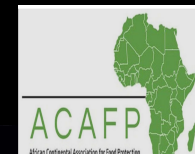




Bridging the Gap: Harmonising Local Realities with International Compliance for Global Market Access

Dr. Ayojesutomi Abiodun-
Solanke



CONTENTS

- | | |
|---|---|
| 1 Executive Summary and Strategic Overview | 2 International Standards Framework |
| 3 Regional Regulatory Landscapes | 4 Compliance Framework and Implementation Strategies |
| 5 Challenges and Implementation Barriers | 6 Strategic Pathways to Regulatory Harmonization |
-

Introduction - The Triple Burden of Food Safety

Food safety is not just a health issue; it is a trade and economic security issue

The Gap: Local practices often rely on traditional knowledge, while Global Standards (Codex, EU Directives) demand high-tech traceability and zero chemical residues

Goal: To move from "Compliance by Accident" to "Compliance by Design"



Key Challenges in Regulatory Harmonization

Regulatory fragmentation creates trade barriers

Different countries maintain distinct food safety standards without scientific justification, leading to product confiscation and destruction

Complexity for businesses

Small and medium enterprises struggle to navigate multiple regulatory frameworks simultaneously across export markets

Trade impact

Lack of harmonization increases compliance costs and slows international food commerce, affecting economic growth

Emerging focal areas

Chemical risk management, allergen thresholds, and novel food assessments are becoming regulatory priorities

Global Regulatory Frameworks (The Benchmarks)

Codex Alimentarius sets international food safety and trade standards

ISO 22000 & HACCP require risk-based food safety management and documentation systems

WTO SPS Measures determine the safety conditions for products in international trade

While these frameworks protect consumers and support fair trade, they can also become technical barriers for African SMEs due to high compliance demands



Codex Alimentarius: Foundation for Global Alignment

Standard Element	Scope & Application	Global Impact
Established Authority	FAO/WHO commission with 170+ member countries since 1963	Sets international benchmark for food safety harmonization
Coverage Areas	Labeling, additives, contaminants, hygiene practices, pesticide residues	Comprehensive framework from farm to consumer
Legal Status	Non-binding but WTO-recognized reference standard	Facilitates international trade and regulatory alignment
Member Benefits	Common language for food safety discussions and standards development	Reduces barriers to market access for compliant products

The African Regulatory Landscape

Systemic Challenges

- **Fragmented Systems:** Disconnect between informal markets and export standards.
- **Monitoring Gaps:** Weak national food surveillance and testing capacity.
- **AfCFTA Opportunity:** The need for harmonized SPS measures across borders.



Regional Perspectives – AfCFTA & Harmonization

AfCFTA seeks one trade framework for Africa

Different national standards cause border rejections of goods

Harmonized regulations reduce trade costs and delays

Stronger regional systems improve food security and competitiveness



Key Compliance Components

Compliance Element	Description	Implementation Focus
HACCP Principles	Hazard Analysis and Critical Control Points system for identifying food safety risks	Preventive approach to hazard management across production chain
Food Traceability	Track and trace systems for product origin and movement through supply chain	Rapid response capability during contamination incidents
Food Hygiene Standards	Sanitation, personnel practices, equipment maintenance requirements	Consistent quality across manufacturing and distribution
Labeling Compliance	Accurate ingredient disclosure, allergen warnings, health claims accuracy	Consumer protection and informed purchasing decisions
Supplier Verification	FSVP (Foreign Supplier Verification Program) requirements for importers	Risk-based assessment of supplier food safety practices

Beyond Fisheries – The Mycotoxin Challenge

Grains, maize, and groundnuts are highly vulnerable to aflatoxin contamination

Aflatoxins are invisible, odourless, and cancer-causing food contaminants

International markets require levels below 4ppb, while some local products exceed 20ppb

Affordable rapid testing kits can help rural farmers improve food safety and market access



Horticulture Challenge – Pesticides & MRLs

Export markets enforce strict pesticide residue limits

Unauthorized pesticide use leads to EU/US market bans

Poor knowledge of withdrawal periods increases contamination risks

Food safety must begin at the farm level



The PAH Challenge in Smoking

A Safety Paradox

Traditional wood-fired smoking methods introduce **Polycyclic Aromatic Hydrocarbons (PAHs)**, which are carcinogenic. While culturally preferred, these residues often exceed international safety limits (EU/Codex), creating a massive barrier to global market entry for African smoked fish products.





Resource Requirements for Compliance

Technical expertise

Personnel trained in HACCP methodology, risk assessment, and regulatory interpretation

Documentation systems

Traceability platforms, hazard analysis records, preventive control monitoring data

Testing capabilities

Microbiological and chemical analysis capacity or partnerships with accredited laboratories

Management systems

Digital platforms for monitoring critical control points and regulatory updates

Regulatory Complexity and Divergence

Primary Implementation Challenges

Scientific justification gaps

Regulatory differences between countries often lack clear scientific basis, creating confusion about risk-based reasoning

Delayed standards development

Codex process experiences slow text discussions, time constraints on agenda items, and blockages at approval stages

Conflicting requirements

Different allergen thresholds, additives approval status, and novel food pathways across regions force companies to maintain multiple compliance systems

Unintended consequences

Policy changes like sesame allergen designation can paradoxically increase allergen presence in food supply

Innovation – The Irorunde Kiln (Technology as a Bridge)

**Improved smoking systems
reduce PAH contamination**

**Features include smoke filtration,
energy efficiency and
temperature control**

**Rural processors can produce
export-quality fish**

**Affordable local technologies
support safer food systems**

The Irorunde Kiln – Innovative Design

In Operation – Smoking Fish **Internal Design & Racks**

- Food-grade stainless steel components.
- Temperature control mechanisms.
- Smoke control to minimize PAH contamination.
- Portability and ergonomic design.

Project ID_57 proudly introduces
**SUSTAINABLE BIOMASS ENERGY
SOURCE AND FISH SMOKING KILN**

1. PEOPLE
2. ZERO WASTE
3. GOOD HEALTH AND WELL-BEING
7. AFFORDABLE AND CLEAN ENERGY
8. DECENT WORK AND ECONOMIC GROWTH
12. RESPONSIBLE CONSUMPTION AND PRODUCTION
13. CLIMATE ACTION
14. LIFE UNDER THE SEA

INSULATED DRUM OVEN

SOCIAL SUSTAINABILITY
Less drudgery
Hygienic
Increased income
Simple to construct and operate

ECONOMIC SUSTAINABILITY
100% Locally Sourced Materials
Low-cost

ENVIRONMENTAL SUSTAINABILITY
Improved Fuel Efficiency

ENVIRONMENTAL SUSTAINABILITY
Improved Fuel Efficiency
Fish safe - Low PAHs

ECONOMIC SUSTAINABILITY
100% locally sourced ORGANIC materials
Improved income

POOR SUSTAINABILITY
Easy to use

Our innovations are adapted on the priceless traditional and local knowledge held by our women, which are simply "too big to ignore!"

CARBONIZED BRIQUETTES

Contact details for further inquiries:
adikafayat@gmail.com
+234 802 583 4358
+234 817 172 0130
+234 803 674 9649

Plant-Based Safety Solutions



Citrus Peels

Leveraging *Citrus sinensis* as a natural preservative to inhibit spoilage.



Indigenous Herbs

Researching locally available antimicrobial plant materials for safety.



Shelf-Life

Extending stability to meet global logistics requirements without chemicals.

Local Innovation: The Cold Chain & Storage

Poor cold storage causes major post-harvest food losses

Temperature control is a global food safety requirement

Solar cold hubs and mobile cooling systems support local markets

Cold chain solutions improve food safety and reduce waste

The Cold Chain Infrastructure

Sagbokoji Case Study

Deploying decentralized solar-powered cold storage addresses the lack of modern refrigeration. This infrastructure serves as a bridge, maintaining the cold chain from farm-to-fork, ensuring that African fish products remain safe and viable for both regional and international trade routes.



Street Foods & The Informal Market

Street food feeds most urban Africans daily

Complex HACCP systems are difficult for vendors

Simple hygiene standards are more practical

Clean water and sanitation improve food safety



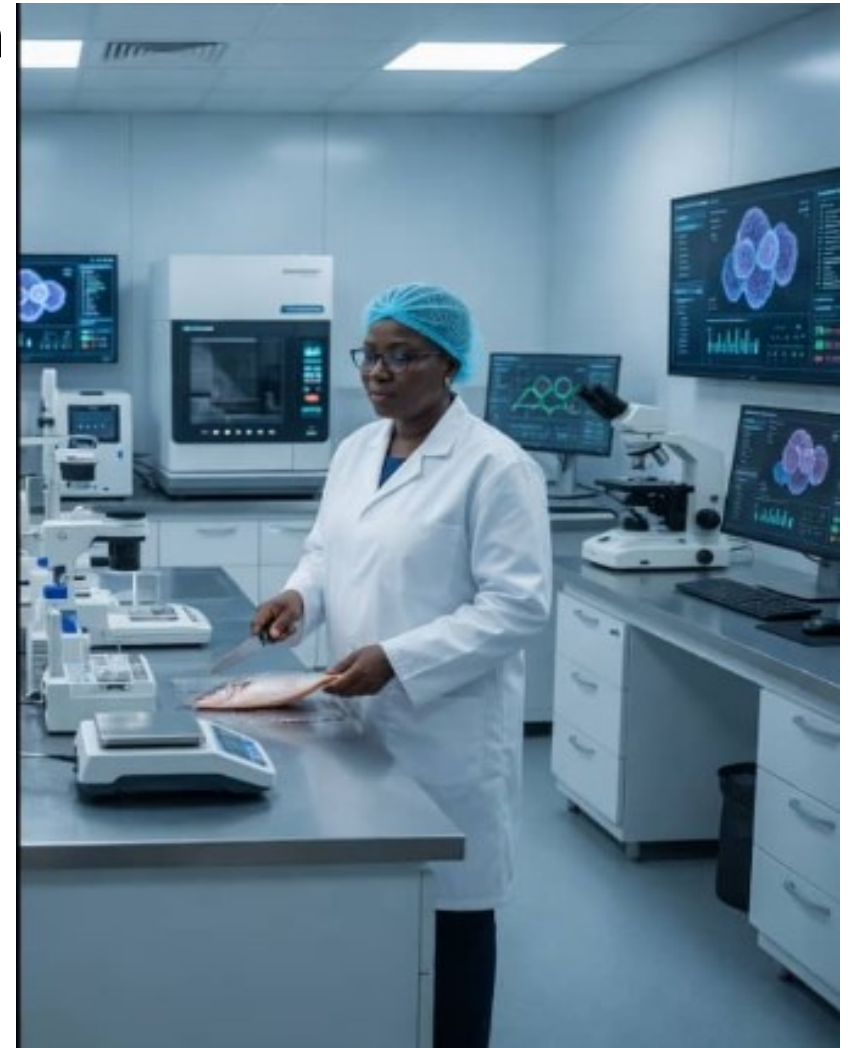
Laboratory Capacity & Certification

Global markets require trusted food testing systems

Few accredited labs increase testing costs and delays

Regional testing centers can improve compliance capacity

Strong laboratories support food safety and trade access



Innovation – Gender & Social Inclusion in Food Safety

Women dominate food processing and vending sectors

Existing food safety training poorly serves small-scale women actors

Gender-responsive training improves food safety compliance

Inclusive practices strengthen sustainable and fair food systems



Empowering Stakeholders

Women handle over 80% of fish processing in Nigeria. Bridging the safety gap requires gender-responsive interventions—mentoring, training, and inclusive technology—that empower these primary actors to adopt global hygiene standards.



The Role of ACAFP & Professional Bodies

ACAFP connects African food safety professionals

Mentorship develops future food safety experts

Research supports evidence-based food safety policies

Professional networks strengthen food safety systems



Industry Best Practices for Compliance Excellence



Science-based decision-making

Organizations should advocate for harmonization based on risk assessment rather than precautionary approaches lacking scientific foundation



Proactive monitoring

Track regulatory updates across target markets through compliance intelligence systems and industry associations



Stakeholder engagement

Participate in Codex committees and regional regulatory forums to influence harmonization discussions



Supply chain transparency

Implement traceability systems exceeding minimum requirements to demonstrate safety commitment and facilitate rapid responses

Strategic Roadmap

Level	Priority Focus	Key Regulation/Standard
National	Local market hygiene & basic monitoring	National Food Safety Acts
Regional	Harmonized SPS measures & Trade	AfCFTA / RECs (ECOWAS/SADC)
Global	Zero-defect, technical compliance	Codex / EU / HACCP

Global food safety evolution emphasizes public-private partnerships and science-based harmonization. Emerging priorities include chemical residue management, allergen threshold development, and novel food assessment consistency. Organizations that integrate anticipatory compliance strategies with harmonization initiatives position themselves advantageously in expanding international markets while maintaining consumer safety standards.

-  **Policy Alignment:** Update national regulations to mirror regional African Food Safety Strategies.
-  **Evidence-Based Advocacy:** Use research (e.g., PAH levels) to influence standards and policy formulation.
-  **Human Capacity:** Training smallholders and vendors in risk-based food control systems.
-  **Multisectoral Coordination:** Strengthening linkage between research, government, and industry.

Conclusion & Summary

Update National laws to mirror AfCFTA/Codex

Subsidize food safety technology for SMEs

Institutionalize "Gender-first" safety training

**Final Statement: Food safety is a shared responsibility
from the water the fish swims in to the plate of the
consumer**

Quelle: flickr.com

Questions & Discussion

"Bridging the gap is a collective journey from traditional roots to global standards."

Dr. AyoJesutomi O. Abiodun-Solanke

Email: tomi.solanke@fcfmt.edu.ng

Senior Lecturer, Federal College of Fisheries & Marine Tech,
Lagos