

# Report on CCW

aimed at defining user requirements for the  
ECO-READY Observatory Platform and App



**Eco  
Ready**

## WHITE

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<sup>1</sup> PU = Public

PP = Restricted to other programme participants (including the Commission Services)

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# Executive Summary

The ECOREADY User Requirements Co-Creation Workshop, held on March 13, 2024, brought together a diverse type of stakeholders to collaborate on shaping the future of the ECO-READY Observatory platform and app. The workshop, conducted online via the Zoom platform, provided an interactive environment for engagement and dialogue, allowing participants to share their expertise, perspectives, and aspirations for the Observatory's development. Throughout the thematic sessions, participants explored key aspects including user needs and cases, data visualization, features and functionalities, and community interaction. Each thematic session held rich discussions, generating valuable insights and recommendations to inform the project's approach.

The workshop's inclusive approach ensured representation from various stakeholder groups, including farmers, industry actors, policymakers, researchers, civil society organizations, representatives of EU food projects, and academics. Their contributions were instrumental in identifying critical requirements, preferences, and priorities for the Observatory platform and app. Moreover, the involvement of Living Labs representatives underscored the importance of integrating end-user perspectives into the design and implementation process.

Participants engaged with thought-provoking questions and topics, providing feedback on the visual appearance of the Observatory, desired metrics and data formats, preferred features and modules, and notification preferences. The workshop also facilitated knowledge sharing, allowing participants to suggest existing tools and platforms they deemed relevant for integration with the Observatory.

Overall, the workshop served as a crucial milestone in the co-creation process, enabling collaborative decision-making and consensus-building among stakeholders. The insights gathered will play a key role in guiding the development and refinement of the ECO-READY Observatory platform and app, ensuring its alignment with user needs, preferences, and expectations. Moving forward, the project team remains committed to fostering ongoing dialogue and collaboration with stakeholders to realize the vision of an innovative and impactful observatory platform for food security, climate change, and biodiversity.



# Disclaimer

This publication has been produced within the ECO-READY project which has been funded by the European Union Horizon Europe Research and Innovation Programme under grant agreement n° 101084201. This publication reflects only the views of the author. The European Commission and Research Executive Agency cannot be held responsible for any use which may be made of the information contained therein.



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# Introduction

## Objectives of workshop

The main goal of the T4.1.1 co-creation workshop was to actively engage food value chain stakeholders in the identification of high-level user requirements and preferences regarding the ECO-READY Observatory platform and app. The outcomes of the workshop aim to inform the definition of technical requirements for the ECO-READY observatory (data, features, functions, and resources required).

The ECO-READY project aims to establish a comprehensive surveillance system, accessible through an observatory (e-platform) and mobile app, to provide real-time assessments and forecasts for the food system in Europe. It integrates with a network of 10 Living Labs across different regions, focusing on resilience strategies and tools development. Emphasising resilient dynamism, it addresses immediate issues and long-term challenges simultaneously. Through co-creation in Living Labs, it generates scenarios, policy recommendations, and early warning systems using innovative AI. The project aims to engage farmers and society in policymaking, enhance awareness of climate-adaptive practices, and empower citizens to influence consumption habits through interactive tools.

The basis of stakeholders engagement and interactivity will be the design of the observatory, which will cover the impact of climate change (short to long term) on biodiversity and genetic resources, sustainable productivity, animal and plant diseases and nutritional composition. It will be a one-door-stop for existing tools and methods and will develop novel integrated methods that allow short-term early warning and medium to long term impact assessment.

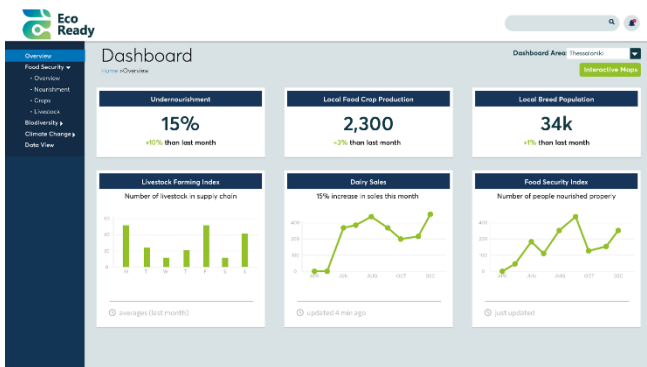


Figure 1. A mock-up of the ECO-READY Observatory

In order to efficiently design the observatory, WHITE organised a co-creation workshop with relevant stakeholders that offered: i) Indications about the high-level user requirements, and ii) Preferences aimed to feed the definition of the technical requirements which were based on software engineering methodologies.



## Agenda

March 13, 2024 - Zoom		
Sessions	Short description of discussions	Duration
Introduction	Overview of project goals, key features, functionalities, and objectives for each asset (Observatory, App, Interactive Map, Living Labs)	10 minutes
Welcome note, roundtable	Introduction to workshop's guidelines. Each thematic breakout room will have an interactive whiteboard. Participants will comment on Observatory mock-ups and share insights.	10 minutes
A. User needs & cases	Discussion on key needs and challenges addressed through the Observatory for food security, climate change, and biodiversity loss. Participants share important aspects/features of the digital observatory and type of information they find useful.	20 minutes
B. Data (visualization, accessibility, updates)	Exploration of effective data visualization formats for understanding food security, food nexus-related, and climate-change-related data. Discussion on metrics and temporal information desired on the observatory dashboards and interactive maps. Focus on data visualization for Living Labs, scenarios, and modelling.	20 minutes
C. Features & functionalities	Identification of features and functionalities for the platform and mobile app to facilitate decision-making/policy processes and support resilience strategies in the context of food security, climate change, and biodiversity. Exploration of educational/survey-like gamification techniques and calculators to enhance user engagement, motivation, and enjoyment.	20 minutes
D. Community interaction	Discussion on community interaction and contact functionalities desired in the digital Observatory and/or the mobile App to enhance collaboration and communication among users/stakeholders.	20 minutes
Wrap-up	Return to roundtable for summary of key points and final remarks.	5 minutes



## Workshop participants

### Number of participants

The co-creation workshop was attended by a total of **58 participants**, including 14 consortium partners who played a key role in organizing and facilitating the event. These participants represented a diverse range of stakeholders from various sectors.

### Type of participants

The participants invited to the co-creation workshop represented a diverse array of stakeholders across the food system, reflecting our commitment to inclusivity and collaboration. We intentionally selected stakeholders from various groups, including **farmers and breeders, industry actors, policy actors from public agencies and regional authorities, representatives from the general public including municipalities, citizen organizations, and environmental NGOs, as well as academics and researchers**. Additionally, we invited **representatives of the Living Labs** that will be set up as part of the ECO-READY project, recognizing their crucial role in the observatory's ecosystem. These stakeholder groups were chosen because of their integral roles in the food system and their expertise in different aspects of food security, climate change, and biodiversity. By including representatives from each of these groups, we aimed to ensure that the future Observatory platform and app would meet the needs and preferences of its intended users. Their feedback and insights during the workshop were invaluable in shaping the development of the Observatory, as they will be the ones utilising it to access information, share knowledge, and make informed decisions in the future.



# Methodology

## Methodological approach

The ECOREADY user requirements co-creation workshop was conducted online on **March 13th, 2024**, leveraging the Zoom platform to facilitate collaboration and engagement among participants. The workshop commenced with a plenary session where participants were greeted by the ECO-READY team. The session began with an introduction to the ECO-READY project by our coordinator I.Manikas from CZU, followed by key workshop guidelines presented by Anastasia Mousiadou from WHITE.

### Virtual Room Structure

Participants were then divided into four virtual breakout rooms, each focusing on specific areas of interest:

- **A. User Needs & Cases**
- **B. Data (Visualization, Accessibility, Updates)**
- **C. Features & Functionalities**
- **D. Community Interaction**

Each breakout room was facilitated by a moderator, co-host, and rapporteur, all of whom were ECO-READY team members.

### Co-Creation Process

The co-creation process followed the World Café format, enabling participants to contribute to discussions in all virtual rooms. The World Café format encourages open and creative dialogue by providing a relaxed and informal setting where participants can engage in meaningful conversations. The process allowed all participants to be part of all virtual rooms, which were moderated by the Eco-Ready team members. After each session concluded, participants transitioned to the next breakout room. Within each room, discussions and questions were visualized on a Miro board, which included Observatory mock-ups and a Mentimeter QR code for feedback submission.

### Feedback Collection on Miro

Participants were encouraged to provide feedback using Mentimeter questionnaires and through written or verbal expressions during discussions. Interaction and feedback were facilitated using post-it notes on the Miro board, with each stakeholder group assigned a distinct colour for easy identification and organization of feedback.



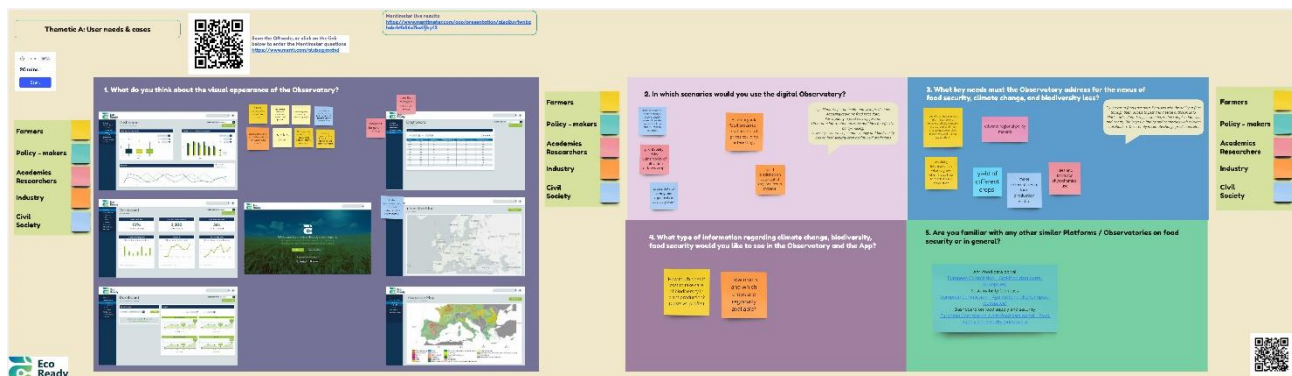


Figure 2. Input collection through Miroboards

## Use of Mentimeter

Moderators guided participants to scan the QR code with their mobile devices to access the Mentimeter questionnaires. This approach ensured an efficient and comprehensive collection of input and facilitated the exchange of opinions on the ECO-READY Observatory and App.

## Plenary Wrap-Up

Following the completion of all four thematic sessions, participants reconvened in the plenary section for a brief wrap-up. Rapporteurs from each breakout room summarized the highlights of their respective sessions. Additionally, a final question was posed via a Zoom poll to gauge participants' willingness to utilize the ECO-READY observatory and app.

## Supporting material

A package of supporting material was available before the co-creation workshop to the partners co-hosting the co-creation workshop (WR, AUTH, CZU, IFOAM). This package included:

- **Training session material:** the methodology training presentation, a list of questions for the core session of the workshop, and the organisational guidelines document (Developed by WHITE);
- An **e-mail template** to invite participants to the workshop (Developed by WHITE);
- The workshop's **agenda**;
- **Presentation for the introductory session** including:
  - Slides about the ECOREADY project (Developed by CZU);
  - Presentation of the Observatory (Developed by AUTH and WHITE);
  - Slides about the workshop's guidelines (Developed by WHITE)
- **Online tools** (the [Miro](#) Whiteboard and [Mentimeter](#) presentations) (WHITE);
- **Consent form:** an informed registration and [consent form](#) provided by WHITE was distributed among participants before the event officially began.

A brief package of helpful guidelines including information on ECO-READY and an Observatory visual was also distributed to the participants prior to the co-creation workshop.

## List of Questions/Topics of discussion

To ensure comprehensive coverage of topics and questions relevant to the future observatory platform and app, WHITE engaged all WP4 partners in the process. Initially, WHITE distributed a proposed list of questions and topics of discussions to the WP4 partners. These topics were carefully crafted to address various aspects of the project's objectives. Additionally, ECO-READY partners, each specializing in different facets of the project, were invited to contribute their insights and suggest additional questions. This collaborative approach aimed to capture diverse perspectives and ensure that the co-creation workshop encompassed all essential elements of the future observatory platform and app. The list of questions/ topics of discussion are shown below:

### Thematic A: User needs & cases

1. What do you think of the **visual appearance of the Observatory** dashboards?
2. In which **scenarios** would you use the digital observatory?
3. What **key needs must the Observatory address** for the nexus/triple challenge of food security, climate change, and biodiversity loss?
4. What **type of information** regarding climate change, biodiversity, food security would you like to see in the Observatory and the App?
5. Are you familiar with any **other similar Platforms/Observatories** on food security or in general? Please share them below.

### Thematic B - Data

1. What **specific types of information or data visualisation** formats do you find most effective for food security data?
2. Which **types of metrics** would you like to see in the Observatory Overview page?
3. What about the **temporal characteristics** of the information here?
4. How should we handle **area information**?
5. Which types of **metrics** would you like to see in the **Food Security pages** of the Dashboard?
6. Which types of **metrics** would you like to see in the **Biodiversity pages** of the Dashboard?
7. Which types of **metrics** would you like to see in the **Climate Change pages** of the Dashboard?
8. How should the **Living Labs** be depicted in map?
9. What types of **metrics** could we add to the different **Interactive Maps**?
10. What info should be shown in the **popups**?
11. Do we include some kind of **information for regions across Europe** (if not available, use empty/grey areas)?
12. What **metrics** would you expect to see on the **Data View** page?
13. How do you prefer to **access and interact with data** within the Observatory?

### Thematic C - Features and Functionalities

1. Which **features** make more user-friendly and accessible platforms, similar to the Observatory, on **desktop view**?



2. Which **features** make more user-friendly and accessible platforms such as the Observatory on **mobile view**?
3. What kind of **modules** will be employed to enhance the engagement, motivation, and enjoyment of users in the digital Observatory?
4. The Observatory will contain **AI models**, whose predictions may be imprecise. Allowing such a tool to notify you frequently may help you not to miss important information, but this may cause wrong predictions as well. How do you like your **predictions**?
5. Please share with us any **existing tools/platforms** you would like the Observatory or App to integrate with?
6. The Observatory will contain AI models, which will predict various phenomena. How long would you like these **predictions to be preserved**?
7. The Observatory will contain AI models, which will predict various phenomena. In what **timeframe** would you prefer these **future predictions** to be extended?
8. How **frequently** would you prefer to receive updates and notifications from the App (e.g., daily, weekly, monthly)?
9. What types of **alerts and notifications** would be useful for you as a user?
10. What kind of personalisation features, you would like to see on the Observatory and app?
11. Are the games also going to **gather user information - cookies data** (with consumer privacy in mind)?

#### Thematic D - Community interaction

1. What types of community interaction and contact functionalities would you like to see in the Observatory & the mobile App, to enhance collaboration and communication among users?
2. What kind of connection are we looking for between policy makers and consumers?
3. What type of feedback mechanism should be integrated into the platform and mobile application to enable users to provide input on its performance and suggest improvements?
4. To achieve real-time data input, would it make sense to you to interact with the Living Labs in the respective regions through the Observatory to provide input on missing information?
5. Any suggestions on how to ensure long-term sustainability/ exploitation of the Observatory platform / App?



# Thematic sessions

The following section presents the discussions around the pre-defined set of questions and key outcomes generated during the thematic sessions about the ECO-READY Observatory, its functions and potential.

The results comprise of a broader guide on how the workshop participants perceived the ECO-READY Observatory and its features. The diagrams included in the descriptions below reflect the participants' preferences and provide a relative picture of their views and preferences on the project assets, without providing a strict direction. The key takeaway of this workshop is the participants' general feedback and suggestions on how to make the Observatory a more useful and inclusive platform, appealing to different types of stakeholders.

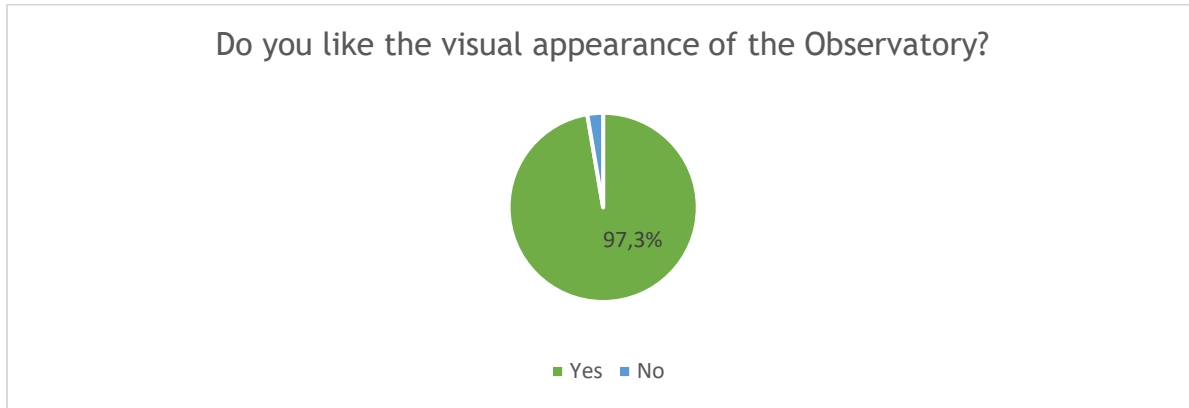
During the interactive workshop, we encountered a common technical challenge: the inability to engage all participants equally. This issue became particularly evident during the breakout room sessions, where achieving an equitable distribution of input in each round proved difficult, consequently hindering the generation of normalised outcomes. To address this, we implemented a normalization process for all questions, thereby ensuring measurements on a consistent scale and facilitating comparability of results across the board. In some cases, where the questions asked were close-ended with fewer than three options given percentages are included in the featured diagrams.

## Thematic A - User needs and cases

The thematic session on *User needs and cases* focuses on understanding the fundamental requirements and scenarios that users envision for the ECO-READY Observatory platform and app. Throughout this session, participants engaged in discussions and provided valuable insights on various aspects related to the user experience and functionality of the platform. The aim of this session was to gather feedback and perspectives on the visual appearance of the Observatory dashboards, the scenarios in which the digital observatory would be utilized, and the key needs that must be addressed to tackle the interconnected challenges of food security, climate change, and biodiversity loss. Additionally, participants explored the types of information they would like to access regarding climate change, biodiversity, and food security, as well as their familiarity with other similar platforms or observatories in the field. Through collaborative dialogue and exchange of ideas, the session aimed to inform the development of the ECO-READY platform and app to better meet the needs and expectations of its diverse user base.

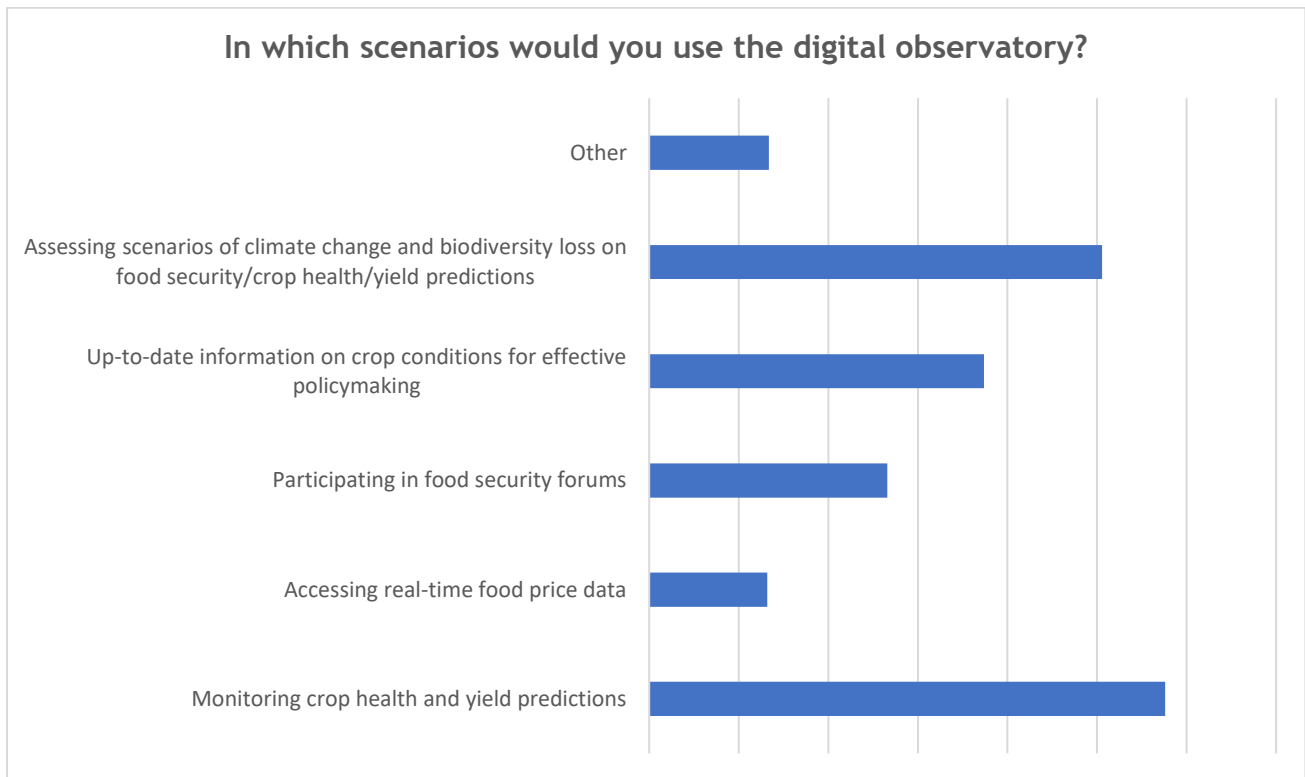


**Question 1. Do you like the visual appearance of the Observatory dashboards?**



Participants provided several additional suggestions regarding the visual appearance of the Observatory dashboards. They highlighted the importance of incorporating **simple translations** for accessibility, **ensuring suitability for color-blind individuals**, and making the appearance **attractive to various user groups**. Furthermore, participants suggested **inserting links to explain technical terms**, using **simple language**, and offering **options to download graphs** to enhance usability. Additionally, they emphasised the **need for features such as combining various data in one graph for easier advocacy work**, making the platform intriguing for the general public, **enabling data export for offline use in PDF reports**, and **providing offline access to the app** without an internet connection. These suggestions aim to improve the functionality and accessibility of the Observatory dashboards to meet the diverse needs of users.

**Question 2. In which scenarios would you use the digital observatory?**



Various additional suggestions were put forward regarding this question. Participants proposed **leading sessions on climate change to demonstrate its impact on different European countries to industry stakeholders**. Additionally, **real-time food prices** were identified as valuable



information for organic food processors, while **yield prediction at aggregated levels** (regional or country) was suggested to provide insights into **profitability, risks, and vulnerabilities associated with cultivating old and new crops**. Moreover, participants emphasised the importance of **accessing data to bolster advocacy efforts within the industry**. These suggestions highlight the diverse needs and interests of stakeholders in utilising the ECOREADY platform and app for decision-making and strategic planning.

**Question 3. What key needs must the Observatory address for the nexus/triple challenge of food security, climate change, and biodiversity loss?**

Stakeholders across various groups expressed key needs that the Observatory should address to tackle the nexus of food security, climate change, and biodiversity loss.

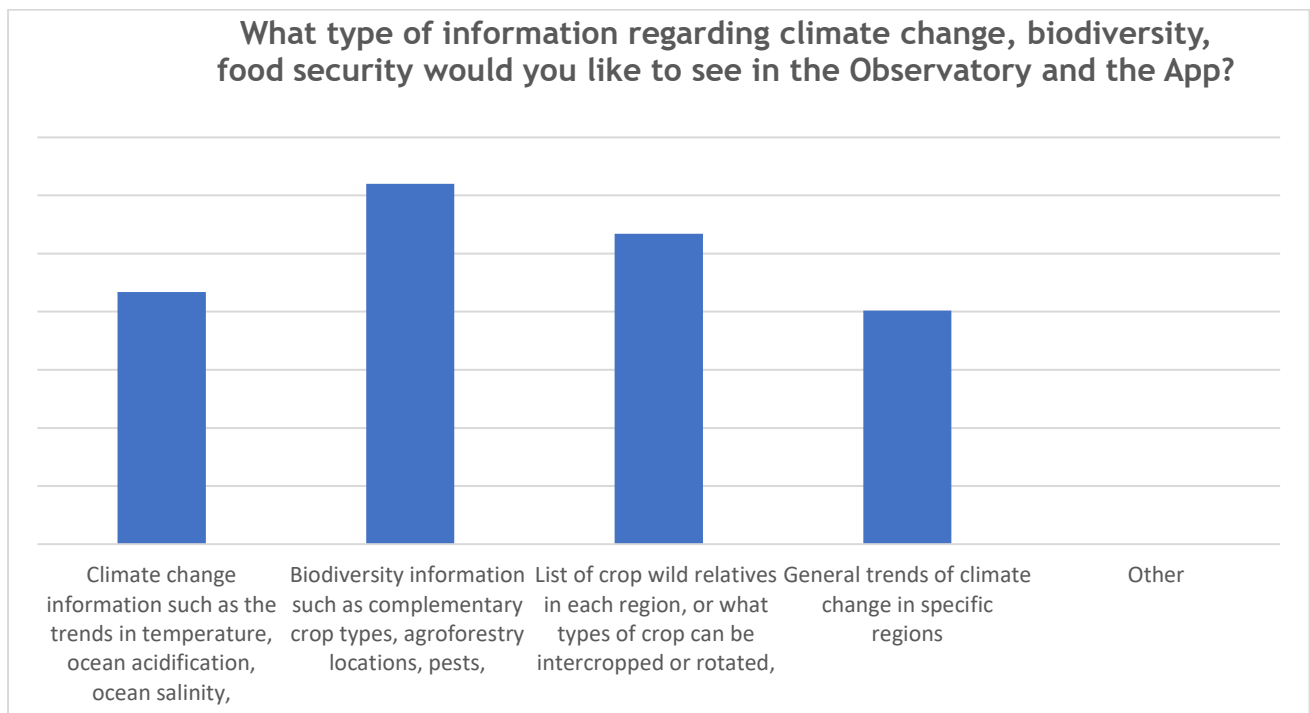
**Farmers** emphasized the need for **reliable predictions** on climate change indicators, yield forecasts, and market expectations, along with **guidance on crop selection, cultivation techniques, and marketing strategies**.

**Academics and researchers** stressed the importance of **educating regional policymakers and establishing rules for the use of phytochemicals**.

**Civil society** highlighted the necessity of **making externalities of food production visible and understanding crop yields**.

In general, various stakeholders emphasized the importance of **accessing data on pest and disease outbreaks, market prices, and climate conditions**, as well as the need for **knowledge transfer, recommendations for resilient food production**, and decentralized monitoring and mitigation efforts. These insights underscore the multifaceted challenges facing the agriculture sector and the critical role of the Observatory in addressing them.

**Question 4. What type of information regarding climate change, biodiversity, food security would you like to see in the Observatory and the App?**



Participants provided additional suggestions such as understanding the costs versus profits associated with biodiversity in plant production, as well as the regional availability of specific crops



and their quantities. There was also an emphasis on the need for specific information on biodiversity and climate change, particularly at the local level, which would be valuable from a policy perspective. Additionally, participants highlighted the importance of information about reporting initiatives, such as companies reporting to platforms like CDP, GRI, and SBTN, as well as the goals set by these companies. These suggestions underscore the diverse range of information needs and interests among stakeholders, reflecting the complexity of addressing food security, climate change, and biodiversity challenges.

**Question 5. Are you familiar with any other similar Platforms/Observatories on food security or in general? Please share them below.**

Stakeholders	Responses
Policy makers	<p><b>Agri-food data portal</b> European Commission   Agri-food data portal <a href="https://agridata.ec.europa.eu/extensions/DataPortal/home.html">https://agridata.ec.europa.eu/extensions/DataPortal/home.html</a></p> <p><b>Sustainability Compass</b> European Commission   Agri Sustainability Compass (europa.eu) <a href="https://agridata.ec.europa.eu/extensions/compass/compass.html">https://agridata.ec.europa.eu/extensions/compass/compass.html</a></p> <p><b>Dashboard on food supply and security</b> European Commission   Agri-food data portal   Food supply and security (europa.eu) <a href="https://agridata.ec.europa.eu/extensions/DataPortal/food-supply-security.html">https://agridata.ec.europa.eu/extensions/DataPortal/food-supply-security.html</a></p>
Civil society	<p><b>PANORAMA Solutions</b> - Repository of NbS case studies. Unrelated to ECO-READY Observatory's scope, but could be useful to look into to get ideas for the community interaction section.</p> <p>PANORAMA   Solutions for a healthy planet   PANORAMA <a href="https://panorama.solutions/en">https://panorama.solutions/en</a></p>
Various stakeholders	<p><b>FAO Food security</b></p> <p><b>AlertUSDA</b></p> <p>IRTA <a href="https://irriter.cat/#/en/map/42.17,3.01,9/variable/accum-irr/metaverse/1/year/2024/date/2023-12-31">https://irriter.cat/#/en/map/42.17,3.01,9/variable/accum-irr/metaverse/1/year/2024/date/2023-12-31</a></p>

### Key Takeaways

**Purposeful Utilisation:** Participants discussed the need to define clear scenarios for when and why stakeholders would use the observatory platform. This involved considering specific needs and objectives, such as monitoring crop health and predicting yields. They recognised that understanding the relevance of data at different scales, from local to regional and national levels, is crucial for effective utilization by stakeholders across various sectors.

**Data Relevance and Accessibility:** There was a consensus on the importance of ensuring that the data provided by the observatory is both relevant and accessible to different stakeholders. This included discussions on the types of information needed, such as climate change impacts on food



security, and the need for user-friendly access and filtering tools to extract relevant information efficiently. The workshop highlighted the significance of making data easily interpretable and actionable for diverse user groups.

**Multi-Stakeholder Collaboration:** The workshop emphasized the necessity of multi-stakeholder collaboration in the development of the observatory platform. Participants recognized that different stakeholders, including policymakers, farmers, researchers, and consumers, have distinct needs and perspectives that must be addressed. They discussed the importance of engaging stakeholders throughout the design and implementation process to ensure that the platform meets their requirements effectively.

**User-Centric Design:** Participants stressed the importance of designing the observatory platform with a user-centered approach. This involved considering how different stakeholders would interact with the platform and tailoring the interface to accommodate their specific needs and objectives. Discussions focused on creating intuitive navigation systems, customizable dashboards, and user-friendly features to enhance the overall user experience and promote engagement.

**Knowledge Exchange and Actionable Insights:** The workshop underscored the value of the observatory platform as a tool for knowledge exchange and generating actionable insights. Participants recognized that providing relevant information, such as alternative crop data for farmers, can empower stakeholders to make informed decisions and adapt to changing environmental and market conditions. They discussed the potential impact of social trends, such as changing diets, on agricultural practices and food security, highlighting the need for timely and relevant data to inform decision-making processes.

**Identification of Similar Platforms:** Finally, participants were encouraged to share any knowledge of similar observatories or platforms in the field of food security or related sectors. This information could provide valuable insights for benchmarking, identifying best practices, and informing the development and enhancement of the observatory platform. Discussions focused on identifying existing platforms that offer similar functionalities and assessing their strengths and limitations to inform the design and implementation of the observatory.

## Thematic B - Data

In this segment of the workshop, we embarked on a critical exploration of effective data visualization formats, specifically aimed at enhancing comprehension and facilitating deeper insights into data related to food security, the food nexus, and climate change. The objective was to identify visualisation techniques that not only present data in an accessible manner but also make it actionable for stakeholders involved in addressing these global challenges.

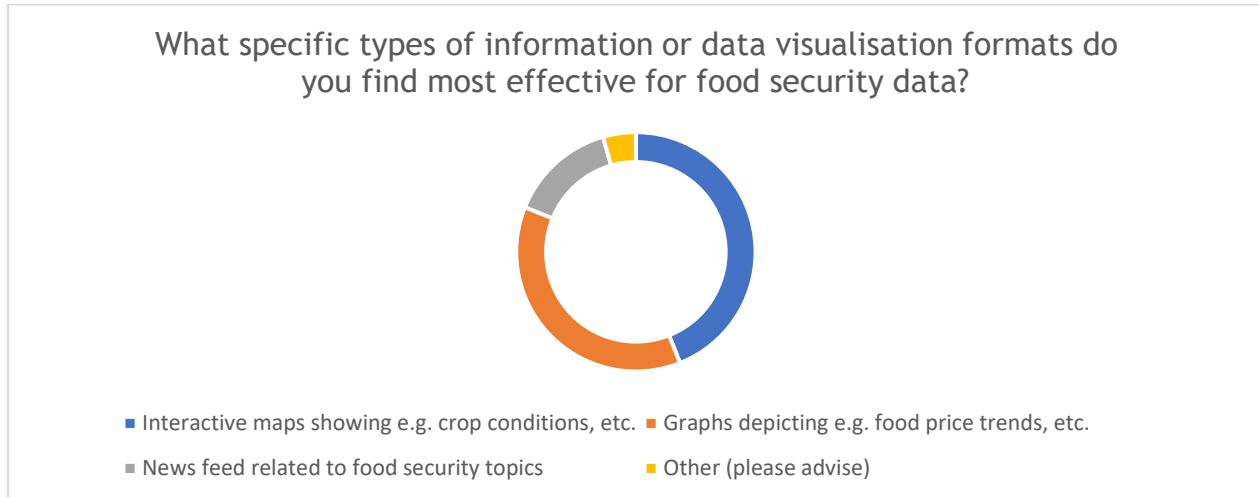
Our discussion centered on the precise metrics and temporal information that participants found most valuable for inclusion on observatory dashboards and interactive maps. These tools are crucial for real-time monitoring and decision-making, as they can illuminate trends, pinpoint areas of concern, and track progress over time. By focusing on what information is most desired by users, we aim to design dashboards that are not only informative but also intuitive to use, ensuring that data leads to informed decision-making.

Furthermore, we delved into the application of data visualization within the context of Living Labs, scenarios, and modeling. Living Labs serve as real-world testing grounds for innovative solutions, where data visualization plays a key role in understanding complex scenarios and modeling outcomes. By visualizing potential future scenarios and the results of different models, stakeholders can better grasp the implications of their decisions, facilitating a more strategic approach to tackling food security and climate change.



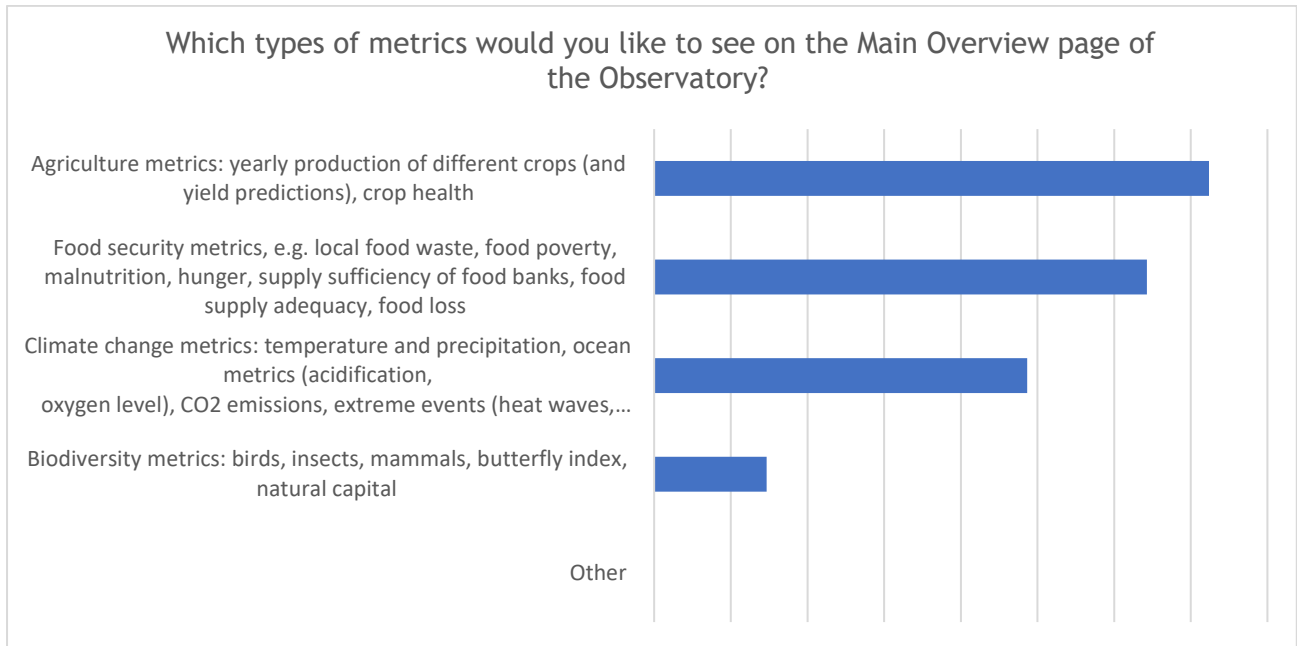
The aim of this workshop segment was not only to identify effective visualization formats but also to foster a dialogue on how these tools can be leveraged to address some of the most pressing issues of our time. By focusing on user-centric design and the practical application of data visualization, we strive to empower stakeholders across the EU to make informed decisions that contribute to a more sustainable and secure future.

**Question 1. What specific types of information or data visualisation formats do you find most effective for food security data?**



Participants in the workshop voiced a strong preference for interactive forms of data visualization to understand food security information, with interactive maps leading the way due to their detailed geographic context and dynamic filtering capabilities. Graphs depicting trends over time were also favored, highlighting their continued relevance in showing changes and patterns crucial for policy and market analysis. While news feeds were recognized for delivering current information, they were not seen as the best tool for in-depth trend analysis. Suggestions for alternative visualization formats were minimal, indicating a general satisfaction with interactive maps and graphs for engaging with and understanding food security data. Overall, users prefer visualizations that offer interactivity and the ability to digest complex data through geographical and temporal representations.

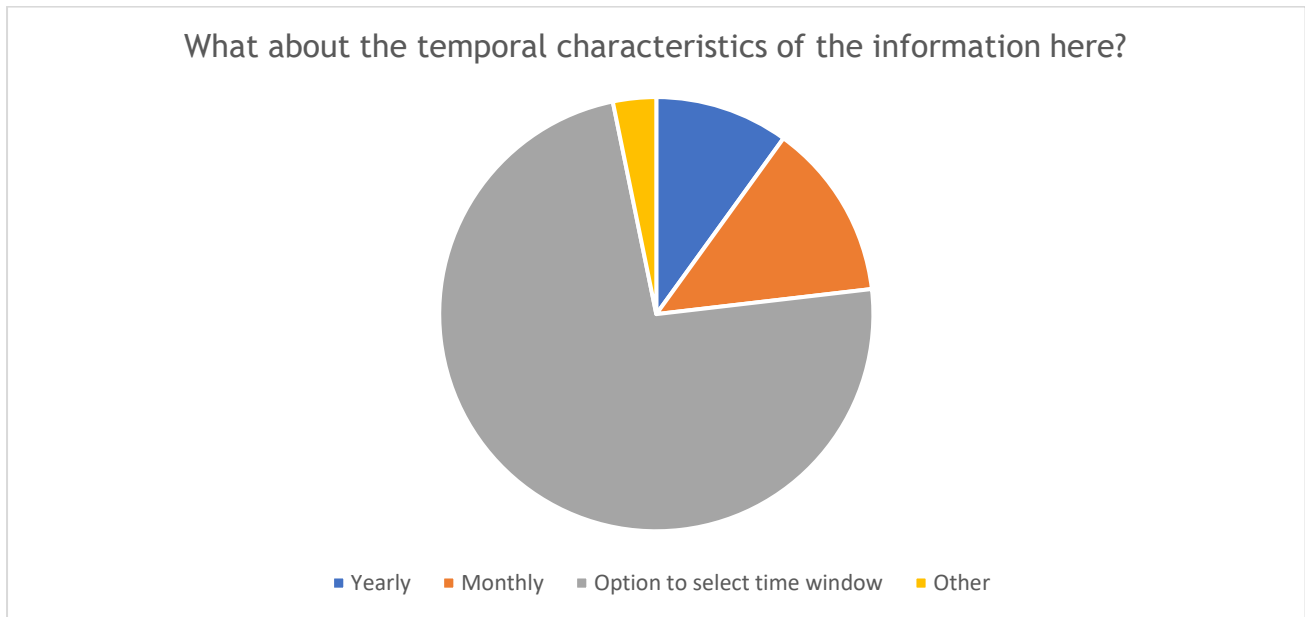
**Question 2. Which types of metrics would you like to see on the Main Overview page of the Observatory?**



For the Main Overview page of the Observatory, workshop participants prioritised a detailed and action-oriented set of metrics that could enhance strategic agricultural planning and address critical aspects of food security. They showed keen interest in agricultural data such as crop production and health, which are essential for operational decision-making. Similarly, there was a notable focus on food security metrics, underscoring the urgency of addressing issues like food waste, poverty, and distribution systems that directly impact human well-being. Furthermore, the impact of climate change on agricultural and ecological systems was acknowledged, with a call for close monitoring of related variables. While biodiversity metrics drew less focus, they were still regarded as important for understanding the overall health of the environment. The absence of preference for 'Other' metrics suggests a consensus on the necessity of these categories, pointing towards a user base seeking a multi-dimensional view that captures the dynamic interplay between agriculture, food security, and environmental change.



### Question 3. What about the temporal characteristics of the information here?

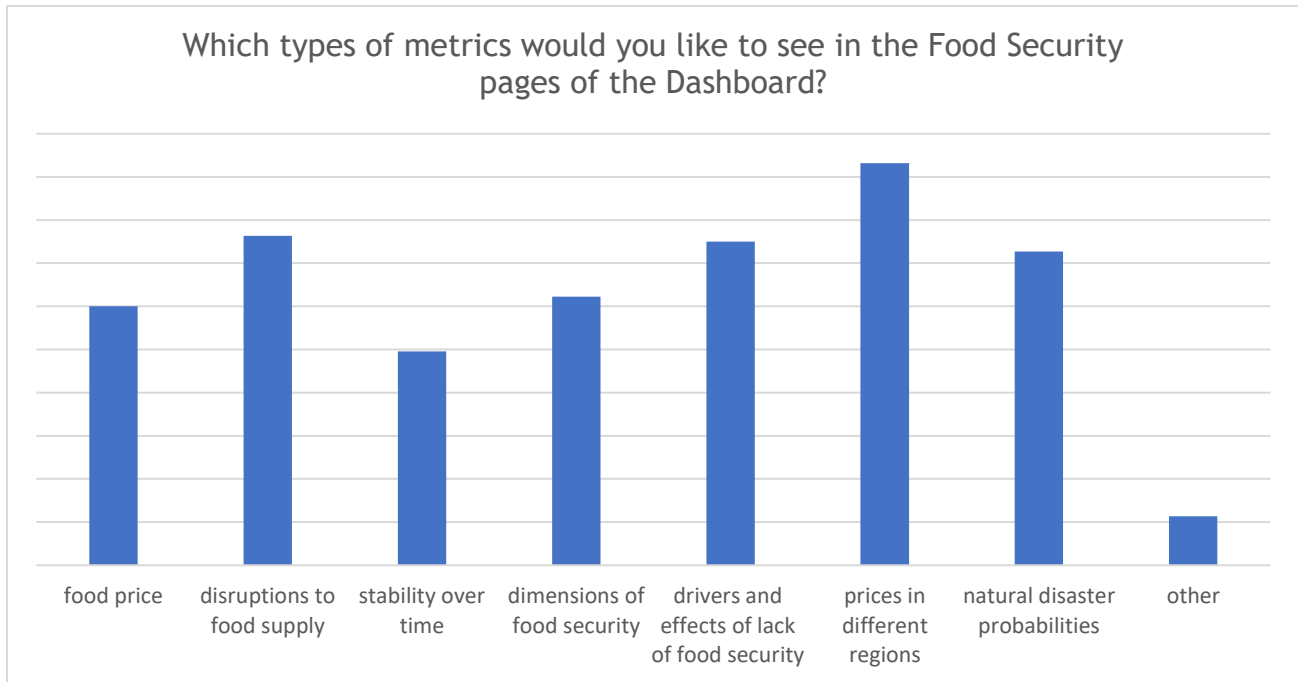


Participants unanimously agreed on the need for the Observatory to provide data with customizable time windows, allowing for a granular examination of trends and events over selected periods. This capability was seen as critical for users to analyze the dynamics of food security, biodiversity, and climate change in both the short and long term. While standard monthly and yearly updates were also valued, the consensus leaned towards the importance of flexibility in temporal data analysis. This preference for personalized time frame selection speaks to the diverse requirements of users, from policymakers to researchers, looking to contextualize their insights within specific temporal boundaries. The low demand for 'Other' time resolutions suggests that the option to customize time windows, alongside the standard offerings, sufficiently caters to the user's needs, providing a comprehensive temporal perspective on the data presented.

### Question 4. How should we handle area information?

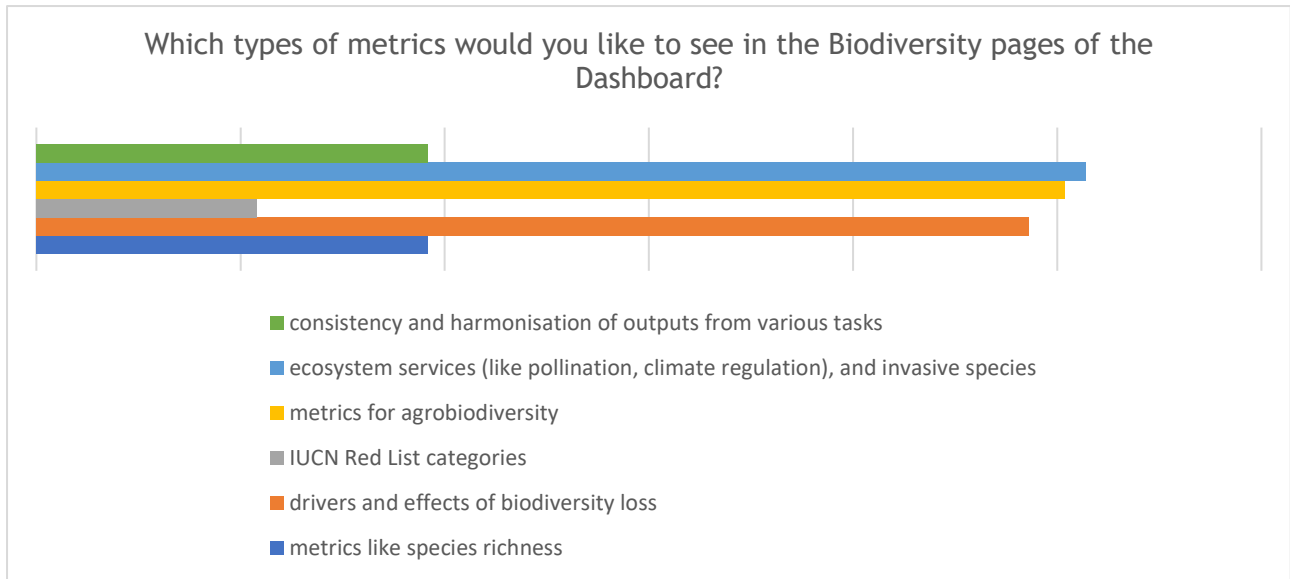
The workshop participants expressed a clear preference for a versatile and user-friendly interface on the observatory that facilitates both a broad overview and in-depth exploration of localized data. They emphasized the importance of interactive maps that provide multi-scale geographical details, from pan-European views down to individual regions or cities. Such interactivity, along with the use of dropdown menus for streamlined navigation and the ability for users to customize their view with filters, is envisioned to make the observatory more adaptable to various user needs. The capability to view current, historical, and projected data within specific areas enhances the platform's utility for a diverse audience, enabling targeted analysis that aligns with users' specific interests or operational focuses. Participants championed features that would allow users to easily switch between macro and micro perspectives, ensuring that the platform serves as a dynamic tool for engaging with complex environmental and socio-economic data.

**Question 5. Which types of metrics would you like to see in the Food Security pages of the Dashboard?**



The feedback regarding preferences for metrics on the Food Security pages of the Dashboard highlights a diverse but clearly defined interest in multiple dimensions of food security. Participants expressed a strong desire for detailed metrics such as disruptions to food supply, prices in different regions, and probabilities of natural disasters, indicating a recognition of the dynamic and region-specific nature of food security challenges. Metrics related to the underlying causes and impacts of food insecurity were also prioritized, reflecting a comprehensive approach to understanding the issue. Additionally, there was moderate interest in food price metrics and stability over time, suggesting a recognition of the importance of tracking long-term trends and resilience in food security measures. Overall, the feedback underscores the need for a robust and comprehensive platform that provides insights into various facets of food security to inform informed decision-making and strategies for addressing food security challenges.

**Question 6. Which types of metrics would you like to see in the Biodiversity pages of the Dashboard?**



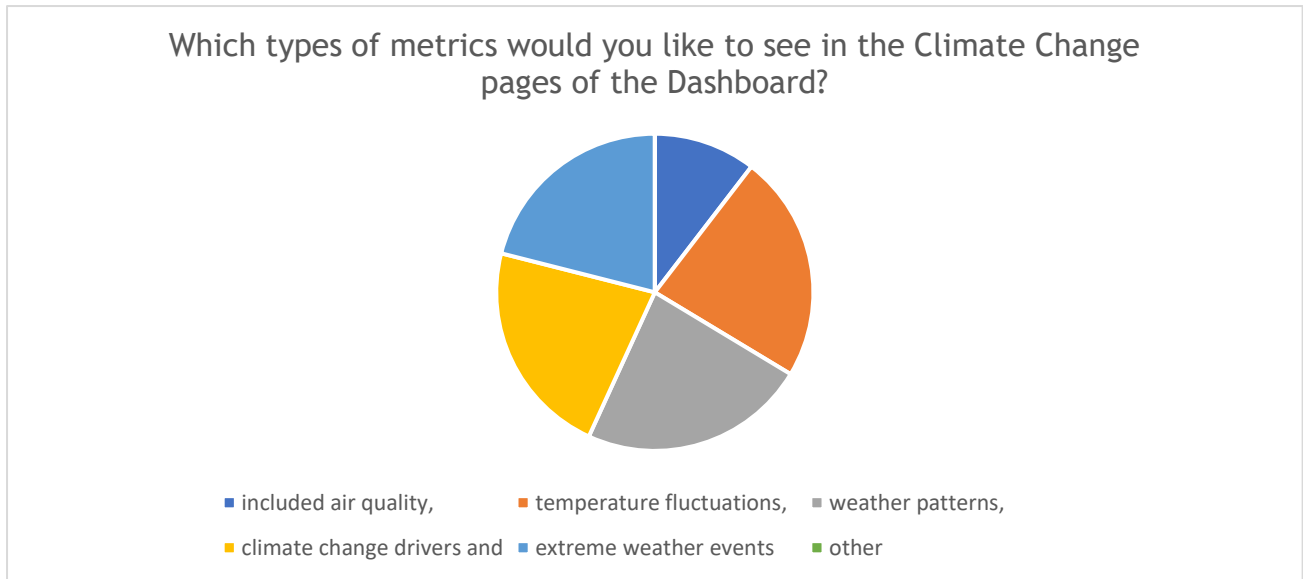
For the Biodiversity pages of the Dashboard, participants underscored the importance of detailed metrics that reflect the diversity within agricultural ecosystems and the broader environmental impacts on biodiversity. There was a pronounced interest in agrobiodiversity metrics, indicating a recognition of the critical role played by the variety of life in agricultural systems, which includes plants, animals, and microorganisms at all levels of biodiversity. Metrics focusing on the drivers and effects of biodiversity loss, ecosystem services, and invasive species were also prioritized, highlighting a desire to understand both the negative and positive influences on ecosystem health and stability.

While the IUCN Red List categories were acknowledged as significant, they were seen perhaps as too niche for the primary audience of the dashboard. Participants indicated a need for a comprehensive biodiversity representation on the Dashboard, encompassing a range of indicators that address ecosystem complexity and interconnectivity. By integrating these metrics, the Observatory aims to enhance understanding of the dynamic relationship between biodiversity and sustainable food systems, emphasizing the essential nature of healthy ecosystems for agricultural productivity and environmental resilience.



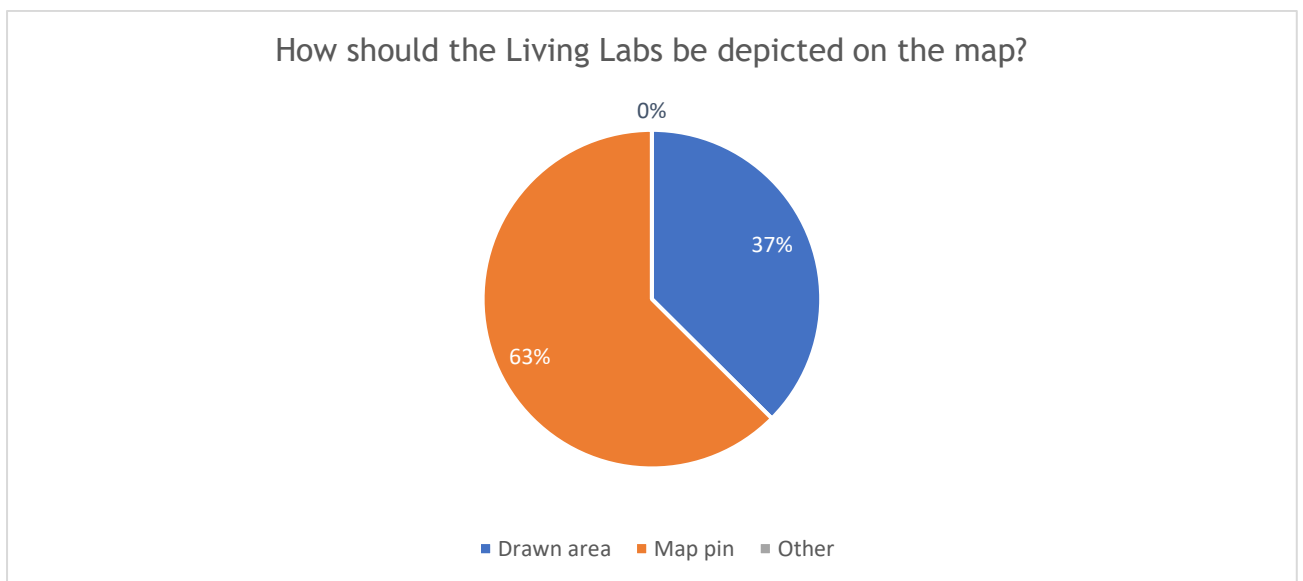


**Question 7. Which types of metrics would you like to see in the Climate Change pages of the Dashboard?**



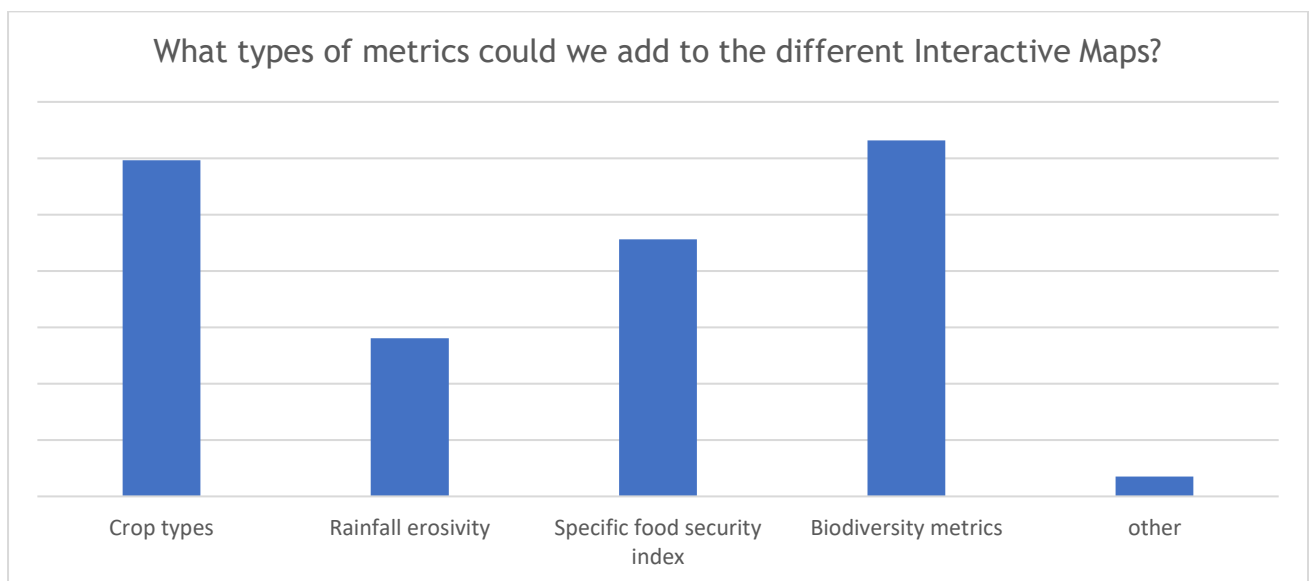
The Climate Change section of the Dashboard is envisioned to be a detailed resource reflecting the multifaceted nature of climate change and its impacts, as indicated by the participants' feedback. They expressed a keen interest in metrics that capture immediate climate dynamics such as temperature fluctuations and weather patterns, which are vital for daily decision-making across sensitive sectors. In addition, understanding the causes of climate change and the frequency and impact of extreme weather events was highlighted as critical for economic, environmental, and social planning. While air quality was seen as important, it was considered part of a larger set of environmental data rather than a standalone climate indicator. The overall feedback suggests participants are looking for an encompassing range of climate metrics on the Dashboard that can inform robust decision-making and policy development towards climate-resilient food systems. The absence of a call for 'other' metrics implies that the proposed ones adequately cover the users' interests, simplifying the design process for the Dashboard.

**Question 8. How should the Living Labs be depicted in the map?**



Workshop participants showed a clear preference for representing Living Labs on the Observatory's map with a straightforward and effective approach. Map pins were the favored method, chosen for their clarity and ease of recognition, allowing users to quickly identify and interact with the locations of the Living Labs. Although less popular than map pins, drawn areas depicting the precise boundaries of the Labs were also valued, suggesting that some users appreciate a more detailed geographical context of these innovation hubs. The lack of alternative suggestions indicates satisfaction with these traditional visual methods. In sum, users favor a mapping approach that combines simplicity with detailed spatial understanding, ensuring the map efficiently conveys the pivotal roles and locations of Living Labs in advancing food security, biodiversity, and climate change solutions.

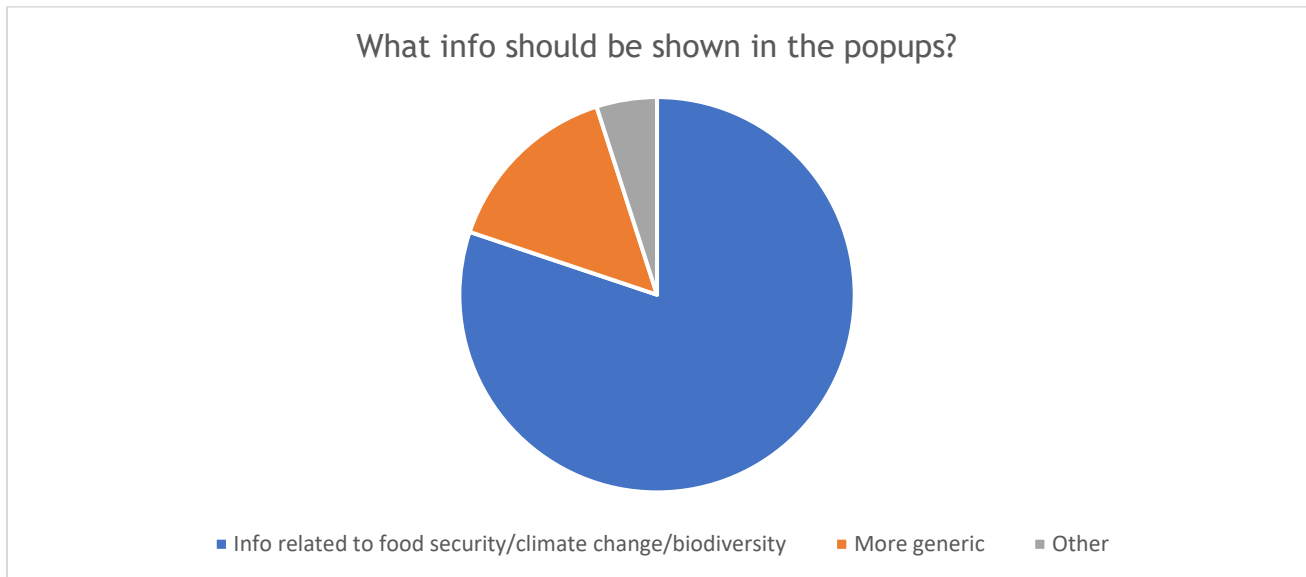
**Question 9 - What types of metrics could we add to the different Interactive Maps?**



The results highlighted a strong preference for incorporating detailed environmental, agricultural, and food security metrics into the interactive maps of the Observatory. Biodiversity metrics, emphasizing ecosystem health and resilience, were ranked highest, underscoring the critical importance of visualizing biodiversity data to inform sustainable practices and conservation efforts. Agricultural diversity, captured through crop type metrics, was also highly valued, reflecting the necessity for spatially explicit data to support agricultural planning and food security strategies. While the specific food security index showed variability in interest, it indicates a recognized need for nuanced food security indicators, albeit with some uncertainties about its application. Rainfall erosivity and other proposed metrics received moderate to low interest, suggesting a focused demand for data that directly influences ecological health and agricultural productivity. Overall, the feedback calls for a comprehensive and spatially nuanced representation of data on the Observatory's interactive maps, aiming to facilitate in-depth analysis and informed decision-making across the domains of biodiversity, agriculture, and food security.



### Question 10. What info should be shown in the popups?



The feedback from the workshop strongly indicates a preference for popups on the platform to deliver specific, detailed information closely related to food security, climate change, and biodiversity. Users have expressed a desire for this focused content to support informed decision-making and provide educational insights directly within the interactive maps. While there was some interest in more generic information, the overwhelming majority of participants highlighted the need for depth and context in the information presented through popups. This approach aims to offer actionable intelligence and quick access to detailed analyses, enhancing the maps' interactivity and value as an educational tool. Essentially, users are seeking an enriched mapping experience that integrates immediate, context-specific insights with options for deeper exploration, reflecting a demand for a comprehensive understanding of the interconnectedness of climate, biodiversity, and food security.

### Question 11. Do we include some kind of information for regions across Europe?

The workshop responses indicate a consensus among participants regarding the importance of including information for regions across Europe in the platform. Users expressed a desire for diverse types of data that could provide insights into local conditions, ranging from secondary data sources to more general information. However, there were considerations for ensuring the quality and reliability of external data sources, with an emphasis on transparency through the display of data sources. Some participants suggested involving public administration to facilitate data provision or funding, recognizing their role in such initiatives.

Furthermore, there was a recognition of the value of both specific and generic information, with suggestions for including baseline knowledge about each region alongside more detailed data. This flexible approach aims to cater to varied user requirements and interests, ensuring that the platform offers a comprehensive view of food security, biodiversity, and climate change across Europe. Ultimately, the feedback underscores the Observatory's commitment to serving a diverse audience with valuable insights into Europe's food security landscape, leveraging a wide range of data sources to achieve a pan-European perspective.

### Question 12. What metrics would you expect to see on the data view page?

During the workshop and due to time constraints, participants did not have the chance to evaluate options relevant to metrics. However, our team managed to extract valuable insight based on participants' answers to other questions that might be complementary to this section. The feedback

for the Data View page highlights a strong demand for detailed, downloadable datasets across the Observatory's key thematic areas. Participants emphasized the importance of open access to raw data for academic research, policy analysis, and educational projects. By providing such data, the Observatory enables users to conduct independent analyses, contribute to understanding food security challenges, and develop evidence-based solutions. This commitment to data transparency and accessibility fosters collaboration and innovation in the field of food security, aligning with the platform's goal of empowering stakeholders with valuable information.

### **Question 13 - How do you prefer to access and interact with data within the Observatory?**

During the workshop and due to time constraints, participants did not have the chance to evaluate options relevant to metrics. However, our team managed to extract valuable insight based on participants' answers to other questions that might be complementary to this section. The feedback emphasizes a preference for user-friendly interfaces with customizable options for data exploration, including filters for specific metrics, time periods, and geographic areas. Participants highlight the importance of making the Observatory's data accessible and relevant to a diverse user base. By facilitating easy interaction with the data, the platform aims to engage users in meaningful exploration and analysis, promoting informed discourse and action on food security, biodiversity, and climate change. This approach aligns with the Observatory's goal of being an indispensable resource for anyone seeking to understand and address these critical global issues.

## **Thematic C - Features and functionalities**

Thematic Session C focused on exploring features and functionalities within the ECO-READY Observatory platform and app to enhance user-friendliness, accessibility, and engagement. Participants discussed optimizing both desktop and mobile views, identifying key features for a seamless user experience. The session also delved into integrating modules to boost user engagement and enjoyment. Conversations extended to AI prediction models, addressing user preferences for accuracy, update frequency, and preservation duration. Participants also shared insights on integrating with existing tools, personalized features, and notification preferences, emphasizing the importance of data privacy. Overall, the discussions underscored the significance of user-centric design, reliable data sources, and privacy considerations in platform development.

### **Question 1. Which features make more user- friendly and accessible platforms, similar to the Observatory, on desktop view?**

The first question addresses the essential features required for the desktop view of the Observatory. After discussing the approach to data presentation and content inclusion, the focus shifts to identifying the functionalities desired by end-users on a desktop platform. The question is based on a Likert Scale ranging from 1 to 5, with participants indicating their preferences for platform features. Participants, with slight variation, consistently ranked the inclusion of a "search bar with filtering" as the most important feature, with an average rating of 4.35 out of 5. This reflects the need to filter the diverse information provided while enabling users to search directly for desired content. Similarly, the use of a drop-down menu for section navigation was ranked second in preference, indicating a preference for a user-friendly navigation interface. However, the proposal of an interactive map with four layers did not receive widespread support, likely due to concerns about increased complexity. Lastly, the inclusion of accessibility features, such as enhanced contrast and content narration, garnered interest, surpassing the average participation level, despite some uncertainty expressed by participants about their understanding of these features.



### **Question 2. Which features make more user- friendly and accessible platforms, similar to the Observatory, on mobile view?**

Question 2 aimed to identify which features contribute to making the Observatory app more user-friendly, utilizing a Likert Scale from 1 to 5, similarly to the previous question. Notably, participants highlighted the significance of accessibility features, rating them at 4.02 out of 5, despite exhibiting considerable variation in their responses. This variance can be attributed to the comprehensive discussion held regarding accessibility features previously. Following closely behind, the "interactive content boxes with information" emerged as the second most important feature. Given the constraints of mobile apps, interactivity becomes crucial for enhancing user experience without overwhelming users with excessive information. Scoring at a median of 3.7 and 3.5 out of 5 were the "scroll to top" and "dynamic scrolling" features respectively. These functionalities are particularly valuable in navigating through extensive content on a mobile platform. Conversely, participants showed less enthusiasm for gamification features. The disparity in responses underscores the diverse ways in which individuals utilize their mobile devices.

### **Question 3. What kind of modules will be employed to enhance the engagement, motivation and enjoyment of users in the digital Observatory?**

Question 3 is presented in a different format, where participants were asked to indicate which modules they would like to see in the ECO-Ready Observatory. Options included Calculators, Simulations, Games, News, and AI Predictions. A significant portion, 40% of respondents, expressed interest in having calculators that measure meal calorie intake, recommended calorie intake, nutrients, and the carbon footprint of selected ingredients. This aligns well with the Observatory's focus on informing users about food security and promoting sustainable nutrition practices.

Following closely, simulations of environmental impact and farm-to-fork strategies ranked second, providing valuable insights into the production processes of goods. Interest in the News section and AI predictions was moderate. The News section, being a common feature on websites, didn't spark significant interest, while AI predictions were somewhat perplexing for participants who may not fully grasp their essence. Additionally, the stakeholders' backgrounds may have influenced lower engagement with AI predictions.

Once again, there was minimal interest in including games in the Observatory. It's worth noting that in some groups, none of the participants voted for the Games module, resulting in a 0% minimum measure.

### **Question 4. AI models in the Observatory may have imprecise predictions. Frequent notifications can prevent missed information but may also result in inaccuracies. How do you like your predictions?**

Question 4 aimed to rank the preferences of end-users regarding notifications for AI predictions. Participants were informed that while predictions may be imprecise, they would ensure users do not miss any updates. Three options were provided, ranging from "I do not want to miss anything. Errors are fine" to "I want predictions only if the model has a high confidence in a prediction."

The majority of respondents indicated a preference for receiving predictions only when they have a high accuracy. Some participants expressed a desire for a balance between receiving frequent notifications and high accuracy predictions. Given that the Observatory primarily presents results and solid data, inaccurate predictions could potentially mislead users and compromise the accuracy of other modules, such as the calculators, resulting in incorrect outcomes.



**Question 5. Please share with us any existing tools/platforms you would like the Observatory or App to integrate with**

In response to Question 5, participants voiced a strong interest in accessing reliable footprint information, emphasizing the importance of utilizing reputable sources like Eurostat and LCA databases such as Agribalyse. Sentinel data for Earth observation and the integration of GIS tools like ArcGIS were also highlighted as essential for visualizing and analyzing spatial data effectively. Additionally, respondents expressed a need for accessing databases such as those provided by RIVM and platforms like agridataspace-csa.eu for comprehensive agricultural data. Lastly, there was mention to biodiversity tools like the Star Metric, underlining the significance of assessing research projects' impact on biodiversity conservation.

**Question 6. The Observatory will contain AI models, which will predict various phenomena. How long would you like these predictions to be preserved?**

We chose not to address this question based on the moderator's preference to prioritize other topics during the session.

**Question 7. In what timeframe would you prefer these future predictions to be extended?**

We chose not to address this question based on the moderator's preference to prioritize other topics during the session.

**Question 8. How frequently would you prefer to receive updates and notifications from the App?**

We chose not to address this question based on the moderator's preference to prioritize other topics during the session.

**Question 9. What types of alerts and notifications would be useful for you as a user?**

In response to Question 9, participants provided valuable insights into the types of alerts and notifications they found useful as users of the Observatory and app.

High importance was placed on alerts regarding severe weather events and pest outbreaks, with participants rating this category an average of 6.7 out of 10, with a maximum score of 9.8. Similarly, notifications regarding crop conditions drew significant interest, receiving an average rating of 8.07 out of 10, with a maximum score of 9.3. These alerts are crucial for users to stay informed about potential risks to agricultural production and plan accordingly.

Additionally, participants expressed a need for notifications about price fluctuations and policy changes, rating them an average of 6.6 and 7.37 out of 10, respectively. These alerts enable users to stay updated on market dynamics and policy developments that may impact their agricultural activities.

In contrast, participants showed less interest in notifications related to privacy and data issues, as well as web and app notifications, rating them an average of 4.4 and 5.07 out of 10, respectively. While still important, these categories received lower scores compared to other alert types.

Overall, participants emphasized the importance of receiving timely and relevant alerts regarding weather, crop conditions, price fluctuations, and policy changes, highlighting the need for effective communication channels to keep users informed and empowered in their decision-making processes.



### Question 10. What kind of personalisation features, would you like to see on the Observatory and app?

In response to Question 10, participants provided valuable insights into their preferences regarding personalization features for the Observatory and app.

Many respondents expressed a desire for personalized news and data tailored to specific regions or living labs, underscoring the importance of localized information in addressing regional environmental challenges. Additionally, there was interest in user or focus group selection, allowing individuals to customize their experience based on their preferences and interests.

Geographical areas emerged as a key aspect of personalization, with participants indicating a preference for features that enable them to explore data based on specific geographical zones or crop regions. Moreover, the option to choose or set one's country or region upon reopening the app according to personal preference was highlighted as a desirable feature, particularly for accessing information relevant to specific crops or agricultural practices.

Furthermore, stakeholders expressed interest in standard demographic options for personalization, as well as features aimed at simplifying the user experience. The mention of observatories suggests a desire for integrated platforms that facilitate data sharing and collaboration among stakeholders.

Overall, respondents advocated for a range of personalization features aimed at enhancing user engagement and providing relevant, localized information tailored to individual preferences and needs.

### Question 11. Are the games also going to gather user information - cookies data (with consumer privacy in mind)?

For Question 11, participants provided insights into their perspectives on whether games within the Observatory would gather user information, considering consumer privacy. It is worth mentioning that the participants could choose more than one answer.

A notable majority, comprising 67% of respondents, expressed support for incorporating features in games that consider consumer choices, behaviors, and motivations. This indicates a desire for games that not only entertain but also provide valuable insights into user preferences and engagement patterns.

Similarly, a significant portion of participants, accounting for 44%, favored enabling social sharing features within games to increase engagement and foster a sense of community among users. This suggests an interest in games that facilitate interaction and collaboration among participants.

Meanwhile, survey-like games to gather user preferences received support from 22% of respondents, highlighting a potential interest in using gaming mechanisms for data collection purposes while ensuring user engagement and enjoyment.

Overall, participants emphasized the importance of balancing user engagement with privacy considerations when designing games within the Observatory, advocating for features that enhance user experience while respecting consumer privacy.

## Thematic D - Community interaction

In this section, we delve into the insights gathered during the Community Interaction thematic session of our co-creation workshop. This session focused on exploring various strategies and mechanisms to foster community engagement, collaboration, and communication within the context of our project's goal to develop an Observatory providing real-time data for the food system. Through a series of questions and discussions, participants provided valuable input on



enhancing collaboration among users, establishing connections between policymakers and consumers, implementing effective feedback mechanisms, leveraging Living Labs for real-time data input, and ensuring the long-term sustainability of the Observatory platform and app. The insights gathered in this session will inform the development of our platform, ensuring it effectively meets the diverse needs of our stakeholders. The key findings and recommendations from this interactive and collaborative session are summarised below.

**Question 1. What types of community interaction and contact functionalities would you like to see in the Observatory & the mobile App, to enhance collaboration and communication among users?<sup>1</sup>**

Based on the responses gathered for question 1 during the co-creation session of Thematic D, participants highlighted the importance of various community interaction and contact functionalities to enhance collaboration and communication among users within the Observatory and mobile app.

These included:

1. Risks addressed and industry-specific data sharing between stakeholders, consumers, farmers, and researchers.
2. Queries about local conditions and the ability to verify predictions, fostering a more intelligent system.
3. Stakeholder forums and a repository of case studies/best practices from different sectors, including academia, industry, and policy.
4. Interaction between communities facing similar challenges, such as farmer forums for sharing observations and best practices.
5. Options to ask questions to policymakers or scientists, along with contact info for inquiries on different topics.
6. Provision of feedback mechanisms through forums and interactive chat, enabling stakeholders with similar roles to share common challenges.
7. Capacity building opportunities and the integration of fun facts and biodiversity monitoring features.
8. Implementation of gamification techniques to collect information, conduct surveys, and facilitate capacity building in an engaging manner.
9. Utilization of objective numbers and observational data sharing among farmers to enhance information exchange and problem-solving.
10. Consideration of interactive scenario builders and gamification elements that are practical, fun, and realistic to foster user engagement and community building within the app.

Participants also emphasised the importance of tailoring interactions to specific stakeholder groups to ensure relevance and effectiveness.

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<sup>1</sup> Example answers that were provided based on the internal ECO-READY survey conducted by AUTH, included *discussion forums, a direct messaging system, establishment of a knowledge repository, fun facts, interactive scenario builder, serious game type/gamification of management of crops/food security/climate change/biodiversity, leader boards of scenarios/game type management, knowledge quiz for education/knowledge sharing/capacity building.*





## Question 2. What kind of connection are we looking for between policy makers and consumers?<sup>2</sup>

Based on the responses gathered for question 2, participants highlighted several key aspects regarding the desired connection between policymakers and consumers within the Observatory and mobile app. These included:

1. Emphasis on transparency and the collection of feedback from consumers, enabling policymakers to make informed decisions based on user input.
2. Suggestions for mechanisms to facilitate feedback from consumers directly via the app, ensuring their voices are heard and considered in policy formulation.
3. Recognition of the need for policymakers to stay informed about new trends and align policy decisions with user needs, particularly in improving agriculture capabilities and reflecting on potential new policy recommendations.
4. Suggestions for open public consultations shared through the observatory, promoting co-creation and testing of policy proposals.
5. Highlighting the importance of considering the needs and concerns of small-scale farmers or smallholders within the Observatory and mobile app. Specifically, there were discussions about the unique challenges faced by smallholders in different regions, such as Germany, where the agricultural landscape may differ significantly from other countries. Suggestions were made to prioritize attention to the sector independently and provide dedicated mechanisms for engagement, given its distinct needs and concerns. This underscores the importance of tailoring communication channels and support mechanisms to accommodate the diversity of stakeholders, including smallholders, within the agricultural community.
6. Recognition of existing communication mechanisms between farmers and policymakers in democratic countries, such as roundtable discussions and social media engagement, emphasizing the importance of direct communication channels.
7. Consideration of different stakeholder groups, such as civil society representing farmers, as intermediaries between farmers and policymakers to synthesize feedback and build rapport.
8. Suggestions for creating community forum-type features within the platform to facilitate suggestions, discussions, and consensus-building among users, ultimately aiding policymakers in understanding trends and making informed decisions.
9. The proposal for an education and awareness hub to provide users with educational resources and promote awareness on relevant topics, contributing to informed decision-making and policy engagement.

Overall, participants stressed the importance of fostering transparent, two-way communication channels between policymakers and consumers, empowering users to contribute to policy discussions and decision-making processes effectively.

## Question 3. What type of feedback mechanism should be integrated into the platform and mobile application to enable users to provide input on its performance and suggest improvements?<sup>3</sup>

Based on the responses gathered for question 3, participants expressed their preferences for various feedback mechanisms and interactive features to enable users to provide input on the performance

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<sup>2</sup> Example answers that were provided based on the internal ECO-READY survey conducted by AUTH, included: Data Sharing, Data Sharing Platform, Feedback Mechanism, Education and Awareness Hub, Engagement Opportunities Forum, Monitoring, Evaluation Centre, Collaborative Projects Space

<sup>3</sup> Example answers that were provided based on the internal ECO-READY survey conducted by AUTH, included: Feedback Button or Form, User Community Forum, Knowledge Quiz for Capacity Building and education, Leaderboards on Sustainable Scenarios



of the platform and mobile app, as well as suggest improvements. The most popular choices included:

1. **Feedback button:** Participants favoured the inclusion of a feedback button as a direct and accessible way for users to provide feedback on their experience with the platform and app.
2. **User community forum:** There was also strong support for the establishment of a user community forum, providing a space for users to engage in discussions, share ideas, and collaborate on improving the platform and app.

Additionally, suggestions were made for other interactive features, including:

3. **Knowledge Quiz for capacity building and education:** Participants highlighted the potential value of incorporating knowledge quizzes as a means of enhancing user engagement, capacity building, and education on relevant topics.
4. **Leaderboards on sustainable scenarios:** Some participants expressed interest in incorporating leaderboards to highlight sustainable practices or scenarios, potentially incentivizing users to engage more actively with the platform and app.

Furthermore, insights from the session emphasized the importance of maintaining relevance and dynamism within the platform and app to encourage ongoing user engagement. Suggestions were made to include a frequently asked questions (FAQ) section to address common queries and ensure users have access to essential information.

#### **Question 4. To achieve real-time data input, would it make sense to you to interact with the Living Labs in the respective regions through the Observatory to provide input on missing information?**

Based on the responses collected for question 4 during the co-creation workshop, participants provided various insights on the potential for real-time data input through interactions with the Living Labs. Here's a summary of the key points:

1. **Collaboration and Communication:** Participants emphasized the importance of establishing collaborations and contacts among stakeholders to facilitate the sharing of data and information related to food security, biodiversity, and climate change. They highlighted the need for trustworthy relationships among food actors to ensure effective communication and collaboration.
2. **Verification of Data:** There were concerns raised regarding the need for data and information to undergo verification to ensure accuracy and reliability before being shared through the Observatory. Participants recognized the importance of maintaining data integrity and reliability for informed decision-making.
3. **Input and Feedback:** Participants expressed support for the exchange of information and feedback through the Living Labs, particularly in instances where missing information or challenges arise. They viewed the Living Labs as a valuable channel for users to provide input and relevant information to enhance the real-time data input process.
4. **Role of Living Labs:** Participants highlighted the role of Living Labs as regional points of contact for submitting missing information or feedback to the Observatory. They emphasized the convenience of utilizing Living Labs to report issues or provide input related to climate change, agricultural practices, or industry challenges, thereby contributing to the generation of real-time data.



Overall, participants recognized the potential of engaging with Living Labs to facilitate real-time data input and foster a sense of community involvement in addressing food security and environmental challenges. They emphasized the importance of clarity in the objectives and focus areas of the Observatory to ensure its effectiveness and long-term sustainability.

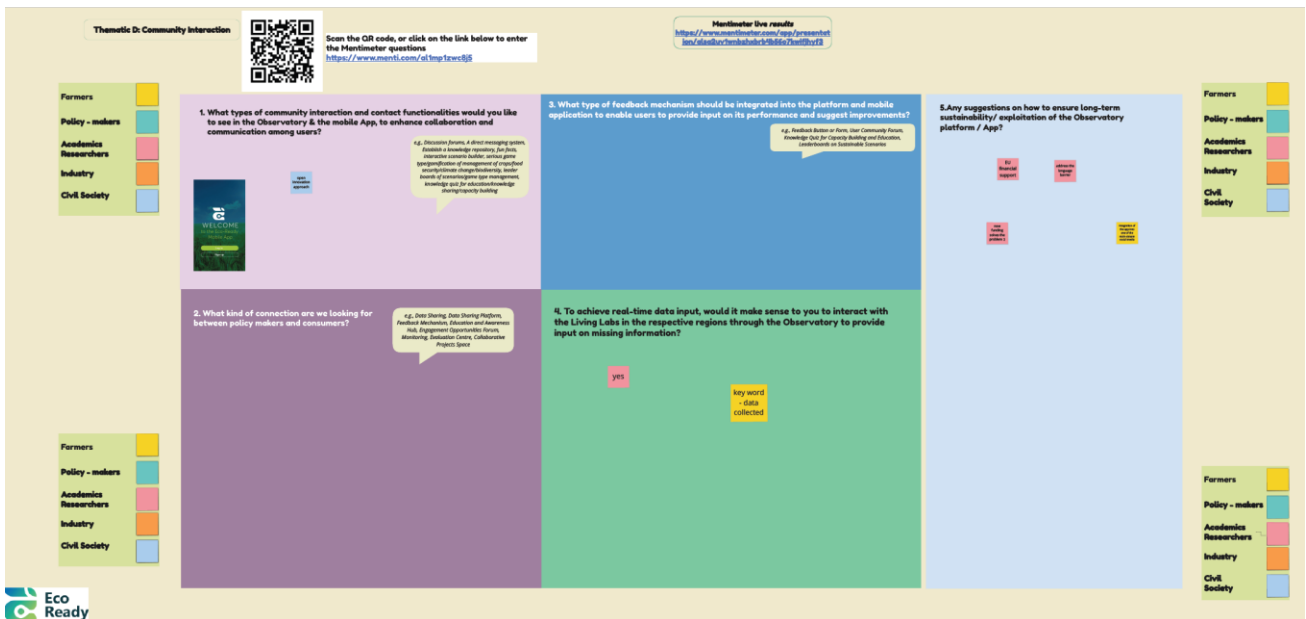
#### Question 5. Any suggestions on how to ensure long- term sustainability/ exploitation of the Observatory platform / App?

Based on the responses collected for question 5 during the co-creation workshop, participants provided valuable insights on ensuring the long-term sustainability and exploitation of the observatory platform and app. Here's a summary of the key points:

1. **Understanding end users:** Participants emphasized the need to understand the needs and preferences of end users to ensure that the platform and app remain relevant and useful over time. They highlighted the importance of providing information that addresses users' problems and interests, as well as having relevant topics for different focus groups.
2. **Data sharing and collaboration:** Participants stressed the importance of all supply chains participating in the observatory and sharing knowledge and lessons learned across different regions and cultures. They emphasized the need for data sets to avoid duplicating work and discussed the management of data intellectual property provided by the Living Labs.
3. **User-friendly interface and continuous updates:** Participants emphasized the importance of a user-friendly interface and continuous updates to the platform and app to keep users engaged. They suggested features such as a feedback button, user community forum, and knowledge quiz for capacity building and education.
4. **Financial support and multilingual availability:** Participants discussed the need for a clear value proposition and business model for the observatory, including consideration of a freemium model and funding mechanisms beyond the duration of the Eco-Ready project. They also highlighted the importance of making the app available in different languages to cater to users with varying language proficiencies.
5. **Incentives for stakeholder groups:** Participants questioned the incentives for different stakeholder groups to use the platform and app. Identified incentives were: Policymakers are incentivized by the opportunity to make better decisions through access to comprehensive data and stakeholder feedback. The general public could be incentivized by gamification techniques, personalized features, and access to news and information. Other stakeholder groups could benefit from information exchange, knowledge sharing, and access to best practices and lessons learned. A general remark was that ensuring that stakeholders are kept motivated to use the platform and app via the benefits provided by it, could contribute to its long-term sustainability.

Overall, participants emphasised the need for a more focused approach to the observatory's themes, user-friendly design, continuous updates, financial sustainability, and incentives for different stakeholder groups to ensure the long-term success and impact of the platform and app beyond the project's duration.





## Conclusion

The co-creation workshop provided valuable insights, requirements, and preferences that will significantly inform the development of the ECO-READY Observatory. Through collaborative discussions and interactive sessions, key stakeholders shared their perspectives on various aspects of the platform, ranging from features and functionalities to community engagement strategies.

The significance of the workshop in shaping the direction of the project cannot be overstated. By gathering input from diverse stakeholders, we have gained a comprehensive understanding of the needs and priorities of our target audience. This insight will guide us in designing a platform that meets the expectations of users. We are committed to ongoing collaboration and engagement with stakeholders throughout the project's lifecycle. By maintaining open communication channels and seeking feedback at every stage, we will ensure that the Observatory remains relevant, user-friendly, and impactful.

Moving forward, our next steps will involve translating the insights gathered during the workshop into actionable plans. We will prioritise the implementation of key features and functionalities identified by participants, while also exploring innovative solutions to address emerging challenges. In addition, we will continue to foster partnerships with stakeholders, including policymakers, civil society, researchers, farmers, and consumers, to ensure that the Observatory reflects the needs and interests of the broader community. By being inclusive in our processes, we will work towards our shared goal of promoting sustainability and resilience within the food system. With the support and collaboration of our stakeholders, we are confident that the ECO-READY Observatory will be a valuable resource for fostering positive change in the agricultural sector and beyond.

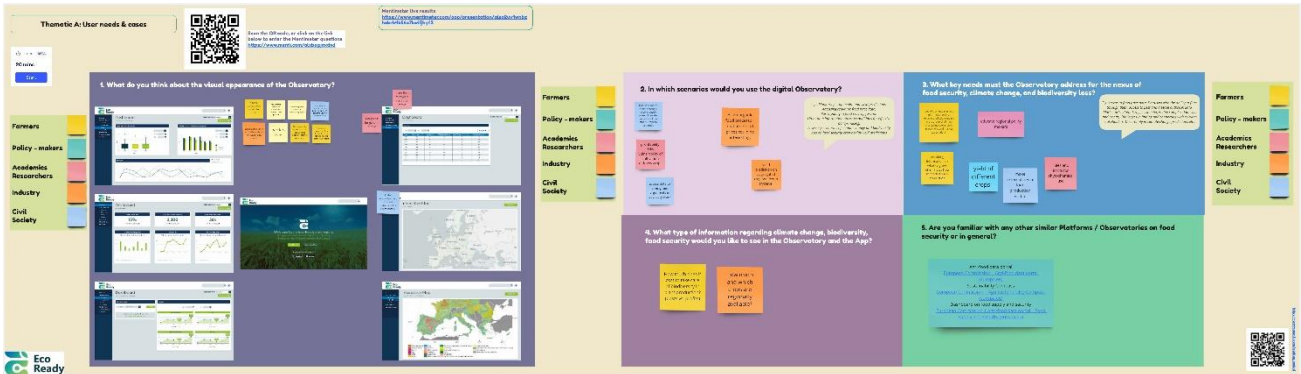
Figure 3. Thematic D Miroboard



# Annex

## Miro Boards

### Thematic A



### Thematic B



**5. Which types of metrics would you like to see in the Food Security pages of the Dashboard?**

*E.g., food price, crop/stock market prices, stability over time, dimension of food security, stress and effects of lack of food security, price in different regions, regional disaster probabilities*

**6. Which types of metrics would you like to see in the Biodiversity pages of the Dashboard?**

*E.g., metrics like species richness, drivers and effects of biodiversity loss, and LCA for 10 categories, metrics for agricultural emissions services like pollution, climate regulation, and insecticide usage, consistency and harmonization of outputs from various tools*

**7. Which types of metrics would you like to see in the Climate Change pages of the Dashboard?**

*E.g., included air quality, temperature fluctuations, weather patterns, climate change drivers and extreme weather events*

**8. How should the Living Labs be depicted in the map?**

*E.g., show area, map pin*

**9. What types of metrics could we add to the different Interactive Maps?**

*E.g., crop types, rainfall variability, sea level, Food Security index or Biodiversity metrics*

**10. What info should be shown in the popups?**

*E.g., info related to Food Security/Climate Change/Biodiversity, or more general?*

**11. Do we include some kind of information for regions across Europe (if not available, use empty/grey areas)?**

*E.g., use layers of generic information*

**12. What metrics would you expect to see on the Data View page?**

*E.g., tables or cubes, time data for researcher use, the ability to select metrics per specific times or regions, a summary view of user-selected data for specific regions, time data on factors like food security at different spatial and temporal scales, climate change and biodiversity drivers, adding interpretations at the bottom of the screen, ensuring flexibility in data downloading*

**13. How do you prefer to access and interact with data within the Observatory?**

*E.g., dashboard numbers, dashboard graphs, map layers, data exploration*

Thematic C

**1. Which features make more user-friendly and accessible platforms, similar to the Observatory, on desktop view?**

*- Gamification features ( progress bars, leader-board, in-app currency - for example people can invest to a LL or a product)  
- Interactive content boxes with information  
- Scroll to top feature  
- Accessibility features*

**2. Which features make more user-friendly and accessible platforms, similar to the Observatory, on mobile view?**

*- Gamification features ( progress bars, leader-board, in-app currency - for example people can invest to a LL or a product)  
- Interactive content boxes with information  
- Scroll to top feature  
- Accessibility features*

**3. What kind of modules will be employed to enhance the engagement, motivation, and enjoyment of users in the digital Observatory?**

*- Calculators (Meal Calculator/Make Recommended Daily Meals/Nutrition/Calories)  
- Simulations (Environmental Impact, e.g., Farm-to-fork process)  
- Games (Eco-Ready Farming/Memory/Clothes/Leaderboard)  
- News (Organic Challenges/Smart Farming/Food Waste)  
- AI Models for predictions*

**4. AI models in the Observatory may have impressive predictions. Frequent notifications can prevent missed information but may also result in inaccuracies. How do you like your predictions?**

*- I do not want to miss anything. Errors are fine, I want predictions only if the model has a high confidence in a prediction  
- There should be a feature between the two.*

**5. Please share with us any existing tools/platforms you would like the Observatory or App to integrate with?**

*e.g. GIS tools, data visualisations software, data sharing points*



Please grab a sticker and share your report on the board!

- Farmers
- Policy - makers
- Academics
- Industry
- Civil Society

Scan and Join

<https://www.mind.com/af/bmg/tw@5>

**6. The Observatory will contain AI models, which will predict various phenomena. How long would you like these predictions to be preserved?**

**7. In what timeframe would you prefer these future predictions to be extended?**

**8. How frequently would you prefer to receive updates and notifications from the App?**

- Daily - Time sensitive - updates for critical data
- Weekly summaries for trends and forecasts
- Monthly for general awareness

**9. What types of alerts and notifications would be useful for you as a user?**

- Alerts for severe weather events/pest outbreaks affecting crop conditions in real-time, or near future predictions.
- Notifications about significant fluctuations in food prices.
- Alerts for policy changes or government initiatives affecting food security
- Alerts for privacy/data/profile issues
- Notifications through the web page and the app (e.g. push notifications). Threshold values inside the charts. A separate page/notification centre with all warnings could also be an option.

Please grab a sticker and share your report on the board!

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<https://www.mind.com/af/bmg/tw@5>

**10. What kind of personalisation features, would you like to see on the Observatory and app?**

E.g. per stakeholder group, gender, geographical zone, etc.

E.g. the user can add information about his/her habits regarding food consumption and receive relevant metrics, newsletters or select which metrics/L2zones to display on their dashboards (similar to Apple's Weather App)

**11. Are the games also going to gather user information – cookies data (with consumer privacy in mind)?**

- Games that not only entertain but also serve as tools for data collection and user engagement.
- Survey-like games to gather user preferences
- Incorporating features that consider consumer choices, behaviours, and motivations.
- Enabling social sharing features to increase engagement and create a sense of community.

### Thematic D

Thematic D: Community Interaction

Scan the QR code, or click on the link below to enter the Mindmeister questions

<https://www.mind.com/af/bmg/tw@5>

**1. What types of community interaction and contact functionalities would you like to see in the Observatory & the mobile App, to enhance collaboration and communication among users?**

- open innovation approach

**3. What type of feedback mechanism should be integrated into the platform and mobile application to enable users to provide input on its performance and suggest improvements?**

- Multi-stakeholder feedback mechanism

**2. What kind of connection are we looking for between policy makers and consumers?**

- open innovation approach

**4. To achieve real-time data input, would it make sense to you to interact with the Living Labs in the respective regions through the Observatory to provide input on missing information?**

yes

key word - data collected

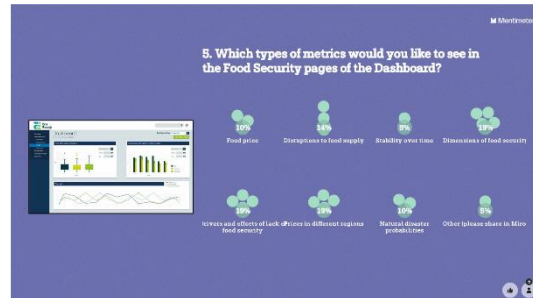
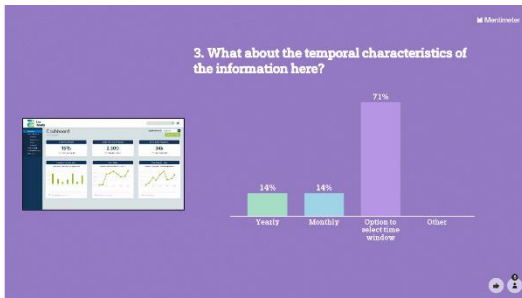
**5. Any suggestions on how to ensure long-term sustainability/ exploitation of the Observatory platform / App?**

- EU financial support
- integrate the platform better
- user financing solves the problem 3
- integration of the app into one of the main platforms (social media)



# Mentimeter

(some examples)





# Supporting material

## Consent form

**DEFINING USER REQUIREMENTS FOR THE ECO-READY OBSERVATORY**  
**CO-CREATION WORKSHOP**  
 Online - 13.03.2024 - 13:00 OET  
Organized by White Research in collaboration with Wageningen University and Aristotle University of Thessaloniki

### Consent form

We are looking forward to your participation in the ECO-READY co-creation workshop aiming to define user requirements for our Observatory Platform and App. Please take a few moments to fill out this consent form.

**Name**

Η απάντησή σας \_\_\_\_\_

**Surname**

Η απάντησή σας \_\_\_\_\_

**Organisation**

Η απάντησή σας \_\_\_\_\_

**Role**

Η απάντησή σας \_\_\_\_\_

**Please indicate your stakeholder group**

Farmers, breeders

Industry actors

Policy actors

Academics, Researchers

Civil society (citizens, municipalities, citizen organisations, community initiatives, NGOs etc.)

Άλλο: \_\_\_\_\_

**Email**

Η απάντησή σας \_\_\_\_\_

**GDPR Consent\***

ECO-READY is committed to ensuring the security and protection of the personal information we process and to providing a compliant and consistent approach to data protection. You can find detailed information about the content and scope of the processing of your data in our Privacy Policy: <https://www.eco-ready.eu/data-protection>

I understand that my personal data will be stored and treated confidentially and according to the principles dictated by the GDPR

**I give my consent to the processing of personal data necessary to:\***


My participation in a co-creation workshop that will be conducted by ECO-READY with the aim of defining the high level user requirements of the Observatory platform and app, collecting insights from relevant stakeholders.

**Please tick the boxes below to confirm that you give your consent for the respective topic. Any unchecked boxes mean that you do not agree to the topic in question**

I agree to the recording of the co-creation workshop.

I authorize ECO-READY to keep my contact details for future project activities

I authorize ECO-READY to send me newsletters and messages regarding ECO-READY activities



This project has received funding from the European Union's HORIZON-CL6-2022 research and innovation programme under grant agreement N-101084201.

Η απάντησή σας \_\_\_\_\_

Υποβολή
Εγκαθάρτηση φόρμας



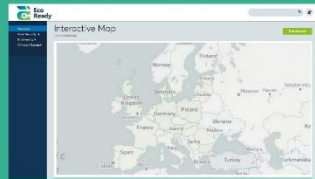
Observatory visual shared with participants prior to the workshop

# INTRODUCTION TO THE ECO-READY OBSERVATORY

The ECO-READY Observatory acts as a central knowledge center, gathering data on food security and climate's impact on farming. It helps us spot issues early and provides tools to address them promptly, while also aiding in long-term agricultural planning.

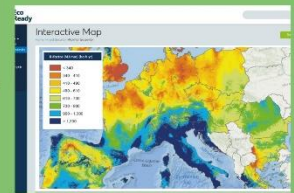
## 01. DATA COLLECTION

The Observatory collects data, models, and knowledge on food security, including biodiversity and disease management



## 02. MONITORING CHANGE

It tracks climate change and other factors impacting food security, offering early warnings for potential disruptions



## 03. CONSUMER ENGAGEMENT

Through digital platforms, consumers access information on climate-friendly food options, empowering them to shape policies and make informed choices.



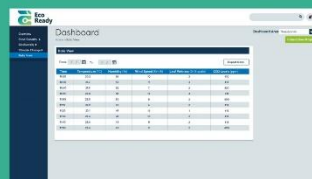
## 04. RESILIENCE PLANNING

Developing strategies for farms and businesses, it addresses regional needs and influences European policy debates.



## 05. POLICY ASSISTANCE

Using AI models, it aids policymakers in selecting resilience plans and crisis management frameworks for agriculture.



## 06. POLICY RECOMMENDATIONS

Offering long-term guidance, it targets initiatives like the Common Agricultural Policy for sustainable agriculture.

