

# UP-RISE: EU-AU Partnership for Resilient, Inclusive and Safe food systems for Everyone

UP-RISE is an international project providing groundbreaking knowledge to understand mycotoxin contamination and to deliver solutions in Africa.



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor REA can be held responsible for them.



# HORIZON-CL6-2023-FARM2FORK-01-20: EU-Africa Union – food safety

- Improved African food safety systems
- Building blocks for improved food safety in Africa, improving climate, environment and food systems, reducing losses by mycotoxins, enhancing local transformation, local markets and regional trade, while reducing impacts on environment, biodiversity, health and society.



## COORDINATOR

Ghent University – Belgium (*Prof. Sarah De Saeger/Prof. Siska Croubels*)

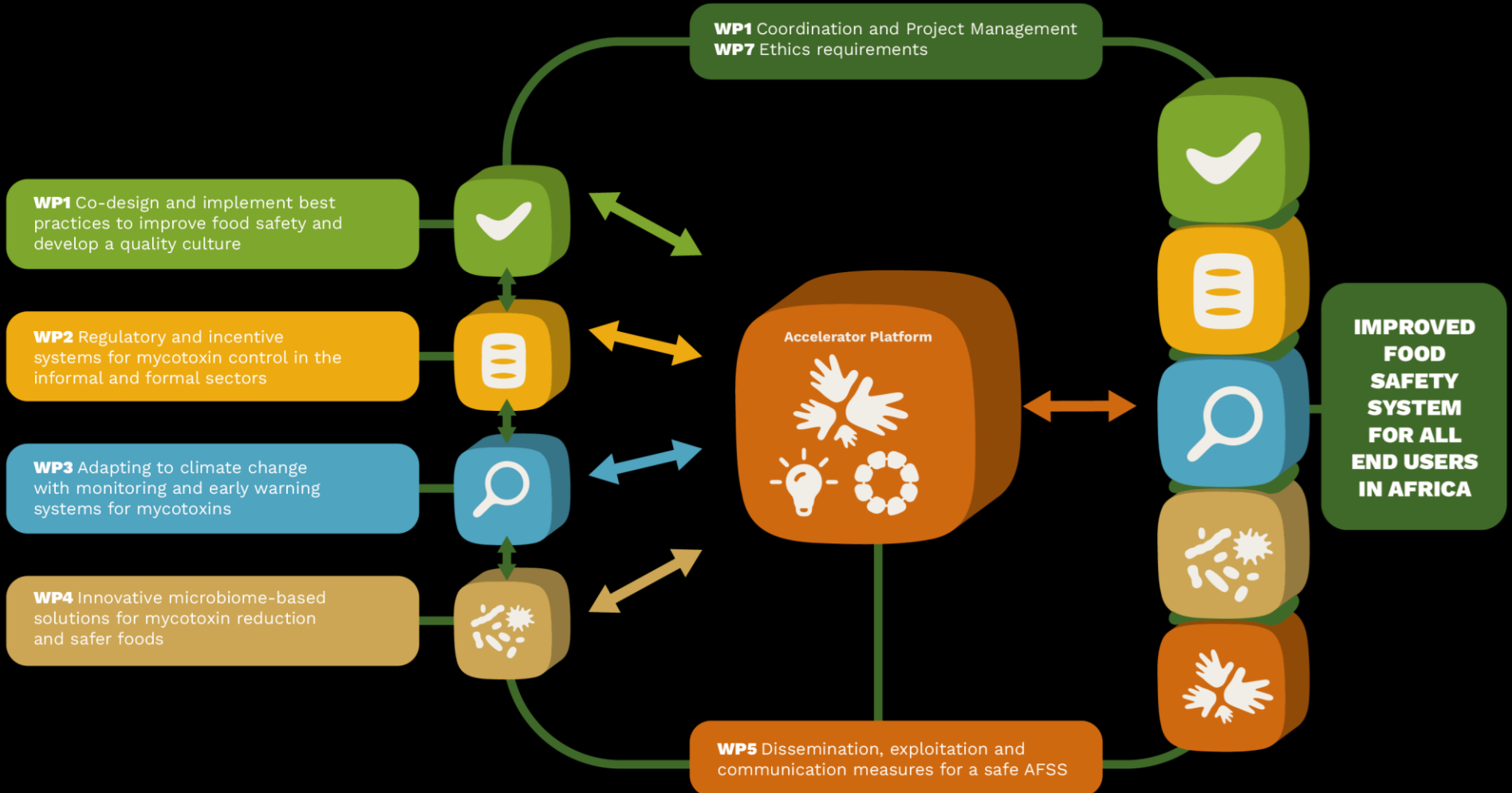


Period: 01.01.2024 – 31.12.2027

[www.uprisefoodsafety.org](http://www.uprisefoodsafety.org)



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# Objectives



## Building Block 1:

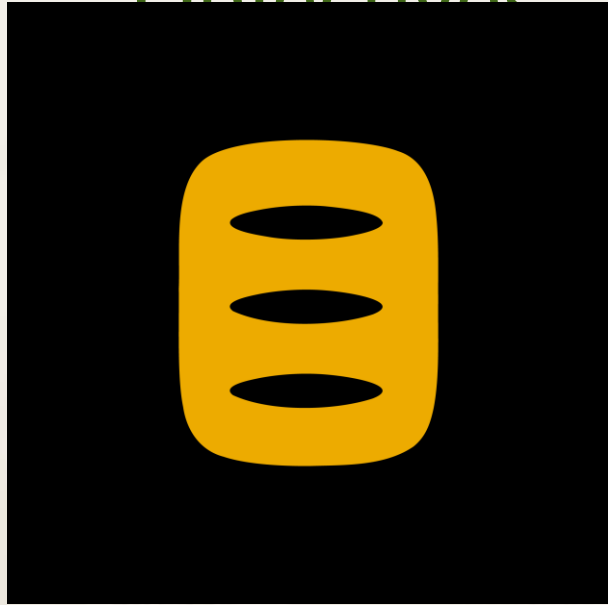
Roadmap for a shared quality culture and integration of the informal sector in the AFSS

**O1:** To increase understanding of food safety in the informal sector

**O2:** To assess and recommend ways to promote and maximize the informal sector's participation and possible integration into the formal food system, with regards to food safety risks



# Objectives



## Building Block 2:

strengthening the food safety regulatory framework in both formal and informal sectors with focus on mycotoxins

**O3:** To implement regulatory food safety frameworks and solutions aimed to create a quality culture at the SME level, including opportunities for better organization of SME in view of lower cost for certification and conformity assessment

**O4:** To improve tools for risk assessment, including long-term health risks of mycotoxins, where risk assessment and other evidence inform the regulatory systems





## Building Block 3:

Early warning to prevent mycotoxin contamination and adapt to climate change

**O5:** To develop monitoring and early warning systems for mycotoxins, to be included in the AFSS

**O6:** To adapt to climate change and reduce increased risks to food safety

# Objectives



## Building Block 4:

Prevention of food losses and improving food safety by providing innovative microbiome-based solutions for nutritious food

**O7:** To contribute to a better understanding on how fermentation can affect the mycotoxin levels in food products

**O8:** To identify new solutions including microbiome-based and complementary approaches for scale-up in traditional fermented foods for reduced food waste and longer shelf-lives





# Objectives



## Building Block 5:

Co-creation, training and mentoring

**O9:** To pilot training systems to help the informal sector towards compliance with food safety and quality schemes

**O10:** To implement the multi-actor approach by involving a wide range of food system actors and conducting trans- and inter-disciplinary research



# Accelerator platform



Multistakeholder Platform  
to Accelerate Result Exploitation  
and Knowledge Sharing






Get in touch with our project coordinators:

[Sarah.DeSaeger@ugent.be](mailto:Sarah.DeSaeger@ugent.be) and  
[Siska.Croubels@ugent.be](mailto:Siska.Croubels@ugent.be) in order  
to join UPRISE Accelerator Platform.

# PhD community

Phd	EU-AI Joint PhD topic	Supervisors	
1	Improving the quality culture in the Kunun Zaki value chain in Nigeria with focus on mycotoxin reduction	FUTMIN	Ugent/CNR
2	Improving the quality culture in the Akpan value chain in Benin with focus on mycotoxin reduction	UAC	CIRAD/UMontpellier
3	Improving the quality culture in the Coco baca value chain in Côte d'Ivoire with focus on mycotoxin reduction	UNO	CIRAD/UMontpellier
4	Improving the quality culture in the Umquombothi value chain in South-Africa with focus on mycotoxin reduction	UJ	Ugent
5	Improving the quality culture in the Maziwa mala value chain in Kenya with focus on mycotoxin reduction	UoN	Ugent/CNR
6	Predictive model development for early warning systems in five African member states and app demonstration in Nigeria	FUTMIN	WU
7	Behaviour change and incentives for an improved food safety culture in the formal-informality continuum	WU/UGent	CIRAD
8	Comparative mycotoxin risk assessment of cereal-based food and fermented derivatives from formal and informal markets in West, East, and South-African regions	UGent	UAC
9	Efficacy of fermentation on overall food product quality and mycotoxin concentration	UJ	CIRAD/CNR



Fermented food product	Crop	Region, Member State	Characteristics
 <p><b>Coco baca</b></p>	Maize	WEST Côte d'Ivoire	Fermented maize porridge produced by women at the household level and informally marketed on stalls in markets. As maize and added spices used are highly prone to mycotoxin contamination, we suspect that coco baca consumers are daily exposed to currently unknown mycotoxins levels. ( <a href="https://www.youtube.com/watch?v=EjtTbAhdTCs">https://www.youtube.com/watch?v=EjtTbAhdTCs</a> )
 <p><b>Akpan</b></p>	Maize, sorghum	WEST Benin	Traditional cereal-based yoghurt dessert based on fermented maize and/or sorghum starch that is pre-cooked and mixed with milk, sugar or ice. Although akpan processing ameliorated, its shelf-life is yet to be improved. Major safety issues are mycotoxins (e.g. AFs, FBs). ( <a href="https://www.youtube.com/watch?v=KmOQNKtCWuE">https://www.youtube.com/watch?v=KmOQNKtCWuE</a> )
 <p><b>Kunun zaki</b></p>	Millet	WEST Nigeria	Fermented beverage from millet, sorghum, maize, rice in decreasing order of preference; in some cases, peanut is added in infant diets to supplement for lipids and proteins. The market is informal and only intended for sale within a day or two days if refrigerated. It has a rich source of beneficial bacteria for consumers health, and mycotoxin levels were reduced by fermentation. ( <a href="https://www.youtube.com/watch?v=Tz32yvrBeCk">https://www.youtube.com/watch?v=Tz32yvrBeCk</a> )
 <p><b>Umqombothi</b></p>	Sorghum	SOUTH South-Africa	Traditional beer based on fermentation of sorghum malt with additives (maize, wheat, sugar). Brewing is mainly done by women at the household level, although there are commercial variants. Suggestion reveals umqombothi as a healthy alternative to western beer, however, there are concerns about the risk of mycotoxin contamination. ( <a href="https://www.youtube.com/watch?v=fHKm-qLe4fQ">https://www.youtube.com/watch?v=fHKm-qLe4fQ</a> )
 <p><b>Maziwa mala</b></p>	Maize, sorghum, millet (dairy cattle feed)	EAST Kenya	Fermented milk produced by women at the household level and informally sold in local hotels. Every tribal community has their production technique (e.g. Mursik–Kalenjin; Riga–Luo; Kule naoto–Maasai). Additives are wood ashes, medicinal plants and cattle blood to enrich the milk and for medicinal values. Mycotoxins (e.g. aflatoxin M1) are major contaminants. ( <a href="https://www.youtube.com/watch?v=-8McWD-6l6U">https://www.youtube.com/watch?v=-8McWD-6l6U</a> )



# Currently ongoing work

- Value chain analysis of the selected crops and fermented foods in the five African countries
- Preparation of selection of business cases
- SITAN analysis of food safety regulatory frameworks in the five African countries
- Development and validation of a risk assessment toolkit
- Map & Gap of fungal and mycotoxin occurrence in the five African countries
- Crop sampling and collection of agronomic and weather data in the five African countries
- Study of the fermentation processes of the five selected products





# Collaboration with 'sister' project

- [Food Safety for Africa \(foodsafety4africa.eu\)](https://foodsafety4africa.eu)







Up-rise ↗

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Up-rise ↗



Up-rise ↗



NOVA  
UP-RISE ACTION  
MAP

PRIORITY WELCOME



## 46<sup>th</sup> Mycotoxin Workshop of the Society for Mycotoxin Research

May 25–28, 2025, Martina Franca, Italy

**Venue:** Park Hotel San Michele (<https://www.parkhotelsanmichele.it/>)



The Workshop is organized by:

- **Antonio Moretti**, Institute of Sciences of Food Production of Research National Council of Italy, CNR-ISPA, Bari, Italy;
- **Paola Battilani**, Faculty of Agriculture, Food and Environment, Università Cattolica del Sacro Cuore of Piacenza, Italy;
- **Chiara Dall'Asta**, Department of Food and Drug, University of Parma, Italy;

on behalf of the Society for Mycotoxin Research and supported by the International Society for Mycotoxicology.



**46<sup>th</sup> Mycotoxin Workshop**  
May 25–28, 2025, Martina Franca,  
Italy

**OPENING REGISTRATION: December 1,  
2024**  
We are looking forward to seeing you at the

**SOCIETY FOR MYCOTOXIN RESEARCH**  
Gesellschaft für Mykotoxinforschung e.V.

[www.mycotoxin-workshop.eu/](http://www.mycotoxin-workshop.eu/)