CAC is the primary multilateral forum for setting international food safety standards and guidelines by means of a formalized process outlined in its Procedural Manual which is inclusive, transparent and consensus-based. The Codex system facilitates opportunities for all countries in the international community to participate in formulating and harmonizing food standards and ensuring their implementation, resulting in standards which are fair and relevant to member countries and, therefore, truly global in nature. In addition to the development of standards, members also play a role in developing codes governing hygienic processing practices, guidelines, methods of analysis and sampling, Maximum Residue Limits (MRLs) for residues of pesticides or veterinary drugs in foods, audits, ethics, equivalence, etc.

The standards setting work of Codex is based firmly upon scientific principles and on scientific risk analysis. Experts and specialists from a wide range of disciplines have contributed to the various aspects of the Codex Alimentarius, ensuring that its standards hold up to the most rigorous scientific scrutiny. As a result, Codex has become an important international forum for the exchange of scientific information and opinions related to food safety, food-related scientific research and risk assessment.

While Codex standards are non-mandatory, they are flexible in their adaptation to national food control systems, making it relatively easy to harmonize national food safety legislations. The formal processes set out in the Procedural Manual of the CAC also ensure that the exchange of information is standardized. In addition to contributing to the safety of the global food supply, Codex also facilitates domestic and international trade and ensures the safety of food imports. Its standards can help to settle differences as they are often used a reference in international trade disputes related to food and agri-food products. Overall, Codex standards and participation in the work of the CAC are of significant value to member countries and are often considered a key component in maintaining effective national food safety systems that protect human health.

3. Key Achievements

Since the establishment of the CAC, its membership has increased from just 30 countries in 1963 to 185 countries and 1 member organization in 2014 and now represents 99% of the global population. The number of international governmental and non-governmental organizations with official Codex observer status and which provide expert information, advice and assistance to the Commission has also increased from just 16 to 220 presently. Accordingly, the CAC's operating budget has grown from \$55,000 to \$8.3 million annually. The CAC is supported by a strong Secretariat and by FAO/WHO teams which help to organize and facilitate the work of the Commission and its subsidiary bodies.

A key achievement of the CAC is the development of the Procedural Manual of the CAC (now in its 21st edition), which is intended to help member governments participate effectively in the work of the Commission. The Procedural Manual sets out the basic Rules of Procedure, procedures for the elaboration of standards and related texts, basic definitions and guidelines for the operation of Codex Committees, such as the development of working principles for risk analysis and the identification and consideration of "other legitimate factors" (e.g., economic cost, availability of resources to undertake analyses and enforce standards, etc.) in the context of risk analysis and risk management within Codex.

Another significant achievement of Codex is building national capacities by providing assistance to developing countries and those with economies in transition to enhance their level of effective participation in the CAC and take full advantage of the Commission's work. Factors that have contributed to this include the FAO/WHO Project and Fund for Participation in Codex (Codex Trust Fund), which provides support to eligible

countries to prepare for and participate in Codex Committees and training courses and to prepare and present scientific/technical positions and data related to the work of Codex, the provision of co-hosting opportunities for developing countries and their participation in various electronic working groups. The contribution of developing countries to the work of the CAC and its subsidiary bodies is important to the continued global relevance and uptake of Codex standards.

Some important accomplishments of particular Codex Committees include: work done on the establishment of maximum levels for mycotoxins, melamine, dioxins and heavy metals in foods and the development of a Codex General Standard for Contaminants and Toxins in Food and Feed by the Codex Committee on Contaminants in Foods (CCCF); the setting of MRLs for residues of pesticides or veterinary drugs in foods through the Codex Committee on Pesticide Residues (CCPR) and the Codex Committee on residues of Veterinary Drugs in Foods (CCRVDF); the development of the Codex General Standards for Food Additives (GFSA) by the Codex Committee on Food Additives (CCFA); and the Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food by the Codex Committee on Food Hygiene (CCFH). Also notable is work that has been undertaken by the Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS) in the areas of national food import control systems, foreign on-site audits and assessments and Judgements of Equivalence.

4. Future Priorities and Next Steps

The priorities and activities of the CAC evolve in accordance with the changing global food landscape and shifting international priorities. New scientific developments in fields related to food, growing participation of developing countries in the work of Codex, changing consumer attitudes and demand, new approaches to food control and changing perceptions of government and food industry responsibilities all present the Commission with new priorities and challenges.

Future activities undertaken by the Commission, in addition to addressing emerging and/or unknown food safety risks such as those arising from natural calamities or nuclear disasters and climate change, will likely include improving food security through enhanced food safety, improving nutritional security and increasing funding for the provision of scientific advice and for activities that will support consensus building. Increased participation of, and capacity building for, developing countries will also be a priority of the CAC going forward, including enhancing their capabilities to

generate data to inform scientific risk assessments developed by expert committees and consultations, strengthening the Codex and domestic food control systems at a national level and enabling developing countries to enhance their trade potential. Increased awareness of Codex amongst several developing countries as well as consumers is also an area that will be highlighted.

Action at the national, bilateral and international (Codex) levels will be necessary in order to make significant progress on the future objectives of Codex. National governments should endeavour to play as active a role as possible in the activities of the CAC and its Committees and to focus resources on identifying their particular capacity building needs, strengthening their national food control systems by harmonizing their domestic food safety standards with those of Codex and taking advantage of international food trade opportunities. Domestically, countries should introduce formal food safety education and guidance texts such as Good Manufacturing Practices (GMP) and Good Agricultural

Practice in the Use of Pesticides (GAP) for small businesses and farmers as well as strengthen their domestic and international laboratory network and engage in equivalence negotiations. It will also be important to contribute to funding for scientific advice, when feasible.

At the bilateral level, Codex member countries can assist developing countries build their capacity for data generation for scientific risk assessment, strengthen their national food control systems and develop their laboratory infrastructure. At the Commission level, it will be necessary to pursue a review of Codex Procedures, as necessary, for “providing added value” in the critical review process and ensuring that Codex standards are consistently developed through consensus. Development of guidance on the process of facilitation, as well as guidance for Codex Committee Chairpersons regarding when and how to make a ruling or any other process to encourage standards development by consensus may be useful to pursue.

Science-based Standards for the Global Marketplace: Codex Alimentarius

Mary Frances Lowe¹

¹ U.S. Manager for Codex Alimentarius

© 2014 Lowe; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. The Role of Science in Codex

Sound science is the foundation upon which food safety and quality standards are developed by the Codex Alimentarius Commission (CAC), the joint UN Food and Agriculture Organization (FAO) and World Health Organization (WHO) food standards program commonly referred to as “Codex.” Codex has a dual mandate: to protect consumer health and to promote fair practices in the global food trade. International scientific review is a fundamental principle of Codex work. The role of science and principles for the development and use of scientific advice have been enshrined in several key documents of the CAC, including the CAC *Procedural Manual* and its Strategic Plan for 2014-2019.

In 1995, the 21st Session of the Commission adopted four Statements of Principle Concerning the Role of Science in the Codex Decision-Making Process and the Extent to Which Other Factors are Taken into Account. The first Principle states that “*The food standards, guidelines and other recommendations of Codex Alimentarius shall be based on the principle of sound scientific analysis and evidence, involving a thorough review of all relevant information, in order that the standards assure the quality and safety of the food supply.*” The four principles were further augmented by Statements of Principle Relating to the Role of Risk Assessment (1997) and by Criteria for the Consideration of the Factors Referred to in the Second Statement of Principle (2001). The latter document states that “*Consideration of other factors should not affect the scientific basis of risk analysis...*” and

promotes the practice of ensuring that scientific risk assessment is kept independent from the practical realities of risk management.

The CAC Strategic Plan (2014-2019), adopted by the Commission in July 2013, reaffirms these principles and states that “*For food safety and nutrition matters, the Commission, as a risk manager, establishes its standards based on risk analysis and bases its work on the scientific advice provided by the joint FAO/WHO expert bodies and consultations.*” The scientific advice that forms the basis for Codex standards and guidelines is carried out by joint FAO/WHO expert committees and consultations, which are independent of the CAC and contribute significantly to the scientific credibility of its work. The principal risk assessment bodies providing advice to the CAC include the Joint FAO/WHO Expert Committee on Food Additives (JECFA), the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) and the Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment (JEMRA). FAO/WHO also convene *ad hoc* specialized expert consultations as required.

2. Principles of Developing Scientific Advice

Four main principles of developing sound scientific advice are:

- *Excellence*: the use of internationally recognized expertise;
- *Independence*: experts contribute in their own capacity and not on behalf of any government or institution;

- *Transparency*: procedures and methods ensure all interested parties understand the processes for the development of scientific advice and have access to reports, safety assessments and other basic information; and
- *Global reach*: interested parties throughout the world are invited to make data available to ensure as broad a reach as possible.

3. Conduct of Scientific Risk Assessments / Outputs

Appropriate conduct of scientific risk assessments and membership of FAO/WHO expert committees and consultations are of fundamental importance. The scope, purpose and expected outputs of the risk assessment should be clearly defined and the experts invited to participate should be selected through a transparent process based on their professional expertise, experience and independence. These expert bodies should also strive to acquire scientific evidence and expertise from many parts of the world so that the relevant data (e.g., toxicological, epidemiological, surveillance, analytical chemistry, prevalence, exposure, etc.) are reflective of conditions in various parts of the world, including Good Agricultural and Manufacturing Practices in Codex member countries.

The process for obtaining expert scientific advice is typically initiated by a call for data channeled through the CAC from a specific Codex Committee. The request for advice is informed by the food safety, quality and nutrition priorities and issues that have been identified by the Commission, its Committees and member states. Guided by its statutes and guidelines and supported by a roster of experts selected for their objectivity, skills, judgment and overall competence through a formal “call for experts,” the JECFA, JMPR, JEMRA and other FAO/WHO expert consultations convene to undertake scientific risk assessment activities in support of Codex standards, guidelines, codes of practice and other recommendations.

A significant body of internationally recognized scientific food safety assessments and evaluations has been generated through these expert committees and consultations. The JECFA, established in 1955 to consider chemical, toxicological and other aspects of contaminants and residues of veterinary drugs in foods, has produced many important outputs related to contaminants, food additives and veterinary drugs. For example, it has generated endpoint values for Provisional Maximum Tolerable Daily, Weekly and Monthly Intakes of food contaminants (i.e., permissible human exposure to specific substances of concern); specifications of identity and purity and Acceptable Daily Intakes (ADI) for food additives as well as specifications of identity and purity;

and ADIs and Maximum Residue Limits (MRLs) for veterinary drugs in foods for human consumption. JECFA has evaluated over 2000 additives and flavors, over 40 contaminants, and approximately 100 veterinary drugs.

The JMPR was formed in 1963 to consider the potential human health effects of pesticide residue intake from food and to recommend MRLs for pesticides and certain environmental contaminants (pesticides no longer in use that are unavoidably persistent in the environment) in foods, in addition to the development of methods and sampling procedures. It has established ADIs and Acute Reference Doses (ArfDs) for particular pesticides to address potential exposure to residues in food at relatively high doses for short-term periods due to accidental or incidental events, and has also recommended thousands of commodity-specific MRLs.

The JEMRA, which has worked since 2000 to develop and provide advice on microbiological aspects of food safety, has developed valuable guidance on controlling sources of contamination and limiting microbial growth.

4. Relationship between Codex Standards and WTO Trade Agreements

The World Trade Organization (WTO) Agreements on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and Technical Barriers to Trade (TBT Agreement) encourage global harmonization of food standards and call for WTO members to base their standards on international standards, guidelines and recommendations as the preferred measures for facilitating international trade in food. Given that the CAC is recognized as the preeminent international standard-setting body for food safety and quality standards, countries that adopt Codex standards benefit from a presumption that their national food safety requirements will be consistent with their obligations under the SPS Agreement to base SPS measures on science and risk assessment. For countries with limited resources, adoption of Codex standards not only fulfills trade obligations, it also ensures that they have food safety standards in place to protect consumers which are based on international scientific review.

5. Benefits and Challenges: Seeking Sustainable Support

Science-based food safety standards developed by the CAC promote food safety and consumer confidence in the global food supply. By working collaboratively through international expert committees and consultations that draw on the expertise of leading scientists, laboratories and institutes from all over the world, resources are conserved, duplication of effort may

be avoided, and the scientific basis of decision-making is enhanced. The timely evaluation of new food technologies to increase food security is another benefit of note. Furthermore, the incorporation of Codex standards into national food safety legislations and control systems assists countries in meeting their trade obligations under WTO Agreements, promoting fair practices in domestic and international food trade. Greater harmonization of requirements facilitates compliance and lessens the likelihood of violative shipments of imported food.

A broad base of scientific data is critical for the development of international food safety standards and yet expert scientific advice is currently heavily dependent on voluntary contributions from a limited number of countries. In 2012, requests for increased scientific advice resulted in additional funds being allocated to attaining and reviewing scientific data, although this funding may not be sustainable in the longer term. Given the increasing number of requests for scientific risk assessment, there is general recognition that current resources are inadequate to meet those requests on a predictable and sustainable basis.

One potential solution being considered to address this challenge is to request that Codex member countries increase their support to the risk assessment process through existing mechanisms; however, a limitation of this proposal is that many countries are currently facing acute budgetary concerns. Other potential solutions may be to encourage the FAO and WHO to place a higher priority on Codex activities in allocating existing funds, or to expand the donor base to include private sector sources, although this would require appropriate safeguards be put in place to ensure the continued independence of the scientific advice.

At the 36th Session of the CAC in July 2013, the Commission and its Executive Committee called on the FAO and WHO to sustain and support funding of scientific advice critical to the work of Codex, and to consider expanding the donor base, including through funding from the private sector with adequate safeguards to ensure independence, impartiality and integrity of scientific advice.

Scientific Assessment Activities Conducted by Food Safety Agencies to Support Domestic and International Standards Development

Rozenn Saunier¹

¹ Director of European and International Affairs Department, French Agency for Food, Environmental and Occupational Health and Safety (ANSES)

© 2014 Saunier; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Scientific risk assessment is fundamental to the development of national and international food safety standards which are based upon the outcomes of a formal risk analysis process. In France, for example, scientific risk analysis is achieved through a two-step process. At the outset, the French Agency for Food, Environmental and Occupational Health and Safety (ANSES) uses its competencies in risk assessment, research, monitoring and reference to provide scientific opinions to the appropriate national Ministries. Based on this scientific appraisal, the Ministries then define, implement and monitor implementation of the regulations through their risk management functions. Responsibility for risk communication is shared between the ANSES and the Ministries, as appropriate.

At both the French as well as at the broader European level, governmental decisions taken in the development of food safety standards are systematically based upon scientific risk analysis. Institutions involved in food safety can be characterized as either independent, scientific agencies capable of conducting scientific risk assessments, such as the ANSES in France and the European Food Safety Authority (EFSA), the European

Chemicals Agency (ECHA) and the European Medicines Agency (EMA) in Europe, and those involved in risk management and economic support work, including national Ministries, such as the French Ministry of Agriculture, and the European Commission (EC).

1. Overview of the ANSES

The ANSES is a public agency established in 2010 through the merger of two agencies dealing with food safety and environmental and occupational health. The consolidation has enabled a wide and integrated scope of competencies and the agency currently contributes to ensuring human health and safety regarding the environment, work and food as well as protecting animal health and welfare and plant health. Its main tasks are to assess nutritional and health risks and benefits, recommend public health measures, conduct laboratory work and research projects, authorize marketing of veterinary medicinal products and conduct public health monitoring missions. A clear distinction exists between the risk assessment activities of the ANSES and the risk management responsibilities of the national Ministries to which it reports.

The ANSES assesses exposure to and risks from microbiological hazards and chemical substances through channels such as food, work, transportation, the environment, indoor and outdoor air quality with one very simple principle: “one substance, one assessment”, taking into account global exposure from all potential sources. It operates 11 laboratories with a number of national, European and international mandates which conduct reference and research activities on food safety and animal and plant health. It also houses a department overseeing marketing authorizations, monitoring and inspections for veterinary drugs and several departments dedicated to risk assessment. Risk assessment activities are conducted through collective expertise, including more than 800 experts involved in scientific panels and working groups, and collaboration with European and international agencies. Every opinion is published on the ANSES website.

2. Scientific Assessment Activities Supporting International Standards Development

Based on its capacities and wide and integrated scope of competencies, the ANSES contributes to the development of different types of standards and scientific advice at the domestic, European and international levels, including those developed by the Codex Alimentarius Commission (CAC) and the WHO/FAO expert committees that provide scientific advice to the CAC, such as the Joint WHO/FAO Expert Committee on Food Additives (JECFA), the Joint WHO/FAO Meeting on Pesticide Residues (JMPR) and the Joint WHO/FAO Expert Meeting on Microbial Risk Assessment (JEMRA) and other international organizations. The support that the ANSES provides varies according to the activity. In the case of risk assessments, expertise is provided through various expert groups/panels, through scientific opinions issued on specific topics (e.g., iodization of salt), as well as through the development of specific methodologies and the provision of data. For laboratory works, expertise and data are provided in addition to the development of analytical or sampling methods and potential missions as reference laboratories. Ministries may also request a review of draft guidelines and other documents containing scientific considerations.

Examples of scientific assessment activities undertaken by the ANSES can be found in its various reference laboratories mandates, which can be designated to study all scientific and technical issues related to a specific topic. In addition to 67 domestic reference mandates, the agency also has responsibility for 9 mandates for the EC regarding food safety and animal health, 14 mandates for the World Organization for Animal Health (OIE), one mandate as collaborative center for the WHO, and one mandate for the FAO. Through fulfillment of their work,

the ANSES has served as the “gold standard” in their field, developing reference material or harmonized methods, disseminating and promoting the use of standards, collecting, analyzing and publishing relevant data, providing scientific and technical training and promoting cooperation and networking.

In support of international food safety standards development, the risk assessment activities of ANSES scientists as part of the French delegation to the Codex Committee on Pesticides Residues (CCPR) have contributed to the work of that Committee, including a *Discussion Paper on Guidance to Facilitate the Establishment of Maximum Residue Limits for Pesticides for Minor Uses and Specialty Crops* (2013) and subsequent database launch. The ANSES is also heavily involved in the work of the International Organization for Standardization (ISO), including chairing the ISO Committee on Food Microbiology (ISO/TC 34/SC 9) and participating on various technical committees. ANSES scientists were project leaders for the development of several reference analytical methods for *Listeria monocytogenes*, *Staphylococcus*, and histamine, among others. In addition to supporting national and international standards development, work is also undertaken on the development of common standards between the European Committee for Standardization (CEN) and the ISO.

The ANSES performs an assessment role in its work for the OIE collaborative center for veterinary drugs. Specifically, the agency provides research and expertise and supports work on international harmonization through participation in the development of OIE standards and methods. It also represents the OIE in Codex and other international meetings and provides technical assistance, such as bilateral or multilateral cooperation opportunities and twinning programs.

The ANSES has also developed national Total Diet Studies (TDS), which are designed to provide a snapshot of the presence of chemical contaminants in food. Following a methodology developed by the WHO, countries generate quantitative data regarding the chemical contaminants found in food. The results can then be added to the WHO database and thus be used to gain a global perspective or to make international comparisons, which is crucial for the WHO's work. France has completed two TDS representing nearly 500 substances searched in more than 22 000 food products. These two campaigns produced nearly 300 000 results.

3. Limitations and Advantages

Scientific risk assessment agencies such as the ANSES perform essential activities which can support domestic as well as international food safety standardization work.

These activities can be complex due to heterogeneity in models and in various national organizations, as well as resource requirements. However, in undertaking this work, food safety assessment agencies endeavour to further develop international networks and strengthen their efficiency and scientific capabilities through data sharing and pooling of resources, common work on methodologies, the monitoring of global trends and emerging food safety risks and scientific recognition of its particular models and opinions.

4. Next steps

It is important to continue to leverage opportunities to further strengthen international collaborations in scientific risk assessment and standards development through the development of dedicated, collaborative fora to improve system efficacy and ensure that governmental decisions taken in regards to the development of food safety standards are based on risk analysis and thus, on science.

China's Contribution to Codex Standard Setting

Junshi Chen¹

¹ China National Center for Food Safety Risk Assessment (CFSA)

© 2014 Chen; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

China plays an important role in the activities of the Codex Alimentarius Commission (CAC) and its subsidiary bodies. The China National Codex Committee was established in 1984. It comprises the Chinese Codex Contact Point (CCP), residing with the Ministry of Agriculture (MOA); and the Chinese Codex Secretariat, which under the responsibility of the newly created National Health and Family Planning Commission (NHFP) which was established in 2013 from a merger of China's Ministry of Health and the State Population and Family Planning Commission. The National Codex Committee also includes representation from the China Food and Drug Administration (CFDA), the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ), the Chinese Ministry of Commerce (MOC) and various industry associations.

In China, Codex activities are generally initiated by the CCP through receipt of a Circular Letter requesting comments on a specific Codex document or issue. The CCP determines which agencies within the National Codex Committee to consult for input and refers the document to those agencies who then work together to build a consolidated national position. The Chinese Codex Secretariat is responsible for provision of the national position(s) to Chinese delegates attending the Codex session in preparation for the meeting, as well as to the host government of the Codex Committee in question. During the Codex session, positions are presented and often negotiated between countries.

Following a session, once the final Committee Report is available, an analysis of the outcomes of the meeting is provided to the China National Codex Committee.

1. From "Silent Observer" to "Active Player"

China continues to increase and strengthen its participation in the CAC and its subsidiary bodies, evolving from a "silent observer" to become an increasingly more active participant in the standard setting work of the CAC. In recent years, China has led or participated in various Codex physical and electronic working groups (eWG) and provided data to support Codex scientific risk assessment processes (e.g., 3-MPCD, Cadmium). China also contributed to the work of FAO/WHO expert committees which provide independent scientific advice to the CAC, such as the Joint FAO/WHO Expert Committee on Food Additives (JECFA), the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) and the Joint FAO/WHO Expert Meeting on Microbial Risk Assessment (JEMRA).

2. Contribution to Codex Standard Setting

China's contributions to the Codex standards development process have been varied and substantial. Some key contributions include the development and management of a processing aids database for the Codex Committee on Food Additives (CCFA); chairing of the eWG on a *Code of Practice for the Prevention and Reduction of Aflatoxin Contamination in Tree Nuts* for the Codex

Committee on Food Additives and Contaminants (CCFAC) and as well as the eWG on a *Discussion paper on the development of a code of practice for the prevention and reduction of arsenic contamination in rice* for the Codex Committee on Contaminants in Food (CCCF). China has actively participated on various Codex eWGs working on issues such as a *Code of Hygienic Practice for Powdered Formulae for Infants and Young Children* (Codex Committee on Food Hygiene (CCFH)); *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CCFH); a *Code of Hygienic Practice for Fresh Fruits and Vegetables* (Codex Committee on Fresh Fruits and Vegetables (CCFFV)); and *Guidelines for Formulated Complementary Foods for Older Infants and Young Children* (Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU)). China has also proposed a Regional Standard for Non-Fermented Soybean Products, which is currently at Step 5 (i.e., adopted by the Commission as “draft text”) in the Codex step process.

Since 2007, China hosts two General Subject Codex Committees, the CCFA and the Codex Committee on Pesticide Residues (CCPR), and has also undertaken the opportunity to co-host several other Committee sessions, such as the Codex Committee on Food Additives and Contaminants (CCFAC) and the Codex Committee on Fish and Fishery Products (CCFFP). In addition, China was elected as a member of the Executive Committee of the CAC (CCEXEC) representing Asia in 2011 and will continue in this role until 2015.

3. Codex Committee on Food Additives

In the time that China has hosted 7 sessions of the CCFA, participation of member countries and other international observer organizations in the work and meetings of the Committee has been active and stable, allowing for significant progress to be made on several important agenda items. For example, considerable progress has been made on the Codex General Standard for Food Additives (GFSA) and its specifications, which set forth the conditions under which permitted food additives may be used in all foods, whether or not they have previously been standardized by Codex, as well as all the provisions for food additives that have been adopted by the CAC. Significant Committee work has also been carried out with regards to increasing alignment with Codex commodity standards as well as with the International Numbering System for Food Additives (INS), a harmonized naming system that provides E numbers, or codes, for substances which can be used as food additives.

Formal feedback from CCFA members collected on behalf of the CAC regarding overall management of the Committee and of the Chairperson’s ability to understand, summarize and successfully conclude discussions during

Committee sessions has indicated that member countries maintain strong confidence in China as the host of CCFA.

4. Codex Committee on Pesticide Residues

Since 2007, the CCPR has also seen significant progress on several of its important agenda items, including Codex Maximum Residue Limits (MRLs) for pesticide residues in food and feed, advancement of the *Pilot Project for JMPR Recommendation of MRLs before National Governments or other Regional Registration Authorities for a Global Joint Review Chemical*, further classification of foods and animal feeds, and continued development of principles and guidance for the evaluation of MRLs for pesticides.

5. CCEXEC

As the elected Geographical Representative for Asia, China represents the collective perspective and interests of the Asian region to the executive branch of the CAC, the CCEXEC. The CCEXEC acts on behalf of the CAC between sessions of the Commission, assuming responsibility for standards management through the critical review process and providing guidance and direction on strategic planning and the overall work of the Commission. Through its role in the CCEXEC, China has participated in the evaluation of the Codex standard setting process, actively promoting the increased participation of developing Asian countries in the activities of the CAC and enhancing overall cooperation within Asia.

6. Challenges and Benefits

China faces several challenges with regards to its contribution to Codex standard setting, including the need to enhance and expand its national capacity building potential in order to continue to strengthen its participation in the CAC, increase awareness of Codex within the Chinese domestic food industry, as well as increase international collaboration with key partners.

Overall, China has benefited considerably from its involvement in the work of the CAC and its subsidiary bodies. Participation in Codex undoubtedly creates greater opportunities for international communication and collaboration with partners. Over the years and with increasing participation, China has developed a deep understanding of Codex rules and procedures and has learned advanced food safety control strategies, specifically in the areas of scientific risk assessment and risk management. Codex provides China with valuable guidance through the reform of its national food safety control system and development of new food safety legislation and national food standards, serving as an important international reference point in the development of Chinese domestic food regulations.

The Contribution of the Asia Region to the Codex Standard Setting Process: Accomplishments and New Horizons

Yayoi Tsujiyama¹

¹ Chairperson of the FAO/WHO Coordinating Committee for Asia

© 2014 Tsujiyama; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

FAO/WHO Regional Coordinating Committees play an invaluable role in ensuring that the work of the Codex Alimentarius Commission (CAC) is responsive to regional interests and to the concerns of its member countries. They normally meet at two-year intervals and their meeting reports are submitted to and discussed by the Commission. Presently, there are six Coordinating Committees established by the CAC representing Africa, Asia, Europe, Latin America and the Caribbean, North America and South West Pacific, and the Near East.

1. Overview of the Asian Region

The FAO/WHO Coordinating Committee for Asia (CCASIA), chaired by the government of Japan, currently includes 23 Codex member countries from the Asian region, from Afghanistan in its westernmost region to Japan in the east. Although the Asian region constitutes as much as 55% of the global population given the large population densities of countries such as China, India and Indonesia, and as much as 46% of global agricultural production, Asian countries currently constitute just 12% of all Codex member countries. This number is considerably lower than the participation rates of other regions such as Europe (27%) and Africa (26%). Furthermore, although since CCASIA's inception in 1978, the total number of its member countries has progressively increased, approximately one third of its members were lost with the establishment of the

FAO/WHO Coordinating Committee for the Near East in 2001. Given that the Asian share in the global import and export of agricultural products is significant, constituting approximately 22-25% of global imports and 16-18% of global exports, and that both Asian trade volume and value is on the rise, it is important that the Asian region develops a strong united voice in the realm of Codex.

2. Current Accomplishments/ Work Achievements of the Asian Region

For over 30 years, the CCASIA has worked to identify and define the food standard and control needs within the Asian region and to promote mutual communication and coordination of food standards work among members, as well as to recommend to the CAC the development international food quality standards of interest to the region and to develop Codex Regional standards for certain food products traded almost exclusively intra-regionally. The CCASIA developed its first Strategic Plan (2009-2014) for the region with the primary objective of strengthening both the food safety infrastructure of all its member countries as well as the region's contribution to the work of the CAC. A renewed CCASIA Strategic Plan for 2015-2020 is currently being developed and is expected to be finalized in 2014.

Member countries' participation in the CCASIA has steadily increased since its establishment, facilitated in

part, by support provided via the FAO/WHO Project and Fund for Enhanced Participation in Codex (Codex Trust Fund). The Codex Trust Fund assists developing countries and those with economies in transition to enhance their level of effective participation in the development of global food safety and quality standards by the CAC. It aims to achieve this by providing support to eligible countries to prepare for and participate in Codex Committees and related meetings, to participate in Codex training courses and to prepare and present scientific/technical positions and data related to the work of Codex. Both donors to, and recipients of, the Codex Trust Fund coexist within the Asian region, thereby mutually assisting one another to strengthen Codex capacity and participation within the Asian region.

Presently, CCASIA member countries are actively involved in hosting several Codex Committees. China has hosted both the Codex Committee on Food Additives (CCFA) and the Codex Committee on Pesticide Residues (CCPR) since 2007 and Malaysia has hosted the Codex Committee on Fats and Oils (CCFO) since 2009. A newly established committee in 2013, the Codex Committee on Spices and Culinary Herbs (CCSCH) is hosted by India. In addition, some members in the Asian region have also hosted ad hoc Codex intergovernmental task forces, including the ad hoc Codex Intergovernmental Task Force on Antimicrobial Resistance from 2007 - 2010 (Republic of Korea), the ad hoc Codex Intergovernmental Task Force on Foods Derived from Biotechnology from 1998 - 2008 (Japan) and the ad hoc Codex Intergovernmental Task Force on the Processing and Handling of Quick Frozen Foods in 2008 (Thailand).

CCASIA countries, including China, India, Indonesia, Malaysia, the Philippines, Thailand and Viet Nam, have also taken the opportunity to co-host a number of general subject and commodity specific Codex Committees, providing a useful experience for developing Asian countries to gain experience hosting meetings of Codex Committees in their own country and region and thus gaining an "inside view" of the dynamics and logistics involved in hosting an international Codex Committee session while focusing national attention on the Codex program.

Asian member countries have also contributed leadership and expertise to the work activities undertaken by Codex Working Groups (WGs) on issues which impact on the Asian region. For example, CCASIA countries are currently chairing or co-chairing a number of WGs established by the Codex Committee on Contaminants in Food (CCCF), to address maximum levels for arsenic in rice, methylmercury in fish, and aflatoxins in ready-to-eat peanuts, as well as WGs established by the Codex Committee on Pesticide Residues (CCPR), which are

investigating performance criteria for methods of analysis for determination of pesticide residues and developing guidance to facilitate the establishment of maximum residue limits for pesticides for minor/specialty crops. CCASIA members have also been providing data and information for the development of standards such as residue data to the CCPR and data on arsenic in rice and lead in fruit juice to CCCF.

The CCASIA has developed and adopted a Regional Guideline for Codex Contact Points and National Codex Committees as well as Regional Codex Standards for gochujang, ginseng, fermented soybean paste, sago flour, chili sauce and tempe. Additional Regional Standards under development include standards for non-fermented soybean products, laver products, hygienic practices for street-vended food and a discussion paper on edible crickets and their products.

3. New Horizon of the Asian Region

In keeping with current food safety challenges facing the Asian region and the renewed direction for the CCASIA as outlined in its Strategic Plan 2015-2020, the region will be increasing focus on:

- (1) promoting the contribution of Asian members to the work of the CAC and its subsidiary bodies through enhanced participation and provision of appropriate scientific data which reflects the needs of CCASIA countries;
- (2) enhancing communication and coordination/collaboration among Asian members to develop consolidated regional positions on key issues;
- (3) obtaining the maximum benefit from the Codex activities of its member countries; and
- (4) improving the scientific and technical capacities of Asian members to contribute data to the work of Codex.

4. Next Steps

Given the significant diversity in the geology, climate, religion and diet of the various CCASIA member countries, it has been challenging for CCASIA to consolidate members' positions on some key issues and, in turn, they have not always succeeded in unifying "one voice". In order to remedy this, CCASIA has committed to increasing information sharing amongst its members to better understand and define the food standards and control needs particular to the Asian region and to increase member attendance and participation at coordination meetings held just prior to regular sessions of Codex Committees. These meetings are a valuable opportunity for Asian member countries to meet and share their views and concerns with one another and to enhance coordination/collaboration.

Codex Alimentarius Commission: Its Importance in Chile's Food Safety History

Nuri Gras¹ and Constanza Miranda²

¹ Former Executive Secretary, Chilean Food Quality and Safety Agency (ACHIPIA), Santiago, Chile

² Studies and Projects, Chilean Food Quality and Safety Agency (ACHIPIA), Santiago, Chile

© 2014 Gras and Miranda; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Throughout Chile's food safety history, the Codex Alimentarius and its Commission have been crucial to its development. Particularly, the Codex Alimentarius Commission (CAC) has been a reference in food standard setting for Chile. In order to share the experience of Chile in the development of its national food control systems and the role the CAC has played in it, a summary of the history and important milestones is presented in this paper.

Since 1969, Chile has been a member country of the CAC. In 1997, the Ministry of Health established, by Decree Supreme 19 of the Ministry of Health, a multi-sectorial National Codex Committee to run Codex activities in Chile. The National Codex Committee consists of a representative of the Ministry of Health, the Ministry of Foreign Affairs, the Ministry of Agriculture, the Ministry of Economy, Promotion, and Tourism, the food industry and trade, consumers and academia. The presidency of the National Codex Committee rotated among the Ministries of Health, Foreign Affairs, Agriculture, and the Agricultural and Livestock Service (SAG) from 1999 to 2010. In 2011, by the enactment of the Decree Supreme 162 of the General Secretariat of the Presidency (SEGPRES) of 2010, the Presidency of the National Codex Committee, the Secretariat and the Chilean Codex Contact Point were permanently established in the Chilean Food Quality and Safety Agency (ACHIPIA) under the Ministry of Agriculture. Among the activities carried out by the National Codex Committee, it is

important to highlight the establishment of 16 Codex Committees to which the Chilean National Codex Committee provides support, including: Codex Coordinating Committee for Latin America and the Caribbean (CCLAC), Codex Committee on General Principles (CCGP), Codex Committee on Food Additives (CCFA), Codex Committee on Food Hygiene (CCFH), Codex Committee on Food Labelling (CCFL), Codex Committee on Methods of Analysis and Sampling (CCMAS), Codex Committee on Pesticide Residues (CCPR), Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF), Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS), Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU), Codex Committee on Contaminants in Foods (CCCF), Codex Committee on Fresh Fruits and Vegetables (CCFFV), Codex Committee on Processed Fruits and Vegetables (CCPFV), Codex Committee on Fats and Oils (CCFO), Codex Committee on Fish and Fishery Products (CCFFP), and Codex Committee on Spices and Culinary Herbs (CCSCH). These Codex Committees are coordinated through the different services provided by the Ministries of Health, Agriculture, Economy, Promotion, and Tourism, and Foreign Affairs.

In 2009, Chile's National Food Safety Policy was enacted, which strengthens national Codex activities and requires food safety regulations to be based on Codex or equivalent international standards. The purpose of the

National Food Safety Policy is to ensure the safety of foodstuffs produced, elaborated and commercialized nationally in order to safeguard public health and consumer rights and to promote competitiveness and exports in the industrial food sector. The role of Codex has been prominent in setting food safety standards in Chile as the main reference document in the field of food safety, the Food Sanitary Regulation (RSA), is based on Codex standards. The RSA was established by the Ministry of Health and released in 1997. Its main purpose is to stipulate the sanitary conditions under which food must be produced, imported, processed, packaged, distributed and sold in Chile in order to protect public health and nutrition. The RSA is constantly revised through public consultation under a multi-sectorial and disciplinary working group of experts, in which Codex standards are the main guidelines to implement improvements. An example of these improvements is Regulation N° 581 of the Ministry of Health of 1999, which sets Maximum Residue Levels (MRLs) for pesticides on food according to Codex standards. Currently, the list of MRLs for pesticides is constantly updated through the work of a multi-sectorial working group headed by the Ministry of Health. Other examples include the 55 food regulations of the Ministry of Economy, Promotion, and Tourism, the 38 food regulations of the Ministry of Agriculture, and the 25 food regulations of the Ministry of Health, most of them based on Codex standards.

Chile has not only based its national food standards on Codex, but has also contributed to Codex standard setting. For example, in 1996, Chile requested the inclusion of *Clupea bentincki* (common Chilean sardine) to the Codex “Standard for canned sardines and sardine-type products” (CXS 094). After providing scientific studies and evidence as requested by the CCFFP and following Codex procedures, Chilean delegates faced a permanent unjustified rejection based on “incomplete procedures for inclusion of new species”. After a 10 year struggle, the delegation achieved inclusion of the Chilean sardine to the Codex standard. Chile’s contribution to the Codex standard improved the procedure of inclusion of new species and resulted in the amendment of the labelling section of the CXS 094 standard.

Many of the Codex achievements in Chile are related to the designation of ACHIPIA as the permanent head of the National Codex Committee, the Secretariat and the Chilean Codex Contact Point. This is the case for the ACHIPIA’s Scientific Network, through which Chile provides technical support to Codex Committees. This network coordinates scientific knowledge on food safety through the administration of a public database and connects experts in the field from the public, private and academic sectors through a multidisciplinary network to improve risk

management. There are eight groups of specialists in the areas of food risk assessment, microbiological hazards, chemical contaminants, veterinary drug residues, pesticide residues, biotoxins, food additives, and food safety and quality. These groups provide relevant technical support to the Codex Committees in their areas of expertise. The Scientific Network’s website can be accessed at <http://redcientifica.achipia.cl/>.

Another Codex achievement for Chile was the launch of the Procedure Manual of the National Codex Committee and Codex Committees in Chile in 2012, in which a detailed description of the entities working for the CAC in Chile is given. In addition, in 2009, Chile co-hosted the CCNFSDU meeting demonstrating to member countries the active participation of Chile and its contribution and commitment to Codex work. In this regard, ACHIPIA designed and implemented the official website of the Codex Alimentarius in Chile (www.chilecodex.cl), in which updated information on Codex Committees actively working in Chile, their coordinator, electronic working groups, and other relevant information on regulations is provided. Moreover, two Outreach Workshops in 2012 and 2013 were carried out, bringing together the public and private sectors. The aim of these activities was to raise awareness of the role of the Codex Alimentarius nationally and internationally, emphasizing its importance in ensuring safe food for consumers and promoting the fair trade of foodstuffs. These initiatives have been crucial to promote interaction among stakeholders by bringing them together through collaborative activities and to foster participation in the Codex Committees in Chile. Finally, ACHIPIA has provided financial assistance to Chilean delegates to participate in international Codex meetings. This has been a major achievement since, as it is shown in Figure 1, it has significantly increased the attendance of Chilean delegates to Codex meetings from 64% in 2010 to 100% in 2013.

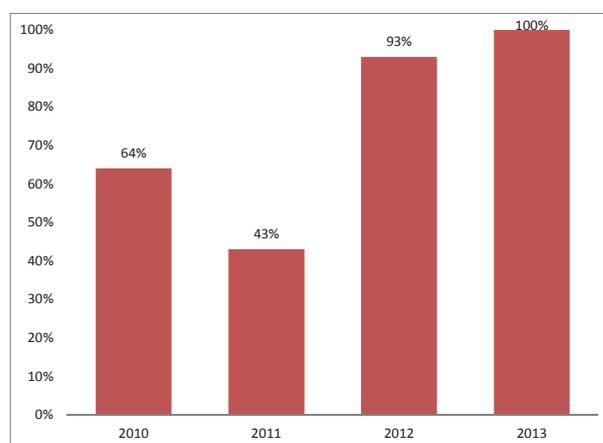


Figure 1. Percentage of attendance of Chilean delegates to international Codex meetings from 2010 to 2013

In summary, the Codex Alimentarius and its Commission have been essential to the development of Chile's food safety system. The lessons learned from this experience have been many and diverse. Engaging countries and educating them to the significance of the CAC as a forum for international collaboration in food standards setting, taking into consideration the importance of scientific information and expert advice to inform national and international standard setting, have been the most important ones. Promoting interaction and collaboration among all stakeholders is and will be our roadmap.

The Importance of Hosting a Codex Committee in Advancing Codex's Strategic Vision and Core Values

Ann Backhouse¹

¹ Director, Codex International Standards, Department of Agriculture, Australia

© 2014 Backhouse; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

The role the host country of a Codex Committee plays in promoting participation in the setting of international food standards as well as advancing the Codex agenda with regards to transparency and inclusiveness is an important one. Of particular significance is the obligation of Codex members to promote the strategic vision of Codex and its core values in the undertaking of this leadership role.

A substantial Codex commitment for Australia is the hosting and chairing of the Codex Committee on Food Import & Export Inspection & Certification Systems (CCFICS). This Committee plays an important role in developing guidance to assist countries in developing inspection and certification systems that are not only world class but that provide flexibility in approaches to inspection and certification. Australia places a high value on the relationships we have been able to develop with our trading partners through the hosting and chairing of these meetings. As well as providing a forum for developing world class standards, the Committee provides an opportunity for regulators to learn from one another and to exchange views on best practice in food control systems.

Co-hosting arrangements for Codex Committees have become an integral part of the Codex process and the benefits to be derived from these types of arrangements are considerable. Australia considers hosting and chairing the CCFICS to be an important part of our contribution to the overall Codex system. Chairing the Committee provides us with the opportunity to promote and influence the development of international standards that reflect our own food safety control systems, while at the same time ensuring that standards and guidelines developed by the Committee reflect a more flexible approach to inspection and certification. Another important consideration is that the norms that are adopted in this area are the least trade restrictive, while ensuring the highest level of consumer protection. The outputs of the CCFICS also provide members with the opportunity to align their domestic approaches with internationally accepted guidelines.

Chairing and hosting the Committee has been an integral part of Australia's development of important bilateral relationships with regulators from other countries, which can assist in resolving market access issues.

The Role of Codex in Food Import, Export, Inspection and Certification Systems

Greg Read¹

¹ First Assistant Secretary, Food Division, Department of Agriculture, Australia

© 2014 Read; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

A substantial part of the worldwide trade in food depends upon the use of inspection and certification systems. The confidence of consumers in the safety and the quality of their food supply depends, in part, on their perception as to the effectiveness of official and officially recognized inspection and certification systems. These systems are fundamentally important and very widely used as a means of ensuring that the food we consume is safe and wholesome.

The Codex Committee on Food Import & Export Inspection & Certification Systems (CCFICS) was established in 1991 after the FAO/WHO Conference on Food Standards and Chemicals in Food and Food Trade. The conference identified the need for an international framework for inspection and certification covering a wide range of technical matters, general concepts of inspection and certification procedures and methods of exchanging information. Complying with food safety demands and satisfying certification requirements of importing countries were two important factors that were identified as impediments to food trade.

The principles and guidelines developed by the Codex Alimentarius Commission, commonly referred to as Codex, in this area set out to harmonize methods and procedures for inspection and certification for food in international trade. Codex has also developed guidance in relation to the development of systems for the design, operation, assessment and accreditation of food import and export inspection and certification systems; guidelines for the development of and judgment of equivalence of sanitary measures; principles and guidelines for the exchange of information in food safety emergencies and on exchange of information in relation to rejections of imported food; principles for traceability and, more recently, principles and guidelines for national food control systems.

Together, the suite of texts developed by Codex in this area provides guidance to both developed and developing countries to facilitate trade in safe food.

New Opportunities for International Harmonization: The New Codex Committee for Spices and Culinary Herbs

Gaurav Dwivedi¹

¹ Assistant Director, Spices Board of India

© 2014 Dwivedi; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Historical perspective

History reveals that the motivation behind the renowned voyages to the Indian land was the search for spices. Approximately 96% of the global production of spices and culinary herbs currently takes place in developing Asian, African, Near East and Latin American countries; however, some European Union countries and the United States are also beginning to initiate commercial production. In recent years, the global production of spices and culinary herbs has risen from 6.5 million mega tonnes (MT) in 2004 to over 10 million MT in 2011 and, with demand increasing rapidly, has now reached 14.5 million MT in 2013-14.

Although international production and trade of spices and culinary herbs has escalated exponentially, there remains a marked lack of globally-recognized and harmonized standards for these commodities across all facets of production, from harvesting and storage to processing, packaging and consumption. This lack of international standardization frequently creates challenges with regard to fair practices in the food trade, such as compliance with various national import requirements, frequent revision of standards by countries, and product specifications unilaterally demanded by buyers.

Being a country with a significant stake in the international trade and commerce of spices, India took the lead in proposing the need and necessity for a Codex

Committee for spices and culinary herbs before the Codex Alimentarius Commission (CAC) which brings together over 185 countries under its fold on food related matters. Spices, herbs and their formulations are assuming greater relevance in the world today. However, production, processing, exports and imports are not on a smooth platform on account of the prevailing disharmony in quality standards for over 100 types of spices and herbs, which can be further sub-grouped based on features, species and formulations.

2. Varying quality standards among spices and culinary herbs

Given that spices and culinary herbs are an integral part of global cuisine and are traded and consumed all over the world, appropriate standardization for quality parameters to ensure the protection of consumer interests and safety and fair practices in trade is required. In view of the fact that the main producers of spices are in developing countries, the lack of harmonized and globally accepted standards can prove to be detrimental to fair trade. Administrations in consuming countries have enactments of law to strictly ensure the quality and safety of the products consumed and used by their populations. It has been a consistent challenge to conform to various import requirements as the country legislators and its consumers raise their standards from time to time, paving the way for trade barriers. Specifications

unilaterally demanded by buyers in the face of nonexistent common international standards leads to trade barriers for exports by most developing countries. In fact, there exists a vast variety in the standards for spices and culinary herbs across countries and, in many cases, there are no standards at all. This calls for a vital need to consider establishing harmonized international standards under the CAC to address this gap. Currently, there is wide variation and inconsistency among quality standards for spices and culinary herbs *internationally*, which can be marketed in many different forms, including whole spices, ground spices, cracked or crushed spices, dehydrated spices, spice mixes and blends, spice oils and oleoresins. Some standard setting international organizations, such as the International Organization for Standardization (ISO), the American Spice Trade Association (ASTA), the European Spice Association (ESA), and national organizations such as India's Food Safety Standards Authority of India (FSSAI) and Agmark, have set certain quality criteria for some spices and herbs; however, the standards set by many of these organizations differ with respect to one another which has contributed to disharmony the standards for quality parameters of spices and herbs.

3. Roadmap for the establishment of CCSCCH

At the 35th Session of the CAC in July 2012, India submitted a proposal outlining the need to establish a Committee to deal exclusively with the quality parameters of spices and herbs. Subsequently, a discussion paper for the establishment of such a committee was presented to each of the six FAO/WHO Coordinating Committees throughout 2012-13. The feedback from the various Coordinating Committees contributed to reframing the initial discussion paper, which was then circulated via the Codex Secretariat for review by members. At the 36th session of CAC in July 2013, when Codex celebrated its Golden Jubilee, India's efforts culminated in the decision of the CAC to form the Codex Committee on Spices and Culinary Herbs (CCSCCH) with the following Terms of Reference:

- (a) To elaborate worldwide standards for spices and culinary herbs in their dried and dehydrated state in whole, ground, and cracked or crushed form.
- (b) To consult, as necessary, with other international organizations in the standards development process to avoid duplication.

4. Interactions with other Codex Committees on matters of interest regarding spices and herbs

Spices Board India is broadening its participatory role in other Codex General Subject Committees on matters of interest related to spices and herbs, such as the Codex Committee on Food Hygiene (CCFH) and the Codex

Committee on Pesticide Residues (CCPR), in order to have a direct impact on the issues under consideration. For example, India co-chaired, with the United States of America, the CCFH electronic Working Group (eWG) on the "Proposed Draft Code of Hygienic Practice for Spices and Dried Aromatic Herbs". As well, India presented two conference room documents (CRD) at the 45th Session of the CCPR, held in 2013, which proposed for consideration the elaboration of Maximum Residue Limits (MRL) for certain pesticides in cardamom, cumin, black pepper as well for curry leaves. Another proposal for new work on the establishment of the maximum level of aflatoxins in spices was put forth by India and is to be considered at the eighth Session of the Codex Committee on Contaminants in Food (CCCCF) in early 2014.

5. Relevance to the Codex Strategic Objectives

The CCSCCH, led by India, will play an important role in the development of Codex standards for spices and culinary herbs and will also support important Codex strategic objectives, such as ensuring fair practices in the food trade by promoting sound regulatory frameworks through the review and development of Codex standards and related texts for food quality. The Committee will meet with the objective of promoting maximum and effective participation of member countries, giving particular attention to strengthening National Codex Contact Points and National Codex Committees by encouraging hosting and/or co-hosting of Codex sessions in developing countries. CCSCCH will enhance sensitization for Codex work in developing countries, which are also the main producers of spices and culinary herbs, and also promote capacity in those countries and strengthen their overall national Codex structures.

6. The first session of CCSCCH

India successfully hosted the first Session of the Codex Committee on Spices and Culinary Herbs (CCSCCH1) in February 2014 in Kochi, India. The Secretariat of the CCSCCH, operating from the Spices Board India, hosted the participation of 107 delegates from over 40 countries and seven Observer organizations, in close liaison with the Codex Secretariat in Rome and the National Codex Contact Point of India, located within the Food Safety and Standards Authority of India (FSSAI).

Discussions focussed on the work management modalities of the CCSCCH, mechanisms for prioritization of work, new work proposals and activities of other international organizations relevant to the work of CCSCCH. The outcomes of the first Session included agreement on new work proposals and identification of responsibilities, subject to approval by the 38th session of the CAC in July 2014. The task of preparing a draft

Standard for Black, White and Green Pepper for circulation for comments at Step 3 of the Codex step procedure has been delegated to an eWG, led by India and co-chaired by Cameroon and Indonesia. The draft standard for cumin will be developed through an eWG chaired by the European Union and co-chaired by India. Argentina will chair the eWG for Oregano with the support of Greece as its co-chair and an eWG to develop a draft standard for Thyme will be chaired by the European Union and co-chaired by Switzerland. It has been decided that India will again be chairing the eWG to advance a discussion paper on the classification of spices and culinary herbs. It has also been decided that the prioritization of the work undertaken by the Committee will be based upon priority-setting "criteria applicable to commodities", as set forth in the Codex Procedural Manual. It has also been proposed by the Committee to hold twelve CCSCH sessions at intervals of 18 months in order to accomplish its objectives.

7. Conclusion

India has now initiated strategies for the harmonization of global standards for spices and culinary herbs, taking into consideration international and national legislations and other available standards and specifications that are based on scientific data. The Committee will develop quality parameters for spices and culinary herbs while taking into account references on other associated parameters from other horizontal Codex Committees.

Concrete and concerted effort through Codex can pave the way towards the elimination of trade barriers and strengthen the global food sector through harmonization of standards.

Codex Alimentarius Commission at 50: Major Achievements and Challenges Ahead

Samuel Benrejeb Godefroy¹

¹ Director General, Food Directorate, Health Canada
Vice Chairperson Codex Alimentarius Commission, 2011-14

© 2014 Read; licensee InTech. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Executive Summary:

For 50 years, the Codex Alimentarius Commission, established by the United Nations' Food and Agriculture Organization (FAO) and the World Health Organization (WHO), has worked collaboratively to develop and adopt international science-based food safety and quality standards and guidelines to protect the health of consumers and ensure fair practices in the international food trade. During that time, the Codex Alimentarius Commission also established a rigorous risk analysis paradigm comprised of risk assessment, risk management and risk communication activities, which has helped ensure the integrity and uptake of food standards by domestic food regulators worldwide.

Codex standards, guidelines and codes of practice have proven to be instrumental to the international community in the protection of human health by managing and mitigating chemical, microbiological and nutritional food safety risks through the establishment of standards and guidance. Some of these standards, guidelines and codes of practice have been in response to such issues as the identification of potentially hazardous chemicals present in food resulting from food processing practices, infant illness due to consumption of contaminated powdered infant formula, and food nutrition labelling requirements for saturated fats, sodium and total sugars as a means to provide consumers with important information to make

informed and healthy food choices. Codex has also demonstrated quick action to ensure fair practices in the food trade, such as its work undertaken to prevent the potential adulteration of foods by the chemical melamine and the potential proliferation of multiple, divergent standards by various domestic food regulatory bodies which could have been disruptive to international trade.

It is important to recognize that the priorities and activities of Codex have and must continue to evolve in accordance with the changing global food landscape and shifting international priorities. Five significant challenges facing Codex going forward will include: the continued relevance of Codex standards to ensure they address current and emerging issues; the sustainability of resources to support Codex standards development, including the continued availability of the Codex Trust Fund to support developing countries' participation in the Codex process and the availability of sound scientific advice upon which risk management decisions are based; effective participation and contributions from an engaged membership, particularly developing countries; continued implementation of effective and innovative work management processes to ensure operationalization of procedures established in the Codex Procedural Manual and efficient management of daily activities; and maintaining consensus in its decision-making. Codex values and principles are pillars that will continue to support the organisation to evolve, adapt and stand the test

of time, while delivering on its mandate to protect the health of consumers and ensure fair practices in the food trade.

Abbreviations:

FAO: United Nations Food and Agriculture Organisation

WHO : World Health Organisation

CAC: Codex Alimentarius Commission

MRL: Maximum Residue Level

Acid-HVP: Acid Hydrolysed vegetable protein

3-MCPD: 3-monochloropropane-1,2-diol

NCD: Non Communicable Disease

HACCP : Hazard Analysis Critical Control Point

1. Introduction

The need to rely on a reference body to guide food standard development internationally was identified since the early 1960s. The rationale for the creation of an international food standard setting body no longer needs further elaboration or demonstration given that food and agri-food products are amongst the most traded commodities internationally with over 1.3 trillion US dollars of trade annually, and this trend is neither decreasing in volume nor in distance travelled by food products across the globe.

Another major driver for the establishment of an international food standard setting body was the principle that all citizens wherever they are in the world are entitled to an appropriate level of protection as far as food safety and nutrition are concerned, given how important these two factors are as determinants of human health. As a result, in 1963, the Joint United Nations Food and Agriculture Organisation (FAO) / World Health Organisation (WHO) Food Standards Program led to the creation of the Codex Alimentarius Commission (CAC), or Codex, and gave it a dual mandate: to protect consumers' health and to ensure fair practices in the food trade.

This mandate is achieved through the development of food standards, including requirements for safety and quality of foods traded internationally, as well as guidelines, codes of practice and advice given to consumers and industry.

The CAC currently includes 185 countries, one member organisation (the European Union) and over 200 observer organisations representing the stakeholder community (e.g., international consumer groups, international food industry representatives, etc.). Being a diverse organisation aimed at being the preeminent international food standard setting body, the CAC has strived since its creation to embody core values of collaboration and inclusiveness, transparency and consensus making when shaping its decisions.

The CAC has also developed a clearly defined set of procedures that guide its workflow and support its decision-making process: the Codex Procedural Manual, which is subject to periodic review and amendments to accompany advances in Codex activities. While being the final decision-maker for standard development and adoption, the CAC relies on a set of subsidiary bodies, mainly committees and taskforces that cover various aspects of food safety and nutrition (e.g., Codex Committee on Food Hygiene, Codex Committee on Contaminants in Food), or are specific to a certain food commodity traded internationally and requiring standardisation (e.g., Codex Committee on Fish and Fish Products).

Being mandated to develop standards aimed at protecting consumers' health, it is important that Codex, as a risk manager, utilize robust and impartial scientific assessments to guide its consideration of risk management options. This scientific assessment capacity has been and continues to be provided by the Codex parent organisations, the WHO and the FAO, through standing scientific advisory bodies such as the Joint Expert Committee on Food Additives (JECFA), as well as *ad hoc* expert groups tasked to address an emerging food safety hazard (e.g., expert consultations on melamine¹ and bisphenol A²). The scientific assessment process strives to embody the same core values of transparency and inclusiveness with a rigorous documentation of every step of the scientific assessments undertaken as well as their dissemination amongst food regulators and stakeholders worldwide and their publication through a number of media (e.g., printed material readily available or open access web availability).

These scientific assessments are meant to transcend domestic scientific assessments given that they rely on data collected globally and involve worldwide experts selected according to an open and transparent process. The robustness of these scientific assessments is the cornerstone for the credibility of Codex standards.

Beyond the standards themselves, Codex has established principles of risk analysis applicable to food that guide its *modus operandi*. They include the three key steps of risk assessment, risk management and risk communication, with the requirement to involve the full spectrum of the stakeholder community along the continuum of the decision-making process and the requirement to be transparent throughout the process.

¹ Toxicological and health aspects of melamine and cyanuric acid, Report of a WHO Expert Meeting In collaboration with FAO Supported by Health Canada FAO/WHO, 2009.

² Joint FAO/WHO expert meeting to review toxicological and health aspects of bisphenol A : final report, including report of stakeholder meeting on bisphenol A, 1-5 November 2010, Ottawa, Canada, FAO/WHO, 2011.

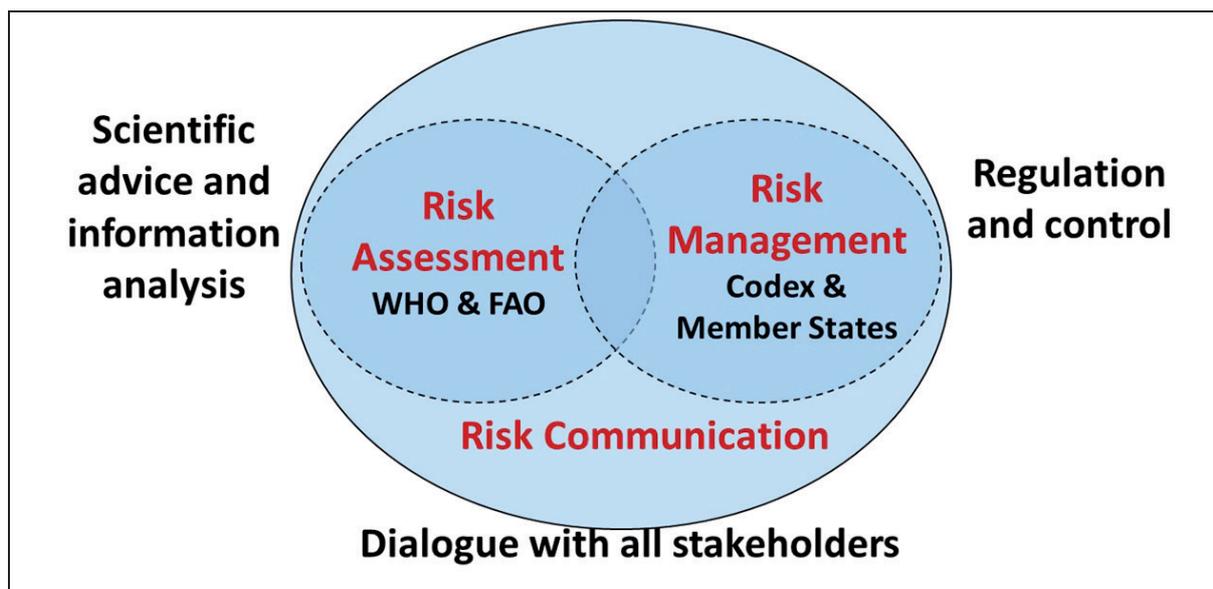


Figure 1. Codex Risk Analysis Paradigm is the foundation for any robust food regulatory system

The rigorous application of these principles in developing Codex standards has guaranteed their credibility and their uptake by domestic food regulators worldwide. Codex also placed emphasis on ensuring that factors being considered to guide risk management decisions are relevant by being global for international standards or regional in nature for regional standards. This relevance is also dictated by the alignment of these factors with the Codex mandate to protect consumers' health and ensure fair practices in the food trade.

These risk analysis principles were propagated internationally and now constitute the foundation of any robust and credible domestic food regulatory system.

2. Overview of Codex Standards Impacts and Accomplishments:

Over the past 50 years, Codex standards have served the world by providing guidance to various domestic jurisdictions on how to mitigate and manage various food safety risks of chemical, microbiological or nutritional nature. They have supported "levelling the playing field" for consumer protection internationally and have helped mitigate some trade irritants through harmonized and agreed upon standards amongst members.

2.1 Illustration of accomplishments in food chemical safety

Since its first session and over the past 50 years, the CAC has adopted various standards, guidelines and codes of practice to manage and mitigate food chemical risks. It has established over 1,100 maximum levels and conditions of use for food additive applications, approximately 2,900 Maximum Residue Levels (MRLs) for pesticides and over 400 MRLs for veterinary drug residues.

2.1.1 Response to emerging process-induced chemicals in food

Codex was instrumental in addressing emerging food chemical safety issues promptly through leveraging resources to provide standards and guidance in response to the identification of chemicals occurring in food as a result of food processing. Two examples could be used to illustrate these outputs: the response to the discovery of acrylamide in food in 2002 and the response to the development of various standards to manage levels of chloropropanols in soy sauce.

In 2002, Swedish scientists reported that acrylamide could be formed in carbohydrate rich foods during high temperature cooking (frying, baking roasting, toasting and grilling). While various food regulators attempted to respond to these findings, Codex identified this issue as a priority for guidance globally and sought support from the FAO and the WHO to conduct a risk assessment related to acrylamide in food. This assessment was completed by JECFA in 2005³ and was subsequently updated in 2010⁴. Codex was also able to rely on the broad international stakeholder community and gather information on best practices to reduce acrylamide levels in food. In 2009, Codex adopted a Code of Practice for the reduction of acrylamide in food which represents the international reference to not only mitigate the occurrence of acrylamide in food preparation and processing, but also to communicate the risks associated with the occurrence of this substance in food.

³ Safety Evaluation of Certain Contaminants in Food, Prepared by the 64th Meeting of the Joint Expert Committee on Food Additives (JECFA), published in 2006.

⁴ Safety Evaluation of Certain Contaminants in Food, Prepared by the 72nd Meeting of the Joint Expert Committee on Food Additives (JECFA), published in 2011.

In 2000, and subsequent to the report by British scientists of higher levels of 3-monochloropropane-1,2-diol or 3-MCPD in soy sauce collected at the retail level, a number of countries (e.g., Canada, European Union, Australia, New-Zealand) reacted by establishing maximum levels for this chemical in soy sauce. Codex prioritised this issue to prevent the development of multiple and divergent standards and to provide guidance on risk mitigation strategies internationally. The United Kingdom chaired an electronic Working Group which updated the information on the potential occurrence of chloropropanols as a result of heat processing during the manufacture of acid hydrolysed vegetable protein (HVP) and subsequent products such as soy or mushroom sauces.

In 2008, Codex was then able to develop and adopt a code of practice for the reduction of 3-MCPD during the production of acid-HVP and products that contain acid-HVP. Codex maximum levels for 3-MCPD in soy sauce were subsequently developed and adopted.

2.1.2 Response to global chemical food safety incidents

We should also recognize Codex for its swift response to the emerging fraud incident related to melamine in food. In 2008, high levels of melamine were reported in infant formula and dairy products manufactured in China as a result of fraudulent activities to artificially boost the protein content of food ingredients through the addition of melamine. As early as December 2008, Canada supported the WHO and the FAO in hosting an expert consultation involving international scientists, including scientists and experts from China. In 2009, Codex prioritised the development of a standard to set maximum levels of melamine in food to enable the distinction between “naturally/environmentally occurring” melamine and levels that may be indicative of potential adulteration. It took only about two years between the time this emerging issue was identified and reported and the time a Codex standard was developed and adopted, including the availability of a credible risk assessment provided by an *ad hoc* expert advisory group set by the WHO in collaboration with the FAO. The development of this standard showcased the ability of the CAC to be responsive to its members’ needs by acting swiftly to provide guidance that prevented the proliferation of multiple maximum levels set by each domestic food regulatory body which could have diverged from each other and could have been disruptive to trade. Such action served to level the playing field in consumer’s health protection around the globe.

It is also to Codex standards that the international community turned to upon the occurrence of the tragic major earthquake and tsunami in Japan in 2011 and the

subsequent Fukushima nuclear plant accident. The guideline levels established by the CAC for radionuclides in foods, which are now included in the General Standard for Contaminants and Toxins in Food and Feed⁵, were a unique source of guidance that food regulators in Japan and elsewhere relied upon to develop their own risk management approaches. This incident highlighted some gaps in current knowledge and resources that should be available to food risk managers in relation to potential radionuclide contamination. In particular, risk assessment methodologies and approaches for potential long lasting contamination and subsequent standards for targeted food commodities will need to be further investigated.

2.2. Illustration of accomplishments in food microbial safety

Codex has been instrumental in developing guidance to mitigate the risks of microbial hazards. The General Principles for Food Hygiene and the subsequent Codes of Hygienic Practice developed and adopted for various food commodities have been landmarks that have guided and continue to guide food operators and food regulators alike, around the world. A special mention is warranted for Codex work to react to concerns expressed in 2004 by members and the WHO over the occurrence of *Enterobacter Sakazakii* infections among infants due to the consumption of powdered infant formula. After a few years of work, Codex managed to adopt in 2008 the Code of Hygienic Practice for Powdered Formulae for Infants and Young Children⁶. This code set requirements for hygienic practices and stringent microbial standards to be put in place and followed by manufacturers, hospitals and other authorities. One of the greatest accomplishments of Codex is that this standard was emulated and included in numerous domestic regulations and requirements to support the protection of the most vulnerable subset of the population worldwide: infants.

2.2 Illustration of accomplishments in nutrition safety

Nutrition safety and food labelling have benefited from Codex food standard development and harmonisation efforts to shape nutrition labelling requirements internationally. Codex also championed initiatives that supported directly or indirectly the implementation of the WHO Global Strategy on Diet, Physical Activity and Health with the addition of saturated fats, sodium and total sugars to the list of nutrients that should be declared on food labels.

⁵ Guideline levels for Radionuclides in Foods Contaminated Following a Nuclear or Radiological Emergency for Use in International Trade, Codex General Standard for Contaminants and Toxins in Food and Feed, (CODEX STAND 193-1995) pages 33 – 37.

⁶ Code of Hygienic Practice for Powdered Formulae for Infants and Young Children, CAC/RCP 66-2008

The first Nutrition Reference Values adopted by Codex in 2013 will lead the way towards enhanced harmonisation of scientific guidance related to declaration of nutrients on food labels. With the increased association found between food and diet and non-communicable diseases (NCDs), and the impact of the latter on human health, there is no doubt that Codex will be called upon to contribute to prevention and mitigation strategies through the development of nutrition and labelling standards.

3. Challenges and future directions of Codex

Codex has evolved considerably since its creation, as reflected by its more diverse membership and its evolving governance structure, with new committees covering most food safety and nutrition aspects as well as quality requirements for most food commodities traded internationally.

To reach the vision that it set for itself as part of its renewed Strategic Plan 2014-19, as the preeminent international food standard setting body⁷, Codex has to adapt to its changing environment and face the various drivers of change that will characterise consumers worldwide and that will impact food production systems regionally and globally.

In this paper, I am highlighting 5 major challenges that I have identified through my discussions and engagement with the Codex community during the opportunities of meetings, workshops and colloquiums in 2013-14: relevance of Codex standards; sustainability of resources; effective and inclusive participation; effective work management; and maintaining consensus in decision making by overcoming polarisation of positions amongst the membership.

3.1 Relevance of Codex standards

Codex will be as useful as its standards remain relevant to its membership. Codex has to respond to the emerging issues stemming from the changing environment of food safety and nutrition, such as the expanding international trade in foods and food ingredients; the multiplication of free trade agreements at the bilateral and regional level where food and food products continue to be a centrepiece of most traded commodities; the continuous changes in food and feed supply chains with some trends that will continue to manifest such as increased innovation, changing demographics, changes in consumers' interests and consumption patterns, as well the requirements for resource optimisation in these

economically uncertain times. Codex has also to respond to some emerging food safety issues directly in relation to climate change affecting agriculture and food harvest practices, such as the changing patterns of mycotoxin and seafood toxin occurrence.

Producing relevant standards for Codex members means the ability to respond swiftly with the development of standards that address identified priorities stemming from these changes in a timely fashion. It also means that these standards account for the global reality of most of its membership and not a privileged few that had the opportunity to contribute and influence their development through the provision of data supporting the scientific assessment, or the consideration of relevant factors determining risk management options. Finally, it means that these standards are practical enough to enable their uptake by as many food operators as possible globally and, therefore, to serve as a reference to domestic regulators for inclusion in their food regulatory requirements, either as such or through the corresponding adaptation to fit the local / national context.

To achieve continued relevance of its standards, Codex must enhance engagement of its membership in the systematic identification of emerging issues requiring a "standard development response". It also must ensure that capacity is available for members to accompany the development of these standards through their ability to provide scientific data when asked and to assess the impacts of the proposed measures on their domestic or regional situation, such as the documentation of relevant consequences on their food supply chain and their food/feed economics. The ability to develop standards identified as a priority in a timely fashion will also play a role in their relevance. Long and inefficient Codex processes could lead to the multiplication of domestic or regional risk management measures in the meantime, as well as to the proliferation and use of private standards that are based on different principles and requirements than those of Codex, which in turn could result in undue impediments to food trade.

The ability for Codex to produce relevant standards was identified as a key priority for the upcoming period, given that Strategic Goal 1 "Establish international food standards that address current and emerging issues" in the Codex Strategic Plan 2014-19 was specifically designed to implement a number of initiatives aimed at maintaining and enhancing such relevance, including the importance of collaborating with other international standard setting bodies to "avoid duplication and optimise opportunities".

⁷ Strategic Plan of the Codex Alimentarius Commission 2014 – 2019, adopted by the 36th Session (July 2013) of the Codex Alimentarius Commission, *Strategic Vision Statement*.

3.2 Sustainability of resources supporting Codex standards development

Developing international standards following Codex principles and requirements is a costly endeavour for the organisation and its membership. Beyond the budget devoted for Codex activities by the FAO and the WHO, as parent organisations to Codex, Codex members must also be ready and equipped to sustain their participation in Codex proceedings. An attempt to identify costs for participation in one single meeting of the CAC, the body which meets annually to finalise and endorse Codex standards, has led to the conservative estimate of approximately USD \$5,000 for each minute of the Commission proceedings, factoring in only the costs associated with availability of delegates, their travel costs and their participation in the meeting. These costs must be added to all others associated with contribution into the various CAC subsidiary bodies as well as to maintain and run Codex national structures. These costs are worth the investment when the outcomes of Codex and its positive impacts on consumers' protection and removal of trade barriers are considered. However, these costs also mean that Codex and its members have to consider measures to sustain and possibly enhance the effectiveness of the financial investments. Continued availability of a trust fund, or a successor initiative, dedicated to support developing countries engagement in Codex proceedings, will be key to support the principle of inclusiveness of Codex proceedings and, therefore, the relevance of the international standards produced. It will be indispensable to enhance commitment of donor countries to sustain such a trust fund. It will be equally important that recipient countries be supported in developing lasting Codex national structures that become formally enshrined in their food regulatory processes so that they can be subsequently maintained. It is also suggested that a medium/ longer term plan be developed by the same recipient countries to accompany their progression in developing and sustaining their contribution to Codex in a manner that reduces their dependence on a trust fund or a successor funding strategy.

Another important cost associated with Codex work is the availability of scientific advice on the basis of which risk management decisions are made. With the increasing demands for such advice to be provided and the limited sources of funding available to the parent organisations, the WHO and the FAO, it will be important for Codex, its membership and its parent organisations to take measures to protect funding that is critical to sustaining Codex work, as well as to identify other sources of funding for this activity in a manner that protects its impartial, unbiased and credible status. It is hoped that a number of discussions currently underway in the FAO,

the WHO and Codex will lead to some concrete developments in sustaining the scientific advice capacity for Codex, as called upon by objective 2.2 of the Codex Strategic Plan 2014-19 :“Achieve sustainable access to scientific advice”.

3.3 Effective participation from an engaged membership

In 50 years, Codex has achieved an unprecedented milestone with its level of membership exceeding 180 countries represented at the CAC. Initiatives such as the Codex Trust Fund have also resulted in the increased participation of developing countries in various Codex committee proceedings according to their own priority setting. It is important that this jump in “quantity” be sustained and accompanied with a similar momentum in effective contribution of developing countries in Codex proceedings. Food safety capacity building initiatives undertaken by the WHO and the FAO as well as by other organisations such as the World Bank, could be further harnessed and targeted to accompany developing countries needs for their effective contribution to Codex. These needs span from the availability of technical experts who contribute in the corresponding committees to the ability of countries to rely on data supporting scientific food assessments, such as regular food surveys (e.g., total diet studies) and consumption surveys that could be adapted and targeted to respond to calls for data made by Codex scientific advisory bodies (e.g., JECFA). Recent investment in food safety capacity building has resulted in an increased availability of food safety and nutrition related competencies in developing nations. This has already had positive repercussions on Codex proceedings where the development of a number of standards is being led by developing countries, particularly in areas where the impacts of these standards are most significant for their food products/exports and/or more relevant for their populations. It will be important that this trend is maintained and strengthened. Capacity building efforts being developed globally (e.g., the World Bank Global Food Safety Partnership) or regionally (e.g., Asia-Pacific Economic Cooperation (APEC) forum and its Partnership Training Institute Network, African Union led capacity building efforts) should be converging further to address Codex capacity building needs. Mobilization of the food stakeholder community in these countries, including regulators, food operators, academia and consumer groups, should result in the establishment of agreed-upon priorities in capacity building needs to support effective contribution in Codex. It is suggested that these priorities be consistently communicated to capacity building providers, which in turn should enhance coordination of their efforts to converge towards Codex-related requirements. Measuring progress in this area with relevant performance indicators related to the upgrade of Codex

capacity in recipient countries will be key to redirect resources where needs are most expressed. A structured discussion between food capacity building providers and Codex Regional Coordinating Committees could be useful in shaping a vision on how food safety capacity building initiatives could be best harnessed to serve Codex needs.

The critical nature of the effective contribution of developing countries in Codex activities was identified in Codex Strategic Plan 2014-19 which devoted an entire Strategic Goal - Strategic Goal 3: "Facilitate the effective participation of all Codex members" to address this requirement. Effective contribution of all countries, and in particular of developing countries in Codex activities, is a pre-requisite for Codex standards to be considered truly global and for Codex to abide by one its core values: inclusiveness.

3.4 Effective work management

Given its diverse and increasing membership, Codex has equipped itself with a Procedural Manual that supports its governance structure and codifies its proceedings, while upholding its mandate and core values. Work processes have been established over time to operationalize these procedures and support Codex to manage its day-to-day activities as a multilateral international standard setter. It is important that these processes be updated and benefit from the latest technological innovations enabling workflow management, communication amongst members involved in a specific task (e.g., electronic working group) and virtual meeting and information-technology mediated tools to support collaboration and information exchange between members. Enhancing coordination of work management between the various subsidiary bodies that may be involved in the development of the same standard (e.g., between commodity committees and horizontal / subject matter committees) will be instrumental to increase Codex efficiency and shorten the timelines required to produce a standard.

Some of the new standards Codex is elaborating are more complex than ever. As a result, Codex processes have to evolve and be innovative to enable such development in an efficient and effective manner. For example, as Codex embarks on updating its landmark guidance on the development of HACCP (Hazard Analysis Critical Control Point) with the intent to broaden the scope beyond microbiological hazards, it is expected that this work will be supported by experts beyond those traditionally focussing on food hygiene-related activities. Collaboration between experts contributing to the various subsidiary bodies will have to be coordinated and flexibility in processes will need to be observed to enable

this type of work to progress in a timely and effective manner. This collaborative approach will likely become more the norm than the exception and Codex processes will need to evolve to accommodate such change.

Should established procedural requirements be identified as an impediment to efficient work management, those procedures will need to be reviewed by the relevant subsidiary bodies for possible amendment or update. It is also important that the Executive Committee, meant to be the executive arm of the Commission, act as such and provide the Commission with the critical advice it needs to rigorously manage and track the progression of its work.

Increasing the efficiency of work management practices in Codex is critical to containing operating costs for the organisation and its members, thus enabling Codex to be a more effective standard setter. Failure to do so will result in a vacuum in guidance and food standards development, which would likely be filled by private standard organisations.

Similarly, Codex has to consider enhanced collaboration with other standard setters working in overlapping areas, building on current achievement of joint work with non-governmental organisations of a public or private nature. Enhanced collaboration will likely result in reduced duplication and stronger alignment and complementarity of guidance produced by the various international standard setters and help Codex realise its vision to be the preeminent food standard setter internationally.

3.5 Maintaining consensus in decision making

Consensus-driven decision making is a core value embodied by Codex since its inception. The Codex community has recently witnessed some difficulties in achieving consensus and in managing the development of certain standards mainly as a result of polarised positions amongst the membership. Standards potentially held at step 8 (last step in the step development procedure, prior to its adoption) and projects for standard development that are difficult to rally consensus support from the membership are a few illustrations of this situation. Attempts to examine the root cause of this polarisation have been made through the creation of an electronic working group led by Canada and the Netherlands, which reviewed situations where such consensus was difficult to achieve and attempted to analyse its causes⁸. Members were also able to engage in facilitated discussions around some of these root causes and options to address such situations in the future⁹. It was evident

⁸ Report and discussion paper of the Electronic Working Group (eWG) on issues related to Standards Held at Step 8, CX/GP 12/27/3.

⁹ Report of the Facilitated Discussion on the Root Causes of Standards Held at Step 8, CX/GP 14/28/4.

from these discussions that some of these impediments were related to domestic and regional considerations as well as to the perception by some members that some standards are being potentially “imposed” upon them, despite their disagreement with some of the risk management considerations. Other members considered that the lack of progress of these standards, the development of which conformed to the risk analysis approach set by Codex, would deny them from having access to these standards and to the credibility they are seeking through their recognition / adoption by Codex. These situations tend to be focussed on certain food applications related to innovative processes or interventions that have different levels of acceptability by consumers worldwide.

It is very evident though, that such occurrences are rare and are the exception rather than the rule. It is also evident that what unites Codex members is far more predominant than what creates differences in positions. Principles and values embodied by Codex should guide it to address these situations up front and to develop approaches that would account for the concerns of its membership, to prevent these situations from proliferating. Discussions similar to what took place in 2012 and 2013 should continue and engage the broad spectrum of the membership towards innovative approaches to support consensus building and address the concerns of the membership as a whole. With the robust foundation of principles that Codex is built upon, there is no doubt that Codex will be up to this task supported by the collaborative leadership of its members.

4. Conclusion

The fact that Codex is a major contributor to food safety and consumer protection does not need to be demonstrated. Similarly, Codex and its standards have contributed in alleviating impediments to trade for

agri-food and food commodities, hence contributing to the development of several regions of the world that depend on these resources and their international trade for their economic development and prosperity. Codex is embarking on the second 50 years of its life as a standard setter, guided by a new strategic direction adopted by its membership in July 2013, in the form of a Strategic Plan for the period 2014-19. Codex is an increasingly diverse organisation that is anchored in robust principles and embodies the key values of collaboration, transparency and inclusiveness advocated by its members. With such a solid foundation, there is no doubt that Codex and its membership will adapt to their changing environment and respond to the emerging issues the organisation is called upon to address such as emerging food safety, food quality and nutrition issues. I have been humbled to contribute to the work of Codex as a food scientist, a food regulator and as a member of the Codex community for over 10 years. I was also privileged to serve Codex and its membership from 2011 to 2014 in the capacity of one of the Vice Chairs of the Commission. This unique opportunity provided me with the privilege to interact with and learn from food safety leaders from around the world. Working with such a dedicated and passionate group of food regulatory professionals in Codex for over a decade has significantly contributed to my own development and experience as a food scientist and a food regulator. I was able to appreciate that, despite the differences of opinion and the variety of positions that the Codex membership may have, we are all united by common principles of evidence-based decision-making and consensus building as well as by a common goal to protect consumers’ health and create a level playing field for food trade. Through continued collaborative leadership, Codex values and principles are pillars that will enable Codex to stand the test of time and continue to deliver on its mandate to protect consumers’ health worldwide and develop standards that will ensure fair practices in the food trade.

Agenda of the Special Session on Codex Held During the China International Food Safety and Quality Conference

November 7th, 2013. 8:30am - 4:30pm

The Crown Plaza Beijing Sun Palace, Beijing, China

First session : Standards – 50 years of Achievements - Chair: Dr. Samuel Godefroy, Vice Chairperson, Codex Alimentarius Commission	
8:30-9:00	50 years of Codex Standards to Protect the Health of Consumers and Ensure Fair Practices in the Food Trade – M. Sanjay Dave, Chairperson, Codex Alimentarius Commission
9:00-9:30	China’s Contribution to Codex Standard Setting – Dr. Junshi Chen, Senior Advisor, China National Centre for Food Safety Risk Assessment (CFSA)
9:30-10:00	Contribution of the Asia Region to the Codex Standard Setting Process – Accomplishments and new horizons – Dr. Yayoi Tsujiyama – Chair of the FAO/WHO Coordinating Committee for Asia
Coffee Break	
Second Session : Codex in the Asia / Asia-Pacific Region – Horizons and future directions – Chair: Dr. Junchi Chen, Senior Advisor CFSA, Chair Codex Committee on Food Additives	
10:30-11:00	Role of Codex in Food Import, Export, Inspection and Certification Systems – M. Greg Read, First Assistant Secretary, Food Division, Department of Agriculture, Fisheries and Forestry, Government of Australia and Chairperson, Codex Committee on Food Import and Export Inspection and Certification Systems
11:00-11:30	The South-West Pacific Region and Needs for Food Standardization to Support Food Safety and Enhanced Market Access Opportunities – Dr. Vele Pat Ula’ava, Secretary, Department of Agriculture and Livestock, Papua New Guinea and Chair of the FAO/WHO Coordinating Committee for North America and the South West Pacific
11:30-12:00	Relevance of Codex Standards for the South-West Pacific region - Emerging Needs in Food Safety Regulatory Harmonization – Dr. Bill Jolly, Chief Assurance Strategy Officer, Ministry of Primary Industries, Government of New Zealand
Lunch Break	
Third Session : Scientific Advice to Support International Standard Setting – Chair: M. Sanjay Dave, Chair Codex Alimentarius Commission	
13:30-14:00	Importance of Science-driven international standards – Looking forward in sustaining scientific advice capacity – Dr. Mary Frances Lowe, Chief Codex Office, US Department of Agriculture
14:00-14:30	Activities of Scientific Assessment to Support Domestic and International Standard Development Conducted by the French Food and Environmental Safety Agency (ANSES) – Dr. Rozenn Saunier – Director, International Affairs, ANSES, France
14:30-14:45	Moderated discussion: Efforts to enhance availability of scientific advice - what has been done and what could be contemplated.

Coffee Break	
Fourth Session : Relevance of Codex Standards - Future Challenges of Codex Standards to Address the Needs of Members and Stakeholders – Chair: Greg Read, Chair, CCFICS - First Assistant Secretary, Food Division, Department of Agriculture, Fisheries and Forestry, Government of Australia	
15:15-15:45	Importance of Codex Standards in the Chilean food safety and food standard development– Nuri Gras, Executive Secretary, Chilean food Safety Agency
15:45-16:15	Relevance of Codex Standards in EU food safety and nutrition legislation and regulation – Dr. Jérôme Lepeintre, First counselor at EU Delegation to China and Mongolia,
16:15-16:45	New opportunities for international harmonization: New Codex Committee for Spices and Culinary Herbs – Dr. Gaurav Dwivedi, Assistant Director, Spices Board of India
16:45-17:00	Wrap-up: M. Sanjay Dave, Chairperson, Codex Alimentarius Commission

INTECH

open science | open minds

International Food Risk Analysis Journal

Proceedings of the Special Session on Codex at the China International Food Safety and Quality Conference Codex Alimentarius Commission at 50, Accomplishments and Future Challenges

In recognition of the 50th anniversary of the Codex Alimentarius Commission



ISSN 1848-2368

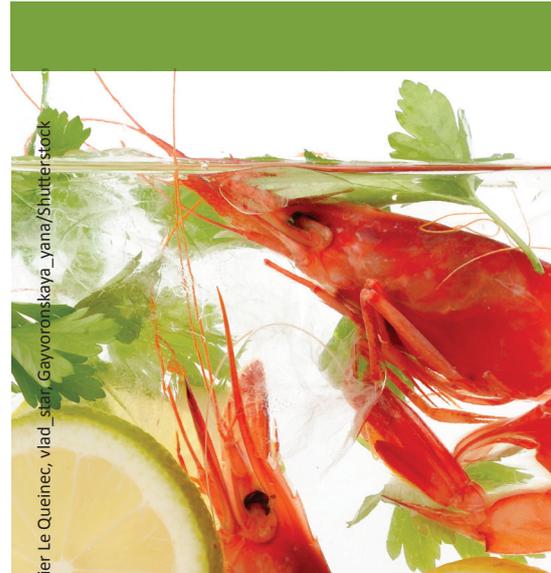
Publisher InTech

Published in Volume 4, 2014

ISSN 1848-2368



9 771848 236005 >



© Filippe B. Varela, Mircea Bezigheanu, Olivier Le Queinec, vlad_star Gayvoronskaya_yana/Shutterstock

