



Food and Agriculture  
Organization of the  
United Nations



WORLD TRADE  
ORGANIZATION

# TRADE AND FOOD STANDARDS





# TRADE AND FOOD STANDARDS

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# FOREWORD



Graziano da Silva  
Director-General, FAO



Roberto Azevêdo  
Director-General, WTO

Trade in food is difficult to imagine without standards. Food standards give confidence to consumers in the safety, quality and authenticity of what they eat. By setting down a common understanding on different aspects of food for consumers, producers and governments, standards enable trade to take place. If every government applies different food standards, trade is more costly, and it is more difficult to ensure that food is safe and meets consumers' expectations.

Food standards and trade go hand in hand in ensuring safe, nutritious and sufficient food for a growing world population. The Sustainable Development Goals (SDGs) acknowledge the role that trade can play in promoting sustainable development. Together, FAO and the WTO and their international system of food standards and trade contribute to achieving SDG 2 on hunger, food security, nutrition and sustainable agriculture; SDG 3 on healthy lives and wellbeing; SDG 8 on economic growth, employment and work; and SDG 17 on strengthening global partnerships for sustainable development.

“

*Food standards and trade go hand in hand in ensuring safe, nutritious and sufficient food for a growing world population.*

”

Together, the FAO and the WTO provide governments with the means to establish a framework to facilitate trade on the basis of internationally agreed food standards. Through the joint FAO/WHO Codex Alimentarius Commission governments establish science-based food standards. The work of Codex provides governments with a valuable resource to achieve

public health objectives such as food safety and nutrition, while providing a basis for trade to take place. The WTO provides a set of rules for multilateral trade, and is a forum to resolve disputes and negotiate new rules. Since standards are essential for smooth trade, the WTO Agreements strongly encourage governments to harmonize their requirements on the basis of international standards. In the area of food safety and quality, the WTO's Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures and WTO's Agreement on Technical Barriers to Trade (TBT) rely on Codex standards by setting these out as the benchmark for harmonization.

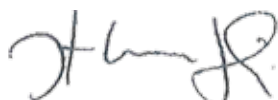
By reducing the need for producers to comply with different standards in different markets, harmonization becomes a powerful tool to make trade less costly and more inclusive. This can help governments that may struggle to find the necessary resources to invest in developing their own food safety requirements, as they can rely on the best available scientific knowledge as embodied in international standards.

Underpinning the system of food standards and trade rules is highly technical work that takes place at Codex and the WTO, led by our members. While often unseen, participation in this work is essential to ensure that standards take into account the realities and address the needs of

different countries. Engagement is also required to resolve trade frictions that inevitably arise, and to keep trade rules up to date with current challenges.

To be able to participate and engage internationally countries need to invest adequately in food safety and food control, and Governments need the domestic capacity to effectively coordinate between all stakeholders. This is both to have an impact at Codex and the WTO to shape standards and trade rules, and to take advantage of the tools provided by this system to enhance domestic food safety and expand export opportunities. Training and capacity building, such as that provided by FAO and the WTO, including through the Standards and Trade Development Facility – a partnership involving FAO and the WTO along with OIE, WHO and the World Bank – play an essential role in enabling developing countries to effectively use the system.

This report describes how the institutional frameworks of FAO and the WTO come together to create a system for international food standards and trade, outlines how this system functions in practice, and presents some emerging issues at the intersection of food standards and trade. We hope that this report will remind policy makers of the importance of our joint work on trade and food standards which owes its success to the active participation of our members.



**Graziano da Silva, Director-General, FAO**



**Roberto Azevêdo, Director-General, WTO**

# EXECUTIVE SUMMARY

This publication explains how international food safety standards are set through the Joint Food and Agriculture Organization of the United Nations and World Health Organization (FAO/WHO) Food Standards Programme – the Codex Alimentarius Commission – and how these standards are applied in the context of the World Trade Organization (WTO) Agreements on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and on Technical Barriers to Trade (TBT Agreement).

In order to trade internationally and have access to markets for high-value products, producers must be able to meet national food regulations. Complying with these requirements in export markets can be challenging, especially for smaller producers in developing and emerging economies. The use of international food standards worldwide not only contributes to public health, but also helps reduce trade costs by making trade more transparent and efficient, allowing food to move more smoothly between markets.

Through the FAO/WHO Codex Alimentarius, members establish science-based, internationally agreed food standards. These international standards are recognized by the SPS Agreement,

thus becoming a benchmark for international trade in food products. The SPS Agreement lays down the rules for food safety, animal and plant health protection measures in trade, to ensure that such measures do not act as unnecessary barriers to trade. Members are increasingly also referring to Codex standards in the context of the TBT Agreement, which applies to other food regulations including quality and labelling requirements. The WTO also provides a set of tools to facilitate international dialogue on food-related measures, and to resolve trade concerns when they arise.

The publication describes the two organizations, how they operate together, and how countries can and should engage to keep international food standards up to date and relevant, and to resolve trade issues. The publication also highlights the need to invest in domestic capacities to be prepared now and in the future to keep food safe and to ensure that trade flows smoothly.

Coordination between all relevant agencies within government as well as with stakeholders from the entire food supply chain is essential. Actors with responsibility for food control systems require knowledge and skills. Investments in this area will allow a country to more effectively protect public





health, contribute to shaping international standards and take advantage of trade opportunities.

The publication also illustrates some of the drivers of change in the area of food regulation, underlining the need for governments to be constantly attentive and ready to pick up on challenges and new opportunities, be they related to human health, consumer preferences or

evolutions in technology. Members will need strong institutions and national capacity to respond to these challenges, both domestically and in the dynamic international system of food standards and trade rules that they have created. They will need to be flexible and forward looking, to enjoy the benefits and manage the risks the future holds, mindful that food is a commodity like no other.



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# INTRODUCTION

The annual value of trade in agricultural products has grown almost three-fold over the past decade, largely in emerging economies and developing countries, reaching USD 1.7 trillion.<sup>1</sup> Over the past two decades, the reduction in tariffs through global and regional trade agreements has provided greater opportunities for the expansion of global food trade. However, in order to trade internationally and access markets for high-value products, producers must be able to meet food standards. Governments apply food standards to ensure that food is safe, and meets quality and labelling requirements. The use of international food standards worldwide helps reduce trade costs by making trade more transparent and efficient, allowing food to move more smoothly between markets.

Trade is inextricably linked to food security, nutrition and food safety. Trade affects a wide number of economic and social variables, including market structures, the productivity and composition of agricultural output, the variety, quality and safety of food products, and the composition of diets.

The institutional framework, the system, that governs the development and application of international food safety standards is based on the Joint FAO/WHO Food Standards Programme – the Codex Alimentarius Commission – and the WTO.

Agricultural development, trade and food security are at the heart of the FAO mandate and the reason for FAO's investment in Codex. The WTO deals with the rules for international trade; its SPS and TBT Agreements set out the framework in which international standards are applied by governments to ensure the safety and quality of internationally traded food products.

This publication focuses on the close relationship between food standards and trade. It describes the system governing the development and implementation of food standards. It further highlights the importance of rules, the harmonization of regulations on the basis of international standards, and the need for countries to be prepared in order to take advantage of the system.

The text offers insights for decision-makers in national governments and other stakeholders dealing with trade, standards, regulations and food policy. It explains that by bringing together trade, food safety and food standards, building awareness, domestic capacity and promoting collaboration, there can be tangible public health and economic benefits.

Part I describes the system of Codex standards and WTO agreements. Part II examines the dynamics of the system in action and the importance of preparation and participation in Codex and the work of the SPS and TBT Committees by countries at all levels of development. The final section explores drivers of change likely to affect food standards and trade in the future.

<sup>1</sup> WTO *International Trade Statistics 2015*.



# WTO

# Part 1

THE INSTITUTIONAL  
FRAMEWORK

A photograph of a wooden desk with a silver desk lamp on the left. A white rectangular sign with the letters 'FAO' in bold black font is placed on the desk. A wooden block is positioned behind the sign. The background shows a chair and other desk items. The bottom half of the image has a green gradient overlay with a white curved line.

# FAO

# KEY MESSAGES

- Through the work of its members, Codex is the world's pre-eminent international food-standard-setting body, working with transparency and inclusiveness, based on the latest and best expert scientific advice and consensus.
- The principles enshrined in the standardization process work to ensure that Codex standards contribute to facilitating trade in food and protecting public health.
- The WTO SPS and TBT Agreements work in tandem with international standard-setting bodies to encourage the harmonization of measures and ensure that they do not create unnecessary trade barriers or arbitrarily or unjustifiably discriminate between members.
- Together the Codex Alimentarius and the WTO form a system of rules to ensure that food is safe, of expected quality, and that it can be traded fairly.



Trade can be more complicated than we think. What happens when two countries define the same product differently or if they set out different criteria to check that a product is safe? Let us think, for example, of the inconvenience as a traveller in having 15 different types of electrical outlet plugs in the world, or the enormous infrastructure investment required for train cargo and passengers to travel across the border between two countries that have different track gauge. Then consider the benefits of being able to plug in and use a USB key with any computer worldwide or the advantages of standard cables, standard operating systems or the standard size of a credit card.

Ensuring that food is safe to eat, and that consumers are not deceived by dishonest practices, have been among the important tasks entrusted to governments since antiquity. Throughout history, many countries have independently developed food laws and regulations, and have often found different solutions to ensure that food was safe, up to the quality expected, and that consumers received sufficient and accurate information about the products they were purchasing. However, the differences between national requirements and specifications often make it difficult to trade food across borders. At the same time, consumers are



*The Codex Alimentarius Joint FAO/WHO International Food Standards Programme, established by FAO and the World Health Organization (WHO) in 1963, is the single most important international reference point for food standards.*



increasingly concerned about food-related risks, including health hazards due to micro-organisms, pesticide residues, other contaminants and unsafe food additives.

The Codex Alimentarius Commission was created to respond to these concerns, with the objective of developing and publishing food standards in a “food code” that would protect public health and ensure fair practices in the food trade. In accordance with Codex General Principles, the publication of the food code is intended to guide and promote the elaboration and establishment of definitions and requirements for foods so they can be harmonized and thereby facilitate international trade. This is why Codex standards began to play a key role under the WTO SPS and TBT Agreements.

Here we will look at the institutional framework underlying food standards and trade at international level and how it operates as a system. This part begins with the food code itself, highlighting the essential nature of Codex standards, how they are developed and by whom. It then describes the trade side of the story, including the set of rules incorporated in two major agreements under the auspices of the WTO, which rely on Codex standards. This part also introduces the legal branch of the system through the WTO dispute-settlement mechanisms available to resolve trade problems arising from food-related measures.

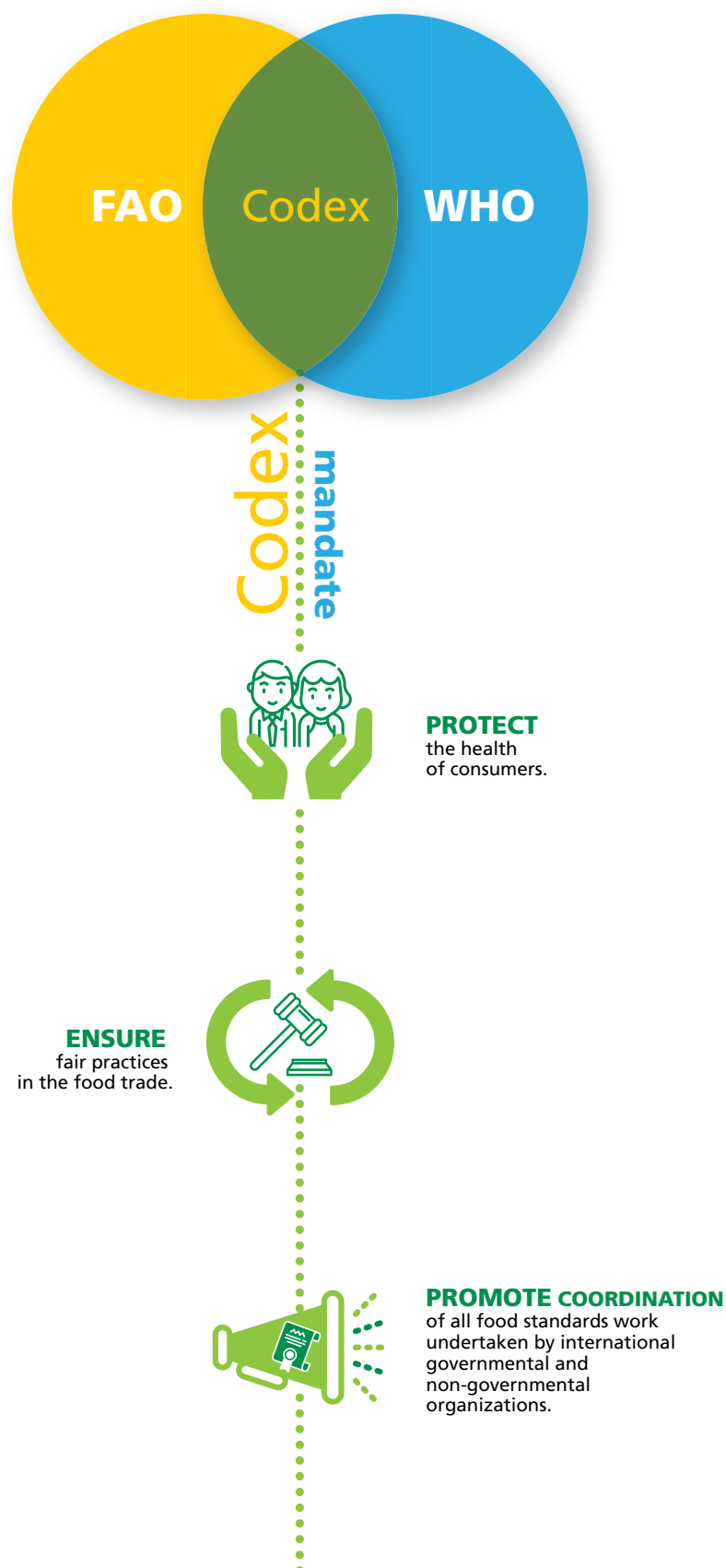
## The Codex Alimentarius

The Codex Alimentarius Commission was established by FAO and the WHO in 1963 as part of the Joint FAO/WHO International Food Standards Programme. It is the single most important international reference point for food standards. The joint nature of Codex is the key to its success. All actors along the food chain need to work together to ensure safe food in every home.

### *What is Codex?*

Codex Alimentarius is a compilation of harmonized international food standards, guidelines and codes of practice. Collectively, these Codex texts aim to protect consumer health and promote fair practices in the food trade, and are developed with the joint input of independent experts and the

# The **Codex** Alimentarius



participation of 188 members representing over 99 percent of the world's population.

For over five decades, Codex texts have contributed to the safety and quality of the food we eat. The Codex Alimentarius forms a global rule book that everyone in the food chain can follow. At the same time, the Codex Alimentarius Commission's intricate but open and participatory standard-setting procedure – gathering together nations to deliberate science-based evidence side by side – also plays an important role in strengthening national food-safety control systems.

### **Codex texts**

Codex standards, guidelines and codes of practice are advisory in nature: to become legally enforceable, countries must voluntarily translate them into national legislation or regulations. All Codex texts are freely available on the Codex website and can be accessed by anyone.

Codex commodity standards define the physical and chemical characteristics of nearly 200 traded

products – from apples and wheat to frozen fish and bottled water.

Codex guidelines, for example, on food labelling enable communication between the producer and vendor of food on the one hand, and the purchaser and consumers on the other.

A code of practice on, for example, food hygiene, describes the controls necessary along the food chain – from primary production through to final consumption – so that everyone, including farmers, growers, manufacturers, processors, food handlers and consumers, can take responsibility for ensuring that food is safe and suitable for consumption.

The Codex general standard for contaminants lists the maximum levels and associated sampling plans of contaminants and natural toxicants in food and feed that are safe for commodities subject to international trade.

The Codex database on food additives includes the conditions and maximum limits within which permitted food additives may be used in all foods.

## **Codex in action**

Codex standards, guidelines and codes of practice, applied together, ensure food is safe. In the case of a milk product, for example, the task begins with the animal and how it is reared – the feed and medicines it is given – then continues with defining how the processes to collect, transport and store the milk must be designed and monitored to ensure its safety. When the milk is processed, hygienic processes and sufficient checks need to be in place to ensure that harmful bacteria and other contaminants are controlled, minimized and kept within safe levels, while nutritional characteristics and the taste, look, smell and texture of the product remain intact.

If the milk is to be transported and perhaps transformed into another product, then it must be tracked and labelled at each phase.

If the product is for export, it will have to meet international standards and regulations, in addition to the needs of consumers.

When consumers taste that glass of milk, it will be the safety of the product together with their enjoyment of its expected quality and overall satisfaction that dictate whether they continue to purchase the product.

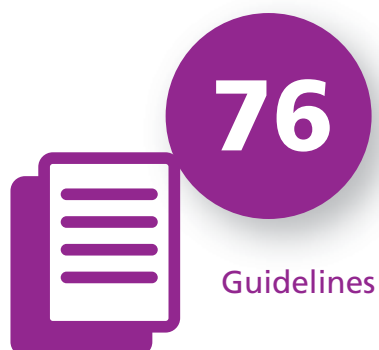
Codex, invisible to consumers, is vital for all other actors from farm to fork along the food chain, helping to ensure that your glass of milk is safe and can be traded across borders.



Source: Codex Secretariat

# The **Codex** scorecard

This illustration gives the number of **Codex standards, guidelines and codes of practice** by subject matter as of July 2016 after the decisions of the 39<sup>th</sup> Session of the Codex Alimentarius Commission.



over  
**4037**  
MLs

covering  
**303**  
food additives



# 4846

Maximum Residue  
Limits (MRLs)  
for pesticide  
residues



covering  
**294**  
pesticides



MRLs for residues  
of veterinary  
drugs in foods

# 610

covering  
**75**

veterinary  
drugs

# 50



Codes  
of Practice



Other databases in Codex contain maximum residue limits (MRLs) for pesticides and residues of veterinary drugs in food.

### ***Inclusiveness and transparency***

At the heart of the Codex mandate are the core values of collaboration, inclusiveness, consensus-building and transparency.

The annual meeting of the Codex Alimentarius Commission brings together an average of more than 130 member states and nearly 50 international observers, including representatives from the private sector, academia, civil society and other stakeholder groups. They meet to adopt new Codex texts or revise existing ones. It is this level of participation and the ability to reach agreement that demonstrate the success of the standard-setting process in Codex.

Transparent working practices that emphasize the participation of developing countries and enable members and observers to communicate in up to six different languages across more than 20 different committees ensure that delegates are able to work together to agree on the best way to ensure that food is safe, of expected quality and can be traded. Inclusiveness is a vital element in making the Codex system work. Investing in this system enhances the quality and effectiveness of the standards set through the broadest possible participation and consensus.

### ***Codex and science***

The foundation of Codex standards depends on developing risk-management measures based on sound scientific evidence from risk assessments. The expert advisory bodies in FAO and WHO are transparent and independent. They are a trusted source responding to global calls for data in order to carry out food-related risk assessment, scientific research and investigation.

#### ***Expert bodies and consultations***

FAO and WHO expert bodies for risk assessment establish the scientific basis for Codex standards. These expert bodies are independent of the Commission and its subsidiary bodies, such that their work contributes significantly to the scientific credibility of the Commission's own work. Codex strictly adheres to its established principles of risk

analysis that ensures the independence of science-based risk assessment (often delivered in the form of scientific advice) from the practical realities of risk management.

#### ***Selection of global expertise***

The competence and neutrality of the membership of these expert bodies is of critical importance. Any conclusions and recommendations depend to a very large degree on the objectivity, scientific skill and overall competence of the experts who formulate them.

For this reason, great care is taken in evaluating the accomplishments of the experts and applying stringent policies to determine and prevent any potential conflict of interest during the selection of the experts invited to participate, through procedures that seek to ensure the excellence, independence and transparency of the advice provided by the FAO/WHO scientific committees. Experts must be pre-eminent specialists in their fields, impartial and indisputably objective in their judgement. They are appointed in their personal capacity, not as a representative of a government, organization or institution, and the input they provide is theirs alone.

All Codex members are encouraged to take part actively in providing data and facilitating the participation of independent experts to the scientific advisory bodies of Codex. A transparent and robust risk assessment process using the world's leading scientists and considering data provided from all over the world ensures the soundness of the scientific advice underlying Codex standards.

#### ***Scientific advice***

Two longstanding expert groups – the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) and the Joint FAO/WHO Expert Committee on Food Additives (JECFA) – have for many years produced internationally acclaimed risk assessments that are not only the basis for Codex risk-management decisions but also widely used by governments, industry and researchers worldwide. The risk assessments and safety evaluations they perform are based on the best scientific information available, compiling inputs from many authoritative sources, and producing publications that are considered international works of reference. Two other expert groups dealing with

Microbiological Risk Assessment (JEMRA) and Nutrition (JEMNU) complete the set of independent scientific bodies that provide expert scientific advice to Codex. FAO and WHO also organize ad hoc consultations or expert meetings to address issues that do not fall under the mandate of these scientific bodies.

### *How does Codex develop standards?*

The Commission reviews a project document presented by a member and decides whether the standard should be developed as proposed. If new work is approved, the Codex Secretariat arranges for the preparation of a proposed draft standard and circulates it to member governments and observer organizations for two rounds of comments. The text also goes to Codex committees dealing with issues such as labelling, hygiene, additives, contaminants or methods of analysis for endorsement of any special advice in these areas. Once adopted by the Commission, a Codex standard is added to the Codex Alimentarius and published on the web site.

Most countries now require less prescriptive standards – especially for commodities – than those developed in the 1970s and 1980s. The Commission keeps abreast of changes, and has been consolidating many of its older, detailed standards into new, more general ones. The benefits of this approach include the broader coverage it attains and that it allows for innovation in the development of new food products.

As we will see in Part II, effective participation by a country increases its ability to influence the development of standards in the areas that matter to it.

### *Common understanding*

The standards published in the Codex Alimentarius codify a common understanding among members on what is considered safe food and of agreed and acceptable quality, which allows them to ensure fair practices in the food trade. Even before the establishment of the WTO, Codex standards constituted a benchmark for food trade.

## Melamine contamination of milk products in China

In September 2008 the first cases of illnesses in infants were reported in China after drinking a particular brand of powdered infant milk formula. By 26 September 54 000 children had sought medical treatment and 12 900 were hospitalised. By December there had been 6 deaths and a total of 294 000 cases. The reason for this dramatic food safety crisis had been identified as contamination of infant formula with melamine in extremely high levels, due to adulteration of the product.

By this time 47 countries had received melamine-contaminated products. Trade was disrupted as countries applied zero-tolerance for

melamine in milk products in the absence of science-based international maximum limits for melamine in infant formula.

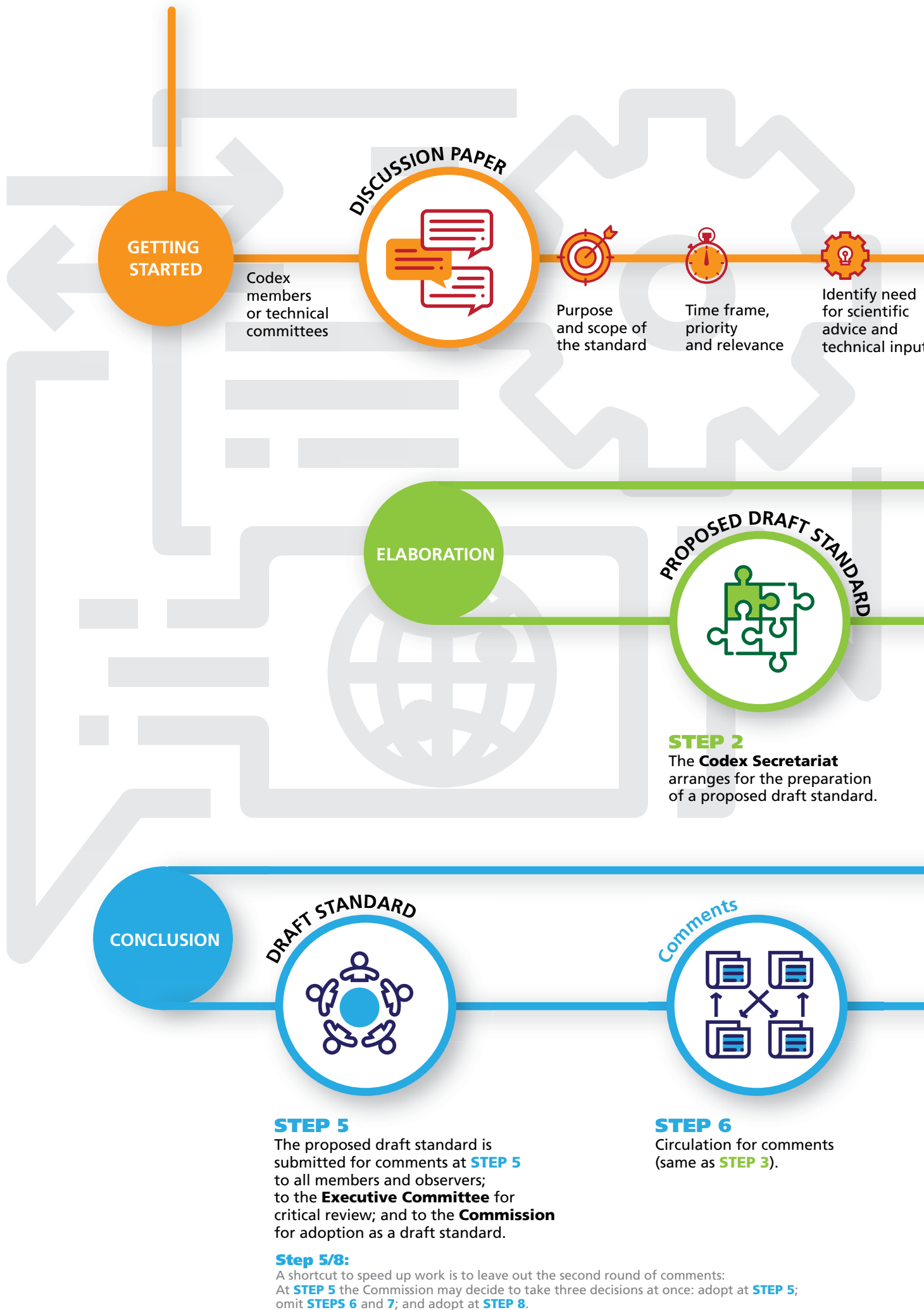
An FAO/WHO Ad hoc expert meeting in Canada in December 2008 established a tolerable daily intake for melamine which formed the basis for the international Codex standard adopted in 2010.

It was possible to manage this event only because of the excellent cooperation of the Chinese authorities with international organizations. Eventually trade was restored and consumer confidence re-established.



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Source: Codex Secretariat



## 8 STEPS

# A CODEX standard – flexible, transparent and inclusive

Possible projects for new standards are usually first discussed at technical committees (discussion papers). Codex members may also directly submit project documents.

PROJECT DOCUMENT



### STEP 1

The **Commission** approves new work based on a Project Document and the critical review of the Executive Committee, and identifies the body to undertake the work.

Comments



### STEP 3

The **Codex Secretariat** circulates the proposed draft for comments to all members and observers.

Comments



### STEP 4

The body undertaking the work discusses the proposed draft and the comments; amends the text, and decides the next step (forward, backward, hold).

Comments



### STEP 7

Discussion and decision on next step (same as **STEP 4**)

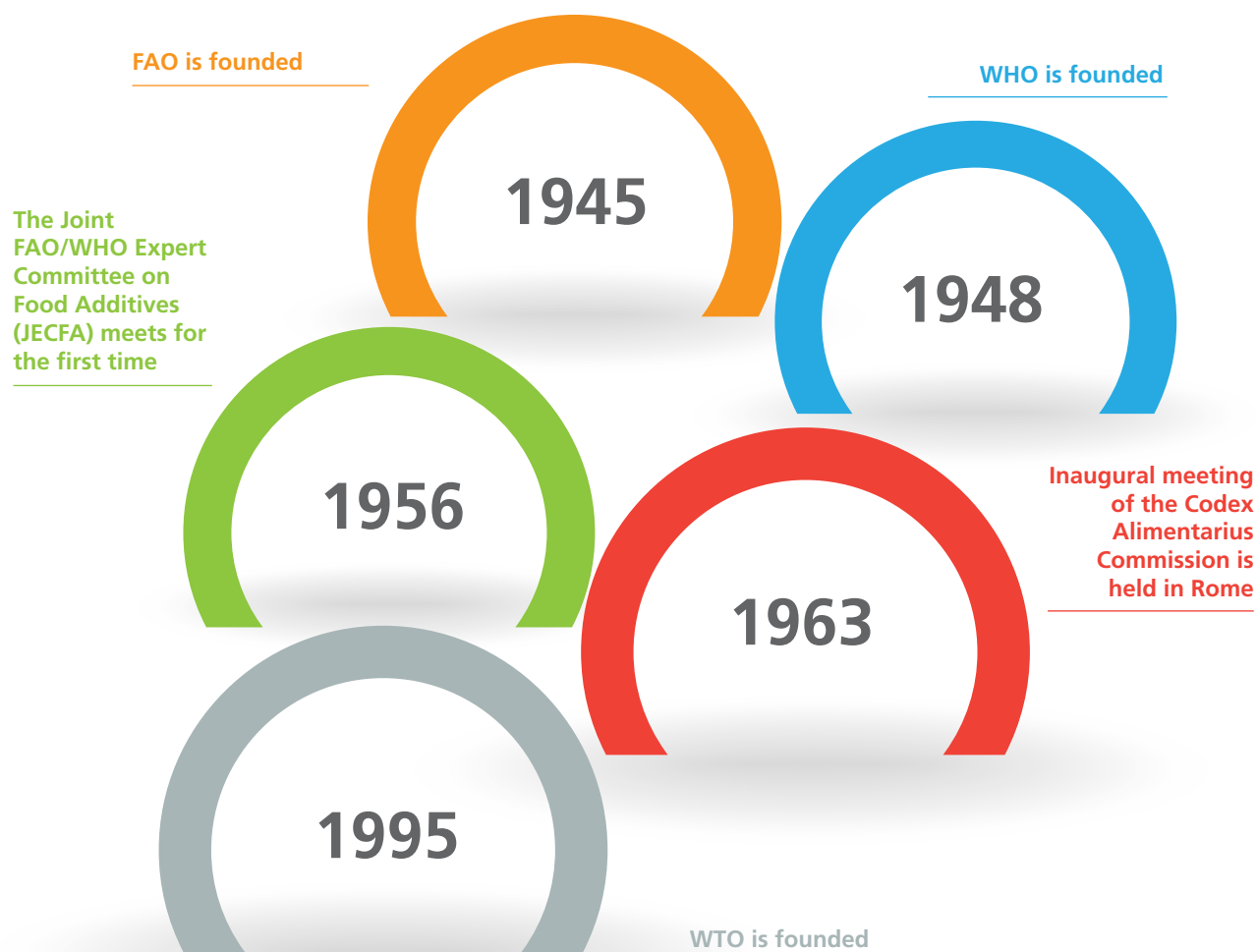
CODEX STANDARD



### STEP 8

The proposed draft standard is submitted for comments at **STEP 8** to all members and observers; to the **Executive Committee** for critical review; and to the **Commission** for adoption as a standard.





## The World Trade Organization

The WTO is the sole global organization mandated to deal with the rules of trade between nations. WTO members come together to negotiate these rules, which take the form of trade agreements, adopted by consensus. The WTO also oversees the application of these rules and monitors the trade policies of its members. The overarching purpose of the WTO system is to help trade flow as smoothly, predictably and freely as possible, which is important for economic development and well-being. The opening of national markets to international trade, with justifiable exceptions and adequate flexibilities, contributes to sustainable development, poverty alleviation and the improvement of living

conditions. The WTO's technical assistance programme plays an important role to ensure that all members are aware of their obligations and can make the most of their rights. When members disagree, they can, as a last resort, trigger the WTO's dispute-settlement mechanism to find a solution.

Although the focus at the time of the General Agreement on Tariffs and Trade (GATT) – the internationally negotiated post-Second World War instrument that gave rise to the WTO – was on ordinary customs duties ("tariffs"), today the focus has broadened to other types of measures that affect trade – including regulations and standards. A key development in this respect was the advent of the WTO SPS and TBT Agreements.



## ***SPS and TBT Agreements***

The SPS and TBT Agreements strike a balance between, on the one hand, members' rights to regulate for legitimate objectives, such as food safety or consumer protection, and, on the other hand, ensuring that such regulations do not become unnecessary or discriminatory barriers to trade.

Both the SPS and TBT Agreements encourage members at all levels of development to participate in relevant standard-setting bodies. This is important to ensure that these bodies produce standards on products of interest to all members, and that these standards take into account the realities and constraints facing different members.

### ***The SPS Agreement***

The SPS Agreement sets out rules for food safety and requirements for animal and plant health. It recognizes the right of governments to adopt and enforce measures necessary to protect human, animal or plant life or health. While the need to constrain trade may arise, any measures taken to do so should not be applied in an arbitrary or discriminatory manner or act as a disguised restriction on international trade.

It is important to note that the SPS Agreement does not prescribe a specific set of health and food safety policies that governments should adopt. Instead, the SPS Agreement sets out a framework of rules to achieve a balance between members' rights to adopt measures to ensure food safety, and the goal of limiting the unnecessary effects of such measures on trade. The rules require that measures be based on scientific findings and applied only to the extent necessary to protect human, animal or plant life or health, as well as that they not unjustifiably discriminate between countries where similar conditions exist.

The SPS Agreement covers all types of measures to achieve these purposes, whether these are requirements for final products, processing requirements, or inspection, certification, treatment or packaging and labelling requirements directly related to food safety.

### ***The TBT Agreement***

Whereas the SPS Agreement applies to measures addressing a narrowly defined set of health-related

risks, the TBT Agreement covers a wider variety of product standards and regulations adopted by governments to achieve a range of public policy objectives, such as protecting human health and safety or protecting the environment, providing consumer information and ensuring product quality. Under the TBT Agreement, members are free to choose how to regulate products to achieve those objectives but must do so in a way that does not discriminate between trading partners or that does not unnecessarily restrict trade in these products.

The TBT Agreement covers trade in all goods – agricultural and industrial alike – and applies to three categories of measures: technical regulations, standards and conformity assessment procedures.

### ***Which agreement applies when?***

Although the SPS and TBT Agreements are very similar, there are some significant differences, and it is therefore important to know which measures fall under which Agreement (see page 14). Unless the purpose of a measure is to protect food safety or animal or plant health from a set of specific risks, it usually falls within the scope of the TBT Agreement. For example, measures taken to



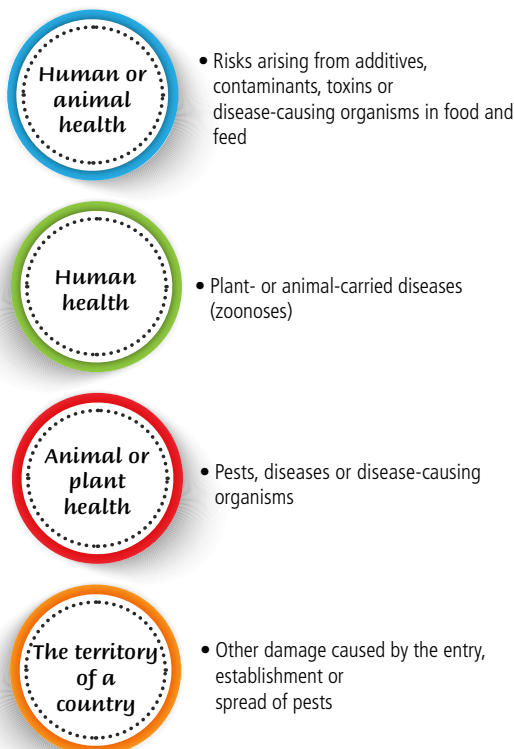
*The SPS and TBT Agreements strike a balance between, on the one hand, members' rights to regulate for legitimate objectives, such as food safety or consumer protection, and, on the other hand, ensuring that such regulations do not become unnecessary or discriminatory barriers to trade.*



## Scope of the SPS Agreement

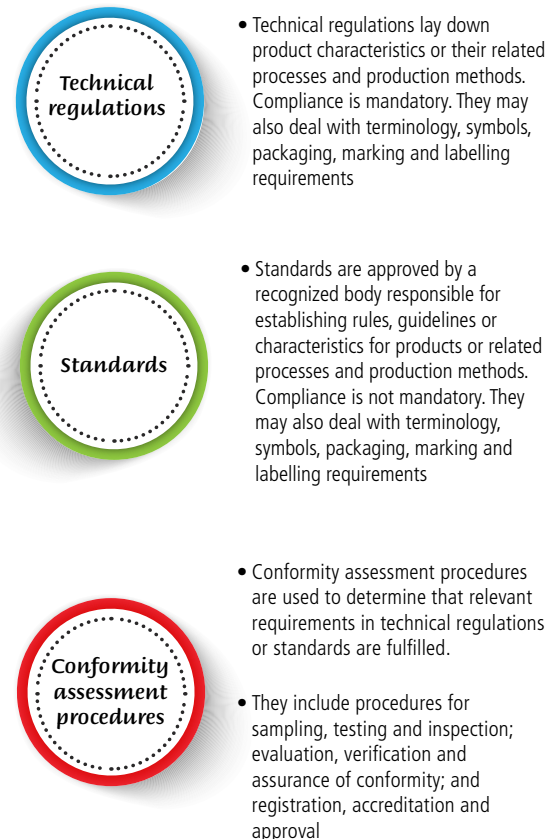
The scope of the SPS Agreement is defined by the objective of the measures.

The measures covered by the SPS Agreement are taken to protect:



## Scope of the TBT Agreement

The scope of the TBT Agreement is defined by the objective of the measures.



## TBT and SPS provisions in regional trade agreements

The proliferation of regional trade agreements (RTAs) over the past 20 years has raised concerns about their possible incompatibility with the WTO multilateral trade system. If RTA provisions differ significantly from similar provisions in WTO agreements, engaging in trade and knowing which rules apply can become more complex.

Recent research (Acharya, 2016) has found that most RTAs contain provisions dealing specifically with the TBT and SPS areas, usually in the form of a specific section or chapter. For example, 72 percent of the RTAs in force in 2015 contained TBT provisions, the majority of them simply reaffirming and reinforcing the provisions of the TBT Agreement. A number contained provisions diverging from the TBT Agreement, for

instance, by employing more stringent wording or undertaking broader commitments. In that minority of cases, the divergent provisions generally build on and incorporate the decisions and recommendations of the TBT Committee, especially in the area of transparency. A similar situation can be observed with respect to SPS provisions in RTAs.

Such RTA provisions therefore complement the WTO system by referring to the work of the TBT and SPS Committees or international standards as the basis for their further commitments.

When it comes to food standards and measures, and the TBT and SPS provisions of RTAs, the WTO rules remain the primary determinant for participating in trade.



reduce risks of microbiological contamination of food would fall under the SPS Agreement, while measures regarding packaging and labelling of food addressing risks not expressly covered by the SPS Agreement (e.g. information on nutritional content) would fall under the TBT Agreement.

### **International standards**

Both the SPS and TBT Agreements strongly encourage WTO members to use international standards, guidelines and recommendations as the basis for their measures.

The SPS Agreement explicitly recognizes three international standard-setting bodies, covering the three main areas in which SPS measures are applied:

- the FAO/WHO Codex Alimentarius Commission, for food safety standards;
- the World Organization for Animal Health (OIE), for animal health standards and diseases that can be transmitted from animals to humans (zoonoses); and
- the International Plant Protection Convention (IPPC), for plant-health standards.

## **Benefits of international standards and harmonization**

International standards and harmonization help to:

- facilitate international trade since products meeting the same standards may be accepted more widely and producers do not need to know in advance the final markets for their products, resulting in fewer unnecessary trade restrictions;
- promote efficiencies and allow for economies of scale since producers need not create different processes or design and manufacture many variations of a given product to meet varying specifications;
- provide a sound scientific and technical basis for measures taken to achieve policy objectives related to food;
- aid governments in developing science-based SPS measures to ensure food safety and animal and plant health without the need to undertake risk assessments on their own;
- provide the basis for conformity assessment procedures (e.g. testing, inspection or certification) that governments use to ensure that product requirements for safety, or other objectives, are respected;
- disseminate technology; and
- lower costs for consumers.

In contrast to the SPS Agreement, the TBT Agreement – which covers a much broader range of products (including food products) and policy objectives (including human health) – does not recognize any particular international standard-setting body. In 2000, in order to help identify which international standards may be relevant for the purposes of the TBT Agreement, members established six principles for the development of international standards (see page 15).

The TBT Agreement contains a Code of Good Practice for the Preparation, Adoption and Application of Standards, which sets out provisions and principles for the development of standards in general. Together, this TBT guidance aims to ensure that international standards have no adverse impact on trade, and provide a sound global basis for regulation.

Both agreements strongly encourage harmonization of regulations in two ways. First, by requiring, as a rule, the use of international standards as the basis for domestic SPS and TBT measures. However, they also allow members to deviate from international standards under certain circumstances. Under the SPS Agreement, members may try to achieve a higher level of health protection than that reflected

in international standards, so long as their measures are based on an appropriate assessment of risks and the approach is consistent, not arbitrary. The TBT Agreement foresees that some international standards might not be appropriate in certain cases – for example, due to climatic, geographical or technological reasons. The TBT Agreement also recognizes that developing countries should not be expected to use international standards that are not appropriate to their development, financial or trade needs.

The second way both agreements promote harmonization of regulations is by "rewarding" measures which are closely aligned to relevant international standards with a presumption of conformity with certain obligations of the agreements, a benefit which may provide members with a certain degree of protection from legal challenges.

### ***Implementing the SPS and TBT Agreements – transparency for resolving trade concerns***

Implementing the SPS and TBT Agreements supports trade in safe, good-quality food that complies with regulatory requirements, while avoiding unnecessary trade disruption. By



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## **Sardines**

**O**n 26 September 2002, in one of its first rulings on the TBT Agreement, the Appellate Body of the WTO upheld a Panel finding in favour of Peru that sardines caught in the Eastern Pacific (from the *Sardinops sagax* species) could be marketed and labelled as canned sardines in the European Union (EU). The dispute arose when an EC Council Regulation stated that only sardines from the species *Sardinia pilchardus* Walbaum (mainly found around the Eastern North Atlantic coast) could be marketed as preserved sardines, thereby excluding Peruvian sardines.

The WTO ruling found that the EC Regulation was inconsistent with

the TBT Agreement because it was not based on the relevant international standard established by Codex (Codex Standard 94) for preserved sardines and sardine-type products. That Codex Standard sets out what can be written on a food label and characteristics of 21 species from which canned sardine or sardine-type products can be prepared, including both *Sardinops sagax sagax* and *Sardina pilchardus* Walbaum.

As a result of this dispute, a mutually agreed solution was reached whereby the EC Regulation was amended to address Peru's concerns and allow trade to continue.

Source: WTO Secretariat



promoting good regulatory practices (GRPs) in the development of measures applying to trade in food, such as transparency, the assessment of least trade-restrictive alternatives to meet policy objectives, and following a risk- and science-based approach, the agreements deliver better outcomes for consumers, producers and regulators. Given the breadth of issues covered by these two agreements, implementation needs a whole-of-government approach, involving a wide range of ministries and agencies responsible for trade, standards, human health, food safety, veterinary and plant health, industry and the environment, among others.

Transparency is among the key pillars for the effective implementation of both the SPS and TBT Agreements. They require members to provide notifications of certain draft regulations affecting trade and to give trading partners an opportunity to comment when a planned regulation might raise concerns. The transparency of this process provides a vital opportunity for consultation on draft regulations. Members can benefit from hearing a range of perspectives on how to best meet their policy objectives, while exporters benefit from advance warning about future changes in requirements in their export markets and from the chance to comment on such changes.

Dialogue and cooperation among members goes a long way to avoiding trade problems occurring with SPS and TBT measures. In the WTO SPS and TBT Committees, WTO members exchange information on all aspects of the implementation of the two agreements. Cooperation and dialogue between technical officials and regulators form the backbone of the work of the committees. Thanks to the technical and pragmatic nature of discussions, the committees offer a useful avenue for resolving issues before they become too political or contentious, potentially leading to legal challenges. In other words, this form of regulatory cooperation between peers plays a pre-emptive role, a useful way of avoiding trade disputes.

### *Resolving trade concerns*

There are several mechanisms available directly or indirectly through the WTO to help resolve trade concerns. Members can comment on notifications of draft SPS or TBT measures, attempt to resolve concerns through bilateral consultations, raise specific trade concerns (STCs) in the relevant WTO committees, or rely on the WTO's formal dispute resolution mechanism. These steps are not listed in any particular order, and members use the mechanism of their choice for each concern.

## The Trade Facilitation Agreement

Traders from developing and developed countries alike have long pointed to the vast amount of "red tape" that still exists in moving goods across borders, which raises costs and imposes a particular burden on small and medium-sized enterprises (SMEs). In response, WTO members negotiated on a new Trade Facilitation Agreement (TFA), which entered into force on 22 February 2017, following ratification by two-thirds of WTO members.

The TFA contains provisions for expediting the movement, release and clearance of goods, including goods in transit, which can be especially important for perishable products such as food. It also sets out measures for effective cooperation between customs and other

appropriate authorities, including SPS and TBT bodies.

Some of the TFA's provisions – for instance, on pre-arrival processing, the publication of average release times, the review and publication of fees and the publication of information on import/export requirements – add specific detail to rules already contained in the SPS and TBT Agreements, without diminishing the rights and obligations of WTO members under those agreements. It is therefore important for officials working on the implementation of these agreements to maintain close contact to benefit from each other's experiences, and to take advantage of capacity-building opportunities available to support the implementation of the TFA.



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Source: WTO Secretariat



# Part 2

THE BENEFITS OF  
TAKING PART





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# KEY MESSAGES

- When a country applies Codex standards and engages with the SPS and TBT Committees, it contributes towards safeguarding public health and seizing international trade opportunities. Successful participation is based on sound knowledge and capacities in food safety and standards. Commitment to, and consistent investment in, continuously improving food control systems are fundamental.
- To enhance food safety, countries must take a comprehensive approach, leveraging contributions from multiple sectors. Coordination at the national level is key to maximizing the benefits that can be obtained from Codex international food standards and the SPS and TBT Agreements.
- Coordination at international level (e.g. between donors) is also an important prerequisite for improving the efficiency and impact of international assistance.

**P**art I described the system of food standards and trade rules created by members for members. With such a system in place, what is then required to keep it working and fit for purpose? And how can members take advantage of the benefits it has to offer?

As with any institution where everybody has a voice and the right to take part, the two complementary spheres of Codex and the WTO rely on the quality of the contributions made: participation is important to bring about change, sustain and drive forward international standard-setting, and put the SPS and TBT tools to use – and, in turn, keep both institutions alive and relevant.

Beginning in Codex, members develop food standards that set the benchmark for public health and trade. Through WTO agreements, members strongly promote harmonization of trade measures based on those international standards. Next, also through the WTO, members monitor each other's use of these standards, as applied in legislation and regulations, and the resulting trade effects. The loop is closed when information on the needs of stakeholders and trade effects feeds back into the Codex process, allowing members to decide on the need to develop new standards or update existing ones. Capacity-building, provided by FAO, the WTO and others, is essential to enabling members to benefit fully from the system.

### **Understanding the system**

The system can be maintained if countries invest by participating in Codex. Likewise, engagement in the SPS and TBT Committees will ensure that guidance and best practices for implementing the agreements remains up-to-date, and that trade frictions are effectively resolved. But it is coordination and processes at the national level for both Codex and the WTO that give a country genuine access to the system. What is required is what we will term effective preparation, which, when combined with strategic participation in the international meetings of the two institutions, gives a country the ability to influence the creation of standards in the areas it needs, and to make sure that the standards developed reflect domestic needs. Effective preparation also means making use of WTO mechanisms to further a country's trade interests, including by making sure trading partners apply international standards.

Good trade relations depend fundamentally on agreement regarding standards. This section will argue that it is only effective preparation that will allow a country to, first, identify where action is required, and then to work to develop this action through an integrated multisectoral consultation at the national level. Health, agriculture, industry, trade and consumer groups all need to be involved in setting a national agenda and national priorities. It is by drawing on the knowledge and experience of these diverse but interconnected groups that a country is able to recognize what is in its own national interest and which measures can be instrumental in facilitating access to export markets. In the same way, knowledge experience, and multisectoral coordination is needed to apply WTO agreements and their rules and procedures at the national level, and to make sure that thematic work on new guidance and practices address emerging issues. It is also through this process that trade problems faced by producers in their export markets can be identified, so that national positions can be taken to address these concerns.

This section first outlines how the WTO SPS and TBT Agreements operate and the importance of members being equipped to participate, making the case for investment in national systems and engagement at the international level. It then describes how standards are developed in Codex, providing guidance on the key principles for

“

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”

placing an issue of national interest onto Codex's international agenda. Throughout, the section underscores the need for a multisectoral approach, starting at the grassroots level, and demonstrates how engagement in one branch of the system can yield benefits in the other.

Effective preparation and multisectoral consultation and coordination are challenging, requiring technical and institutional capacities that need to be developed and maintained. The section will conclude with case studies and global success stories where FAO has implemented capacity-development programmes. These examples demonstrate that targeted, informed and coordinated investments can bring benefits in terms of the impact standards make when they are applied, and the positive effects this can have on market access for food.

## The WTO SPS and TBT Committees in action

Food standards have always mattered for trade, and their importance is growing. At the WTO, in the SPS and TBT Committees, members monitor the trade impact of food safety and other food-related measures. They also discuss experiences and best practices in implementing the SPS and TBT Agreements, and develop procedures and guidance to assist members. This work shows, in particular, the importance of harmonized, science-based food standards in facilitating trade. Under this framework, members use notifications<sup>2</sup> to indicate their intention to introduce new or modified measures. If a measure affects trade or has the potential to do so, members can raise their concerns in a meeting. Such trade and market access issues are termed Specific Trade Concerns (STCs).

### Notifications

Measures related to food safety are most noticeable, but those dealing with other aspects of food (including non-SPS health risks) – such as labelling or quality – are also growing in number.

<sup>2</sup> Although there is no obligation to notify SPS regulations that are substantially the same as an international standard, in 2008 the SPS Committee recommended that members do so anyway since this information could be useful for trading partners. Therefore, when members notify a measure referencing a Codex standard, they can additionally indicate whether it meets that standard.



*At the WTO, in the SPS and TBT Committees, members monitor the trade impact of food safety and other food-related measures. They also discuss experiences and best practices in implementing the SPS and TBT Agreements, and develop procedures and guidance to assist members.*



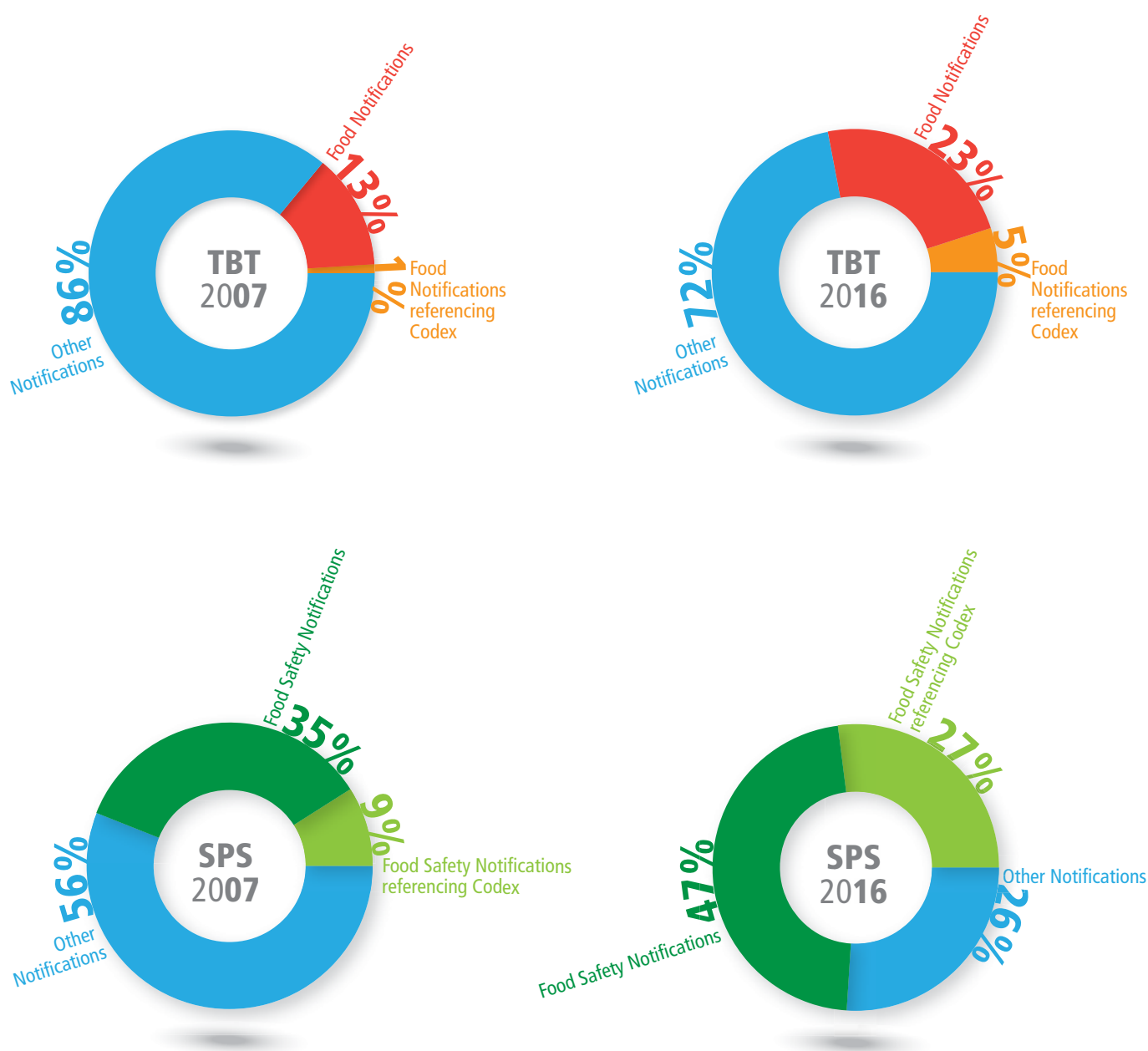
The share of regular SPS notifications that relate to food safety measures has, overall, increased over the years, from 44 percent in 2007 to 74 percent in 2016. The share of notifications specifically referencing a Codex standard roughly tripled over the same period (see Figure 1).<sup>3</sup>

Food issues, though less prevalent in TBT notifications since the Committee deals with measures on all goods, have gained in prominence there too: only 14 percent of TBT notifications submitted in 2007 related to food measures, while this figure reached 28 percent in 2016, following a peak in 2014. In the same period, the share of TBT notifications referencing Codex rose from 1 percent to 5 percent.

It is not surprising that notifications of food safety measures affecting trade very frequently reference Codex standards, since the SPS Agreement explicitly recognizes Codex as the international standard-setting body for food safety matters.

<sup>3</sup> In the SPS context, “other notifications” refer to animal or plant health measures, whereas in the TBT context they refer to a wide range of products and subject matters.

**Figure 1: TBT and SPS - Notifications of food and food safety regulations referencing Codex standards \***



\* TBT notifications are included when the notification text mentions food or beverages. SPS notifications are included when the notification has the stated objective of food safety.

Source: WTO Secretariat



Although the TBT Agreement does not explicitly recognize Codex, or any other international standard-setting body, Codex is the most frequently referenced body in TBT notifications when it comes to measures dealing with food. Reference to Codex standards in TBT notifications has become more common over the past ten years, showing that members are more frequently drawing on Codex standards as the basis for food-related TBT measures, in particular measures addressing food labelling or quality.

### *Specific trade concerns*

Should a measure lead to market access problems, a WTO member can raise it for discussion as a STC.

The proportion of STCs brought before the SPS and TBT Committees in which the use of Codex standards was at issue has increased between 2007 and 2016, especially in the TBT context (see Figure 2).

The SPS Committee deals with food safety and animal and plant health issues, and a large share of the STCs discussed relate to food products. Many STCs deal with food safety measures that have an effect on another WTO member's exports. WTO members regularly refer to Codex standards in such STC discussions, as shown in Figure 2. In some cases, the exporting member encourages the importing member to base its measures on a relevant Codex standard, with a view to facilitate trade. However, STCs often arise in areas where there is no relevant Codex standard, and members refer to the lack of such a standard during the discussions.

## *Specific trade concerns*

**A**t SPS and TBT Committees meetings, WTO members discuss trade issues relating to a specific measure put in place by one WTO member that is constraining the exports of another. These are called STCs. The discussion provides an opportunity for WTO members

to ask their trading partners to explain or justify requirements that make it difficult for them to export. It is a technical and pragmatic exchange between regulators and experts that helps ease trade frictions and avoid disputes.

## *Antioxidant residues in shrimp*

**I**n October 2012 and at subsequent meetings, India raised an STC in the SPS Committee regarding Japan's introduction of mandatory testing for residue levels of Ethoxyquin, an antioxidant used in some countries as a preservative in feed for aquatic animals, to control browning in pears, or as a food additive. Japan had notified a measure based on its Food Sanitation Act of 2005 that defined permissible residue levels of Ethoxyquin for some products, but did not include MRLs in shrimp. Japan explained that no Codex standard for Ethoxyquin in shrimp existed when it changed its legislation. A risk assessment was under way. The default tolerance level of 0.01 ppm applied in the meantime.

India argued that, while the threshold level for shrimp was set at 0.01 ppm, the level for fish was 1 ppm, and Codex had set an MRL of 3 ppm in pears. The very low level applied by Japan did not take into account the objective of minimizing negative effects on trade. According to India, there was no scientific evidence on the toxicity or carcinogenicity of the substance. India was the largest supplier of shrimp to Japan and this measure had an adverse effect on its exports.

Codex indicated that it had placed Ethoxyquin on the priority list for evaluation. Eventually, Japan concluded its risk assessment and proposed a draft MRL of 0.2 ppm, and in October 2014 both members reported that the concern had been resolved.

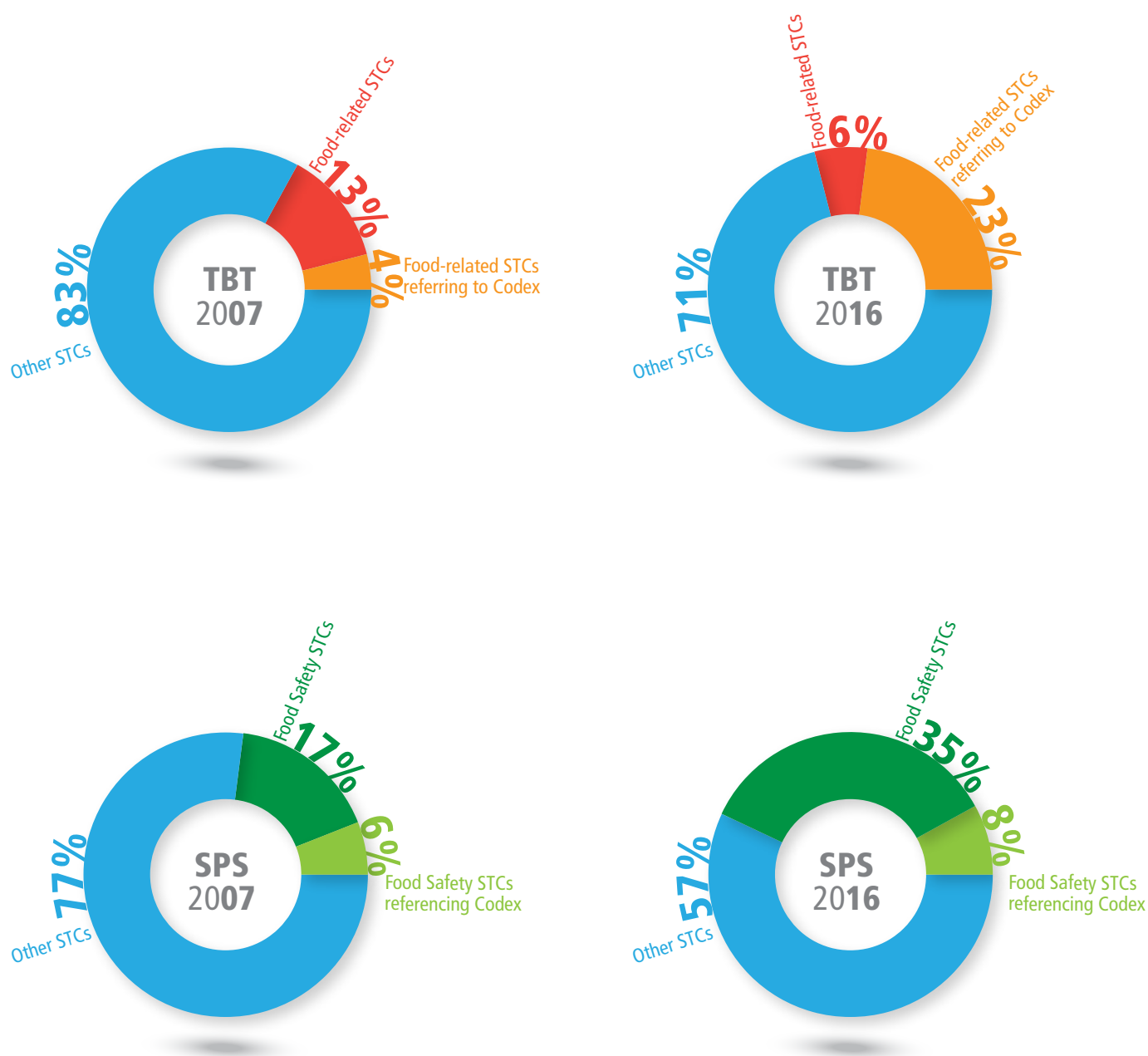
Source: WTO Secretariat



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**Figure 2: TBT and SPS - Specific trade concerns related to food referencing Codex standards \***



\* TBT STCs are included when the measure at issue deals with food or beverages. SPS STCs are included when the measure at issue has the objective of food safety.

Source: WTO Secretariat

In TBT STC discussions over the past five years, members have made much more frequent reference to Codex standards or guidelines (see Figure 3). Between 2007 and 2016, the share of STCs in which Codex standards were mentioned increased from 4 percent to 23 percent. In absolute terms, Codex standards were discussed in the context of two STCs raised in 2007, while in 2016, they came up in relation to 21 STCs.

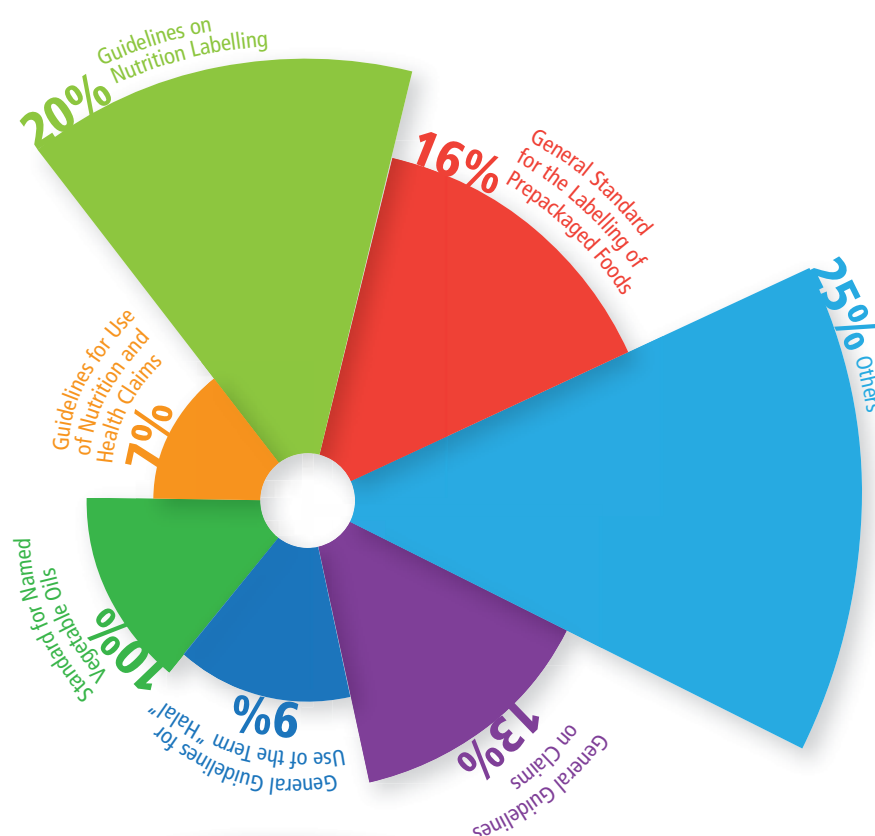
The nature of the Codex standards relevant to the SPS and TBT Agreements are different. For example, general standards dealing with issues such as labelling or health claims may be more subject to varying interpretation in implementation than a specific pesticide MRL, which lays down a numerical safety threshold.

Taking a closer look at the new STCs raised over the past five years in which Codex standards were referenced, around 60 percent concern TBT issues (labelling, quality and others), while the rest relate to food safety (see Figure 4).

#### ***Drivers of trade concerns***

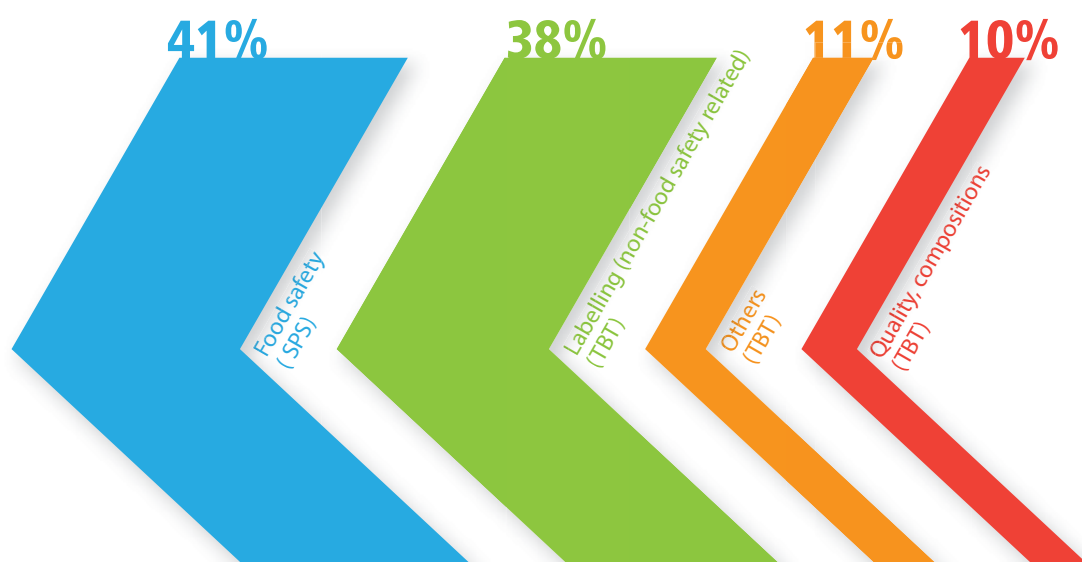
As noted above, when Codex standards are mentioned in STC discussions in the SPS Committee, it is often with regard to the lack of a Codex standard for a particular product or food safety concern. In some cases, Codex can respond by swiftly developing a standard; in other cases, this may be more difficult or require more time.

**Figure 3: Codex standards referenced in TBT specific trade concerns raised from 2012 to 2016 \***



Source: WTO Secretariat

**Figure 4: Specific trade concerns referencing Codex Standards raised from 2012 to 2016 \***



Source: WTO Secretariat

A recent driver of STCs before the TBT Committee has been the upward trend in food- and nutrition-labelling regulations. Discussion of labelling measures to promote nutrition and healthy diets has become a major issue in the TBT Committee, with one third of new STCs brought to the attention of WTO members since 2012 concerning these types of labelling schemes. A second major source of STCs in TBT discussions is the regulation of alcoholic beverages, including labelling, compositional requirements and definitions.

### The benefits of taking part

The growing number of notifications and STCs referencing Codex standards before the SPS and TBT Committees underscores the importance of countries ensuring that they are equipped to take part in and engage with the system of standard setting and the WTO.

The foundation for engaging in the work of the SPS and TBT Committees and in the Codex

standard-setting process is effective multi-stakeholder coordination at the national level. Successful implementation of the SPS and TBT Agreements requires a whole-of-government approach, involving a wide range of ministries and agencies, including health, agriculture, industry, trade, environment and standards bodies, among others, many of which are also involved in the Codex process. The private sector has an essential role to play as well: it is producers who must contend with the requirements of food measures domestically and in export markets, and the private sector is a key partner in the development and application of food standards.

Governments and the private sector alike can track notifications to keep abreast of regulatory changes in export markets, identify possible concerns and ensure compliance with new requirements. Then, when the need arises, it is WTO members who submit comments on a draft regulation of another member that may impact exports, and, if necessary, use the SPS and TBT Committees to resolve concerns.

The complementary expertise and experience of the public and private sectors make a critical contribution to standard setting and to resolving trade concerns. With regard to standard setting, it is the government that initiates the process by setting objectives for public health and food safety, subsequently involving private sector expertise. Conversely, it is usually the private sector that first identifies market-access issues, while it is the government that is able to investigate and prioritize issues and bring them to the attention of the TBT or SPS Committee.

Members may establish any of a range of different mechanisms to facilitate this public-private collaboration, but what is important is that there is a way for dialogue to take place, to prioritize and reach a national position on an issue, and enable it to be raised in the Codex Alimentarius Commission or at the WTO.

## Kenya's mechanisms for national coordination

**I**n Kenya, the National Consultative Committees on TBT and SPS help promote coordination between different stakeholders on TBT and SPS matters. This multi-stakeholder committee is comprised of representatives from various state departments, regulatory authorities, business associations, non-governmental bodies, academia and international organizations. The National Consultative Committees promote public-private partnerships to review issues pertinent to TBT and SPS matters, for example: reviewing developments in technical

regulations, standards and conformity assessment procedures that are potential barriers to trade for domestic and international partners; and fostering stronger channels for dialogue on information exchange amongst ministries and lead agencies. At a minimum, the Committees meet at least three times per year. The meetings are scheduled to precede the WTO TBT and SPS Committee meetings, such that internal consultations can be held amongst the various national stakeholders in preparation for the WTO TBT and SPS Committee meetings.

## Understanding trade issues at the national level

The WTO system has functional tools for addressing trade problems arising from import requirements on food products, including from their alignment with Codex standards. But the effectiveness of these tools, such as commenting on notifications of new or modified regulations and discussion of STCs, is directly contingent upon members' engagement and participation in the SPS and TBT Committees. Effective participation in these committees requires investment in effective and well-coordinated multi-stakeholder dialogue at home, to be able to identify trade issues related to food standards, define priorities and choose how best to address these issues, for example, by sending comments in response to a notification or by raising an issue in the SPS or TBT Committee.

Why raise STCs in the SPS or TBT Committee? Should a country's domestic industry encounter market-access barriers in export markets related to food standards, the regular meetings of the TBT and SPS Committees provide a low-cost and expedient mechanism to address these problems. The discussion of STCs is a practical tool that can help to restore market access for exporters, without resorting to usually longer dispute-settlement proceedings. The discussion is pragmatic and solution-oriented, taking the form of a peer-to-peer dialogue between technical experts and/or regulators and trade officials.

Using the committee to highlight STCs may also be a way to find allies. Frequently, WTO members share similar market access problems, and discussion in the committee helps to build a coalition of concerned governments. Several WTO members applying pressure together can be more successful than one acting alone.

As noted above, the basis for effective participation at the international level is strong multi-stakeholder dialogue at home. There is no easy way to build this up; it takes time, resources, hard work and investment in people and structures that facilitate the coordination process. But the benefits can be significant, even if they are hard to quantify. Often the costs are only apparent when market access is lost, which can have a major economic impact on the exporting sector, including farmers and workers in processing industries. For most WTO members, this



## SPS and TBT enquiry points

Every WTO member is required to have TBT and SPS Enquiry Points, which are responsible for providing information and responding to requests from other members and handling

comments received on notifications. They often also play a leading role in activities related to national coordination for implementation of the TBT and SPS transparency provisions.

coordination starts with the SPS and TBT notification process and the Enquiry Points. All WTO members are required to have a contact point for questions on TBT and SPS matters, and these **Enquiry Points** often act as a hub for national coordination on TBT and SPS matters.

Accessing relevant information on product import requirements can be an immense challenge for exporters, especially SMEs. Every year, the WTO

receives more than 3 500 SPS and TBT notifications. Three publicly available online tools help stakeholders find notifications relevant to their trade: the SPS Information Management System (IMS) ([www.spsims.wto.org](http://www.spsims.wto.org)), the TBT IMS ([www.tbtdims.wto.org](http://www.tbtdims.wto.org)) and ePing SPS/TBT Notification Alert System ([www.epingalert.org](http://www.epingalert.org)). The SPS and TBT IMS are search platforms that locate SPS and TBT notifications by parameters such as product, notifying member and objective. ePing is an online-alert system allowing users to receive daily or weekly email alerts about SPS and TBT notifications covering products and markets of interest to them. ePing also includes an Enquiry Point management tool that facilitates information-sharing and discussions at the domestic and international levels. Stakeholders can track, comment on and/or adapt to new regulatory conditions, avoiding trade disruption or addressing potential trade problems at an early stage.

### *Participation in the SPS and TBT Committees*

Many developed countries are quite active in the work of the SPS and TBT Committees, and the

## The system in practice - trade and standards for cinnamon

In 2005 and early 2006, Sri Lanka raised an STC in the SPS Committee regarding EU import restrictions on cinnamon exports from Sri Lanka. The issue related to Sri Lanka's traditional practice of burning sulphur as a way of protecting cinnamon from possible fungi and insects. While this practice does not require direct application of sulphur to the cinnamon, it does leave some residue.

The EU directive setting maximum residue limits (MRLs) for sulphur dioxide (SO<sub>2</sub>) prevented Sri Lanka's cinnamon exports from entering the EU market. In raising the STC, Sri Lanka highlighted that there was no international standard

for sulphur levels in cinnamon. Codex was at that time in the process of considering the use of SO<sub>2</sub> as an additive but had not developed maximum permitted residue levels for SO<sub>2</sub> in cinnamon.

Following discussion in the SPS Committee, the Chairperson drew the matter to the attention of the Codex Alimentarius Commission, which subsequently adopted a standard establishing a MRL for SO<sub>2</sub> in cinnamon. As a result, the EU decided to base its requirements on the Codex standard and, by the end of 2006, Sri Lanka reported to the SPS Committee that this issue had been satisfactorily resolved.



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participation of developing members has increased significantly over time, but least-developed country members (LDCs) mostly have a low level of engagement. Developing members have steadily increased their level of notifications under the SPS and TBT Agreements. This group of members now submits significantly more notifications each year than developed members, which is a positive sign of engagement in the work of the committees.

Moreover, developing members now raise or support more STCs per year in the SPS and TBT Committees than developed members. Although the growing number of issues raised by developing members is a positive sign of engagement in the work of the Committees, on average each developing member still raises fewer issues than each developed member. For many developing members, exports of food and agricultural products play an important role in the economy, and the SPS and TBT Agreements and the committee mechanisms are a means to gain and maintain market access. Given that producers and SMEs in developing and LDCs often have the lowest capacity to adapt to new requirements and overcome market access challenges for their food exports, these members have much to gain from strategic engagement in the work of the committees. All economies regardless of size have an equal voice in the committees and therefore an equal chance to have their issues heard and addressed, which makes participation by smaller and more vulnerable members all the more important.

### ***Best practice in the SPS and TBT Committees***

The value of engaging in the work of the SPS and TBT Committees goes beyond resolving market access issues. Since the committees are incubators for guidance and best practice on how to implement the SPS and TBT Agreements, it is vital for members to have a voice in the normative function of the committees. The guidance developed by the SPS and TBT Committees over the years has addressed issues such as recognition of equivalent measures, transparency, international standards, conformity assessment procedures and good regulatory practice (GRP).

For example, in the SPS Committee, members developed guidance on equivalence – the concept

that another country's SPS measures must be accepted as equivalent if they achieve the level of health protection sought, even if the exporting country's measures differ from those of the importing country. Members thought that facilitating the application of this concept would especially help developing countries, which had indicated that they faced difficulties in having their SPS measures accepted as equivalent by importing members. In parallel, Codex also developed specific guidance, including the Guidelines for the Judgement of Equivalence of Sanitary Measures,<sup>4</sup> and provided regular reports about this work to the SPS Committee.

In the TBT Committee, members developed guidance for how to facilitate the acceptance of conformity assessment results, such as certifications and tests, from other members. The TBT and SPS Committees both undertake regular reviews of the implementation of the agreements, which are important opportunities to identify new areas of work, often becoming a source of new guidance.

## **Participating in Codex**

In the early 1970s, a typical session of the Codex Alimentarius Commission would be attended by approximately 250 delegates from around 60 countries. Today, with global food exports in excess of USD 1 trillion annually, over 500 delegates from 120 countries regularly attend the Commission, reaffirming the position of Codex as the pre-eminent international food standard-setting body (see Figure 5).

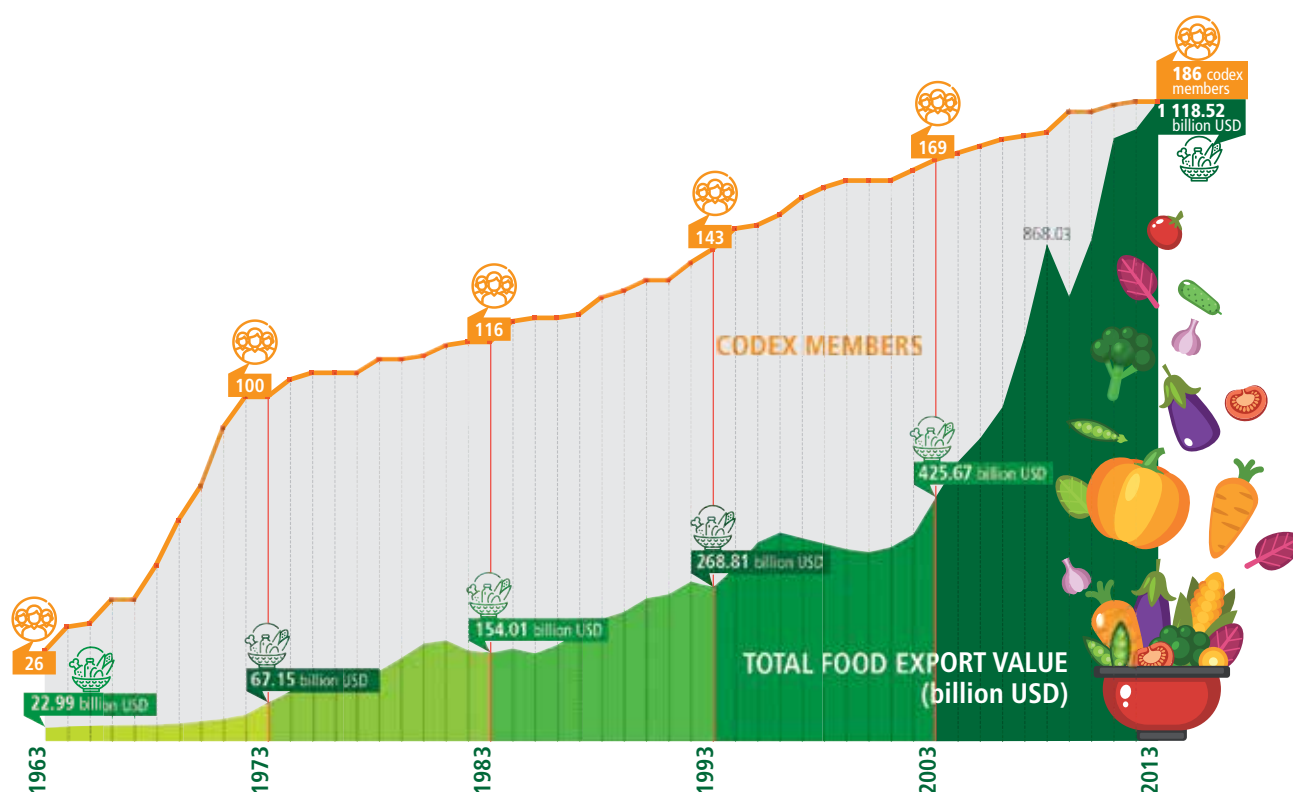
However, participation in technical Codex committees and task forces is much lower. On average, 138 Codex members from 47 countries participate in the meeting of a Codex subsidiary body<sup>5</sup> where substantive negotiation takes place on draft standards. In the past, most participating countries were industrialised countries and developing countries were few. Developing countries not only did not participate actively in meetings, they also did not fully use their right to send written comments to meetings.

<sup>4</sup> Guidelines on the Judgement of Equivalence of Sanitary Measures associated with Food Inspection and Certification Systems (CAC/GL 53-2003).

<sup>5</sup> Data from 11 technical committees held between September 2016 and May 2017.



**Figure 5: Growth in world food exports and Codex membership**



Source: Codex Secretariat and FAOSTAT

## The FAO/WHO Codex Trust Fund

The participation of both low- and high-income countries from various regions allows Codex to develop globally relevant standards. While participation had grown over the years it was still insufficient at the start of the century.

The first FAO/WHO Codex Trust Fund (CTF) was in operation from 2004-2015 and acted as a catalyst to expose developing and transition economy countries to Codex and help them understand the importance of Codex for their country. The three objectives of the fund were: widening participation; strengthening participation and enhancing scientific and technical participation of developing countries in Codex.

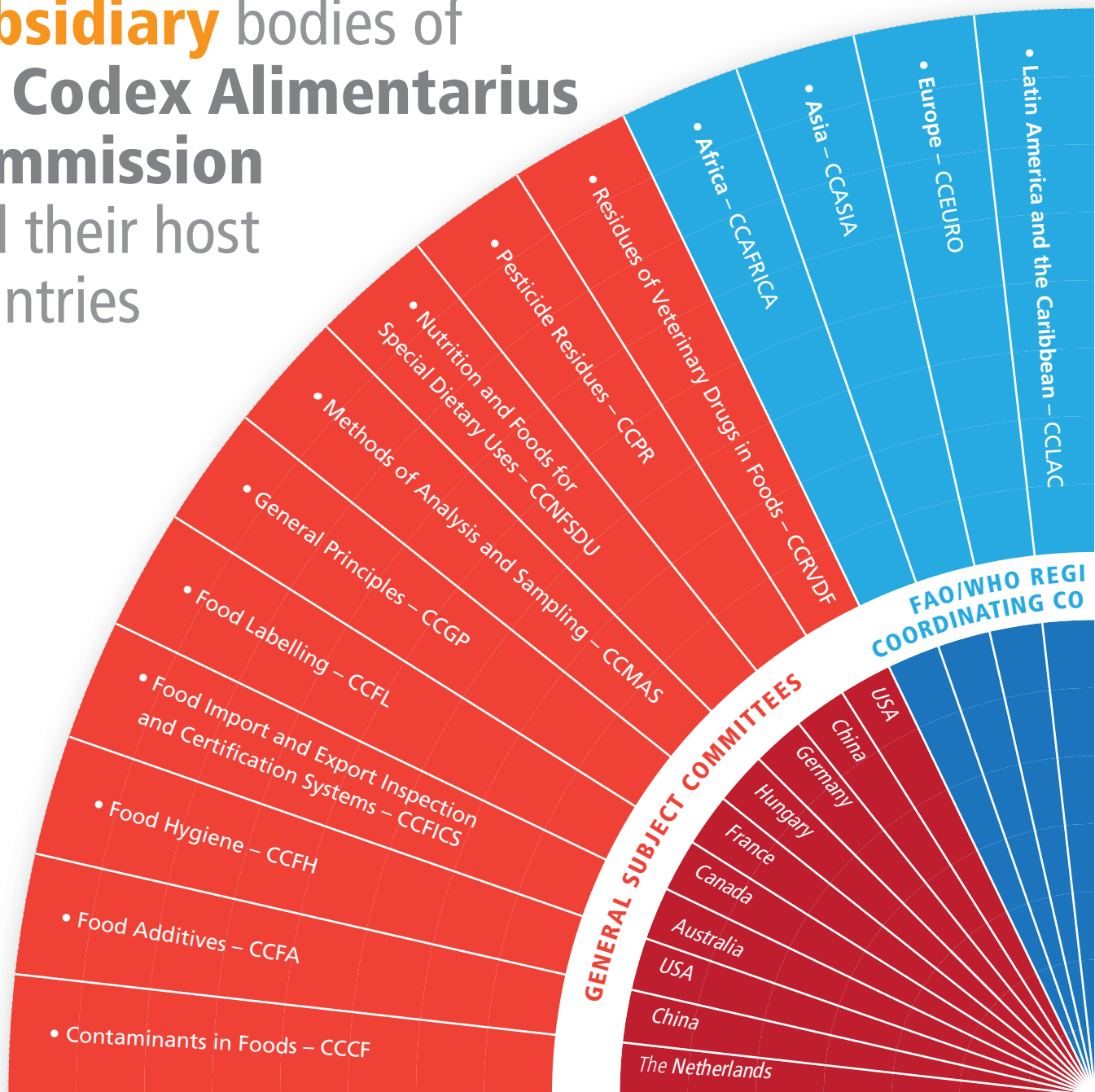
The CTF was very successful at fulfilling its primary mandate, supporting participants from 140 countries. It addressed a real need of developing countries and countries in transition, and was an explicit area of focus for many donors. The CTF also supported participants from 142 countries at 41 CTF capacity building events as part of the second objective, "strengthening participation".

Work on the third objective of CTF only began in 2012 with a project called Mycotoxin in Sorghum and the shift in focus from participation in Codex to developing national capacity is highlighted by the FAO/WHO project on food consumption data. This initiative began with CTF and continues with the new Codex Trust Fund, or CTF2.

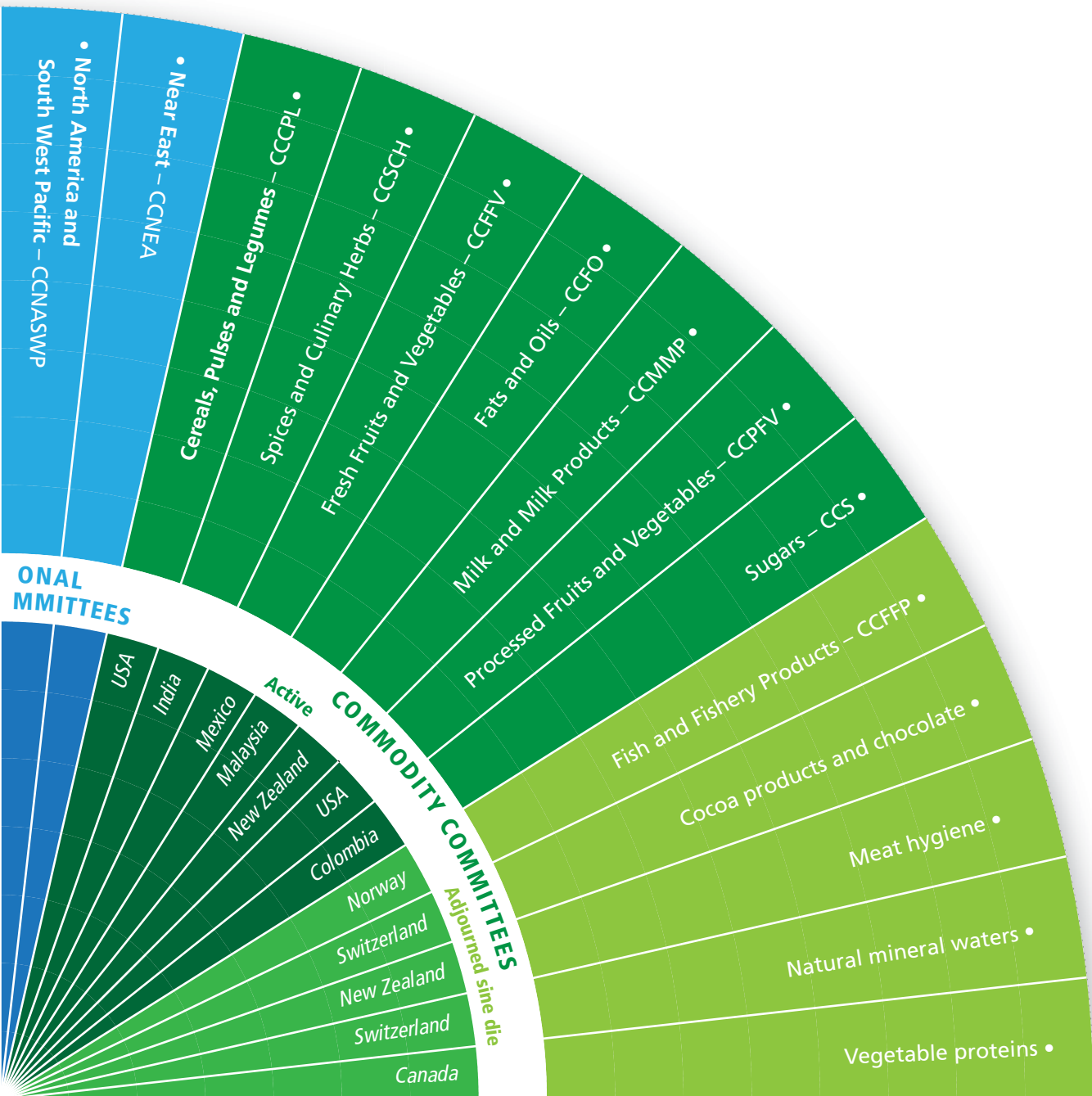
CTF2 responds to the growing need to build capacity of developing countries in their capital, to read and analyse hundreds of Codex working documents circulated each year, prioritise the technical areas the country wishes to focus on, and develop national positions or collect scientific data that will support such positions.

CTF2 was officially launched in July 2016 at the 39th Session of the Codex Alimentarius Commission. It will run for 12 years and support over 100 eligible countries to build strong, solid and sustainable national capacity to engage in the international food standard-setting work of Codex.

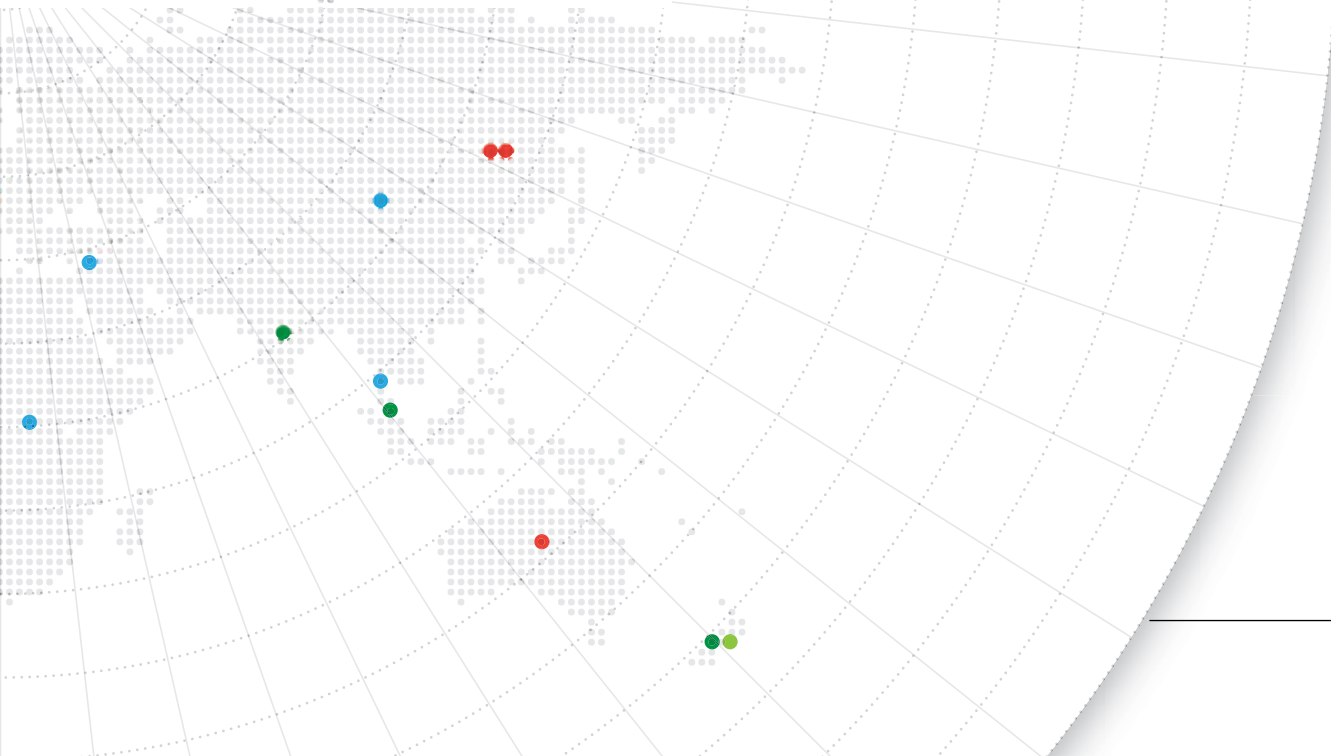
# Subsidiary bodies of the Codex Alimentarius Commission and their host countries



## CODEX ALIMENTARIUS



# COMMISSION



When Codex was linked to the WTO through the SPS Agreement, members recognized the need to ensure more balanced participation, for example through the Codex Trust Fund. If the large majority of Codex member countries do not actively participate in standard setting, the resulting standards may lack universal relevance both in terms of their content and their uptake by countries.

Codex is a global process whose work throughout the year is hosted across five continents making participation a challenge for many countries: besides the annual plenary session of the Commission, Codex has 17 committees, six regional coordinating committees and further ad hoc task forces (see pages 32-33). In addition there are at times up to 100 electronic and physical working groups that work between sessions. Working groups often do not operate in full working languages of Codex and the increasing number of working groups is considered as a major barrier to participation by developing countries.

For this reason, it is not enough merely to be present at the meetings: a country position must be developed and national delegates must be prepared to present their countries' national interests effectively in a very technical international forum. While participation in the Commission as the main decision body is essential, countries should also plan which bodies to attend strategically, evaluating the costs and benefits of taking part.

### ***Building a national position***

Countries get most value from Codex when they prepare at the national level. It is essential for countries to invest in a system that allows them to identify and prioritize food safety and trade concerns. This can be achieved by bringing together government health experts with officials of other government departments, such as agriculture, industry and trade, and representatives of consumers groups, and coordinating consultation among all these stakeholders. What food safety or trade issues is the country truly facing? What are its national priorities? How can participation in Codex contribute to solutions and what is the appropriate starting point?

### ***Codex contact points***

Coordination begins with the work of Codex Contact Points – national officials who should ideally be located in the ministry with primary responsibility for the development and implementation of systems for food regulation, production, processing, distribution and control. This is typically the ministry of health, food or agriculture, or may be a body or agency charged with food inspection or standards or consumer protection.

Normally, all government ministries wish to be involved in decision-making processes that may have impact on their area of responsibility. Similarly, producers and operators in the food industry all have vested interests in the decisions that come out of Codex. Likewise, through consumer associations, consumers also have an interest in Codex processes as the ultimate beneficiaries of food-production, -regulation and -control systems.

Establishing a national Codex committee is another option available to countries, which can serve to provide highly useful support to the work of the Codex Contact Point and ensure that all ministries, non-governmental organizations, consumers and industry have the opportunity to present their views on Codex matters, including aspects related to food control. The primary terms of reference of such a national committee should be to advise the government on the implications of any issues relating to food standards and food control that may arise in relation to the work undertaken by the Codex Alimentarius Commission. Such a consultative group can provide important benefits by assisting the government in ensuring a safe supply of food for consumers while also maximizing opportunities for industrial development and the expansion of international trade.

When a Codex contact point or a national Codex committee is empowered to coordinate stakeholders across government and the private sector, and when needs and priorities in terms of food safety and trade are given high visibility and economic support, then the powerful mechanisms of Codex become fully available to that country.

A country with a coordinated, consolidated position, supported across sectors and backed up



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by data justifying a particular concern, is in a strong position. A first phase of engagement with a Codex committee can be to contribute to the development of standards proposed by others – perhaps by offering technical expertise or language support by co-hosting an electronic working group. Once a country has gained experience with the mechanisms of standard development, it can begin to consider its own needs more closely. When considering developing a discussion paper or project document for new work, the country will need to focus on a range of factors. These include the purpose of the proposed standard, guideline or code of practice; its relevance and timeliness; its alignment with the Codex strategic objectives; the need for technical input; the availability of expert scientific advice; and a realistic time frame in which to complete the work.

Countries that have built effective engagement in Codex have demonstrated the remarkable strength to be harnessed within a coordinated and integrated system. In little over 20 years, some countries have shifted from only attending Codex meetings to co-hosting a session of a committee and even permanently hosting a commodity or general subject committee of particular interest or relevance to the country.

Preliminary steps, such as co-hosting a committee session, leading work in a committee working group, or developing draft standards between sessions, can be an effective way of learning how to operate from within the system as well as addressing a national food safety or trade concern.

### ***Innovation and technology in Codex***

The rapid modernization and implementation of innovative working practices in Codex has greatly facilitated active participation across committees.

## **Codex online web tools**

**T**he Codex Online Commenting System allows members to submit national positions to develop and refine Codex texts in multiple languages in real time.

The Online Platform for Electronic Working Groups provides a transparent and secure discussion forum to facilitate the work of committees between sessions.





In any given year, there can be as many as 100 working groups in Codex operating electronically between sessions on work assigned by a committee. Participation in such groups, as already mentioned, is one recommended route to both understanding Codex processes and procedures and to begin to influence and shape an item of work under way. By eliminating the travel and associated costs of physically attending meetings, Codex has met head on the challenge of encouraging greater involvement in standard-setting work by introducing simple and intuitive online systems both for working groups and for providing comments on draft texts.

By working efficiently and effectively in the preparatory stage at the national level, a coordinated and committed country can engage with and even lead work in Codex with minimum financial burden. Investing in a robust contribution at this initial phase – where a country demonstrates its knowledge and awareness of food standards issues, its priority national concerns, backed up by data and supported across sectors – allows for even greater benefits when a delegation takes part in a physical session of a committee.

### Why apply Codex standards?

This section has so far outlined the importance of a nationally coordinated position to access the international standard-setting environment and argued for the need for standard-setting in a rules-based system. But what are the benefits of applying standards?

#### **Benefits to public health and trade**

The benefits of applying standards should be viewed in terms of both public health and trade. We have seen that it is in a country's interest to take the first critical step by adopting standards through national legislation, but if a country is unable to enforce this legislation, it will not obtain the benefits. Unsafe food is a major social and development challenge and public health cannot be improved if the food reaching the consumer is not safe. This requires effective control measures to be put in place. Applying Codex standards domestically also makes it easier for exporters to gain and maintain market access.



## The danger of unsafe food

In 2015, the WHO published the first ever "Estimates of the global burden of food-borne diseases" – the most comprehensive report to date on the impact of contaminated food on health and well-being. The report showed that nearly one in ten people fall ill every year from eating contaminated food, with 420 000 dying as a result and low-income areas most affected. Children aged under 5 are at particularly high risk, accounting for one third of the deaths even though they make up only 9 percent of the population. The public health burden of food-borne diseases is comparable in magnitude to those caused by tuberculosis, malaria and HIV/AIDS.

Unsafe food is dangerous, as demonstrated, but Codex provides global guidance. A seminal Codex text in response to the threat of food-borne diseases is **The General Principles of Food Hygiene (CAC/RCP 1-1969)**, which follows the food chain from primary production through to final consumption, highlighting the key hygiene controls at each stage. A Codex **code of practice**, it recommends a Hazard Analysis and Critical Control Point (HACCP)-based approach wherever possible to enhance food safety.

The controls described are internationally recognized as essential to ensure the safety and suitability of food for consumption. The General Principles are recommended to Governments, industry (including individual primary producers, manufacturers, processors, food service operators and retailers) and consumers alike.



### Public health and food safety

Food safety must therefore be high on the public health agenda, especially for developing countries, where food safety can be one of the most significant challenges for access to export markets.

Against this backdrop, investing in the capacity to apply standards has clear advantages in terms of public health, trade, market access and agricultural development. The ability of a country to take advantage of global agreements, such as the SPS and TBT Agreements, is linked to its understanding of how standards are set and applied. If a country participates actively in Codex, then it is able to leverage a global community of

scientific expertise. Access to this network of world-class knowledge and experience allows a country to apply the best possible scientifically sound standards, guidelines and codes of practice to protect public health and thereby its entire population.

“

*Unsafe food is a major social and development challenge and public health cannot be improved if the food reaching the consumer is not safe.*

*Food safety must therefore be high on the public health agenda, especially for developing countries, where food safety can be one of the most significant challenges for access to export markets.*

”

## ICN2 Framework for Action

The “Framework for Action” report from the **Second International Conference on Nutrition** (ICN2, Rome 2014) recommends building the necessary national infrastructure so that implementation of international standards can contribute to food safety at the domestic level.

### ICN2 Recommendation 54 (Rome, 2014)

“Actively take part in the work of the Codex Alimentarius Commission on nutrition and food safety, and implement, as appropriate, internationally adopted standards at the national level.”

## A standard for oregano?

In 2017, the Codex Committee on Spices and Culinary Herbs began working to see if it is possible to develop a single draft standard for all products traded globally under the name “oregano”. In the two largest producing regions, the product comes from different botanical families. Some countries believe this distinction should be preserved as the products have different physical and chemical characteristics that consumers should

be aware of. Others feel that excluding one product from a Codex standard could have a negative effect on trade and further implications for the social, environmental and economic strength of the region.

Codex provides the tools and environment for all major producers and exporters, together with stakeholder groups from industry and consumer associations, to work together to reach consensus.



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## Meeting pesticide standards for export

**W**hen producers and traders in developing countries are unable to meet pesticide residue standards, their fruit and vegetable exports are rejected. That happens because few MRLs exist for these crops, in which case very low default MRLs are applied, or because the MRLs may be different from Codex standards or for different trading partners. When this occurs, people along the fresh produce value chain pay the price. There are often major gaps in residue data in

developing countries due to the high costs of generating data, registering new pesticides and getting them approved for use by farmers. This in turn discourages private sector investment. As a result, farmers use older, less environmentally friendly pesticides, which are also less effective for managing pests and diseases and therefore more likely to disrupt trade flows.

### Trade and quality standards

Using international standards as a common benchmark avoids unnecessary costs and removes potential barriers to trade. Should a dispute arise, international standards can play a central role in finding a resolution.

Trade in food and agricultural products offers a way for farmers, processors and traders in developing countries to increase their incomes and boost economic development. But despite the potential, they face many challenges. Limited capacity to meet food safety requirements is often one of the major obstacles.<sup>6</sup>

### Advantages for the domestic market

The more institutions become accustomed to operating in an international context, the greater the benefits at the national level. Each country will benefit from defining and evaluating their most important local public health issues and assessing the capacities in place to address those challenges. Similarly, on the trade side, the ability to comply with food regulations in export markets requires substantive knowledge of technical requirements and the capacity to implement them.

<sup>6</sup> The Standards and Trade Development Facility (STDF) aims to, among others, address this obstacle, as explained on page 46.

## Investing in capacity development

Countries must have the capacity to implement Codex standards if they wish to improve consumer protection and enhance market access for exports. It is public and private sector expertise in effectively managing food safety along the food chain, together with the experience of the relevant authorities in effectively regulating food safety and quality, that enables a country to shape the Codex agenda and influence Codex recommendations. It is also these core competencies in food control that enable countries to engage constructively with trading partners, through the SPS and TBT mechanisms, to respond to issues of food regulation and standards affecting trade. Adequate strategic investment in developing national capacities for food control is a fundamental necessity. When a country addresses these needs, its participation in the two spheres of the system for food standards and trade as described above will become active, its contributions relevant and results attainable.

It should be recognized that there is no shortcut to having an effective food-control system. In any one country, responsibilities relating to food control are often divided among many agencies across multiple ministries, which contributes significantly to the complexity of national food-control systems. It takes careful planning and consistent commitment to achieve continuous improvement. Planning for capacity development

must not only involve cross-sectoral consultation to identify and prioritize weaknesses to be addressed, but also consider the conditions necessary to ensure that investments lead to improvements in the system that can be sustained.

What is required at the national level to implement food control programmes, and what are the capacities that need to be developed?

#### **Key dimensions of capacity development**

Food-control systems are complex. There are a number of functions and capacities involved. For the purposes of this publication, we can consider food safety capacity development under the following three broad areas: 1) legislative, institutional and policy frameworks; 2) the application of a food safety risk analysis approach and other evidence-based approaches to support food control decision making at various levels; and 3) technical capacities for programme implementation and monitoring.

These dimensions must be carefully synchronized and work together as interconnecting cogs in a unified machine in order to drive effective capacity development.

#### **Enabling policies and food safety law**

An institutional framework in a country must be clear, provide unambiguous guidance and set out legislative requirements. These requirements will typically be that food must be safe and suitable; food must not be adulterated, damaged, deteriorated or perished; and food must not be represented in a way that is false, misleading or deceptive. The legislation enacted will require food producers, processors and manufacturers to ensure that the food they supply is safe and appropriately represented to consumers.

Domestic food regulation, in the form of rules for setting standards, should ensure that standards are based on risk analysis using the best, most up-to-date and robust scientific advice. Legislation should also ensure consistency between domestic and international standards in order to facilitate trade.

At the policy level, a country will define its priorities and design laws that are both health protective and, at the same time, trade



*Adequate strategic investment in developing national capacities for food control is a fundamental necessity. When a country addresses these needs, its participation in the two spheres of the system for food standards and trade will become active, its contributions relevant and results attainable.*



facilitating. Codex standards and WTO agreements provide a basic framework to help members achieve these dual objectives through their national legislation.

It is food safety law that will ultimately regulate the behaviour of national actors in the food system. Coordination and effective communication among different institutions – including in the areas of public health, trade and agriculture, food safety, and the private sector and civil society – is required to ensure that the needs of all are considered in developing and reviewing food legislation.

#### **Good regulatory practice**

Sound national legislation in food and agriculture reflects international obligations while respecting the national context. Governments have recognized the benefits of applying GRPs to promote high-quality and cost-effective regulations that address national objectives and needs while also taking into account international obligations. Some examples of GRPs include: a

## FAO Development Law Service

**F**AO has a unique reservoir of knowledge and information to assist countries in drafting or amending legislation relevant to food safety and quality. This invaluable resource and collective wisdom has been accumulated over more than 40 years of engagement with different legal traditions around the world. With a team of lawyers from different backgrounds, the FAO Development Law Service (LEGN) is the focal point for promoting the design of workable and appropriate national regulatory frameworks in all areas under FAO's mandate. LEGN provides assistance through legal and institutional assessments; support to a participatory legal reform processes; preparation of draft laws; and capacity development activities for lawyers and regulators. Such capacity development helps countries to improve their abilities to autonomously formulate appropriate legislation.

Assistance is tailored to each country's situation, with attention to the national legal framework and tradition, as well as to the implementation of applicable international agreements

and international reference standards. To date, FAO has assisted a broad range of countries and regional organizations across five continents in revising their legislation.

FAO also has the world's largest legislative database (FAOLEX) on food and agriculture, including natural resources management (fisheries, land, water and forestry), and provides legal information by publishing legislative studies and legal papers online, including GRPs for drafting or revising national legal frameworks. These publications cover different SPS-related topics, not only food safety, but also animal and plant health and biosafety.

FAOLEX has been running since 1995. It is continuously updated, with an average of 8 000 new entries per year. It currently contains legal and policy documents drawn from more than 200 countries, territories and regional economic integration organizations and originating in over 40 languages.

whole-of-government approach to developing regulations; the assessment of alternative measures (e.g. regulatory impact assessment); risk assessment; transparency and public consultation; the use of international standards; and the review and monitoring of the performance of regulations on a lifecycle basis. The regulatory drafting, analysis and review processes take a multidisciplinary approach and involve all categories of stakeholders.

WTO members have been discussing GRP in the TBT Committee for the past 20 years. Since 2012, members have also discussed GRP guidelines in the form of an illustrative list of voluntary mechanisms and principles of GRP to support members in implementing the TBT Agreement across the regulatory lifecycle. In the area of food safety legislation, FAO works to assist countries in building legislative frameworks aligned to international reference standards and incorporating the SPS principles of risk-based technical justification, necessity, proportionality and non-discrimination. More recently, the Standards and Trade Development Facility (STDF) began discussions on GRP in the SPS area.

Using GRP principles and mechanisms makes for more open, effective and responsive regulatory systems, and reduces the potential for trade problems. One example of a good practice is that food legislation clarify the roles and responsibilities of the different stakeholders, ensure an appropriate chain of command for enforcement and emergency action, and facilitate coordination among the different stages of the food production chain. Sound and workable law in this area acts to improve national public health and to foster international trade in food and agricultural products.

Food legislation should not be static. A country must be able to adapt its laws and regulations at various levels as and when the need may arise – for example, in response to a particular crisis, emerging issues, or new technologies, such as the genetic modification of crops, the introduction of novel or special-purpose foods; or in the course of implementing a particular international or regional trade agreement.

### ***Risk-based decision making***

There is an array of food-borne hazards, both familiar and new, that pose risks to health and

present obstacles to international trade in food. These risks must be assessed and managed to meet growing and increasingly complex sets of national objectives. Risk analysis, a systematic, disciplined approach for making food safety decisions, includes three major components: risk assessment, risk management and risk communication (see Figure 6). It is a powerful tool for carrying out science-based analysis and reaching sound, transparent solutions to food safety problems. Using risk analysis can promote continuous improvements in public health and provide a basis for expanding international trade (FAO/WHO 2006).

Risk analysis has very practical applications. It allows authorities to recognize, identify and make transparent decisions on where to invest resources. Risk analysis can be applied in developing new food standards, evaluating proposed changes to existing food standards, performing monitoring and surveillance activities, assessing food technology practices and considering emerging food safety issues.

It is difficult for trading partners to engage in a discussion on measures if they are unable to speak the language of risk analysis. Indeed, the SPS

Agreement requires that all SPS measures be based on a risk assessment. Crucial capacities, such as being able to justify measures and understand how to question others, depend on how fluent a country is in risk analysis. A country is empowered, can network purposefully and hold constructive dialogue regarding the legitimacy of a measure and its purpose only when it has developed its risk analysis capacity.

### ***What are the benefits of food safety risk analysis?***

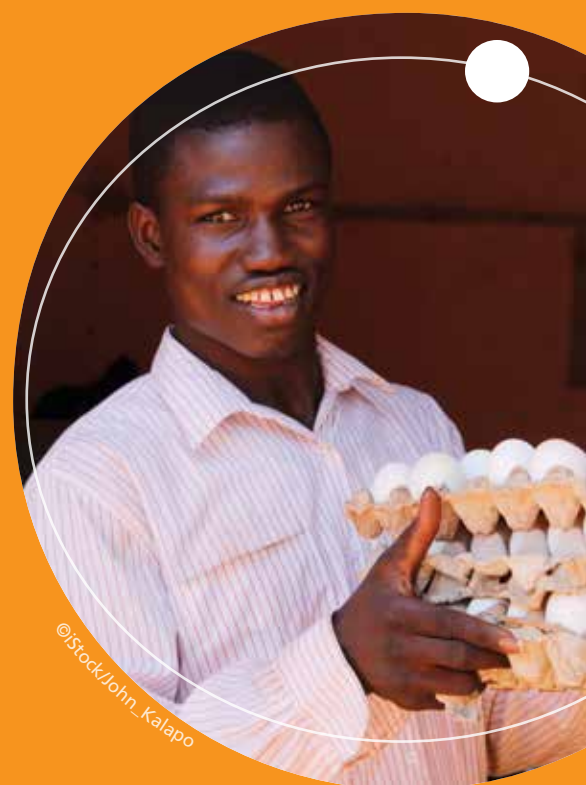
A food-safety risk analysis approach helps a country to decide what is important and what is not when it comes to protecting public health, and to determine where to invest resources to gain the greatest benefit. While there may be a perception on the part of some developing countries that risk analysis is an overly complex and sophisticated tool designed by and for developed countries, the ability to operate on a technical risk analysis level takes on even greater significance when a country has limited resources to invest. Risk analysis can be used to support strong programmatic and policy decision making in the local context, in the area of standard setting or with regard to which surveillance programmes to prioritize. A capacity development initiative that strengthens risk-

## ***Mali: Implementing risk analysis***

**M**ali is an example of a country that sought to improve its approach to food-safety decision making by adopting a risk analysis framework. Already having access to relevant food analysis and consumption data, the food-safety authorities sought advice about how to utilize the data to guide strategic choices and day-to-day food control activities.

In 2014, Mali and FAO launched a two-year capacity development programme. A broad range of stakeholders – from competent authorities, starting with the

national food-safety authority laboratories, private-sector actors, including primary producers, consumers' representatives, to research institutions, academia, and civil society representatives – was engaged in a series of training events on how to use their national data to prioritize risks and optimize the management of those risks. Mali is now able to build monitoring and control programmes for domestic and imported foods based on a practical understanding of risk analysis.

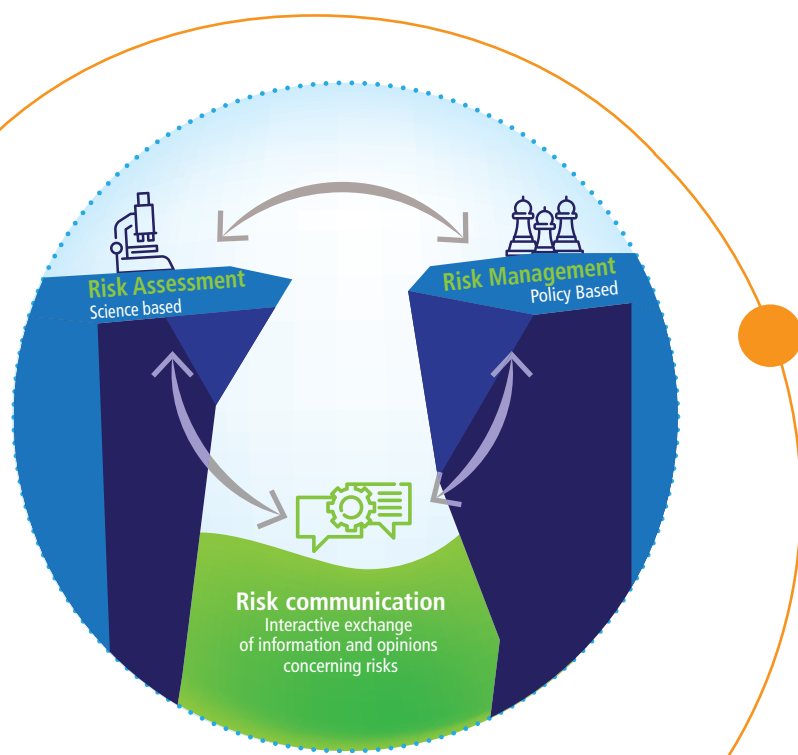


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Source: FAO



**Figure 6: Risk analysis**



analysis competency will enable participants to speak more effectively with trading partners. It is the language of technical negotiation without which delegates at Codex meetings, especially at the technical-committee level, would be unable to question, influence, justify or challenge the work being undertaken. Effective communication with public and other stakeholders is critical to engender confidence in the system: this is an essential element to facilitate trade.

In setting goals for capacity development, it is important to get the process under way, however modestly, based on the resources available. There are complex aspects but also simple initial steps that can be taken. It will take time for risk-analysis processes to reach maturity, but it is an investment worth making to obtain important results.

## Ghana: a risk-based approach to tackle a chemical hazard in smoked fish

The people of Ghana eat a lot of smoked fish preserved using a traditional smoking process. FAO has collaborated with Ghana over many years to support this sector, most recently to develop a smoking technique that can control the contamination of smoked fish with polycyclic aromatic hydrocarbons (PAHs) – compounds associated with incomplete combustion that research has shown to be carcinogenic and thus a serious public health concern.

Ghana has national standards and codes of practice covering smoked fish, as well as programmes for the regulatory control of these products. However, they did not reflect modern risk-based approaches to food safety and did not take into account the risks posed by PAHs.

In 2016, using newly available data from a national study that

analysed contamination as well as levels of consumption of smoked fish, FAO worked with the Ghana Food and Drugs Authority to enable their staff to understand how to use their own data to assess and characterize risks.

This exercise demonstrated that a different smoking technique developed by FAO (the “FAO-Thiaroye de transformation du poisson” or “FTT processing technique”) led to a hundredfold reduction in contamination levels, effectively resulting in a “no risk” end-product through the application of good practices.

Ghanaian officials are now able to apply specialized risk assessment processes and appreciate the need to invest in codes of good practice as part of their food safety management approach.

Source: FAO

## Capacity building with the private sector: Example of aquaculture in Bangladesh

Shrimp and prawn aquaculture is an important source of income for small-scale farmers in Asia. The Asian aquaculture sector produces 75 percent of the shrimp consumed worldwide. In Bangladesh, the shrimp and prawn sector is the second largest export industry, with 90 percent of the exports sold to the EU, and over 80 percent of these produced by small-scale aquaculture farmers.

Following rejections by the EU in 2008 and 2010 of shrimp and prawn from Bangladesh due to the presence of residues of antimicrobials that are banned for use in livestock, the Government recognized the danger of losing access to this important market and decided to stop all exports to the EU. FAO was asked for support and partnered with Department of Fisheries in close collaboration with Worldfish and the Bangladesh Shrimp and Fish Foundation to implement a STDF-funded project with an emphasis on disease control, with the aim of avoiding further misuse of veterinary drugs.

Building on its experience in the aquaculture sector, FAO designed a three-year programme working with 1 000 small-scale shrimp and prawn farmers. As a first step, the farmers were encouraged to organize into clusters, which enabled them to start their own harvest-collecting depot, thereby bypassing middlemen and increasing their bargaining power.

Aiming for sustainability, the long-term training approach ensured that ten full-time assistants supported the clusters over a period of two years to help the farmers improve their production practices and systems. Changes included using only tested, disease-free postlarvae and no longer using antimicrobials or other therapeutic agents.

The results were so encouraging that the Government of Bangladesh decided to expand the approach for application throughout the shrimp and prawn aquaculture sector. EU border rejections of shrimp and prawn products for unauthorized substances have been dramatically reduced.

### Technical capacities for enforcement

FAO works with countries to upgrade their capacity to establish and implement appropriate food safety and quality control systems. This section has already noted the importance of a modern and effective legal and regulatory base that addresses safety issues throughout the food chain, including food production, handling, storage, processing and distribution. The emphasis in modern food control is on prevention, with food businesses bearing the responsibility to ensure that the food they produce and market is safe and meets required quality criteria.

However, without an enforcement mechanism in place, the legal and regulatory system is redundant. Authorities must have the technical capacity required to oversee the enforcement of requirements, monitor the food-safety situation to verify that food-control programmes are genuinely achieving the target outcomes and to facilitate interactive communication to ensure all stakeholders are fully engaged and informed.

Capacities required to support enforcement include laboratories with diagnostic capabilities, inspection services and communications and information systems. Such capacities must not only be put in place but managed in a way that enables the sustainable provision of relevant services. Authorities must be able to implement good manufacturing practice HACCP programmes, and to demonstrate compliance with relevant standards and regulations.

As noted above, food control is based on effective food safety management and quality control by the food industry. Good practices for food-safety management are defined in the relevant Codex codes of hygienic practice. Governments have an important role to play in supporting the adaptation of these codes to the local context and in ensuring that opportunities for effective training are available for all food handlers and food business operators along the food value chain.



Source: FAO

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FAO has implemented many training courses over the years aimed at developing groups of well-qualified food-hygiene trainers, in collaboration with relevant academic and private sector institutions. FAO also provides and mobilizes technical resources to support such expertise development.

Traceability is an important component of food-safety management strategy along value chains. However, in many developing countries, the fragmentation of supply chains creates significant challenges to achieving traceability.

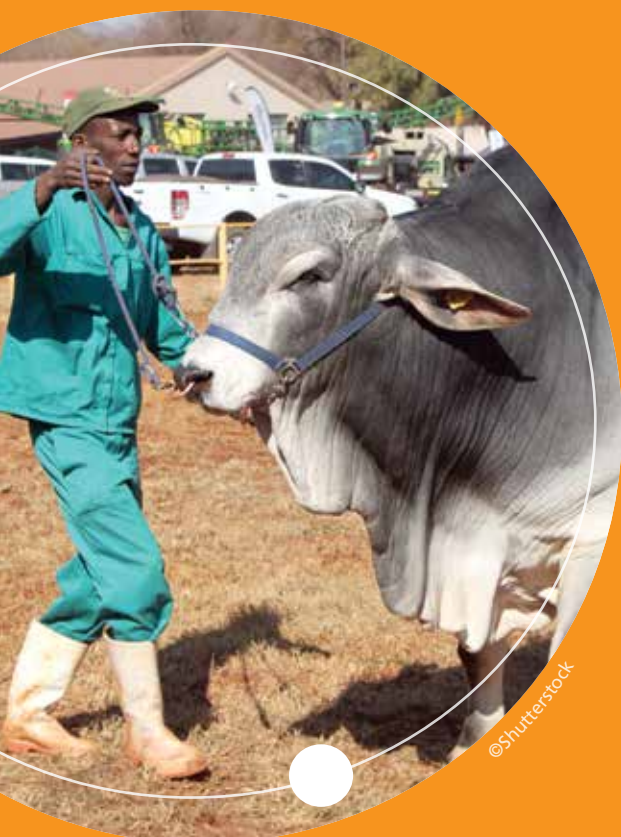
Food inspection and certification systems are on the frontline of enforcement programmes. By leveraging its member country networks, FAO has been able to make extensive knowledge and experience in food-inspection best practices available to those countries seeking to strengthen their systems. FAO has made manuals available to support enhanced risk-based inspection of food imports, fishery products and meat products. FAO

has also provided a number of online tools to support the design and implementation of sampling programmes. Risk-based food inspection includes facilities inspection, verification of compliance with established good practices, and end-product sampling. Diagnostic capacity is recognized as a key element of compliance infrastructure.

However, laboratory capacity development must put adequate focus on the sustainability of these expensive assets. This includes ensuring and enabling procedures and policies in areas such as cost recovery and procurement, as demonstrated in the Chile case study (see page 46).

### ***Optimizing the impact of investment in capacity development***

The evolving nature of capacity development for food standards means it has no definitive end-point. What is certain is that it requires a starting point, robust planning and consistent investment.



## **Swaziland Livestock Information and Traceability System**

FAO applies its extensive knowledge of food chain and food systems to develop integrated and sustainable solutions to food safety issues along the food chain. In recognition of this expertise, the Commission on Genetic Resources for Food and Agriculture requested FAO to develop Guidelines on Animal Identification and Traceability. These Guidelines serve many purposes, including supporting the traceability of foods of animal origin, and were validated by a series of country pilot projects.

Several countries have turned to FAO for support in developing their capacities to implement

multipurpose animal identification and traceability systems. One such project, implemented through FAO's Technical Cooperation Programme, established the Swaziland Livestock Identification and Traceability System (SLITS), which has improved traceability and disease control, enabled accurate residency determination and swift quarantining of disease outbreak areas, and facilitated the determination of catchment areas for export.

In addition, SLITS has made certification with the EU and other international and regional markets possible.

Source: FAO



## Building Botswana's technical capacities to ensure food safety and safeguard trade

As Botswana's largest non-mineral export commodity, beef is important for the livelihood of the country's many small-scale farmers. While beef producers rely on veterinary drugs as a crucial tool for controlling disease, the potential implications for food safety and trade must be kept in check by national controls on their residual levels in food. Any potential trade restrictions have significant implications, as seen in 2011, when beef exports to the EU were temporarily suspended due to concerns about the effectiveness of controls, leading to lost revenue estimated at €48 million.

In response, FAO and the International Atomic Energy Agency (IAEA) implemented targeted cooperation to assist Botswana improve its system of food-safety controls, including by strengthening the technical and analytical capacities of the Botswana National Veterinary Laboratory (BNVL). Thanks to technology transfer and hands-on training, in collaboration

with the FAO/IAEA laboratory in Seibersdorf, Austria, the BNVL is now better able to control mycotoxins and the residues of veterinary drugs and pesticides by using isotopic and nuclear-related techniques along with a range of complementary tools: staff benefited from training in food safety testing and the procurement of lab materials and equipment; and the BNVL was accredited in over 10 modern analytical methods allowing it to demonstrate the absence of disease and contamination in food.

Not only was confidence in exports restored, but Botswana's strengthened institutional capacities have reduced the country's need to outsource analytical testing abroad – previously a costly and time-consuming procedure. As a result, Botswana has today not only bolstered its beef exports to the EU and other lucrative markets, but empowered its people by reaping the benefits of trade in other sectors of the economy.

There are a number of donors and technical agencies that support food safety capacity development at the international level. In 2004, FAO and the WTO joined forces with the World Bank, WHO and OIE to establish the Standards and Trade Development Facility (STDF) with the primary objectives of advocating increased investment in SPS-related capacity development and facilitating coordination among relevant donors and agencies. Regular meetings of the STDF Working Group provide a platform for discussing best practices in capacity development and promoting opportunities for upstream collaboration and coordination in the design and implementation of SPS-related interventions.

## Standards and Trade Development Facility (STDF)

The STDF's global network brings together leading trade, health and agriculture experts worldwide to address persistent and emerging SPS challenges, including those related to food safety. Examples of recent topics of focus include electronic SPS certification, trade facilitation in an SPS context, prioritization of SPS investments, and public-private partnerships to support SPS capacity building.

The STDF also provides limited funding to both develop and deliver innovative SPS-related projects. These grants help public and private sector stakeholders in developing countries

comply with SPS requirements to gain market access. Oftentimes, these grants function as catalysts to engage new partners and funding sources to support longer-term impact. To date, the STDF has funded over 60 projects and project preparation grants around the globe related to food safety and trade.

Since inception, in 2004, the STDF has been supported by 17 donors who have contributed over USD 52 million to the trust fund. The STDF continues to be a successful example of a partnership where FAO and the WTO work jointly to identify best practice in SPS capacity development.



Source: FAO

FAO also participates in the more recently established Global Food Safety Partnership, which focuses on coordination and advocacy on food-safety capacity development, with an emphasis on public-private partnerships. Partnership and coordination are essential to obtain the best results from capacity-development investments.

At the national level, too, coordination is critical in the planning and implementation of food safety capacity development. Since food-safety and quality activities commonly involve many agencies across several ministries, counterproductive competition for resources can arise. Instead, there needs to be cooperation and coordination in identifying priorities for capacity development and mobilizing and managing investments to achieve them.

## Chile: Building trust among trading partners by investing in laboratory capacity

**F**ood exports make a significant contribution to the Chilean economy, totalling more than USD 10 billion in 2015. However, before 2011, Chile encountered challenges in satisfying all relevant food safety and -quality import requirements. One major limitation was in the area of food-contamination and drug-residue testing and monitoring, where the EU, a leading trading partner, recommended multiple improvements, including in analytical capabilities. In response, FAO/IAEA implemented a technical-cooperation programme to enhance the capacities of the Chilean Agriculture and Livestock Service (SAG) laboratory system.

Following the improvements made to the system, the core SAG laboratory oversees and periodically audits a network of six local private laboratories, provides technical guidance, schedules mandatory inter-laboratory testing and re-analyses 7-10 percent of samples – all with ongoing mentoring and support from FAO/IAEA. The results have

enhanced trust among trading partners, including the EU, which signalled its confidence in the quality of the lab results and commended the system's effectiveness.

FAO/IAEA collaboration – including through technology transfer and technical advice – was key to this successful change. FAO/IAEA-supported research into analytical techniques for food safety guided the direction of the lab capacity building, and a number of the Chilean labs today participate in the international network conducting research and exchanging findings. With ongoing FAO/IAEA support, Chile now contributes to an interregional food safety project involving 28 countries – building networks and equipping developing countries with the platform and technical capacities they need to contribute effectively to international food safety standards and guidelines, including under the auspices of the Codex Alimentarius.

Source: FAO

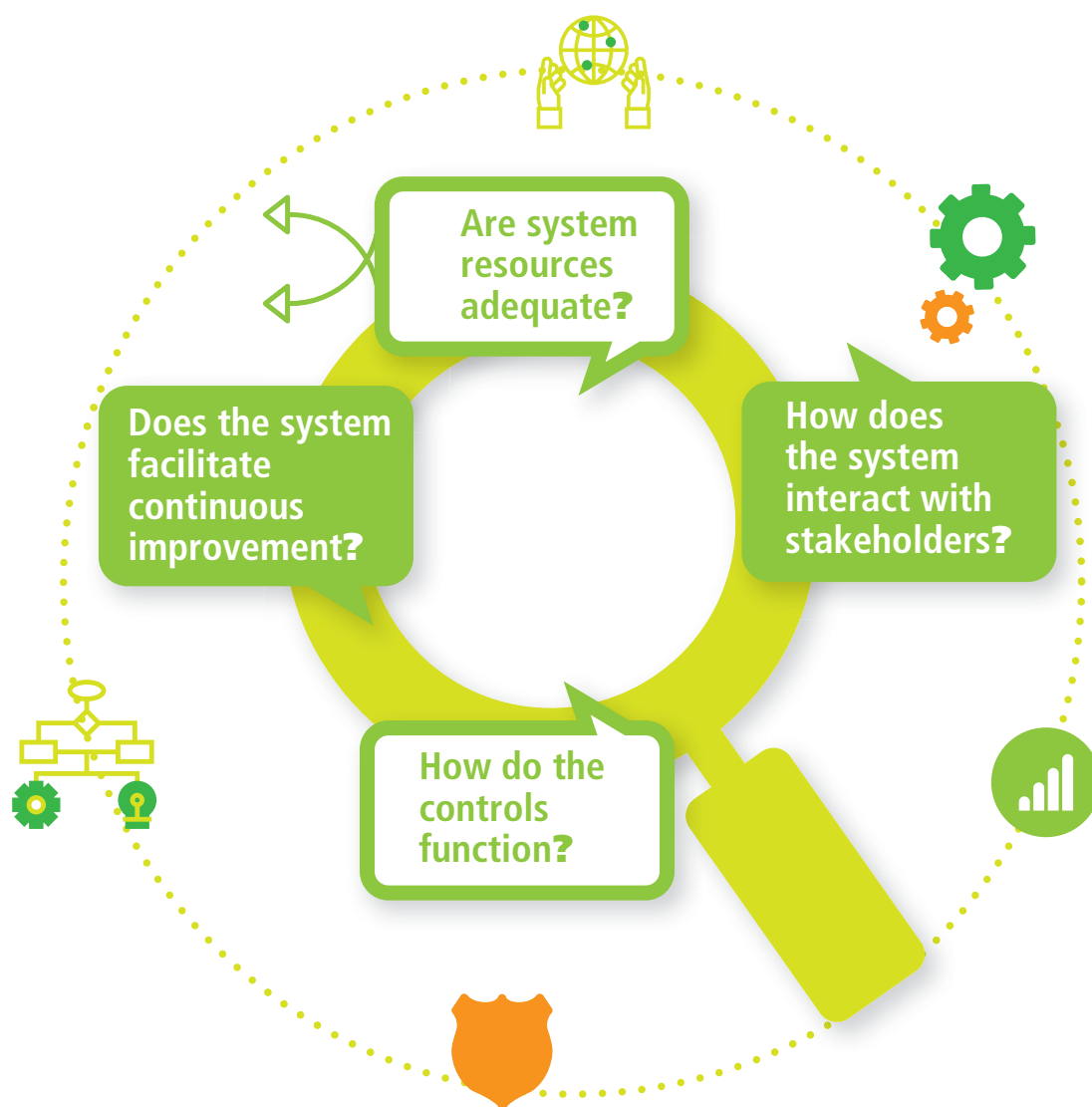


### FAO/WHO Food Control Assessment Tool

FAO developed the Food Control Assessment Tool to support plans for developing national capacities for food control that can be monitored (see Figure 7). The assessment is based on relevant Codex provisions and internationally recognized good practices, and structured around four dimensions of the food-control system: inputs and resources; control functions; interactions with stakeholders; and continuous improvement. The systematic and evidence-based assessment

process improves the reliability of the assessments on which capacity-development interventions are based. Using the Assessment Tool also facilitates improved accountability in the area of capacity development, accountability within government services, between technical-assistance providers and beneficiary governments, and between donors and implementers. It also facilitates greater coherency in capacity development even when several different players are involved, by enabling complementarity between different interventions.

**Figure 7: FAO/WHO Food Control Assessment Tool**





# Part 3

A DYNAMIC  
SYSTEM



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# KEY MESSAGES

- As new types of challenges inevitably arise, better preparation and increasing engagement will help members pick up the signals and find solutions that achieve food safety and nutrition objectives while facilitating trade.
- Countries must remain alert, watchful and prepared in the ongoing effort to keep food safe and nutritious as scientific knowledge, products, technology and trade continue to evolve, becoming ever-more dynamic and diverse.
- Strong institutions will be required, both nationally and internationally, to enjoy the benefits and manage the risks the future holds.

Methods of production and processing, as well as the paths that food travels along from farm to fork, are continuously evolving. The standards world must be ready to adjust to ensure that food trade can continue to flow smoothly. Stakeholders will need to be prepared, able to pick up the signals that change is taking place and to steer their national frameworks accordingly.

As new and challenging issues in food standards and trade inevitably emerge, there is no room to remain complacent. The mechanisms and processes available to them through Codex, FAO and the WTO, are important tools members can use to meet these new challenges.



*Countries will need to stay alert and take a proactive approach, regularly updating their capacities and staying informed to identify new challenges.*



Trade and production patterns evolve. In the manufacturing industry, for example, it is no longer the norm to design, develop, build and then sell a vehicle or a piece of high-tech equipment in the same place: there is an evolving global supply chain whereby design, manufacture and assembly often occur on several different continents. Similarly, food products are often grown in one country, processed in another and consumed in a third. Information technology and electronic commerce are also changing the way trade takes place, creating new opportunities for small and medium-sized enterprises to enter value chains.

Science and technology continuously advance. It is now possible to detect minute quantities of radiation and ever-smaller residues of pesticides in fruits and vegetables. Against this backdrop of change, how can national authorities ensure that risk analysis, risk management and risk communication remain fit for purpose? How will regulators face the challenges and take advantage of the benefits of advances in technology? How will they face climate change or manage transboundary diseases? In this dynamic situation, the role of regulators in ensuring food safety, quality, authenticity and information is as vital as ever.

Countries will need to stay alert and take a proactive approach, regularly updating their capacities and staying informed to identify new challenges. Such an approach will better enable them to shape, and not simply follow, international discussions in Codex and the WTO, and make the right decisions to respond to changing circumstances.

The role of Codex will remain critical as it is called upon to continuously update its “rule book” as science evolves and regulators turn to international standardizing bodies for guidance. Members’ engagement is necessary to ensure that Codex can continue to play this role, making sure that the rules remain relevant and up to date. In this changing context, easing trade frictions and disseminating guidance and best practice through the WTO SPS and TBT Committees is equally vital.

This section will present selected drivers of change at the intersection of food standards and trade. Examples regarding socio-economic factors, public health, new technology, and the environment demonstrate the need for standards to evolve in order to keep pace with the changing food system. Strong national preparation and engagement by members in the global system of food standards and trade is the best way to meet the challenges and opportunities that arise.

#### ***Drivers of change***

The advance of science and technology is one of the most important drivers of change at the nexus of food standards and trade. New technologies continue to be developed for application to production, processing and handling of food and



can present important advantages. Food safety governance of these novel technologies and processes must keep pace with their development. There continues to be rapid advancement in diagnostic tools. With the use of ever more sensitive and, often, sophisticated diagnostic tools, countries will also need to ensure that decisions on acceptability are based on “risk” and not simply presence of trace amounts of contaminants that might not be of public health significance. Adequate access to suitable diagnostic tools by developing countries is also of concern.

Whole genome sequencing (WGS) is an analytical technique that allows the determination of the complete DNA sequence of an organism’s genome. In terms of food safety, WGS has the potential to change the way we detect, monitor, assess, investigate and manage microbiological hazards. This includes the detection and surveillance of, and response to, food-borne diseases and outbreaks. WGS allows for the identification and characterization of micro-organisms with an unprecedented level of sensitivity and specificity. The technology provides significant cross-sector potential, enabling uniform typing systems across the environmental, animal, food and human sectors, and offering the potential to trace food-borne contamination back to its microbial sources.

The accuracy, speed and low cost of WGS in identifying and tracing food-borne micro-organisms are likely to trigger changes in food-control systems, including with regard to food imports and exports. WGS continues to evolve quickly as a technique, but as yet only limited standards are available. In the future, food safety standards may need to take into account the application of WGS. The technique may also affect aspects of the international movement of goods, since the identification of a specific consignment as the source of an outbreak can be expected to become much faster and more precise. As a possible consequence, countries of origin or transit may face additional demands to verify that any underlying source of contamination has been contained. Ideally, this will allow necessary trade restrictions to focus more precisely on the source of the contaminated products, thereby reducing unnecessary barriers for unaffected products.

Technology also has implications for food quality, as areas of focus shift from visible characteristics to invisible ones. If a genetically modified apple does not brown and show decay, is it still an apple? Is it still safe? Does its nutritional content change? When we can no longer rely on traditional visual or analytical methods, it becomes more difficult to differentiate quality and enforce food legislation. Countries need to effectively prepare at the national level, and engage internationally, to manage the challenges and reap the benefits of scientific and technological progress.

New technologies can provide different perspectives on perennial challenges. Increasing opportunities for accidental admixing of GM with non-GM commodities and the ready availability of detection techniques for trace levels of GM may be a driver for regulators to revise their approaches to the management of low-level presence of GM in traded food consignments. In this respect, engagement and cooperation at the international level is important to develop a common understanding.

Digitalization and information technology are related drivers of change that will continue to have a profound impact on trade and food standards. One example is the uptake of electronic SPS certificates – certificates produced and transmitted electronically rather than as paper documents – which are increasingly important tools for improved control and efficiency in agricultural trade. Electronic SPS certificates reduce the costs associated with printing and shipping paper documents as well as of sorting, distributing, retrieving and archiving them. In addition, they enable SPS authorities to store and access data electronically, which can be used, for example, to implement automated risk management methods for inspections.

Key benefits of electronic SPS certificates include enhanced authenticity and integrity and the reduction of opportunities for fraud, which result in improved food security and safety. The opportunities for faster and even pre-arrival clearance are especially critical for agricultural and food products. Developing countries may encounter challenges in seeking to adopt standardized electronic SPS certificates, as they may face a digital divide or possess limited resources to invest in the necessary infrastructure requirements.

## Low-level presence of genetically modified organisms

An increasing number of countries is engaged in the production of genetically modified (GM) crops, which are expanding in variety and in turn proliferating the opportunities for the inadvertent mixing of GM with non-GM commodities. At the same time, technological advances are providing more powerful tools for detecting the presence of GM materials. This phenomenon is of particular significance to the grain trade, which encounters major problems when even trace levels of GM material that is not approved by the importing country are found within a consignment. Such detection can result in the detention and refusal of the consignment. Trace amounts of GM material, that has been approved in accordance with Codex Guidelines in at least one country, are referred to as low-level presence (LLP). Many countries and trade associations are highly concerned with the market disruption and the economic consequences of detentions and rejections due to LLP.

The underlying issue is that trading partners may have different rules regarding the acceptability of a particular GM event. In 2003, the Codex Alimentarius Commission adopted the Guideline for the Conduct of Food Safety Assessment of Foods Derived from Recombinant-DNA Plants, which countries are called upon to apply in making decisions on the safety of

particular GM events. Frequently, not all countries take the same decisions on a given GM event. Different rules apply to the acceptability of the same GM event in different countries, which can lead to inefficiency, unpredictability and ultimately costly disruptions to trade.

Increased opportunities for the admixing of GM with non-GM commodities along with the increased accessibility of tools for detecting GM events could lead to more frequent instances of LLP. Countries need to be more aware of the issue and better prepared to deal efficiently with the management of LLP situations. Annex 3 of the Codex Guidelines contains provisions in this regard. The principal approach of the Annex is a combination of a simplified food safety assessment for cases of LLP and mechanisms for sharing data and information to enable rapid risk-based decision making. FAO maintains a database to facilitate such information sharing, but greater commitment from more countries to share such information is needed. Greater investment is supporting countries to develop the capacities to understand the safety assessments, thereby empowering them to make sound and transparent decisions on LLP risk management at the national level and to engage more effectively in relevant international discussions.

Nevertheless, in light of benefits, paperless trade in the agriculture sector is likely to grow in importance in the near future and effective national preparation, and engagement at the international level, is imperative to take advantage of such systems.

Increased trade, especially in value-added commodities together with fluctuations in production create opportunities for food fraud, another longstanding challenge for regulators.

Efforts to fight food fraud may be reshaped by scientific and technological progress. Food fraud undermines trust in food, regulators and markets. Trust in the food supply chain is one of the most important paradigms that we all, as consumers, rely on for making informed food choices. Consumers must be able to trust that labels correctly reflect the composition of the food: they are the primary source of information on nutritional value and the major tool available to

match preferences against food composition. New techniques to safeguard food authenticity, together with information sharing, can help regulators combat food fraud and resulting loss of confidence in the food chain.

Changing food-consumption patterns and lifestyle choices are also drivers of change in an interconnected world. Consumers are increasingly demanding information about their food to make informed consumption choices, while diets and preferences are changing. At the same time, there is global awareness of the need to address obesity and other diet-related non-communicable diseases (NCDs) through comprehensive solutions encompassing a range of policy measures. Governments need to be prepared to address nutrition concerns within their national food policy contexts, and engage internationally. As the example on nutrition labelling and trade shows (see page 55), engagement by members at the international

## Food fraud

**F**ood fraud is the deliberate substitution, addition, adulteration or misrepresentation of food or food ingredients for economic gain. Food fraud can be a threat to food safety or negatively impact the nutrition status of already vulnerable populations. At the core is a violation of the authenticity of food and the assumption that food labels convey truthful and accurate information.

When food fraud occurs, all downstream stakeholders in the supply chain immediately lose all trust in the authenticity of the food and trade can be frozen almost instantly. To rebuild trust and, in turn, resume trade, the authenticity of products in the market must be verified and demonstrated, which can be a long and expensive process. Food fraud always causes immense financial losses, as most consumers simply switch immediately to other products or categories and often never return.

Strong standards for authenticity that are regularly enforced throughout the entire value chain help prevent the occurrence of such events. In addition, a number of tools to assess the vulnerability of supply chains and organizations to food fraud have been developed by various organizations. However, discussions at the international level on the suitability of these tools are still under way, and it remains to be fully determined which mechanisms to prevent fraud and mitigate its impact will be most effective for global trade and value chains.

level can provide impetus to develop further guidance to make the system work better.

Many other drivers of change can be expected to present challenges for the global system of food standards and trade. The commitment of members to national preparation, and international engagement through Codex and the WTO SPS and TBT Committees, are crucial for navigating these challenges.

A growing and ever more interconnected global population requires greater international cooperation between members to address health risks. Food production will have to keep pace with a rising population. Increasing incomes lead to greater demand for animal products. On a planet that is home to more people and more animals, when a disease breaks out it spreads faster than in the past – faster still thanks to our greater interconnectedness, including through trade. While some diseases affect only animals or only humans, some animal diseases also pose a threat to humans, and new such diseases are emerging all the time. This poses a challenge to disease surveillance, and outbreaks can have a devastating effect on local production and the ability to trade.

Food safety – and thereby human health and economic well-being – is inextricably linked to the environment and organisms from which food is produced. Like the causes of transboundary animal diseases, food-borne pathogens in the food chain are influenced by multifaceted interactions between the environment, micro-organisms and reservoir hosts. Additional factors, such as climate change, water quality and availability, behavioural practices and trade policy decisions, can either drive or mitigate the emergence and global dissemination of food-borne hazards.

This interconnected reality means that proactive food safety leadership must be based on holistic analysis of the food system and multi-sectoral and international collaboration. Growing interconnectedness creates new incentives and opportunities for regulators to work together to identify emerging risks and to proactively respond to these risks.

FAO, OIE and WHO have endorsed the “One Health” approach – a collective and collaborative framework for addressing human, animal and



environmental health. One Health promotes information exchange among the health, food safety, agriculture, veterinary and environment sectors to support prevention, early warning and mitigation of events that threaten “One Health” and carry implications for cross-border trade. Advancing the operationalization of the One Health approach – including by building networks incorporating policy, economic and social science inputs – could offer a means to attain optimal results in maintaining public health and economic stability. Looming risks – such as the potential failure to comprehensively address the problem of antimicrobial resistance, which is predicted to result in major economic losses and 10 million deaths annually by 2050 – make the promise of such an integrated approach all the more crucial.

A One Health approach allows regulators to pick up signals early. It facilitates holistic thinking when

proposing solutions so that when fixing one problem an even bigger problem is not created somewhere else.

The purpose of One Health is not specifically to address food-safety challenges, but mainly to consider the inter-related issues of various sectors in order to optimise the overall health of the planet. However, food safety is a key element of One Health, allowing better signals of change to be captured than from looking at food-safety data in isolation.

The global community needs to continue its commitment to advancing One Health and to improving the capacity to interpret the signals and take effective and early action to avoid food safety problems and trade disruptions.

## Nutrition labelling and trade

**F**ood labelling, including nutrition labelling, is an important interface between producers and consumers. All relevant information must be displayed on the label to ensure fair practices and allow consumers to make informed decisions (e.g. in case of allergies), or compare different products. There is growing global recognition in organizations such as WHO and FAO of the need to address obesity and diet-related NCDs. It is recognized that an unhealthy diet is one of the leading causes of the global burden of disease, and implies significant economic and social costs.

Many countries have identified nutrition labelling as a policy option for the prevention of obesity and diet-related NCDs. At ICN2 governments affirmed their commitment to “create an enabling environment for making informed choices about food products”. Food labelling was included among the recommendations in the ICN2 Framework for Action. The recently declared United Nations Decade of Action on Nutrition provides further opportunities for governments to develop and implement international standards, including food-labelling policies, to help consumers make informed food choices.

The Codex Committee on Food Labelling (CCFL) sets standards and guidelines for labelling applicable to all foods. Its particular emphasis is on the need to provide truthful and useful information to consumers by establishing general rules for labelling as well as specific rules for nutrition labelling and claims. Since 2005, following the adoption of the WHO Global Strategy on Diet, Physical Activity and Health, CCFL has worked on updating its guidelines, to allow for improving diets and the

reduction of NCDs. Since 2012, Codex has recommended that nutrition labelling should be mandatory for the majority of pre-packaged foods.

A growing number of governments now require additional nutritional information on food products, in the form of front-of-pack labelling, giving consumers a visual representation of the amount of certain substances, such as sugar, fat and salt, sometimes linked to colour-coding to motivate consumers to avoid foods high in certain nutrients.

In the WTO, front-of-pack labelling schemes have led to much discussion in the TBT Committee in recent years in the context of STCs regarding the potential inconsistency of these schemes with existing Codex standards and the provisions of the TBT Agreement. In addition, the current proliferation of various schemes may prove confusing for consumers and lead to trade problems. In response to these concerns, CCFL will review different front-of-pack nutrition-labelling schemes and evaluate whether common principles can be developed. FAO’s work on providing relevant, reliable and up-to-date food-composition data, through the International Network of Food Data Systems (INFOODS), provides important assistance in the development of nutrition-labelling standards.

This example demonstrates how discussions on standards in the WTO TBT Committee can have a positive effect on the further development of Codex standards and improve the overall system for the benefit of consumers and trade.

# REFERENCES AND RESOURCES

## References

---

Acharya, R. (2016). *Regional trade agreements and the multilateral trading system*. 1st ed. Cambridge University Press, WTO

FAO/WHO. (2006). *Food safety risk analysis. A guide for national food safety authorities*

WHO (2015). *WHO estimates of the global burden of foodborne diseases: foodborne disease burden epidemiology reference group 2007-2015* Available at: [http://apps.who.int/iris/bitstream/10665/199350/1/9789241565165\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/199350/1/9789241565165_eng.pdf)

FAO/IFIF. (2010). *Good Practices for the Feed Industry. Implementing the Codex Alimentarius Code of Practice on Good Animal Feeding*

FAO. (2009). *Guidelines for risk-based fish inspection*

FAO. (2009). *GM food safety assessment tools for trainers*

FAO. (2008). *Risk-based food inspection manual*

FAO/WHO. (2005). *Enhancing Participation in Codex Activities*. An FAO/WHO training package

FAO/WHO. (2005). *Guide for developing and improving national food recall systems*

FAO/WHO. (2003). *Assuring food safety and quality. Guidelines for strengthening national food control system*

## Resources

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FAO [www.fao.org](http://www.fao.org)

WTO [www.wto.org](http://www.wto.org)

Codex Alimentarius Commission  
[www.codexalimentarius.org](http://www.codexalimentarius.org)

List of Codex food standards  
<http://www.fao.org/fao-who-codexalimentarius/standards/list-of-standards/en/>

More FAO publications can be found at:  
<http://www.fao.org/food/food-safety-quality/publications-tools/food-safety-publications/>

Link to Food Safety Online Tools:  
<http://www.fao.org/food/food-safety-quality/publications-tools/food-safety-tools/>

Link to Scientific Advice Resources:  
<http://www.fao.org/food/food-safety-quality/scientific-advice/>

Link to FAOLEX database:  
<http://www.fao.org/faolex/en/>

## FAO Resources

---

Selected publications on risk assessment, food safety & quality

FAO. (2016). *Risk based imported food control manual*

FAO. (2016). *Applications of Whole Genome Sequencing (WGS) in food safety management*

FAO. (2014). *Horizon Scanning and Foresight: An overview of approaches and possible applications in Food Safety*

FAO. (2014). *Evidence-informed food safety policies and risk management decisions – FAO technical meeting, 18-22 November 2013*



## WTO resources

---

- WTO, 2010. *The WTO Agreement Series – Sanitary and Phytosanitary Measures*: [https://www.wto.org/english/res\\_e/booksp\\_e/agrmtseries4\\_sps\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/agrmtseries4_sps_e.pdf)
- WTO, 2014. *The WTO Agreement Series – Technical Barriers to Trade*: [https://www.wto.org/english/res\\_e/publications\\_e/tbttotrade\\_e.pdf](https://www.wto.org/english/res_e/publications_e/tbttotrade_e.pdf)
- WTO SPS Committee, Major Decisions and Documents: [https://www.wto.org/english/tratop\\_e/sps\\_e/decisions06\\_e.htm](https://www.wto.org/english/tratop_e/sps_e/decisions06_e.htm)
- WTO, 2017. Decisions and Recommendations adopted by the WTO Committee on Technical Barriers to Trade since 1 January 1995. (G/TBT/1/Rev.13)
- For access to additional information about SPS, see the WTO SPS Gateway: <https://www.wto.org/sps>
- For access to additional information about TBT, see the WTO TBT Gateway: <https://www.wto.org/tbt>
- For access to the text of the WTO SPS Agreement: [https://www.wto.org/english/docs\\_e/legal\\_e/15sps\\_01\\_e.htm](https://www.wto.org/english/docs_e/legal_e/15sps_01_e.htm)
- For access to the text of the WTO TBT Agreement: [https://www.wto.org/english/docs\\_e/legal\\_e/17-tbt\\_e.htm](https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm)
- For information about the SPS Committee's 2014 Workshop on Risk Analysis: [https://www.wto.org/english/tratop\\_e/sps\\_e/wkshop\\_oct14\\_e/wkshop\\_oct14\\_e.htm](https://www.wto.org/english/tratop_e/sps_e/wkshop_oct14_e/wkshop_oct14_e.htm)
- For information about food labelling discussions in the WTO, see 2016 TBT Committee thematic session "Regulatory cooperation between Members: Food Labelling": [https://www.wto.org/english/tratop\\_e/tbt\\_e/tbttnov16\\_e.htm](https://www.wto.org/english/tratop_e/tbt_e/tbttnov16_e.htm)

- To search TBT notifications, specific trade concerns, and other TBT related information, consult the TBT Information Management System: <http://tbtdims.wto.org/>
- To search SPS notifications, specific trade concerns, and other SPS related information, consult the SPS Information Management System: <http://spsims.wto.org/>
- To sign up for email alerts of SPS and TBT notifications, consult ePing: <http://www.epingalert.org/en>
- To access WTO online learning resources, consult the WTO ECampus: <https://ecampus.wto.org/>
- For information about trade facilitation: [www.wto.org/tradefacilitation](http://www.wto.org/tradefacilitation)
- For information about the implementation of the Trade Facilitation Agreement and about technical assistance available: <http://www.tfafacility.org/>

## STDF Resources

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<http://www.standardsfacility.org/>

- Facilitating safe trade: [www.standardsfacility.org/facilitating-safe-trade](http://www.standardsfacility.org/facilitating-safe-trade)
- Electronic certification: [www.standardsfacility.org/SPS-eCert](http://www.standardsfacility.org/SPS-eCert)
- Prioritizing SPS investments for market access: [www.standardsfacility.org/p-ima](http://www.standardsfacility.org/p-ima)
- SPS Capacity Evaluation Tools: [www.standardsfacility.org/capacity-evaluation-tools](http://www.standardsfacility.org/capacity-evaluation-tools)

# ACRONYMS

<b>BNVL</b>	Botswana National Veterinary Laboratory
<b>CCFL</b>	Codex Committee on Food Labelling
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FAOLEX</b>	FAO's Legislative Database
<b>GATT</b>	General Agreement on Tariffs and Trade
<b>GM</b>	Genetically Modified
<b>GRP</b>	Good Regulatory Practice
<b>HACCP</b>	Hazard Analysis and Critical Control Point
<b>IAEA</b>	International Atomic Energy Agency
<b>ICN2</b>	Second International Conference on Nutrition, Rome, 2014
<b>IMS</b>	Information Management System
<b>INFOODS</b>	International Network on Food Data Systems
<b>IPPC</b>	International Plant Protection Convention
<b>JECFA</b>	Joint FAO/WHO Expert Committee on Food Additives
<b>JEMNU</b>	Joint FAO/WHO Expert Meetings on Nutrition
<b>JEMRA</b>	Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment
<b>JMPR</b>	Joint FAO/WHO Meeting on Pesticide Residues
<b>LDCs</b>	Least Developed Countries
<b>LEGN</b>	FAO Development Law Service
<b>LLP</b>	Low-Level Presence
<b>MRL</b>	Maximum Residue Limit
<b>NCDs</b>	Non-Communicable Diseases
<b>OIE</b>	World Organization for Animal Health
<b>PAHs</b>	Polycyclic Aromatic Hydrocarbons
<b>RTA</b>	Regional Trade Agreement
<b>SAG</b>	Chilean Agriculture and Livestock Service
<b>SLITS</b>	Swaziland Livestock Identification and Traceability System
<b>SMEs</b>	Small and Medium-sized Enterprises
<b>SPS Agreement</b>	Agreement on the Application of Sanitary and Phytosanitary Measures
<b>STC</b>	Specific Trade Concern
<b>STDF</b>	Standards and Trade Development Facility
<b>TBT Agreement</b>	Agreement on Technical Barriers to Trade
<b>TFA</b>	Trade Facilitation Agreement
<b>WGS</b>	Whole Genome Sequencing
<b>WHO</b>	World Health Organization
<b>WTO</b>	World Trade Organization

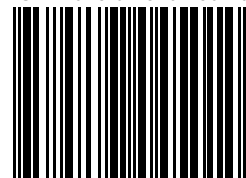
# TRADE AND FOOD STANDARDS

**T**rade in food is difficult to imagine without standards. Food standards give confidence to consumers about the safety, quality and authenticity of what they eat. By setting out a common understanding on different aspects of food for consumers, producers and governments, harmonization on the basis of international standards makes trade less costly and more inclusive. Food standards and trade go hand in hand in ensuring safe, nutritious and sufficient food for a growing world population.

Together, FAO and the WTO provide governments with the means to establish a framework to facilitate trade on the basis of internationally agreed food standards. Through the joint FAO/WHO Codex Alimentarius Commission, governments establish global science-based food standards that provide the foundation for achieving public health objectives such as food safety and nutrition. Since standards are essential for smooth trade, the WTO SPS and TBT Agreements strongly encourage governments to harmonize their requirements on the basis of international standards.

This publication emphasizes the importance of participation and engagement of governments in standards development in Codex and in resolving trade concerns in the WTO SPS and TBT Committees, as well as the importance of capacity development, which together contribute to the dynamism and robustness of the global system of food standards and trade.

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