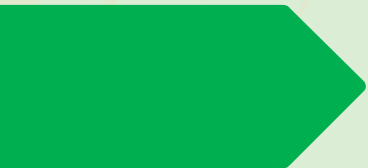




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The Importance of Food Safety Management systems
and Regulatory Frameworks in addressing the
Regulatory Bottleneck Challenges and the safety and
quality concerns on Edible Insects to meet the rising
global demand – the ARSO standardization initiatives.
22nd April 2026



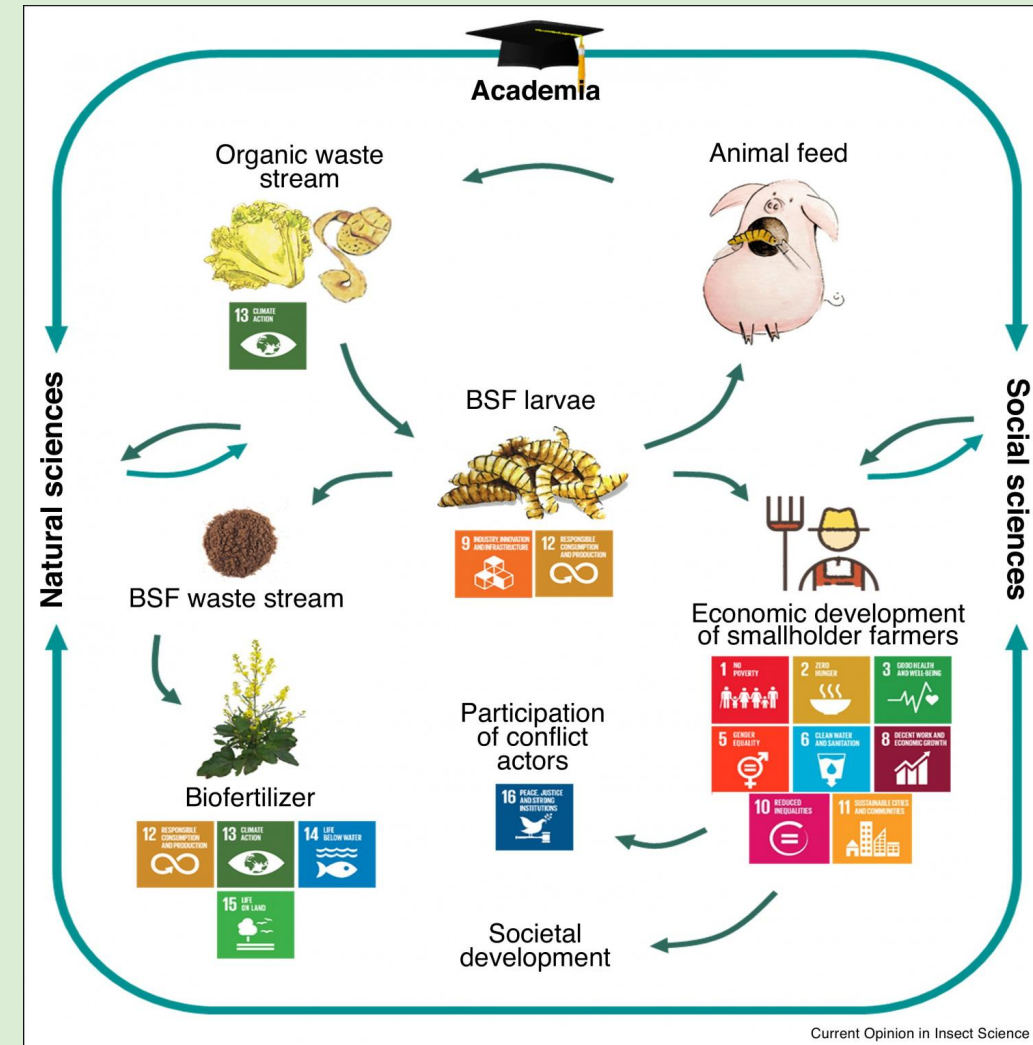
Dr Oswin Chibinga
Chairperson ARSO PC 03

Date: 22/04/2026



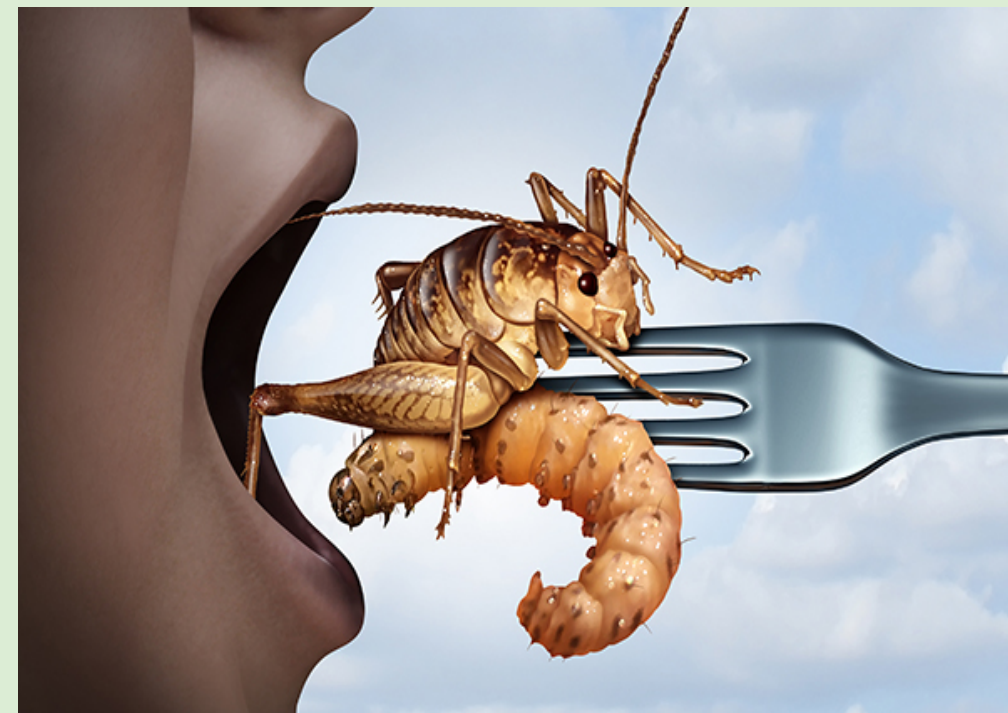
1. Introduction

- ❓ **Edible Insects for Sustainable Development & Food Security**
- ❓ Global population projected to reach ~9 billion → increased food demand
- ❓ Conventional livestock strains land, water, and environment
- ❓ **Edible insects offer:**
 - ❓ High-quality protein, vitamins, and micronutrients
 - ❓ Efficient feed conversion (require far less feed than cattle/poultry)
 - ❓ Lower greenhouse gas emissions
- ❓ Already consumed by ~2 billion people globally
- ❓ Recognized as a **promising alternative food and feed source**



2. Food Safety and Quality Concerns

- ❓ **Key Safety Challenges in Edible Insects**
- ❓ **Microbiological risks:**
 - ❓ Pathogens (e.g., *E. coli*, *Listeria*) from poor handling
- ❓ **Chemical and toxicological risks:**
 - ❓ Bioaccumulation from feed substrates
- ❓ **Allergenicity:**
 - ❓ Cross-reactivity with shellfish proteins
- ❓ Variability in composition affecting quality and labeling
- ❓ **Processing & storage risks:**
 - ❓ Improper handling → contamination, spoilage
- ❓ → Safety must be addressed across the **entire value chain (farm to fork)**



3. Importance of Food Safety Management Systems



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- ❓ • **Role of Food Safety Systems (FSMS)**
- ❓ **Implementation of systems like:**
 - ❓ HACCP (Hazard Analysis and Critical Control Points)
 - ❓ Good Hygiene Practices (GHP)
- ❓ **Key functions:**
 - ❓ Identify and control hazards during production and processing
 - ❓ Ensure traceability of insect feed and rearing conditions
 - ❓ Standardize processing (e.g., heat treatment reduces microbes)
- ❓ **Benefits:**
 - ❓ Protect consumer health
 - ❓ Build consumer trust
 - ❓ Enable commercialization and export
- ❓ ➔ FSMS are essential to **scale up the edible insect sector safely**



ARKS

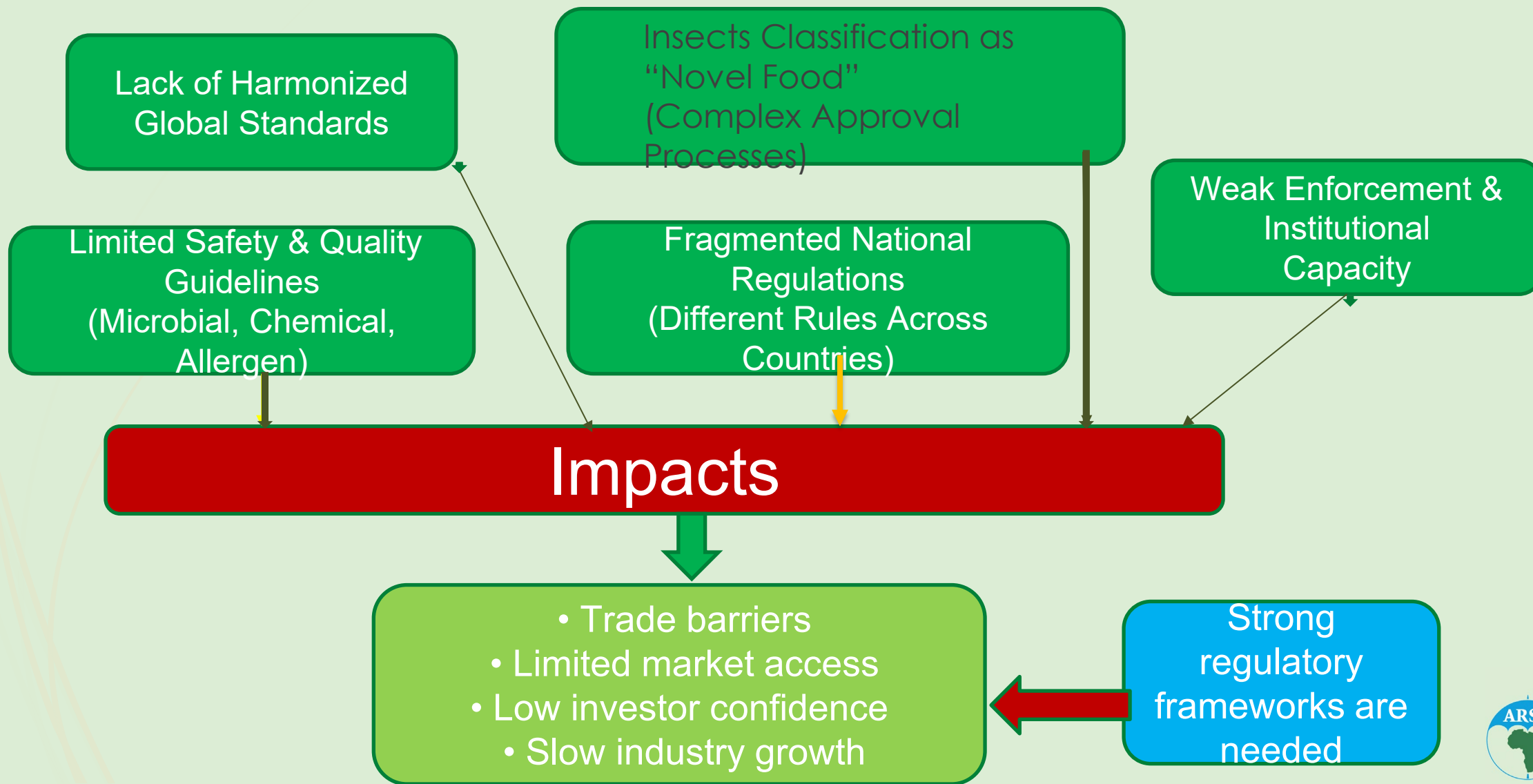


4. Regulatory Bottlenecks & Need for Frameworks

Regulatory Challenges



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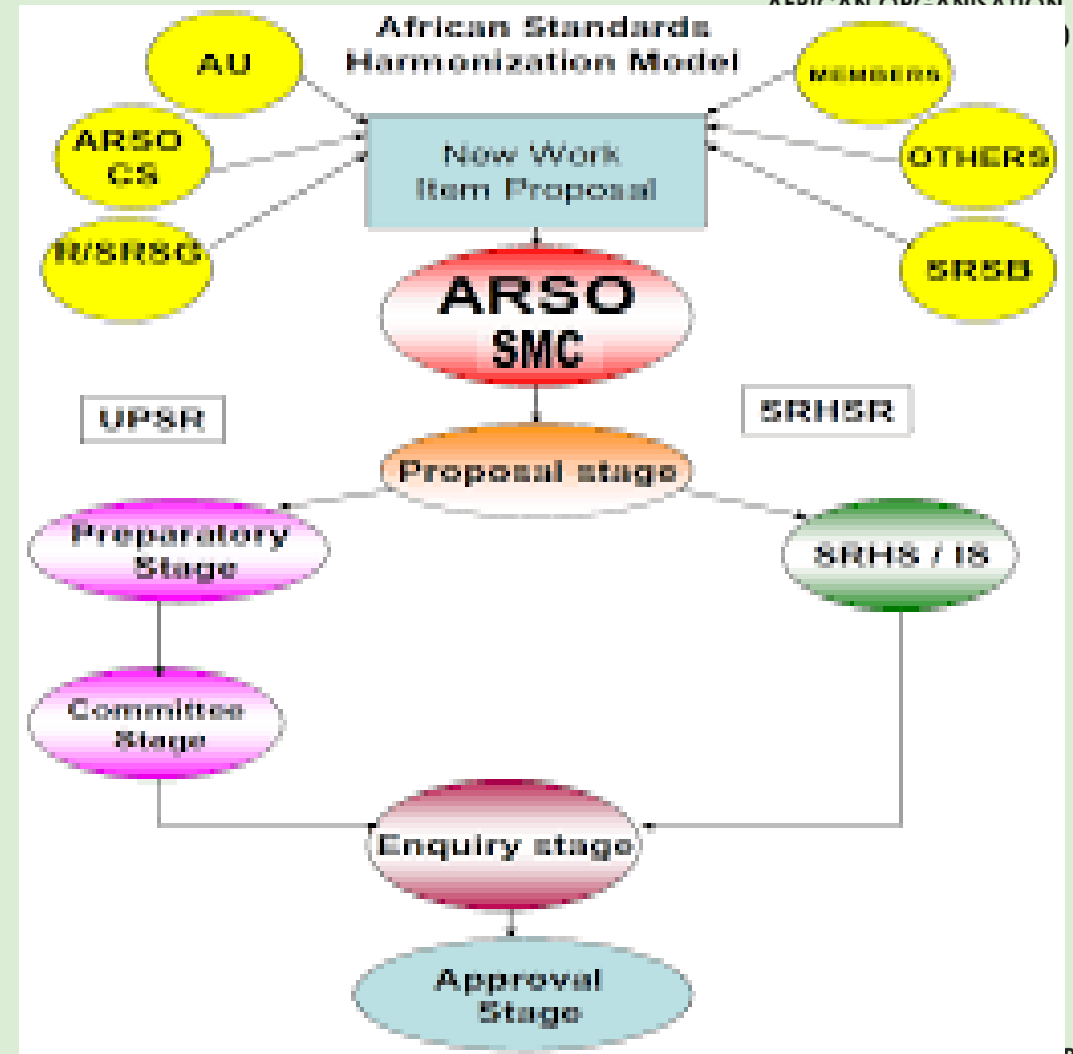


5. ARSO Standardisation Initiatives



• ARSO's Role in Addressing Challenges

- ❓ **African Organisation for Standardisation (ARSO) initiatives:**
 - ❓ Development of **harmonized African standards** for edible insects
 - ❓ **Guidelines on:**
 - ❓ Production and harvesting
 - ❓ Processing and packaging
 - ❓ Hygiene and safety requirements
- ❓ **Objectives:**
 - ❓ Remove regulatory bottlenecks across African markets
 - ❓ Promote intra-African trade
 - ❓ Ensure consumer safety and product quality
- ❓ **Impact:**
 - ❓ Supports sustainable development goals (SDGs)
 - ❓ Enhances food security and livelihoods
- ❓ → ARSO standards help **bridge gaps between safety, regulation, and market growth**





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Thank you

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