



MYMATCH

Deliverable D3.1

Food System Stakeholders Engagement Plans



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Project's summary

Climate change amplifies food safety risks by fostering the proliferation of pathogens and contaminants in the food supply chain and introducing unfamiliar or novel hazards.

Among the food safety threats, because of their ubiquity, MYMATCH will consider the effects of climate change on a selection of mycotoxins-(MY) (related to fungi belonging to *Aspergillus*, *Fusarium*, and *Alternaria*) occurring in maize, wheat, tomato, and nuts.

Thanks to a strong and multi-actor partnership, MYMATCH will contribute to:

1. the prediction and mitigation of risk related to fungi and MY occurrence,
2. the assessment of MY exposure in humans (concerning different diets) and animals, and
3. the implementation of proper risk management measures.

This will be achieved with data collection taking place at different levels, from literature considering events that happened in the past, under controlled environments and open fields, enabling the generation of the missing datasets needed to fulfil the project aims.

This will support the development and implementation of fungi and MY predictive models founded on accurate climate change scenarios to anticipate the changes in MY occurrence in European food systems.

MYMATCH AI MY management Platform will be the final output, the support for all food system actors with tailored predictions, recommendations, and mitigation approaches. By using this platform, the agri-food researchers, farmers, industry stakeholders, and policymakers, involved in the project through the MYMATCH's Multi-Actor Framework, will be assisted in taking threat-mitigation initiatives and in decision-making, both in the short- and strategic long-term planning.

MYMATCH tools and methods will be generated in a way that is easily extendable to other contaminant issues and co-created and developed with a strong interaction with potential users like EFSA.

Document's objective and executive summary

The Food System Stakeholders Engagement Plan aims to define the structured and systematic approach the MYMATCH project adopts to engage diverse stakeholder groups effectively throughout the project lifecycle. The plan articulates strategies tailored to the unique needs and expectations of key stakeholder categories, including farmers, food industry representatives, consumers, and policymakers. It guides the planning, execution, and continuous adaptation of engagement activities to foster meaningful participation, knowledge exchange, and collaborative decision-making. By facilitating transparent and reciprocal communication, the plan seeks to ensure that the project aligns closely with stakeholder concerns and priorities, thereby enhancing the relevance, impact, and sustainability of project outcomes.

The MYMATCH Food System Stakeholders Engagement Plan provides a comprehensive framework for engaging a broad spectrum of stakeholders pivotal to addressing MY management within a changing climate context. The plan builds upon extensive stakeholder mapping and categorization that identified 264 key participants across four primary groups: farmers, food industry actors, consumers, and policymakers. Drawing on an in-depth SWOT analysis, the plan details tailored engagement strategies intended to accommodate the differing priorities and capacities of these groups.

Engagement activities are underpinned by robust research tools, including tailored survey instruments and participatory workshops, enabling systematic collection of community-level insights, needs, and priorities. Ethical considerations have been prioritized, with appropriate approvals secured to support the deployment of engagement instruments. The Stakeholder Advisory Board (SAB), established with active representation from all stakeholder categories, guides the inclusive governance and adaptive management of engagement efforts.

This plan underscores MYMATCH's commitment to a multi-actor, user-centered approach that facilitates co-creation, knowledge exchange, and iterative feedback. It serves as a strategic roadmap to empower stakeholders, inform research directions, and enhance policy and practice outcomes related to food safety and climate resilience across Europe's food systems.

Table of contents

Acknowledgements	1
Project’s summary	2
Document’s objective and executive summary	3
Table of contents.....	4
List of abbreviations.....	5
List of figures	6
List of tables.....	6
1. Introduction & Overview	7
2. Inspiring theoretical principles of the MYMATCH Stakeholder Engagement Plan	8
2.1.1 The Rationale for Stakeholder Engagement in Climate Change and Food Safety	8
2.1.2 Multidisciplinary Environment for Bringing Engagement to Real	9
2.1.3 In-depth Listening to Enable Dialogue with all Stakeholders.....	10
2.1.4 Considering Stakeholders as Co-Authors	11
2.1.5 Enabling Mutual, Continuous Learning	11
3. MYMATCH Stakeholder Engagement Plan Methodology	13
To truly make MYMATCH a multi-actor project, the consortium engaged stakeholders since the beginning of the project. MYMATCH will build a strong and comprehensive Stakeholder Engagement Methodology, effectively guiding all stakeholder engagement activities throughout the project, while relying on a science-based model and on various methods and tools.	
	13
MYMATCH Scientific Model for Engagement.....	13
3.1 Stakeholders Identification.....	16
3.2 Stakeholders Analysis	20
3.3.1. Farmers: SWOT Analysis.....	22
3.3.2. Food Industries: SWOT Analysis	24
3.3.3. Consumers: SWOT Analysis	26
3.3.4. Policymakers: SWOT Analysis.....	28
3.3 Stakeholders Engagement Activities	30
3.3.1 Stakeholders Surveys: Farmers, Consumers, & Food Industries.....	30
3.3.2 Stakeholders Interviews: Policymakers	31
3.3.2.1 Summary of One-to-One Expert Interviews (In progress)	32
3.3.3 Stakeholders Advisory Boards (SAB)	32

3.3.3.1	Stakeholders Advisory Board Meeting Planning & Execution	34
4.	Proposed Future Strategies for Stakeholder Engagement Throughout the MYMATCH Project	35
4.1	Farming Community.....	36
4.2	Food Industries.....	36
4.3	Consumers.....	37
4.4	Policymakers & Public Bodies.....	37
4.5	Other European Projects and Networks.....	38
5.	References	42

List of abbreviations

AI – Artificial Intelligence

CC – Climate Change

COVID19 – Coronavirus Disease of 2019

EFSA – European Food Safety Authority

EIDs –(Re)emerging Infectious Diseases

EU – European Union

Etc. – Et cetera

FAO – Food and Agriculture Organization

FS4EU – Food Safety4EU

KPI – Key Performance Indicator

MAA – Multi-Actor Approach

MY – Mycotoxin

NGO – Non-governmental Organization

R&D – Research and Development

SAB – Stakeholders Advisory Board

SME – Small and Medium Enterprise

SWOT – Strengths, Weaknesses, Opportunities and Threats

WP – Work Package

List of figures

Figure 1- Level of stakeholders' engagement.....	15
Figure 2- Actions based on engagement level.....	16
Figure 3- Individuals' Relationships Within Communities and the wider society.....	17
Figure 4- Farmers SWOT Analysis.....	23
Figure 5- Food Industry SWOT Analysis.....	25
Figure 6- Consumers SWOT Analysis.....	28
Figure 7- Policymakers SWOT Analysis.....	30

List of tables

Table 1. Stakeholders' Distribution by Country and Group	20
Table 2. List of SAB Members by Country	34
Table 3. MYMATCH Stakeholder Engagement and Dissemination Activities Matrix	41

1. Introduction & Overview

(MY), toxic secondary metabolites produced by certain fungi, present a particularly persistent and complex challenge. Their heat stability and resistance to conventional food processing make them difficult to eliminate, posing ongoing risks to public health and economic stability. MY, (such as aflatoxins produced by *Aspergillus* spp) are increasingly prevalent due to favourable conditions for fungal proliferation under warmer climates (Deshmukh et al., 2025; Şen & Kabak, 2025). Recent studies have found MY occurrence above detectable levels in 60-80% of food samples (Eskola et al., 2020), with the economic burden reaching billions of dollars annually in the United States alone. Climate change (CC) has been shown to influence both the geographical distribution of mycotoxigenic fungi and their toxin-producing capacities, potentially leading to elevated contamination levels in some regions and the emergence of new hotspots in other (Battilani & Leggieri, 2015; Medina et al., 2017; Moretti et al., 2019).

MY exert various adverse effects on human health, including carcinogenicity, mutagenicity, teratogenicity, cytotoxicity, neurotoxicity, nephrotoxicity, immunosuppression, and estrogenic effects (Silva et al., 2019). The severity of these effects depends on the amount ingested, duration of exposure, and individual factors such as age, gender, body weight, diet, and health status (Abrunhosa et al., 2016). According to the Food and Agriculture Organization (FAO), and recently confirmed (Eskola et al., 2020), an estimated 25% of food is contaminated by MY, with severe consequences for health as well as economic prosperity globally (Soares Mateus et al., 2021). Although the risks from MY are well known, CC is expected to alter their occurrence, posing new challenges for food safety and security (Adunphatcharaphon et al., 2022).

Given the multifaceted nature of food safety under climate stress, effective stakeholder engagement-encompassing policymakers, farmers, scientists, food producers, and consumers is essential. Identifying and incorporating stakeholder requirements early in the development process is essential to ensure that new detection technologies are both practical and widely adopted. Thus, ensuring food safety in the era of CC requires a coordinated approach grounded in scientific innovation, policy reform, and inclusive

stakeholder participation to safeguard human health and promote sustainable food systems.

2. Inspiring theoretical principles of the MYMATCH Stakeholder Engagement Plan

CC and food safety are recognized as two of the most pressing and interconnected challenges facing society. The need to adapt agricultural practices and develop more resilient cropping systems is urgent and requires a genuine engagement of various stakeholders to effectively tackle these global issues, as well as to ensure a comprehensive perspective and enhance the effectiveness of proposed solutions. Thus, following the principles of the Multi-Actor Approach (MAA) (Calliera et al., 2021; Feo et al., 2022), MYMATCH will collaborate with a broad spectrum of food system actors, including farmers, producers, food industries, consumers, decision-makers and governments, as well as academia. To that end, MYMATCH has carefully planned the use of specific methods and tools to foster stakeholder engagement within a Multi Actor Framework. In the following paragraphs we shall explain the theoretical background in which the MYMATCH Stakeholder Plan is rooted.

2.1.1 *The Rationale for Stakeholder Engagement in Climate Change and Food Safety*

There is a growing need for a paradigm shift in stakeholder engagement, moving from traditional, top-down consultation toward a more inclusive, iterative, and co-creative process that recognizes stakeholders as active partners in knowledge generation, decision-making, and solution development. The recent global crisis and the changing expectations regarding the roles and responsibilities of public and private organisations, coupled with the diminished trust in science and experts, highlight the need for new approaches to engage various stakeholders in the agri-food sector. During the 21st century, diverse global problems have emerged, mostly related to food equity, CC, environmental sustainability, zoonotic and (re)emerging infectious diseases (EIDs) – such as COVID-19 - which are affecting the agri-food system.

Many of these risks are likely to rise with continued agricultural development based on land conversion and imprecise application of biochemical inputs such as fertilizers, and pesticides, but they are also correlated with more systemic conflicts (such as

governance, the absence of reliable and accessible social protection programs, lack of dialog among the actors involved). As a consequence, despite the notable efforts of prior generations of scientists, policymakers, farmers, and other agri-food system actors, food safety indisputably remains a challenge for humankind.

In this context of complexity, innovative actions are needed to effectively address such problems. To ensure an effective global response to food safety challenges linked to MY and CC, strong cooperation and trust are required among all key actors across the agri-food chain. Therefore, public policy and consumer behaviour must align with broader societal objectives related to food safety, public health, and climate resilience, ensuring access to safe, nutritious, and sustainable food while protecting both people and the environment. Achieving this alignment requires rethinking how local, national, and global institutions design and implement policies that foster cooperation, trust, and proactive engagement among all food system actors. Rather than merely constraining harmful practices, these efforts should actively promote health-protective and sustainable behaviours. A constructive dialogue between science, policy, and society can help guide ethical and responsible innovation in food safety, particularly in the management of MY risks under CC.

2.1.2 Multidisciplinary Environment for Bringing Engagement to Real

According to recent definitions of stakeholder engagement “any group or individual who can affect or is affected by the achievement of a defined purpose” can be defined as stakeholder. This definition underlines the potential variability of actors that can add value to a cause such as food sustainability. As a consequence, stakeholder engagement should promote and expand the focus shifting from top-down design, planning and implementation efforts beyond downstream participants, to other actors who exert influence for complex issues such as food sustainability. This approach calls for the integration of a variety of perspectives and different power positions, which can bring value to the solution of complex issues, but that needs to be orchestrated and guided. In this perspective, only a multidisciplinary approach can lead to a positive correlation between number of stakeholders that are taken into account during planning, the decision-making processes and the programme success. Applying a multidisciplinary lens in the realization of stakeholder

engagement also needs efficient management and prioritisation of the stakeholders and partner relationships already involved with programme activities.

From MYMATCH perspective, to sustain a multi- and trans-disciplinary collaboration is a fundamental component of a stakeholders engagement process and it implies the open dialog and collaboration among key experts from different disciplines (i.e. psychology, sociology, bioethics, genomics, agricultural sciences, toxicology), together with different group of “lay stakeholders” (i.e. citizens, farmers, policy makers), in order to better disentangle all the different technical, social, economic, political and ethical implications of the emerging challenges in agriculture and food systems.

2.1.3 In-depth Listening to Enable Dialogue with all Stakeholders

Agri-food systems are considerably broader than food value chains. They encompass all the stages of food transformation: growing, harvesting, packing, processing, marketing, consuming and disposing of food residues. Agri-food systems are essentially multidimensional, including sociocultural, economic, environmental and political aspects, having complex interactions with multiple actors operating within dynamic and interactive environments. Recent societal challenges, such as COVID-19 disease and its fallouts, have highlighted the need to listen to citizens’ voices and enable a fruitful dialog with them. This is important, as they are the most important dowels of a complex system that rely on their behaviours to function. Each individual choice and behaviour, indeed, is responsible for a part of the bigger change. In brief, thus, a review of values, principles, and behaviours is essential to ensure globally responsible behaviour, which will lead to an effective shift toward food sustainability. This implies an active listening of all the different perspectives, frame of reference and processes of decision making which are typical of the different stakeholders’ group. A psychosocial ability to measures engagement needs and priorities of the different stakeholders’ group is a key asset to orient meaningful and successful engagement activities and promote behavioural change. We need to listen to stakeholders’ perspective in an empathetic and culturally sensitive way first (and foremost) planning occasions and activities where to enable participation. Psychological insight, process of consumers and stakeholders’ intelligence are, according to MYMATCH vision, a key preliminary strategic action which may ensure not only the success of an engagement

initiative, but also its ethical application. Engagement is a value, but may be interpreted, meant, experienced in different ways by different stakeholders' groups: a psycho-social empathic and rigorous analysis of such perspective is the crucial ingredient for the whole process.

2.1.4 *Considering Stakeholders as Co-Authors*

Too often stakeholders' engagement is approached as a dissemination activity where to inform society and professional communities about the main decisions taken on other tables. Stakeholders thus are engaged in order to get their approval and support as final target of a whole complex process of research, deployment and decision making. This approach is risky and unethical. Risky because it fails in empowering the disruptive and innovative potential of a true dialogue and collaboration with stakeholders, thus losing occasion to promote real sustainable change. Furthermore, a not truly democratic and participatory approach to stakeholders' engagement risks to hinder the final full adoption of an innovation in civil society since stakeholders won't feel completely part of the transformative endeavour neither will be able to appreciate completely the transformative potential of the proposal. Unethical because it risks betraying the original meanings and values which inspire the practices of stakeholder engagement.

In order to avoid such risks, we consider crucial approaching stakeholders as a source of ideas by recognizing their co-authorship about the whole innovative process: in other words, a true and ethical approach to engagement should empower stakeholders in their own right and legitimacy, as well as on their duties as co-partners of the project. They are not defined by their role in the project, but by their interests and their willingness to be engaged. This recognition implies that the orientation of the management of the project should be to shape the project in such a way that it combines the interests of many of the stakeholders and thereby provides value to many of them.

2.1.5 *Enabling Mutual, Continuous Learning*

Given the complexity of current social structures and environmental problems, attaining a truly sustainable society seems rather improbable today. Expert actors

must be extensively involved in knowledge production and normative considerations must be explicitly incorporated.

In MYMATCH, stakeholder engagement is conceived as a cyclical and continuous process that supports knowledge sharing and thus mutual learning between researchers, end-users, and institutional actors. This approach is embedded across Tasks T3.1, T3.2, T10.1, and T12.2.

This cyclical model positions engagement not as a one-off consultation, but as a transformative, iterative process through which all parties—scientists, policymakers, practitioners, and end-users progressively build shared understanding, improve decision-making, and co-create solutions for managing MY risks under CC. While stakeholders are not co-designing the technical architecture of the MYMATCH AI platform, their involvement is essential for shaping its usability, relevance, and applicability. Through ongoing feedback, scenario-based workshops, and pilot testing, stakeholders help refine requirements, identify practical constraints, validate assumptions, and ensure that the final tool supports real-world needs. In this way, engagement functions as a co-pilot process—stakeholders guide, inform, and test the system—ensuring that scientific innovation remains grounded in operational realities without implying full technical co-creation.

Ultimately, MYMATCH aims for these engagement experiences to foster lasting learning and collaboration, extending beyond the timeframe of the project and strengthening long-term cooperation between science, policy, and society in the field of food safety.

A key element of participation, especially in the context of managing increasing uncertainty, and attaining such a normative and yet ill-defined goal as sustainable food development, is learning. We use the term mutual learning to emphasize the focus on informal exchanges of knowledge and experiences based on reciprocity and reflexivity, all of which are foundational to producing legitimate and socially accountable knowledge. In doing so, stakeholder engagement requires a new “attitude” also in the way people are willing to learn, to listen, to cooperate and to accept others’ interests and values. Furthermore, the principle of mutual and continuous learning must be accepted. However, not all the actors from a more

traditional learning culture may cope with this challenge, as it requires a change in the way knowledge and expertise are conceived. For these reasons, it is necessary to combine aspects of peer learning (experts) with those of social learning, emphasizing differences and dialogue between experts as opportunities and cornerstones of a change program for European food policies.

3. MYMATCH Stakeholder Engagement Plan Methodology

To truly make MYMATCH a multi-actor project, the consortium engaged stakeholders since the beginning of the project. MYMATCH will build a strong and comprehensive Stakeholder Engagement Methodology, effectively guiding all stakeholder engagement activities throughout the project, while relying on a science-based model and on various methods and tools.

MYMATCH Scientific Model for Engagement

The science-based model (Graffigna, G., 2021) allows the assessment of the psychological levels of stakeholders' engagement to identify the best strategies to involve them into the processes as described in the following paragraph. The model illustrates a progressive pathway from disengagement to full engagement, showing how different MYMATCH stakeholder groups move through motivational and psychological states before becoming active contributors in the food safety and MY management process. The first phase, Disengagement, represents a condition in which individuals or groups feel distant, uninterested, or unaware of their potential role-this is often the case for consumers, whose limited visibility of MY risks requires awareness-building, clarification of relevance, and reduction of perceived barriers. At this stage, the priority is not to trigger immediate action but to create the cognitive and emotional space for recognizing why participation matters.

The second phase, Arousal, captures the moment when initial curiosity or concern begins to emerge. Farmers frequently fall within this stage, showing interest when practical benefits become visible. Strategic actions here involve promoting internal resources-helping them build confidence, recognizing their existing knowledge, and clarifying how their contribution can meaningfully influence risk reduction. Once this motivational activation develops, individuals progress into Adhesion, where they start

aligning more closely with the project or network. Food industry actors typically reflect this phase: they acknowledge the importance of managing MY risks but still require autonomy-supportive structures, clear demonstrations of value, and feasible pathways to integrate new practices. At this point, strengthening ownership and enabling independent yet coordinated action becomes essential.

Finally, the process culminates in Engagement, where individuals or groups feel fully involved, motivated, and integrated into the shared mission. Policymakers often operate closest to this phase, as they already recognize the societal implications of MY management and can embed these responsibilities within institutional frameworks. In this stage, participation stabilizes and becomes mutually reinforcing, allowing the ecosystem to benefit from sustained, proactive, and autonomous contributions across the food system.

In this framework, we propose an innovative model that emphasise stakeholder engagement as a continuous flux and transformation rather than any assumed shift from one 'steady state' to another.

According to our model, in fact, stakeholders can demonstrate different levels of "availability to be engaged", it means that they can be more or less oriented to change their behaviors towards a more active predisposition in the network. Taking part to a broader network, which rely on a partnership among all the actors involved, means that a certain degree of motivation to participate is needed in order to effectively reach the outcomes. However, psychological behavioral change theories demonstrate that people can be at different stages of their engagement process, which means that they can be reached through different engagement strategies and can contribute differently to the network. In other terms, too often stakeholders' engagement only relay on the consideration of visible outcomes of engagement (in terms of behaviors, opinions and rational declaration from the stakeholders which needs to be engaged). From psycho-social perspective, those elements are only the tip of an iceberg of stakeholders' participation in a process. MYMATCH goal is to unveil the deeper emotional and motivational - as well as socio-cultural - elements that may sustain or hinder the stakeholders' willingness and availability to participate.

In particular, our approach relies on science-based model to assess the psychological levels of stakeholders' engagement and to identify the best strategies to involve them into the processes (adapted from *the People Health Engagement Model, Graffigna et al., 2015*), presented in the Figure 1 below.

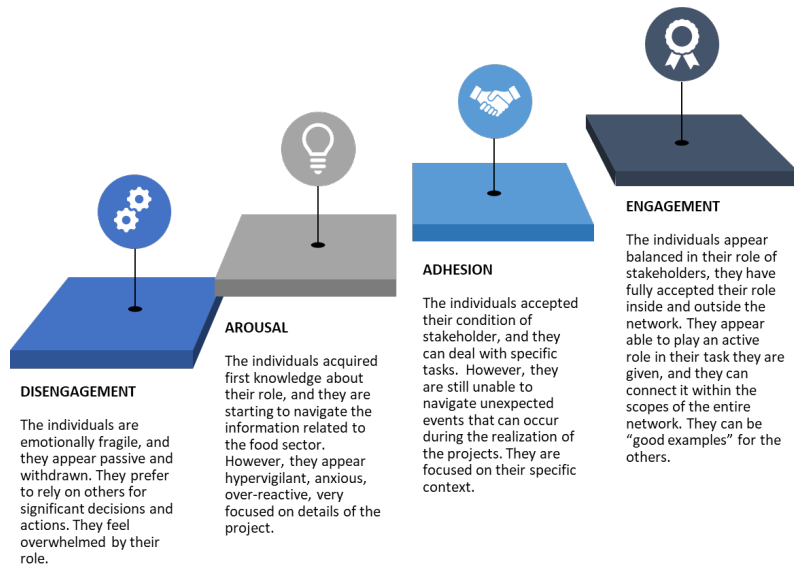


Figure 1- Level of stakeholders' engagement

This model, grounded in a scientifically validated framework for stakeholder engagement, serves as both a diagnostic tool and a strategic guide for communication and training initiatives. Rather than directly measuring individual stakeholders' engagement through a dedicated questionnaire, this framework is used to prioritize stakeholder groups and tailor related activities accordingly. The approach is designed to enhance awareness, facilitate meaningful dialogue, and position stakeholders as proactive partners within the agri-food network, equipping them to address both current and emerging challenges.

As previously argued, effective stakeholder engagement is widely recognized as a cornerstone of collaborative research and innovation, particularly within complex, multidisciplinary projects addressing societal challenges such as CC and food safety. Meaningful engagement requires continuous, transparent, and iterative dialogue that integrates stakeholders' perspectives, values, and expertise throughout the project lifecycle. Building on this theoretical foundation, the MYMATCH project adopted a

systematic methodology of stakeholders' engagement articulated in three steps: 1) stakeholders' identification; 2) stakeholders' analysis; 3) stakeholders' engagement activities (Figure 2) as described in the following paragraphs.



Figure 2- Actions based on engagement level

3.1 Stakeholders Identification

MYMATCH stakeholder engagement plan builds on a structured mapping process that has already been initiated in the first project's months. To establish a comprehensive overview of the MY ecosystem, we developed and circulated an Excel-based stakeholder mapping tool among MYMATCH partners. Each partner contributed by identifying and listing potential stakeholders across four main categories: farmers, consumers, food industry representatives, and policymakers. This iterative process allowed the continuous refinement and expansion of the stakeholder list through collaborative exchanges among partners. In parallel, an extensive online search was conducted to identify additional relevant actors at both the national level (with a focus on Italy) and the EU level, ensuring the inclusion of key organizations, networks, and initiatives related to MY management and CC adaptation. The resulting database provides the foundation for targeted engagement actions and will inform the next steps of stakeholder interaction and co-design activities within MYMATCH.

Stakeholder theory states that in order to be successful, a project needs to consider the interests of a wider group of stakeholders, including institutional representatives, profit and non-profit organizations, companies, end users, suppliers, etc. When considering the interests of stakeholders, a first decision that should be made is to define who should be recognized as stakeholder. This definition has evolved over the past decades. Stakeholders in this plan are defined as individuals, groups, or

organizations that are affected by-or can influence-decisions or actions related to food safety management and climate change, and who may be prioritized in decision-making on these issues.

Define the stakeholder ecosystem: We consider crucial to identify key stakeholders at different levels of the “ecosystem” in which a policy should be developed and applied. The Ecological Systems Theory (also called “Development in Context or Human Ecology Theory”) was developed by Urie Bronfenbrenner. It offers a framework which enables community psychologists to examine individuals' relationships within communities and the wider society (Figure 3). The theory is also commonly referred to the ecological framework. It identifies five environmental systems with which an individual interacts. In our approach to stakeholders' engagement an ecological attention is paid to the different levels of the eco-system of a policy making process in order to be sure to identify and map stakeholders and their interconnections which may explain opinions, behaviours and levels of engagement. This tool was used, indeed, to support the brainstorming activity and to define possible stakeholders taking into consideration all the applicable levels.

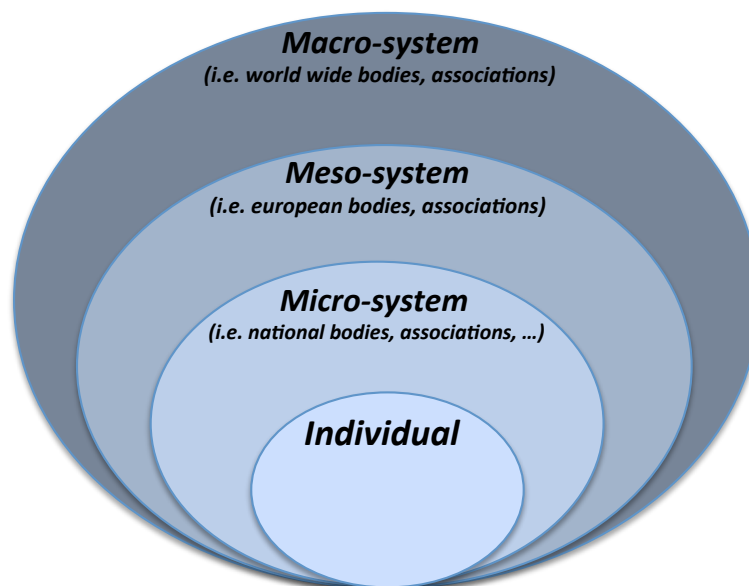


Figure 3- Individuals' Relationships Within Communities and the wider society

According to this model, the following levels of stakeholders' identification are considered:

- **Microsystem:** Refers to the institutions/bodies and groups that most immediately and directly impact the individuals' attitudes and behaviours.
- **Mesosystem:** Consists of institutions/bodies that are possibly interconnected with the microsystems with a broader level of influence.
- **Macrosystem:** Describes the institutions/bodies that represent the overarching culture that influences citizens and stakeholders' attitudes and behaviours, as well as the microsystems and mesosystems embedded in those cultures. Cultural contexts can differ based on geographic location, socioeconomic status, poverty, and ethnicity. Members of a cultural group often share a common identity, heritage, and values.

In MYMATCH, stakeholder identification and mapping allowed to position the key stakeholder groups within the broader ecosystem model, ensuring coherence between their roles and levels of influence. Accordingly, stakeholders are categorized across the micro-meso-macro layers of the food safety ecosystem as follows:

- Consumers at the micro level, representing individual behaviours, perceptions, and decision-making;
- Farmers and food industry actors at the meso level, functioning as operational and organisational components of the food supply chain;
- Policymakers at the macro level, shaping regulatory frameworks, institutional priorities, and governance mechanisms.

As well as identifying potential stakeholders, it is also necessary to determine the level of engagement priority that should be afforded to Project stakeholders. Stakeholder priority can be determined by understanding each stakeholder's influence and impact in relation to the Project. This is termed "stakeholder mapping", the process for which is outlined below.

Stakeholder impact refers to the degree to which a project affects the interests, priorities, and conditions of its stakeholders. These impacts can be either positive or negative, resulting in improvements or challenges to stakeholder wellbeing,

operations, or decision-making. In this project, stakeholders are grouped into four primary categories to guide the stakeholder mapping process, where each group may experience different types and levels of impact based on their role in the food system, exposure to risks, and adaptive capacity.

- **Farmers** - As primary producers, farmers are often the most directly affected by climate variability and MY risks. Project activities may significantly influence their production practices, crop management, and economic stability. Impacts are typically immediate and operational, relating to on-farm decision-making, risk awareness, and access to mitigation tools.
- **Food Industry Representatives** - This group includes processors, distributors, and retailers whose operations depend on the quality and safety of agricultural products. Impacts are often felt through supply chain disruptions, regulatory changes, and the need to adopt new safety standards or technologies to manage contamination risks.
- **Consumers** - Consumers are affected indirectly through food availability, safety, and prices. The project's outcomes may influence consumer awareness, trust in food systems, and access to safe, nutritious food. Impacts at this level are typically societal, shaping perceptions of food safety and behavioural adaptation to climate-related risks.
- **Policymakers** - Policymakers and regulatory authorities are impacted through evidence-based recommendations that inform legislation, monitoring systems, and resource allocation. Their engagement is critical for integrating research findings into policy frameworks that strengthen food safety and resilience under CC.

Stakeholder Landscape Across MYMATCH

Stakeholder identification is conducted based on available primary and secondary data information, a review of available Project documentation, input from the Project partners, as well as being informed by the results of site visits. The stakeholder list will be continuously updated throughout the life of the Project.

Comprehensive stakeholder mapping and identification were successfully completed by all relevant partners, covering a total of 265 stakeholders. These have been

categorized into four principal groups: farmers (n=59), the food industry (n=89), policymakers (n=85), and consumers (n=41) with a total of 11 EU level stakeholders as highlighted in Table 1. These categories underpin the development of tailored engagement approaches and research tools. This categorization lays the groundwork for targeted engagement strategies tailored to each group's characteristics and needs.

S. No	Country	Farmers	Consumers	Industry	Policymakers	Total
1	ES	3	4	4	2	13
2	HU	3	2	5	2	12
3	FR	3	3	5	4	15
4	NO	2	1	6	4	13
5	UK	4	3	7	3	17
6	PT	5	1	5	4	15
7	RS	9	1	5	4	19
8	HU	0	0	0	0	0
9	EL	3	1	5	3	12
10	IT	26	20	45	56	147
11	EU	1	5	2	3	11
Total		59	41	89	85	274

Table 1. Stakeholders' Distribution by Country and Group

3.2 Stakeholders Analysis

Following the initial mapping phase, a stakeholder analysis was conducted to systematically assess and categorize the identified actors according to their relevance, influence, and interest in MYMATCH's objectives. Methodologically, stakeholder analysis is a key step in participatory research and project design, aimed at

understanding the roles, expectations, and potential contributions of each actor within the system. This analytical process involved classifying stakeholders based on criteria such as their decision-making power, technical expertise, geographical coverage, and degree of engagement in issues related to MY management and climate resilience. The analysis enables prioritization of engagement efforts, ensuring that both highly influential and highly affected groups - such as farmers and food processors - are adequately represented in subsequent participatory activities. By integrating both mapping and analytical dimensions, this approach ensures that stakeholder engagement in MYMATCH is evidence-based, inclusive, and strategically aligned with the project's multi-actor and co-creation principles. Key part of the stakeholder's analysis in MYMATCH approach was to conduct a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis as explained in the following section.

The SWOT analysis is a structured analytical tool used to assess internal and external factors that may influence the success of a project, organization, or stakeholder group. It helps identify what works well (strengths), what needs improvement (weaknesses), where new advantages can be leveraged (opportunities), and what potential risks or barriers exist (threats).

In the context of WP3 of the MYMATCH project, the SWOT analysis was applied to understand how the different stakeholder groups - farmers, food industries, policymakers, and consumers - interact with and are affected by climate-driven MY risks, as well as to guide the design of tailored engagement strategies.

The analysis combined a review of the scientific and grey literature with direct input from project partners, gathered through a dedicated workshop held during the MYMATCH Consortium meeting in Braga (4-5 November 2025). During the session, partners were asked to reflect on key challenges (weaknesses/threats), opportunities, and effective engagement strategies for each stakeholder group. This participatory exercise provided qualitative insights based on partners' disciplinary expertise, field experience, and national contexts.

Overall, this SWOT exercise served as a foundation for defining targeted engagement tactics and refining the multi-actor approach. The results underscore the importance

of demonstrating tangible value, fostering trust through two-way communication, and co-creating solutions with stakeholders rather than imposing them.

3.3.1. Farmers: SWOT Analysis

Farmers' practical knowledge and firsthand experience with MY contamination is critical for the MYMATCH project's success. Their local networks also facilitate communication within rural communities, making them pivotal for outreach. However, gaps in access to advanced technology and limited capacity for rapid adoption present challenges. Engagement strategies can build awareness and empower farmers, while resilience-building helps manage climate impacts. Economic pressures, misinformation, and regulatory uncertainties remain key threats needing continuous attention to sustain farmers' active participation and confidence. Using a standard SWOT framework, we conducted a comprehensive analysis of the farming sector; the findings are summarised below and illustrated in Figure 4.

Strengths

Farmers bring invaluable practical knowledge of crop production, grounded in years of hands-on experience. Their firsthand experience with MY contamination gives them a realistic understanding of on-farm challenges and management practices. Farmers also possess strong local networks and connections within rural communities, which foster trust, information exchange, and cooperation. Their deep understanding of farming challenges—from soil management to post-harvest storage—makes them essential partners in co-developing feasible and context-specific mitigation strategies. Collectively, these strengths position farmers as key contributors to the co-creation and validation of MYMATCH tools and recommendations.

Weaknesses

Despite their practical expertise, farmers often face limited access to advanced technologies and digital tools, which can restrict their ability to implement innovative solutions for MY management. Many may also experience difficulty adopting new practices, particularly when these require additional time, investment, or technical understanding. Dependence on weather conditions further exposes them to uncertainty, while heavy workloads may limit their availability for project activities or training. Additionally, language and literacy barriers can hinder effective

communication and understanding of scientific information, underscoring the need for tailored, user-friendly engagement approaches.

Opportunities

The MYMATCH project offers farmers numerous opportunities to strengthen their adaptive capacity. Through participation in knowledge-sharing workshops, they can exchange experiences and learn from researchers and peers. Engagement in citizen science activities enables them to contribute data and observations that inform research while increasing their scientific literacy. Farmers can also co-create solutions with scientists and other stakeholders, ensuring that tools and practices developed are practical and relevant. Training activities and access to practical tools and information further empower farmers to improve crop management, reduce MY risks, and enhance resilience to climate impacts.

Threats

Farmers remain highly vulnerable to climate variability, with extreme weather events directly influencing crop quality and MY contamination levels. Economic pressures resulting from yield losses and market fluctuations can exacerbate financial instability, while regulatory changes may impose additional compliance challenges. The spread of misinformation-for example, about pesticide use or contamination control-can lead to ineffective or harmful practices. Finally, pest outbreaks and unexpected contamination events represent unpredictable threats that can undermine both productivity and trust in mitigation strategies.

<p>STRENGTHS</p> <ul style="list-style-type: none"> • Practical knowledge of crop production knowledge • Firsthand experience with MY contamination • Established local networks • Connection to rural communities • Deep understanding of farming challenge 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • Limited access to technology • Difficulty adopting new practices • Dependence on weather factors • Overloaded with workload • Language & literacy barriers
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Participation in knowledge-sharing workshops • Engagement in citizen science activities • Potential to co-create solutions • Participation Training • Access to practical tools & information 	<p>THREATS</p> <ul style="list-style-type: none"> • Increased vulnerability to climate variability • Economic pressures due to crop yield loss • Exposure to market fluctuations and regulatory risks • Possible misinformation affecting decision-making • Pest outbreaks and unexpected contamination threats

Figure 4- Farmers SWOT Analysis

3.3.2. Food Industries: SWOT Analysis

The food industry is equipped with significant infrastructure and regulatory familiarity, positioning it as a key stakeholder in managing food safety risks. Their financial and operational scale enables investments in advanced AI tracking and contamination monitoring tools. However, complexity in supply chains and slow adaptation to innovations restrict their responsiveness. Collaboration in advisory boards and capacity-building initiatives within MYMATCH can harness their capacities. Using a standard SWOT framework, we conducted a comprehensive analysis of the food industry sector; the findings are summarised below and illustrated in Figure 5.

Strengths

The food industry benefits from established processing, monitoring, and safety infrastructures, which provide a solid foundation for managing food quality and reducing MY risks. Many companies possess strong financial resources, enabling them to invest in new technologies and quality assurance systems. Their experience in large-scale production ensures efficiency and consistency, while familiarity with regulatory frameworks allows them to navigate compliance requirements effectively. Furthermore, the industry's connectivity with suppliers and partners facilitates coordinated responses across the value chain, from raw material sourcing to product distribution. These strengths make the food industry a crucial actor in implementing preventive and adaptive measures for MY management within MYMATCH.

Weaknesses

However, several internal challenges can limit agility and innovation. Complex supply chains often make it difficult to trace raw material origins or monitor contamination risks at every stage. Potential delays in information flow and decision-making can hinder timely responses to contamination events. Many companies are slow to update practices or face difficulties integrating new technologies-especially when legacy systems or cost considerations are involved. Limited transparency in raw material sourcing remains a significant issue, as incomplete data from suppliers can compromise risk assessment and undermine consumer trust.

Opportunities

The MYMATCH project creates opportunities for the food industry to modernize and strengthen its safety systems. Companies can implement AI-based tools for real-time tracking, prediction, and decision support in MY management. Active collaboration on innovation - through co-design workshops or research partnerships - can help tailor these tools to industrial needs. Participation in cross-sector advisory boards allows the industry to influence policy dialogues and align with best practices at the EU level. Moreover, training and capacity-building activities within MYMATCH can enhance staff skills in risk monitoring and data interpretation. The expansion of digital monitoring platforms offers further potential to improve traceability, optimize quality control, and reduce economic losses.

Threats

The food industry faces several external risks that may affect stability and reputation. Increasing regulatory demands - especially around food safety and environmental compliance - can raise operational costs and require frequent system upgrades. Reputational damage due to contamination incidents or product recalls remains a persistent concern, as it can quickly erode consumer trust. Intense market competition and consumer skepticism over product safety or sustainability may pressure companies to demonstrate greater transparency. Additionally, climate variability poses a significant threat, disrupting agricultural supply chains and altering the prevalence of MY contamination, thereby increasing both financial and operational risks.

<p style="text-align: center;">STRENGTHS</p> <ul style="list-style-type: none"> • Established processing, monitoring, & safety infrastructure • Financial resources to invest • Experience in large-scale production • Regulatory familiarity • Connectivity with suppliers & partners 	<p style="text-align: center;">WEAKNESSES</p> <ul style="list-style-type: none"> • Complex supply chains • Potential delays • Sometimes slow to update practices • Difficulty fully integrating new tech • Limited transparency into raw material sourcing
<p style="text-align: center;">OPPORTUNITIES</p> <ul style="list-style-type: none"> • Implement AI tools for tracking • Collaborate on innovation • Participation in cross-sector advisory boards • Training & capacity building via MYMATCH • Expansion of monitoring through digital platforms 	<p style="text-align: center;">THREATS</p> <ul style="list-style-type: none"> • Growing regulatory demands & its costs • Risk of reputational damage due to safety incidents • Market competition • Consumer skepticism affecting brand image • Disruptions from climate variability affecting supply chains

Figure 5- Food Industry SWOT Analysis

3.3.3. Consumers: SWOT Analysis

Consumers' growing focus on food safety, ethical sourcing, and transparency empowers them as a potent lever for change, especially through market demands. Yet, their indirect influence on production and policymaking creates a gap requiring active engagement to harness their potential fully. Misinformation and conflicting information degrade trust, while limited technical literacy hampers their capacity to assess risks. Using a standard SWOT framework, we conducted a comprehensive analysis of the consumers; the findings are summarised below and illustrated in Figure 6.

Strengths

Consumers play a pivotal role in shaping food systems through their increasing awareness of food safety and quality standards. Their high demand for transparency and ethical sourcing has encouraged producers and retailers to adopt more responsible and traceable practices. As a collective group, consumers possess the ability to influence market trends and demand, guiding shifts toward safer and more sustainable food products. The growing interest in sustainability and safe food reflects their willingness to support innovations that reduce risks such as MY contamination. Moreover, many consumers engage in social movements and advocacy campaigns, which amplify public dialogue on food safety, environmental health, and responsible consumption.

Weaknesses

Despite their influence, consumers often face limited direct control over production and supply chain practices, relying on producers, regulators, and retailers to ensure food safety. Many lack technical knowledge about MY, climate-related risks, or food system complexities, which can limit informed decision-making. Uncertainty or confusion about food safety information - especially when scientific data is not communicated in accessible terms - can lead to inconsistent behaviors. Additionally, limited participation in formal governance processes means that consumer perspectives are not always represented in policy or research discussions. The fragmented nature of consumer representation, with diverse interests and information sources, further complicates coordinated engagement.

Opportunities

The MYMATCH project offers multiple avenues to engage and empower consumers. Surveys and citizen science initiatives can involve them directly in data collection, awareness, and participatory research. Consumers also have the potential to drive change through advocacy, influencing both policy and market practices toward safer, climate-resilient food systems. Collaboration in co-creating trust-building initiatives, such as transparent communication campaigns or labeling improvements, can enhance confidence in food safety. Awareness campaigns and educational activities provide opportunities to improve public understanding of MY and their links to CC. Finally, multi-actor engagement platforms create spaces where consumers can interact with scientists, policymakers, and industry representatives, strengthening mutual trust and informed dialogue.

Threats

Consumers are increasingly exposed to misinformation and disinformation, which can erode trust in food systems and scientific institutions. Information overload - often from conflicting or non-verified online sources - further complicates their ability to discern reliable messages. The prevalence of false or misleading claims, including those spread through social media, can distort perceptions of food safety. Persistent distrust toward industry and policymakers may limit acceptance of new innovations or risk management tools. Additionally, the digital divide - both in terms of access and digital literacy - can prevent certain population groups from obtaining credible and timely information, reinforcing inequalities in food safety awareness and engagement.

<p>STRENGTHS</p> <ul style="list-style-type: none"> • Increasing awareness of food safety & quality • High demand for transparency & ethical sourcing • Ability to influence market trends & demand • Growing interests in sustainable & safe food • Active participation in social movements 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • Limited direct influence over production practices • Limited technical knowledge • Uncertainty or confusion over food safety info • Limited participation in formal governance • Fragmentation in consumer representation
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Engagement through surveys & citizen science • Potential to drive change through consumer advocacy • Collaboration in co-creation of trust-building initiatives • Outreach via awareness campaigns & education • Empowerment via multi-actor engagement platforms 	<p>THREATS</p> <ul style="list-style-type: none"> • Mis-information reducing trust in food systems • Information overload with conflicting data • Vulnerability to false or misleading claims • Distrust towards industry & policymakers • Digital divide limiting access to credible resources

Figure 6- Consumers SWOT Analysis

3.3.4. Policymakers: SWOT Analysis

Policymakers possess significant regulatory power, enabling them to shape food safety and public health frameworks effectively. Their ability to allocate resources and engage multiple stakeholders positions them as critical actors in driving systemic improvements. The MYMATCH project can capitalize on policymakers' participation in advisory boards and predictive modelling to support proactive, evidence-based decision-making. Yet, navigating political pressures and conflicting interests requires ongoing stakeholder dialogue and transparent governance to sustain regulatory advances. Using a standard SWOT framework, we conducted a comprehensive analysis of the policymakers; the findings are summarised below and illustrated in Figure 7.

Strengths

Policymakers hold regulatory authority and significant influence over policy frameworks, giving them the capacity to shape food safety, agricultural, and climate-related regulations that directly impact MY management. Their ability to allocate public resources allows targeted funding for research, monitoring, and capacity-building initiatives. With long-term perspectives on food safety and public health, policymakers can promote sustainable and preventive strategies that benefit society as a whole. They also have access to diverse stakeholder consultations, enabling them to integrate multiple viewpoints—from scientists and industry representatives to consumers and civil society—into policy development. Importantly, policymakers are mandated to protect consumer health and welfare, positioning them as central actors in ensuring food system resilience under changing climatic conditions.

Weaknesses

Despite their strategic position, policymakers often face bureaucratic constraints that can slow decision-making and limit flexibility. Policy development frequently lags behind scientific progress, making it difficult to incorporate emerging research findings, such as those related to MY risk prediction or climate impacts. Limited capacity for rapid response can hinder effective management of food safety crises,

while risk aversion may discourage experimentation with innovative policy approaches. Additionally, regulatory gaps or inconsistencies-particularly across regions or sectors-can create challenges in harmonizing food safety measures and ensuring coherent risk management across the value chain.

Opportunities

The MYMATCH project offers policymakers valuable opportunities to strengthen evidence-based governance. They can craft policies and regulations grounded in scientific evidence, leveraging project outputs such as risk models and stakeholder insights. Participation in advisory boards and scientific partnerships fosters closer collaboration with researchers and practitioners, promoting policy coherence and innovation. The use of predictive models and AI-driven tools allows for proactive risk assessment and early-warning systems to anticipate MY contamination under climate variability. Policymakers can also coordinate with EU projects and international partners, aligning MYMATCH's outcomes with broader food safety and climate adaptation agendas. Furthermore, their influence over funding priorities provides an opportunity to support further research, stakeholder engagement, and outreach activities that sustain project impacts beyond its duration.

Threats

Policymakers operate within a complex environment influenced by political and economic pressures, which can restrict the scope and ambition of regulatory actions. Competing agendas and conflicting stakeholder interests may delay policy adoption or dilute regulatory effectiveness. Public skepticism toward government actions can undermine trust, especially in areas concerning food safety and emerging technologies. Political instability or administrative turnover may disrupt policy continuity and long-term planning. Finally, lobbying and influence from interest groups can distort policy priorities, posing a risk to balanced, evidence-based decision-making and the protection of public welfare.

<p style="text-align: center;">STRENGTHS</p> <ul style="list-style-type: none"> • Regulatory authority & influence over policy • Ability to allocate resources • Long-term perspectives for food safety & public health • Access to diverse stakeholder consultations • Mandated to protect consumer health & welfare 	<p style="text-align: center;">WEAKNESSES</p> <ul style="list-style-type: none"> • Bureaucratic constraints & limitations • Policy development can lag behind scientific progress • Limited capacity for rapid response • Risk aversion slowing policy innovation • Possibility of regulatory gaps
<p style="text-align: center;">OPPORTUNITIES</p> <ul style="list-style-type: none"> • Opportunity to craft evidence-based regulations • Participation in advisory boards & scientific partnerships • Use of predictive models for proactive measures • Coordination with EU projects & international partners • Influence on funding to support research & outreach 	<p style="text-align: center;">THREATS</p> <ul style="list-style-type: none"> • Political & economic pressures may limit policy scope • Competing agendas & conflicting interests • Public skepticism toward government actions • Political instability affects policy continuity • Influences from lobbying & interest groups

Figure 7- Policymakers SWOT Analysis

3.3 Stakeholders Engagement Activities

Stakeholder engagement activities within the MYMATCH project are designed to ensure active, continuous, and meaningful participation of all key actors across the food system-farmers, food industry representatives, policymakers, and consumers. These activities aim to establish two-way communication channels that connect scientific research with practical realities, supporting the co-creation of effective and socially relevant solutions. Engagement is being carried out through a combination of surveys, interviews, workshops, and advisory board meetings, which provide opportunities for dialogue, knowledge exchange, and joint problem-solving. During these activities, stakeholders are encouraged to share their experiences, needs, and expectations related to MY management and CC adaptation. The outcomes feed directly into the design of the MYMATCH AI-driven management platform, ensuring that technological innovations are grounded in end-user perspectives and that policy recommendations align with real-world challenges and capacities.

3.3.1 Stakeholders Surveys: Farmers, Consumers, & Food Industries

As part of the stakeholder engagement activities, this project focuses on conducting a stakeholder survey to understand how different actors across the food system - farmers, food industry representatives, and consumers - perceive and respond to the risks posed by CC and MYs. These surveys are the central methodological tool used to assess levels of risk awareness, digital literacy, food safety knowledge, and preferred information channels. By co-designing context, specific questionnaires with

stakeholders, the project ensures that the data collected reflect real-world priorities, barriers, and needs.

These insights will serve as a foundation for designing more effective communication strategies and practical digital tools for early warning and risk management. While the project also aims to map existing digital platforms and practices, this work is guided directly by the feedback and priorities identified through the stakeholder survey. By anchoring innovation in stakeholder realities, the project supports the development of food safety strategies that are both socially relevant and climate resilient.

This study will use three structured questionnaires tailored for farmers, food industry representatives, and consumers. Each tool explores stakeholder awareness, perceptions, concerns, and expectations regarding CC, MY contamination, and food system resilience. The questionnaires and interview guide have been co-designed and reviewed by project partners to ensure clarity, cultural relevance, and scientific accuracy. The data collection method was adapted to the needs of the project, which required engaging key stakeholder groups as identified above.

The measurement instruments consist of *ad hoc* items developed specifically for this project, rather than validated clinical scales, as the study is not a clinical trial but an opinion-based survey. The purpose is to capture stakeholders' perceptions and opinions on key topics of interest in a non-invasive manner. To enhance reliability, the questionnaires were pre-tested and refined to ensure comprehensibility and consistency across respondents. This approach ensures the tools are ethically appropriate, contextually relevant, and aligned with the project's aims.

3.3.2 Stakeholders Interviews: Policymakers

In parallel, key informant interviews are being conducted with policymakers and individual's familiar with legislation, enforcement, or policy processes to explore institutional perspectives on CC and MY management. These interviews focus on understanding existing policies, national strategies, and governance frameworks related to food safety and climate adaptation. Policymakers are also invited to discuss barriers to implementation, coordination challenges among agencies, and opportunities to strengthen cross-sectoral collaboration. Insights from these interviews will inform recommendations for policy alignment, support the co-design

of actionable tools, and ensure that the project's outputs are consistent with regulatory priorities and sustainable food governance goals.

3.3.2.1 Summary of One-to-One Expert Interviews (In progress)

In continuation with the first SAB, we invited the members of the SAB for a one-to-one interview in order to discuss the issues of CC, food safety, MYs risks, digital and artificial intelligence platforms, and multi-actor engagement strategies. The aim is to gather experts and policymakers' insights on how CC is reshaping food safety challenges, with particular attention to MY contamination, and to explore how digital tools can support more effective regulatory and governance strategies.

3.3.3 Stakeholders Advisory Boards (SAB)

The SAB has been established as a foundational body within the MYMATCH project to provide expert advice and ensure stakeholder perspectives are integrated into project activities. The SAB has actively contributed feedback throughout these meetings, reinforcing its role as an essential mechanism for transparent project oversight and adaptive decision-making.

To ensure that the generated knowledge and the developed tools are understandable and adapted to end-users' needs, and to maximise their uptake, MYMATCH consortium will engage with selected end-users to set up a SAB representing farmers (wheat, maize, cereals), food industries, and policymakers from different countries, different scales (local, regional, national, and European), and different types of organizations (associations, NGOs, industries including SMEs, etc.).

The members of the SAB will be invited to regular workshops, including one in-person workshop organized together with the second General Assembly of the project. During these collaborative sessions, planned activities as well as first results will be presented, and the consortium will gather members' advice. In particular, at least one session will be organized to gather their technical requirements for the MYMATCH AI Platform, one session will be focused on the co-design of CC scenarios, one session will be devoted to the training of the developed tools to maximize the uptake of the solutions, and one session will be held for the demonstration of the AI Platform. The collaboration with the SAB over the course of the project will be ensured by the stakeholder engagement methodologies.

The MYMATCH SAB consists of different key experts and stakeholders from different parts of stakeholder categories as highlighted in Table 2. In essence, the SAB should consist of experts that are most influential in their activities with regards to MYs risk management.

S.NO	Name	Affiliation	Country
1	Prof. Michele Suman	Barilla/FoodSafeR Project	Italy
2	Prof. Sarah De Saeger	University of Gent/UPRise Project	Belgium
3	Prof. Hanna leena Alakomi	VTT Technical Research Centre of Finland	Finland
4	Prof. Johanna Suomi	Finnish Food Authority	Finland
5	Cristiano Spadoni	Image Line	Italy
6	Dimitris Tsitsigiannis	Laboratory of Phytopathology, Department of Crop Science, Agricultural University of Athens	Greece
7	Monica Ermolli	Scientist, JRC	EU
8	Catherine Bessy	Senior Food Safety & Quality Officer, FAO	EU
9	Hans Steinkellner	Scientific Officer, EFSA	EU
10	Gianluca Nurra	Scientific & Technical Advisor, Coceral and Euromalt	Italy
11	Karl Presser	Premotec GmbH, President EuroFIR AISBL	Switzerland
12	Barbara Tiozzo	Risk Communication Specialist, EFSA Communication Experts Network	EU
13	Fabrizio Fabbri	Sustainability Policy Manager, Euro Coop	Belgium
14	Frans Verstraete	Directorate-General for Health and Food Safety (DG SANTE), European Commission	EU

Table 2. List of SAB Members by Country

3.3.3.1 Stakeholders Advisory Board Meeting Planning & Execution

The first SAB meeting of the MYMATCH project was held online on 23 September 2025. The workshop aimed to introduce the project's objectives, gather expert feedback, and establish the foundation for continued stakeholder collaboration. The session included an overview of the MYMATCH project by Prof. Paola Battilani, followed by a presentation of the Multi-Actor Approach (WP3) by Prof. Guendalina Graffigna. The agenda was structured to promote active participation, including brief introductions by SAB members and an interactive Mentimeter session that facilitated real-time feedback and brainstorming.

The meeting brought together representatives from academia, international organizations (e.g., FAO, EFSA), industry (e.g., Barilla, Euro Coop), and research institutions across Europe. Discussions focused on the project's scope-developing an AI-driven MY management platform to address food safety under CC-and the role of stakeholders in shaping its direction. SAB members were invited to share their perspectives on challenges in managing MY contamination, the effectiveness of current EU regulations, and expectations for the development of digital and AI-based tools. The meeting successfully set the stage for continued collaboration and advisory input throughout the project's implementation.

The interactive Mentimeter session provided valuable qualitative insights into stakeholders' perceptions. Members emphasized the importance of user-friendly tools, harmonized regulations, and cross-sector communication to improve MY management. Feedback highlighted the need for strong connections between research, policy, and practice, ensuring that scientific outputs are translatable into practical measures for farmers and food industries. The SAB's reflections will directly inform adjustments in stakeholder engagement, platform design, and communication strategies. A mechanism for continuous feedback will be integrated into future meetings to ensure that stakeholder perspectives remain central to project progress.

Initial SAB consultations have focused on mapping and engaging actors across different levels of the food system. Early discussions, including the first SAB meeting,

have identified priority areas such as improving risk communication, enhancing predictive tools for MY occurrence, and integrating end-user feedback into design processes. Stakeholders expressed strong interest in participatory methods that empower farmers, policymakers, and industry partners to co-develop adaptive solutions. These consultations confirmed the need for localized data-informed approaches that can be scaled across diverse agricultural and regulatory contexts.

4. Proposed Future Strategies for Stakeholder Engagement Throughout the MYMATCH Project

The MYMATCH project's stakeholder engagement programme, led under WP3, is designed to build and sustain dialogue between scientific, industrial, and policy actors throughout the project. It aims to:

- Establish and maintain communication with stakeholders.
- Identify end-user needs for MY management under CC.
- Co-design the AI-driven MYMATCH platform.
- Develop synergies with related initiatives such as FoodSafety4EU and other EU projects.

The SAB acts as a key advisory structure in this programme, ensuring that the platform responds to real-world challenges and user expectations. Future activities will focus on deepening engagement through thematic workshops, targeted interviews, and field demonstrations as defined in the above sections. An in-person SAB meeting is planned to facilitate more interactive discussions and collaborative validation of the AI platform in the later part of the project with EU commission. Additional activities will include stakeholder surveys across key groups -farmers, food industry representatives, consumers, and policymakers - to capture diverse perspectives on risk perception, digital literacy, and adaptation practices. These upcoming efforts aim to ensure that MYMATCH remains grounded in stakeholder realities while advancing scientific and technological innovation in food safety under CC.

The next SAB workshop is planned for September 2026, potentially face to face in Bruxelles. Continuous input loops will be established, linking stakeholders' experiences with ongoing platform development and testing. The strategy also

includes collaboration with existing networks and EU projects to ensure that the MYMATCH platform complements broader food safety and climate adaptation initiatives. The SAB acts as a key advisory structure in this programme, ensuring that the platform responds to real-world challenges and user expectations. To ensure that stakeholder perspectives are effectively integrated, MYMATCH will implement a multi-tiered feedback process with strong collaboration with WP11 and WP12.

4.1 Farming Community

Farmers, farmer organizations, and cooperatives form a direct end-user group, whose engagement is central to MYMATCH. The project will deliver practical value through tools and guidelines designed to help anticipate, prevent, and mitigate MY risks under changing climate conditions. Dissemination for this group will use case studies, demonstration plots, risk prediction modules, and tailored training materials. Agricultural events, fairs, and on-farm visits will serve as key interaction points, ensuring access to knowledge and fostering trust.

Activities:

- Distribute user-friendly guidelines and decision-support content.
- Hold demonstration and training sessions at agricultural fairs/events.
- Create targeted video tutorials and fact sheets.
- Collaborate with farmer associations for direct outreach.
- Share best practices and results through cooperative newsletters and EIP AGRI networks.

4.2 Food Industries

Food processors, distributors, and retailers stand to benefit from MYMATCH's predictive models, compliance guidance, and risk-reduction strategies. Dissemination for this group involves delivery of sector-specific reports, workshops on supply chain preparedness, and tech-transfer days to foster knowledge uptake and operational improvements. By illustrating the economic and reputational benefits of proactive MY management, communication will actively support market, compliance, and brand integrity objectives.

Activities:

- Provide predictive reports and commercial case studies.

- Organize chain-wide briefings and control scheme workshops.
- Share content within food clusters, federations, and company channels.
- Issue industry newsletters and host targeted webinars.

4.3 Consumers

Consumers are essential drivers of food system change. MYMATCH's dissemination activities for this group are designed to raise awareness about the health impacts of MYs and CC on food safety. Through partnerships with consumer associations and NGOs, educational campaigns, and consultation platforms like FS4EU, MYMATCH will provide clear, accessible information to build food safety literacy and invite feedback to inform project evolution.

Activities:

- Launch online awareness campaigns via social media and newsletters.
- Develop educational content and infographics for the project website.
- Conduct surveys and consultations with consumer organizations.
- Partner with NGOs for community outreach and engagement.

4.4 Policymakers & Public Bodies

MYMATCH actively targets European, national, and local policy makers as key to shaping regulatory frameworks for food safety and climate resilience. Dissemination for this audience focuses on tailored policy briefs, scenario modeling, and stakeholder roundtables/advisory boards to guide regulatory innovation and implementation. Engagement will leverage direct presentations at policy forums and provide actionable recommendations through established channels.

Activities:

- Prepare and circulate policy briefs and recommendations.
- Attend and present at policy-oriented workshops (e.g., EFSA).
- Involve policymakers directly in the planned co-creation cycles, especially as the platform and project outputs become more mature and ready for policy-relevant feedback.
- Include policymakers in the later SAB workshops to review refined results and ensure alignment with regulatory, governance, and implementation needs.

4.5 Other European Projects and Networks

Collaboration and knowledge sharing with other European projects and international networks are critical to maximizing MYMATCH's reach and impact. Dissemination will focus on establishing synergies, joint events, and knowledge-transfer initiatives, amplifying best practices and facilitating adoption of innovations in food safety and climate resilience.

Activities:

- Organize joint project events and annual meetings (e.g., Ambrosia, UpRise) to facilitate collaboration and knowledge exchange.
- Host networking webinars and share project outcomes.
- Contribute to collective newsletters and online platforms.
- Initiate partnership reports and replication initiatives.

Example of Summary Table 3. elaborated on the basis of Par 4, to be completed with time, any Key Performance Indicator (KPI) and specific actions (i.e. workshop in coming project months/years).

Engagement Strategies	Farming community	Food Industries	Consumers	Policymakers & Public Bodies	Other Networks and EU Project
Establish communication & maximize impact	<ul style="list-style-type: none"> • Distribute user-friendly guidelines and content; demo/training; newsletters • Hold demonstration and training sessions at agricultural events • Collaborate with farmer associations for outreach • Create targeted video tutorials 	<ul style="list-style-type: none"> • Provide predictive reports and commercial case studies • Organize chain-wide briefings and control scheme workshops • Share content within food clusters, federations, and company channels • Issue industry newsletters and 	<ul style="list-style-type: none"> • Launch online awareness campaigns via social media and newsletters • Develop educational content and infographics for the website • Conduct surveys and consultations with consumer organizations 	<ul style="list-style-type: none"> • Prepare and circulate policy briefs and recommendations • Attend and present at policy-oriented workshops (e.g., EFSA) • Involve policymakers in co-creation cycles • Include policymakers in SAB workshops to review refined results • Share regulatory guidance and best practices via ministry newsletters 	<ul style="list-style-type: none"> • Host networking webinars and share project outcomes •

	<p>and fact sheets</p> <ul style="list-style-type: none"> • Share best practices via cooperative newsletters & EIP AGRI 	<p>host targeted webinars</p>	<ul style="list-style-type: none"> • Partner with NGOs for community outreach and engagement 		
Identify end-user needs & co-design tools	<ul style="list-style-type: none"> • Collaborate with farmer federations and cooperatives • 	<ul style="list-style-type: none"> • Collaborate with sector associations and lead partners 	<ul style="list-style-type: none"> • Conduct targeted surveys and consultations with consumer networks 	<ul style="list-style-type: none"> • Involve policymakers in stakeholder/adaptation planning cycles 	<ul style="list-style-type: none"> • Organize joint project events and annual meetings
Co-create MYMATCH platform/tools	<ul style="list-style-type: none"> • Co-create MYMATCH platform/tools <p>Collaborate with farmer associations for direct outreach.</p>	<ul style="list-style-type: none"> • Direct feedback sessions with food industry associations 	<ul style="list-style-type: none"> • Partner with NGOs for outreach and engagement 	<ul style="list-style-type: none"> • Involve policymakers in evaluation cycles 	<ul style="list-style-type: none"> • Contribute to collective newsletters and online platforms

Build synergies and partnerships	<ul style="list-style-type: none"> • Share best practices via newsletters and EIP AGRI 	<ul style="list-style-type: none"> • Share guidelines and updates through sector bulletins 	<ul style="list-style-type: none"> • Partner with NGOs and consumer organizations for engagement 	<ul style="list-style-type: none"> • Invite policymakers to policy review sessions 	<ul style="list-style-type: none"> • Initiate partnership reports and replication initiatives. • Contribute to collective newsletters and online platforms (the EU Food Safety Platform can host MyMatch contents and act as amplifier – see here: https://foodsafetyplatform.eu/home/eu-foodsafetyplatform-projects/)
Disseminate scientific findings	<ul style="list-style-type: none"> • Provide access to demo plots, case studies, and technical docs • Partnerships with farmer organizations for dissemination 	<ul style="list-style-type: none"> • Present findings at trade workshops and conferences • Sector-wide dissemination via associations 	<ul style="list-style-type: none"> • Share project progress and results via newsletters and FS4EU platform • Partnerships with consumer associations for feedback 	<ul style="list-style-type: none"> • Share policy-relevant findings and best practices • Direct presentations at policy forums and through official channels 	<ul style="list-style-type: none"> • Link with FoodSafety4EU & EU networks via newsletters and events • Amplify impact using EU Food Safety Platform

Table 3. MYMATCH Stakeholder Engagement and Dissemination Activities Matrix

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