Food Safety Approach

Safer Food for Sustainable and Resilient Businesses

DEPARTMENT OF AGRI-BUSINESS

Food Safety – a driver for human and economic development

Food Safety is a key determinant of **human health.** According to the 2015 report on the burden of foodborne illness issued by the World Health Organization (WHO), one in ten people get sick as a result of contaminated food products. Overall, an estimated 600 million fall ill every year after the consumption of unfit food which results in the loss of 33 million healthy life years, and children under five being impacted the most with over 125,000 children's deaths attributed to food borne illness. Due to the complex nature of food supply chains, food and agri-food products travel further distances and more frequently, making food contamination that occurs in one place impact the health of consumers living on the other side of the planet. As a result, tracking and identifying the source of foodborne illness outbreaks is more difficult. The timely recall of incriminated products and the prevention of further illnesses become more complex to achieve, unless robust traceability systems are in place.

Food safety is also a key contributor to **agricultural development and food security.** Unsafe and contaminated foods are not fit for consumption and contribute to the increase of food loss and waste, thus exacerbating food insecurity. About 30% of food production is wasted or lost worldwide meanwhile, global population is estimated to reach 9.6 billion individuals by 2050, with the highest proportion of growth to be witnessed in developing nations, some of which are already suffering from malnutrition and hunger. Inefficiencies in food production value chains as well as associated breakdown in food safety practices are key contributors to food loss. According to the Food and Agriculture Organization of the United Nations (FAO), eliminating such losses would contribute to feeding 870 million undernourished people worldwide . Improved food safety practices to reduce food losses can hence greatly contribute to the food security agenda and thus fighting hunger and various forms of malnutrition.

Food safety is also a key consideration in **food trade** as unsafe food impedes access to markets. With food being one of the most traded commodities internationally reaching a global trade volume of 1,486 Billion US Dollars in 2014, many developing countries are negatively impacted in their economic balance sheet as a result of food safety issues. Lack of knowledge, limited food safety culture and unreliable supply chains are some illustrations of gaps and challenges that impede the development of the agri-food sector in developing nations, resulting in real financial losses incurred by food business operators due to their non-compliance with international market requirements. Consequently, frequent disputes over food safety and quality require-ments have become a real barrier to international trade, prompting the global food trade environment to place strict obligations on both importing and exporting countries, and hence on all value chain actors who are operating along the respective supply chains.

In general food supply chains involve a range of different stages including on-farm production, slaughtering or harvesting, processing, storage, transport and distribution before the food product reaches consumers. Over the past half century, the process by which food gets from the farm to the plate has changed drastically, due to the extent to which globalization of food production and trade have impacted food supply chains, making them longer, more diverse and hence more complex. Given the importance of the production of safe food to public health, food and nutrition security, trade, tourism and national economies, it is important that all those involved in food production along the supply chain, from producer to consumer, observe safe food processing and handling practices.

Its far-reaching impacts make food safety a pillar that supports and sustains economic and human development and the connector between three major policy agendas: **Health, Agriculture and Trade**.
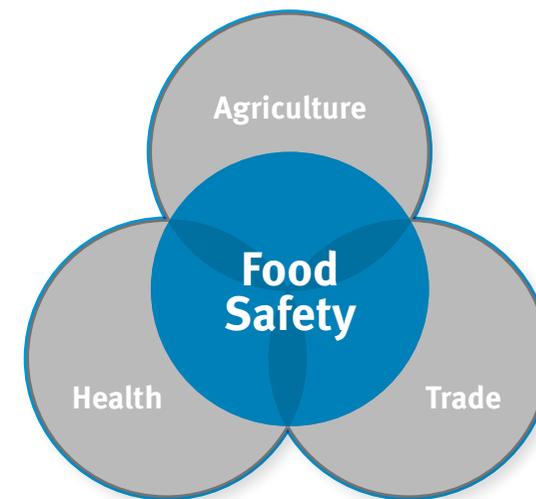
Figure 1: Food safety is the connector between the Health, Agriculture and Trade policy agendas

Food Safety and Agri-Business Development – UNIDO's mandate and the Sustainable Development Goals (SDGs)

Safe, nutritious and sufficient food and its preeminence as a determinant of health were clearly identified as part of the **Sustainable Development Goals (SDGs)** for 2030, which reaffirmed the interdependence of food safety and food security. From ending hunger to sustainable industrialization and sustaining natural resources, food safety and agri-business development lie at the very heart of the 2030 Agenda for Sustainable Development. The following graph illustrates why food safety matters and how it is contributing to the achievement of the goals.

Why food safety matters

1 NO POVERTY

Improved livelihoods and income generation through enhanced food safety practices.

2 ZERO HUNGER

Food safety greatly contributes to food security and reduced food loss and waste.

3 GOOD HEALTH AND WELL-BEING

Good health starts with safe and nutritious food.

4 QUALITY EDUCATION

Food for thought – safe and nutritious food is critical to learning.

5 GENDER EQUALITY

Women produce ½ of the world's food – enhanced food safety practices lead to increased productivity, a safer work place and higher income.

6 CLEAN WATER AND SANITATION

Enhanced food safety leads to the reduction of food loss and hence contributes to a more sustainable management of water resources.

7 AFFORDABLE AND CLEAN ENERGY

Contaminated crops do not lead to a sustainable source of energy, rather are detrimental to clean energy production.

8 DECENT WORK AND ECONOMIC GROWTH

Safer food for sustainable and resilient businesses with increased market access.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Enhanced competitiveness of the agri-food processing industry through sustainable food safety systems.

10 REDUCED INEQUALITIES

Wherever they may be, citizens should have equal access to safe food sources.

11 SUSTAINABLE CITIES AND COMMUNITIES

How can cities and communities thrive without access to safe food sources?

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Improved food safety practices reduce food losses and waste.

13 CLIMATE ACTION

Updated food safety measures are indispensable to mitigating emerging food hazards caused by climate change.

14 LIFE BELOW WATER

Contamination of water ecosystems results in a whole new set of food safety threats (for products of marine origin).

15 LIFE ON LAND

Increased harvest through the application of food safety practices can contribute to a more sustainable use of the terrestrial ecosystems.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Effective food safety oversight calls for robust and trustworthy institutions, aiming to ensure fair practices in the food trade.

17 PARTNERSHIPS FOR THE GOALS

Multi-dimensional challenges of food safety require multi-stakeholder partnerships and scalable global solutions.

Developing, promoting and disseminating best practices in food safety for the benefit of food and agri-food businesses as well as consumers is an essential element of the United Nations Industrial Development Organization's (UNIDO) mandate to accelerate and promote inclusive and sustainable industrial development (ISID), which in turn is a key contributor to Sustainable Development Goal 9 (SDG9) "building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation".

Within UNIDO, the Department of **Agri-business** is the main driver of the Organization's mandate of promoting sustainable and inclusive business opportunities through agri-business and agri-value chain development. To achieve this goal, technical cooperation activities focus on adding value to agricultural commodities all along the value chain. Through its technical assistance, the Department links resources and markets in the agribusiness value chains and strengthens forward and backward industrial linkages in order to advance the economic transformation of countries, improve employment and income opportunities, and reinforce sustainable livelihoods. Overall, the Department has a strong track record in agri-business development and in working directly with businesses and agri-industry along the entire food processing value chain.

With regards to food safety specifically, the **Food Systems and Nutrition Division (FSN)** of the Department of Agri-Business has the task of developing and implementing **UNIDO's food safety approach**. This is reflected in the division's mandate to promote sustainable food systems that deliver food safety and nutrition security and improve the competitiveness of the agri-food processing sector through access to support services, markets and trade opportunities, while ensuring economic, social and environmental sustainability.

This document hereby introduces UNIDO's food safety approach. It defines UNIDO's food safety - related interventions and explains how UNIDO can leverage its capacity building initiatives, advisory and convening power, in a holistic and cohesive manner, to enable sustainable and resilient food and agri-food businesses.

3 ^{Chapter}

UNIDO's Food Safety Approach – Safer Food for Sustainable and Resilient Businesses

UNIDO's food safety approach is designed to help execute the Organization's mandate and structure its interventions such that it can leverage its capacity building initiatives as well as its advisory and convening power to support sustainable and resilient food and agri-food businesses. Therefore, it is a lever which ensures that the organization's food safety-related capacity development initiatives are effective and contribute fully, in a cohesive and holistic manner, to achieving inclusive and sustainable industrial development.

The approach is centered around three key pillars:

1) enabling sustainable businesses through effective food safety capacity building;
2) enabling a favorable food safety environment through integrating food safety into the wider context of regulatory frameworks, national quality and food safety policies as well as infrastructure development;
3) fostering food safety advocacy and partnerships through enabling the engagement of the private sector in local, regional and global partnerships and advancing multi-stakeholder food safety dialogue and interventions.

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The following paragraphs describe UNIDO's three pillared Food Safety Approach, with the expected outputs from **Building Blocks** forming each pillar, along with the **Targeted Interventions** aiming to achieve these outputs.
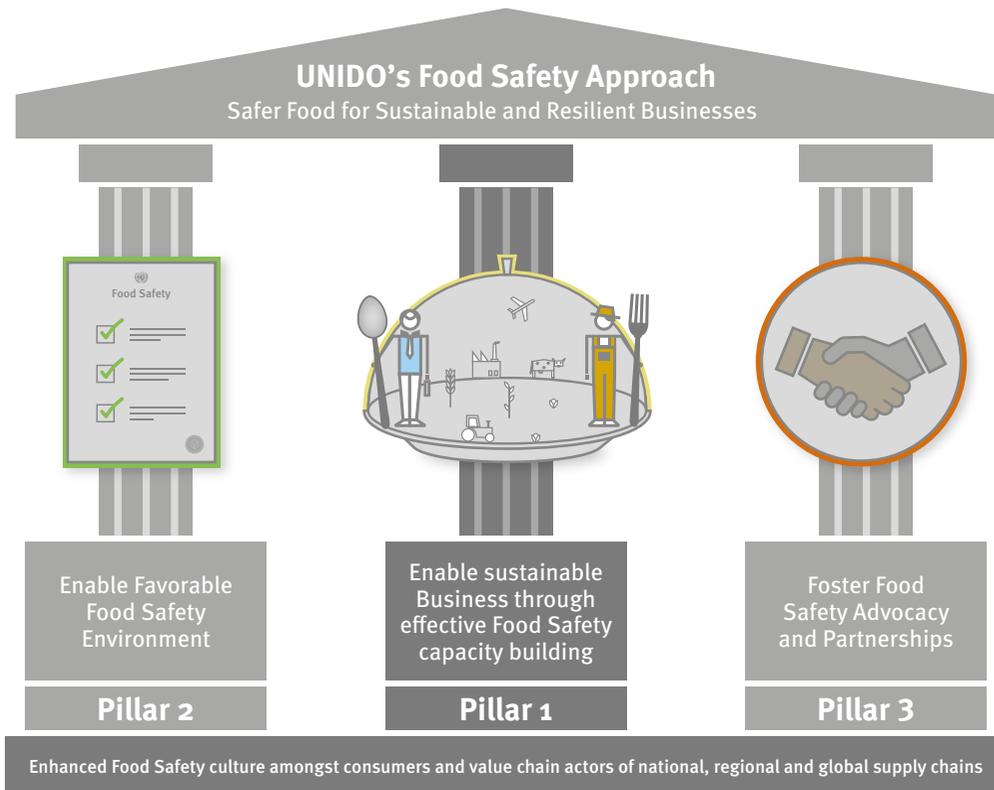

Figure 2 – Main pillars of UNIDO's Food Safety Approach

Pillar 1 –
Enable sustainable business through effective food safety capacity building

Building block 1.1 – Tailored and Scalable Food Safety schemes adopted by value chain operators
Building block 1.2 – Enhanced and Sustained Local Food Safety Competencies along the value chain

Pillar 2 –
Enable favourable Food Safety Environment

Building block 2.1 – Collaborative Inter-agency Environment to support Food Safety regulatory frameworks
Building block 2.2 – Tailored food safety related conformity assessment services developed to enhance food safety compliance

Pillar 3 –
Foster Food Safety Advocacy and Partnerships

Building block 3.1 – Private Sector Engagement facilitated in Global, Regional and National Food Safety Partnerships

Figure 3 – Main pillars and building blocks of UNIDO's Food Safety Approach

Pillar 1 –
Enable sustainable business through effective food safety capacity building
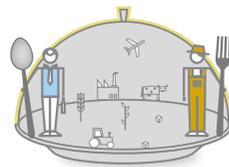
This pillar is at the heart of UNIDO's food safety approach. For the food and agri-food sector, enabling sustainable and resilient businesses requires access to local, regional and global markets through compliance with internationally recognized food safety standards as well as market-driven safety and quality schemes. Practical interventions include, amongst other aspects, the introduction and promotion of a set of food safety certification schemes with relevant capacity-building programs. Tailored interventions will be designed and applied to adapt to the needs of less developed food and agri-food businesses to gain buyers' trust and market access, as well as to expand the ability of these small and medium businesses in conquering new markets and sustain their production models.

Interventions also include competency development and personnel qualification schemes for operators and staff involved along the food value chain to follow and apply food safety-specific trainings and educational programs. In addition, emphasis is made to sustain food safety competencies and resources through building capacities of relevant institutions, from the public and the private sector.

Building block 1.1 —

Tailored and Scalable Food Safety schemes adopted by value chain operators

- Support less-developed food and agri-food businesses gain market access and buyers trust, by implementing relevant schemes such as UNIDO's Sustainable Supplier Development Program (SSDP), through public and private partnerships.

- Assist small and medium food businesses to comply with recognized food safety schemes relevant to their market needs.

- Design and implement supply chain-driven safety and quality assurance schemes, covering all supply chain actors e.g., growers, collectors, packers, processors, distributors, traders etc.

Building block 1.2 —

Enhanced and Sustained Local Food Safety Competencies along value chains

- Enhance food safety educational and/or training programs and curriculums to secure the availability of qualified workforce along the food/agri-food supply chain, including the development of personnel certification schemes in partnership with relevant academic networks, organizations and institutions.

- Build sustainable food safety competency through the development of human capital (i.e. advisors, assessors, auditors, mentors, practitioners etc.) and institutional structures (i.e. training centres, educational institutions, consultancy services/firms, etc).

- Establish and upgrade centres of excellence in food safety, directly serving food and agri-food businesses e.g., packaging service centres, food technology centres, food safety certification centres, e-learning platforms, R&D and training centres, etc.

Pillar 2 –
Enable favourable Food Safety Environment

A favorable food safety environment is indispensable to support sustainable and resilient food and agri-food industries and hence constitutes an enabling pillar in UNIDO's Food Safety Approach. This is achieved through integrating food safety in the context of national quality and food safety policies, infrastructures for conformity assessment, accreditation, metrology and standardization.[1] A robust and internationally recognized national quality system is crucial for ensuring confidence and integrity of the national food control system. It is also achieved through ensuring a predictable food safety regulatory environment, aligned with international standards, applying best practices in food safety regulatory decision-making that allows predictability, stability and trust amongst all stakeholders, domestically and internationally.

These outputs are achieved through enhanced collaboration and partnerships with international organizations involved in food safety-related standard setting, as well as relevant international and regional quality infrastructure institutions. UNIDO has therefore always adopted a collaborative approach with relevant international organizations, inter alia, the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the World Health Organization (WHO), the World Organization for Animal Health (OIE), the Standards and Trade Development Facility (STDF) of the World Trade Organization (WTO), the International Plant Protection Convention (IPPC) Secretariat, the International Organization for Standardization (ISO), the International Laboratory Accreditation Cooperation (ILAC), the International Accreditation Forum (IAF), and the International Bureau of Weights and Measures (BIPM).

1 The quality infrastructure portfolio of UNIDO is implemented in collaboration with UNIDO's Trade, Investment and Innovation Department.

Building block 2.1 —

Collaborative Interagency Environment to support Food Safety regulatory frameworks

- In collaboration with international organizations involved in standard setting, support the development of a predictable and trusted food safety regulatory environment for food and agri-food businesses in Member States, by establishing and strengthening food safety legal and regulatory capacities and infrastructure.

- Integrate the food safety standards development environment with the needs of the food and agri-food businesses for practical guidance and market access development.

- Support compliance of food and agri-food businesses with national and international standards and regulations through the provision of technical assistance in food safety certification (i.e. awareness raising, human resource capacity-building, certification, etc.).

Building block 2.2 —

Tailored food safety related conformity assessment services developed to enhance food safety compliance

- Establish and upgrade national quality systems (i.e. quality policy, legal framework and institutional structures) adapted to the new principles of the international trade regime, specifically the WTO's Agreements (TBT / SPS).

- Upgrade the national metrology and accreditation systems to enhance compliance and competitiveness of the food and agri-food sector, as well as to improve the credibility, efficiency and international recognition of a country's food control system.

- Promote and develop laboratory capacities for food safety testing and support their international accreditation.

- Strengthen other food safety related conformity assessment bodies, such as inspection and certification bodies, towards their international accreditation and recognition.

Pillar 3 –
Foster Food Safety Advocacy and Partnerships

UNIDO clearly recognizes that the multi-dimensional challenges of food safety are of a magnitude that requires a multi-player response which calls on governments, businesses and industry, international organizations and civil society to join forces with the aim to deliver global solutions and to scale up collaborative capacity-building efforts.

Sustaining investments, legacies and achievements of food safety capacity building efforts requires strong and effective partnerships, and it is a key enabler to support developing and sustaining resilient food and agri-food businesses. The third pillar in UNIDO's food safety approach therefore aims to foster existing and develop new food safety partnerships to promote the needs of private sector actors and advocate for their enhanced engagement and participation in regional and global food safety forums, particularly those pertaining to framing the agenda of the food safety capacity development, stand-ard setting and regulatory development. It also calls for convening relevant and tailored collaborative forums, involving multiple partners and stakeholders (public and private) to promote food safety dialogue.

Stemming from UNIDO's principles of operations anchored in the importance of building bridges between the public and private sector and reaching out to partners locally and globally, the organization has also focused on active contribution to partnerships with the private sector, such as the Global Food Safety Initiative (GFSI) as well as multi-stakeholder endeavors such as the Global Food Safety Partnership (GFSP), a public-private partnership hosted by the World Bank. These partnerships are regarded as key instruments in achieving Inclusive and Sustainable Industrial Development (ISID) through the implemen-tation of a cohesive and holistic food safety approach.

Building block 3.1 –
Private Sector Engagement facilitated in Global, Regional and National Food Safety Partnerships

- Empower food and agri-food businesses and private sector actors to engage in National Food Safety initiatives and programs through their contribution in their design, delivery and implementation, in partnership with other stakeholders.

- Enhance the engagement of food and agri-food private sector actors in food safety standards setting and regulatory development initia-tives at the national and regional level.

- Advocate for a stronger and effective participation of food and agri-food private sector actors in global food safety forums, especially those pertaining to framing the future of the food safety capacity development and regulatory environment.

- Develop engagement approaches and convene tailored forums to support public/private partnerships devoted to food safety promo-tion in support of business development opportunities.

Through implementing UNIDO's Food Safety Approach, calling to structure its food safety related interventions and integrate them within its overall industrial development agenda, the organization aims to ensure a cohesive and holistic approach for food safety as a means towards achieving its objective "safer food for sustainable and resilient businesses".