

DIVINFOOD – H2020 n°101000383



# DIVINFOOD

Co-constructing interactive short and mid-tier food chains  
to value agrobiodiversity in healthy plant-based food

## Deliverable D1.2

*Methodology to elaborate a consumption white paper*

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## Summary

The Deliverable 1.2 “Methodology to elaborate a consumption white paper” is intended to guide the implication of consumers, considered as citizens, in the decisions relative to the development of food chains. It is addressed to the DIVINFOOD consortium, and to all value chain actors, development services, policy-makers, researchers or citizen associations seeking methods to make consumer-citizens decision-makers in their innovation, policy or research activities concerning food chains. The document first reviews inspiring approaches for involving citizens in developing recommendations on potentially complex topics, used in the agriculture and food sector. Second, it describes the methodology developed in DIVINFOOD to elaborate a white paper, which can be replicated or adapted in other contexts.

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1	10/12/2022	Yuna Chiffolleau, Tara Dourian, Zsófia Perényi, Emese Gulyás	
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# Introduction

White papers are documents positioning institutions' or organisations' arguments and recommendations regarding a policy, business, technical or technological issue. They are generally written by experts but can also involve citizens to help elaborate recommendations. For instance, the European Commission regularly invites relevant parties (stakeholders or citizens) to participate in a consultation process and debate about proposals they put forward. Parties' feedbacks may give rise to legislative developments that are then outlined in white papers, which are submitted to the public, the stakeholders, the European parliament and Council in order to reach a political consensus<sup>1</sup>.

However, involving citizens – and not only stakeholders<sup>2</sup> – in the design of recommendations for research, innovation or policies, remains not a common nor easy task. While many initiatives promote citizen participation, specific methods are required to favour a “critical participation”<sup>3</sup>, that means a participation with the possibility and the capacity for participants to make propositions. Critical participation is not intended to simply confirm what is proposed by decision-makers as “the best, and the only possible solution”. Citizens need however to understand the issue at hand, in order to be able to discuss and/or propose different solutions. They also need to understand the purpose of their participation.

At the turn of the 21st century, citizen involvement in decisions related to food systems has been theorised through the concept of “food democracy”, emerging as a response to the overt inequality and the lack of democracy characterizing the global food system<sup>4</sup>. In building food democracy, a rights-based discourse is foundational: citizens' capacities, responsibilities and active, “meaningful participation” are stressed, calling them to regain control of decisions related to their food systems<sup>5</sup>.

Involving citizens was one of the foundations of the DIVINFOOD European project, which aims to develop food supply chains valuing neglected and underutilised agrobiodiversity, for and with consumers, considered as citizens, both to contribute to reverse the decline of agrobiodiversity and to meet their expectations. In the first months of the project, DIVINFOOD thus started to develop a white paper based on the expectations and aversions of consumer-citizens regarding the use of agrobiodiversity in food chains. Building on a food democracy perspective, this white paper is intended to guide the research and innovation activities of DIVINFOOD partners, from the selection of varieties to the marketing of food products, including the drafting of policy briefs

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<sup>1</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:white\\_paper](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:white_paper)

<sup>2</sup> We refer here to the distinction made by the OECD: “Stakeholders are any interested and/or affected party, including institutions and organisations, whether governmental or non-governmental, from civil society, academia, the media, or the private sector. Citizens are individuals, regardless of their age, gender, sexual orientation, religious, and political affiliations. The term is meant in the larger sense of ‘an inhabitant of a particular place’, which can be in reference to a village, town, city, region, state, or country (...). In this larger sense, it is equivalent of people.” (OECD, 2022, p. 13).

<sup>3</sup> Friedberg, 1972

<sup>4</sup> Clapp, 2021; Lang, 2005.

<sup>5</sup> Hassanein, 2003.

and the setting up of experiments with local authorities to better value agrobiodiversity in food chains. It is also a resource to build citizen-led roadmaps for all value chain actors, researchers, policy-makers, advisers, citizens, concerned by the use of agrobiodiversity in food chains.

The objective of this document is to present the methodology developed in DIVINFOOD to involve consumer-citizens in the formulation of recommendations to guide project activities. This methodology was inspired by various existing approaches, described below, for involving citizens in defining policy orientations, economic strategies or research agendas in relation with the agricultural and/or food sectors<sup>6</sup>. Such approaches are considered “democratic innovations”, in that they promote “novel ways of organising citizen participation in the formal democratic process”<sup>7</sup>. We review these approaches in the first section<sup>8</sup>, and, in the second section, we present the methodology developed in DIVINFOOD, which could be replicated or adapted in other contexts.

# 1. Inspiring approaches used in the agriculture and food sectors to involve citizens in developing policy, economic or research recommendations

## 1.1 Food policy councils

The most frequently documented types of initiatives implementing food democracy are food policy councils, which flourished significantly in the early 2000s in cities and regions across Europe, the United Kingdom, North America, and Australia. In a local or regional food policy council, various stakeholders from all facets of a food system are brought together and gather regularly, in order to learn about and examine their local food system, and make policy recommendations to improve it. Typically, these stakeholders include, among others, farmers, consumers, food processors, food wholesalers and distributors, food retailers and grocers, chefs and restaurant owners, community gardeners, food bank managers, policy makers and academics. These councils are typically driven by local/regional authorities, but appear to be more adapted to the participation of representatives of local/regional organisations, including consumer or civil society associations, than of individual consumer-citizens.

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<sup>6</sup> For a broader view of citizen participation approaches, we warmly recommend the Guidelines for citizen participation processes published by the OECD in September 2022; OCDE (2022), *OECD Guidelines for Citizen Participation Processes*, OECD Public Governance Reviews, Éditions OCDE, Paris, <https://doi.org/10.1787/f765caf6-en>

<sup>7</sup> Candel, 2022.

<sup>8</sup> This section does not pretend to be exhaustive, we present here some approaches used in the agricultural and food sector that inspired the method developed in DIVINFOOD.

Table 1 summarises the main characteristics of food policy councils, and provides references.

Food policy councils	
<b>Level</b>	City, metropolis, region
<b>Participants</b>	Local/regional organisations
<b>Time-duration</b>	Regular meetings, multi-year
<b>Conditions of implementation</b>	Typically driven by local/regional authorities
<b>Inclusion of consumer-citizens</b>	Through civil society and consumer associations representatives
<b>Means for citizen critical participation</b>	Exchange with professionals during meetings
<b>References/resources</b>	<ul style="list-style-type: none"> <li>Halliday J., Torres C., van Veenhuizen R., 2019. Lessons of inclusiveness. Editorial to the Special issue on food policy councils. <i>Urban Agriculture</i>, 36 [online]  <a href="https://ruaf.org/document/urban-agriculture-magazine-no-36-food-policy-councils/">https://ruaf.org/document/urban-agriculture-magazine-no-36-food-policy-councils/</a></li> <li>See, for example, one of the pioneer food policy councils, the Toronto Food Policy Council, established in 1991:  <a href="https://tfpc.to/">https://tfpc.to/</a></li> </ul>

**Table 1.** Characteristics of food policy councils

## 1.2 Citizen assemblies and conferences

This approach consists of bringing together a group of ordinary citizens – lay people – who learn about a topic through educational training sessions, alongside experts, over a determined period of time, becoming equipped with the necessary knowledge to produce a public statement with recommendations. Originally based on the “Consensus Conference” model developed in Denmark in 1987 to evaluate a technological development, they are meant to foster public implication in science and technology assessment, matters that are usually relegated to academics and experts. Citizens may be randomly selected or recruited to represent a variety of socio-demographic profiles, may participate voluntarily and may be paid or compensated as suited.

During the GMO crop boom in the late 1990s, and within a context of rising anti-GMO public campaigns, these conferences were a way of engaging citizens with the use of genetic technologies in food and agriculture. Among others, one of the main leading examples is the Citizen Conference on GMOs initiated by the French government in 1998, the first national consultation of its kind, where 14 citizens participated in training sessions with experts on the topic, before joining a public debate with various stakeholders and developing recommendations (Marris, Joly, 1999, see the reference below).

More recently, citizen assemblies and conferences have continued to emerge on other topics related to environment, food and agriculture, namely the Citizen Conference on Sustainable Food and Agriculture organised by the city of Paris in 2021 (France), the Citizen Convention for Climate held by the French State in 2019, the national Citizen Assembly for Climate in Spain in 2021, as well as the Citizens' Assembly for Food Policy in Switzerland in 2022. Citizen conferences are typically implemented at the national level or at urban/metropolitan/regional levels, driven by the State, a local authority, an NGO, or a private foundation.

Citizen assemblies and conferences	
<b>Level</b>	Urban, metropolitan, regional, national
<b>Participants</b>	A group of citizen randomly selected or recruited to represent various socio-demographic profiles
<b>Time-duration</b>	Training sessions over a limited period, leading to the drafting of a recommendations document / a white paper
<b>Conditions of implementation</b>	<ul style="list-style-type: none"> <li>• Mobilisation of experts to train participants (which could induce costs)</li> <li>• Remuneration or compensation for participants (not systematic)</li> </ul>
<b>Inclusion of consumer-citizens</b>	Direct
<b>Mean for citizen critical participation</b>	Training sessions by experts (e.g., About 20 experts distributed during 3 consecutive week-ends in the case of the Citizens' Conference on Sustainable Food and Agriculture in Paris, France)
<b>References/resources</b>	<ul style="list-style-type: none"> <li>• Marris C., Joly P.-B., 1999. Between consensus and citizens: Public participation in technology assessment in France. <i>Science studies</i>, 12, 3-32. 10.23987/sts.55116.</li> <li>• See, for example, the Citizen Conference developed in 2021 in Paris (France), <a href="https://cdn.paris.fr/paris/2021/07/02/c7b66fffc869a92bd815164adef08dca.pdf">https://cdn.paris.fr/paris/2021/07/02/c7b66fffc869a92bd815164adef08dca.pdf</a></li> </ul>

**Table 2.** Characteristics of citizen assemblies and conferences

## 1.3 Public consultations

A public consultation consists of giving citizens the opportunity to provide feedback to a public institution (such as comments, perceptions, information, advice, experiences, and ideas) regarding a specific issue. Usually, governments define the issues up for consultation, set the questions, and manage the process, while citizens are invited to share their views and opinions. Public consultations can be used to involve both citizens and/or stakeholders. When involving stakeholders (such as NGOs), public authorities can invite specific persons/organisms. When consultations are open to the broader public, organisers need to prepare a robust communication strategy to ensure high levels of participation and to reach a diverse range of participants. Public



consultations can be done in many different ways (focus groups, workshops, surveys, polls...), either in-person, online, or hybrid, from local to international level.

Public consultations	
<b>Level</b>	Local to international
<b>Participants</b>	Stakeholders and/or citizens
<b>Time-duration</b>	Usually one-time but requiring time to prepare necessary materials, to communicate and invite stakeholders/citizens to participate, and giving them enough time to provide their contributions
<b>Conditions of implementation</b>	Usually implemented by a public institution, through a group of 8-10 people (focus group), open participation to any respondent (survey) or a randomly selected representative sample of the public (public poll)
<b>Inclusion of consumer-citizens</b>	Direct but may be less important than stakeholder participation (depending on the complexity of the issue and the questions)
<b>Means for a citizen critical participation</b>	Generally not considered
<b>References/resources</b>	<ul style="list-style-type: none"> <li>• OECD, 2022. OECD Guidelines for Citizen Participatory Processes. Paris, OECD Editions.</li> <li>• See, for instance, the public consultation launched by the European Commission in April 2022 to gather opinions from citizens and stakeholders on overarching issues related to food system sustainability, <a href="https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13174-Sustainable-EU-food-system-new-initiative/F_en">https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13174-Sustainable-EU-food-system-new-initiative/F_en</a></li> </ul>

**Table 3.** Characteristics of public consultations

## 1.4 Participatory research

Participatory research approaches, in their fullest form<sup>9</sup>, can also play a key role in fostering citizen participation in research orientations and design. As opposed to instilling a hierarchy between “expert researcher” and “ordinary” citizens, a participatory approach gives citizens a voice and a role, alongside researchers, in taking ownership of the subject at hand, in elaborating protocols, and in producing knowledge. Including them in decision-making processes about scientific and technical choices brings to light broader societal interrogations, which may otherwise be limited or obscured by specific disciplines and research questions. The development of organic agriculture is the subject of numerous participatory research projects: some focus on the involvement of farmers, others extend to local multi-actor communities. In all cases, citizens participate directly, they are not represented through elected officials, advisors or facilitators,

<sup>9</sup> For an overview of the different forms of participatory research, see, for example, English P.B., Richardson M.J., Garzon-Galvis C., 2018. From crowdsourcing to extreme citizen science: participatory research for environmental health. *Annual Review of Public Health*, 29, 335-350.

although these stakeholders may also participate in the project. The DIVINFOOD project, as a whole, adopts and develops a participatory research approach.

Participatory research	
<b>Level</b>	Local (research team) to national (research organisms)
<b>Participants</b>	Citizen
<b>Time-duration</b>	Workshops of several days (to produce a research agenda) to multi-year participatory research programmes
<b>Conditions of implementation</b>	<ul style="list-style-type: none"> <li>• Voluntary process from research organisms/teams</li> <li>• Growing support of public/private funds for this type of research</li> </ul>
<b>Inclusion of consumer-citizens</b>	Direct
<b>Means for a citizen critical participation</b>	Exchanges with researchers, more experienced citizens, and possibly stakeholders
<b>References/resources</b>	<ul style="list-style-type: none"> <li>• Ciaccia C., Di Pierro M., Testani E., Roccuzzo G., Cutuli M., Ceccarelli D., 2019. Participatory Research towards Food System Redesign: Italian Case Study and Perspectives. <i>Sustainability</i>, 11(24):7138.</li> <li>• Moragues-Faus A., Omar A., Wang J., 2022. <i>Participatory Action Research with Local Communities: Transforming our Food System</i>. Food Research Collaboration Policy Brief. <a href="https://foodresearch.org.uk">https://foodresearch.org.uk</a></li> </ul>

**Table 4.** Characteristics of participatory research

## 1.5 Participatory guarantee systems

Participatory guarantee systems are local quality assurance systems that involve citizen-consumers in the definition and assessment of the criteria qualifying local agricultural production systems. They are developed and officially recognised in several countries in the world (Brazil, Tanzania, etc.) as an alternative to third-party certification for organic farming. Relying on farm visits, which are learning opportunities, they certify producers based on active participation of producers and citizen-consumers and are built on a foundation of trust, social networks and knowledge exchange. Such systems seek input from stakeholders, particularly from citizen-consumers who have an active role in guiding producers' choices.

Participatory guarantee systems have inspired innovative participatory processes in which citizen-consumers are involved to co-elaborate and assess quality criteria to be met in food value chains, in collaboration with farmers, food processors, retailers, and local authorities. Ici.C.Local, a participatory free brand co-created by INRAE and a local authority (the city of Grabels, in the

south of France), is an example of such a system, now being increasingly used throughout France<sup>10</sup>.

Participatory guarantee systems	
<b>Level</b>	Local, regional, national
<b>Participants</b>	Farmers and consumer-citizens (often considered primary stakeholders), and other stakeholders such as farmers' NGOs, consumer groups, environmental groups, and local and regional government agencies/authorities.
<b>Time-duration</b>	Co-development of the criteria over a limited period of time with many interactions, followed by periodic meetings on-farm over several years
<b>Conditions of implementation</b>	Initially focused on organic farming, increasingly applied to local food systems/chains
<b>Inclusion of consumer-citizens</b>	Direct
<b>Means for a citizen critical participation</b>	Farm and food-processing unit visits
<b>References/resources</b>	<ul style="list-style-type: none"> <li>• Loconto A.M., Hakanaka, M., 2017. Participatory Guarantee Systems: Alternative Ways of Defining, Measuring, and Assessing 'Sustainability'. <i>Sociologia Ruralis</i>, 58(2), 412-432.</li> <li>• IFOAM, 2022. Participatory Guarantee Systems. Frequently asked questions (FAQs). <a href="https://www.ifoam.bio/our-work/how/standards-certification/participatory-guarantee-systems/pgs-faqs">https://www.ifoam.bio/our-work/how/standards-certification/participatory-guarantee-systems/pgs-faqs</a></li> <li>• Chiffolleau Y., Millet-Amrani S., Canard A., 2016. From Short Food Supply Chains to Sustainable Agriculture in Urban Food Systems: Food Democracy as a Vector of Transition. <i>Agriculture</i>, 6, 57. <a href="https://doi.org/10.3390/agriculture6040057">https://doi.org/10.3390/agriculture6040057</a></li> </ul>

**Table 5.** Characteristics of participatory guarantee systems

<sup>10</sup> The Ici.C.Local approach consists of signalling 'local' products from short food chains, respecting certain sustainability criteria, in open-air markets and retail shops, through a colour code. The perimeter of "local" and the sustainability criteria are defined locally and collectively, by actors of the value chains, local authorities and their local partners, and consumer-citizens. The definition of local and the sustainability criteria may concern the food value chains, from breeding to marketing, and not only agriculture (Chiffolleau et al., 2016). <https://iciclocal.fr>

## 2. Methodology developed in DIVINFOOD

### 2.1 A methodology inspired from various approaches

The DIVINFOOD project takes an innovative approach to tackling the specific challenge of valuing agrobiodiversity: project partners start from the consumption end of the value chain, which they see as a driver to analyse, evaluate, experiment and structure the broader use of neglected and underutilised agrobiodiversity. In DIVINFOOD, consumers are considered as citizens, and vice-versa. They are involved from the project's premise, in the co-construction of food supply chains valuing agrobiodiversity, jointly with value chain actors, development services, policy-makers and researchers. This approach positions the consumer-citizen as a central actor who holds an active decision-making role in the elaboration of a white paper intended to guide project research and innovation activities.

The five approaches described in section 1 seek to involve citizens in decision-making processes around food and agriculture (putting food democracy into practice), and could be used to develop a white paper. The DIVINFOOD European project is grounded in the participatory research approach (1.4), built on the lessons learned from the work on food policy councils (1.1) in terms of direct consumer and citizen participation, and was particularly inspired by methods used to conduct citizen conferences and public consultations (1.2 and 1.3), by proposing to citizens, as done in participatory guarantee systems (1.5), to contribute to the definition of the criteria to be taken into account for the use of agrobiodiversity in food supply chains.

The DIVINFOOD approach aimed to reach a large number of citizens across all seven countries on which the project focuses, as diverse as possible, both to identify the main judgements among numerous respondents, and to mobilise consumer-citizens around the project. Moreover, the goal was to provide member countries, as well as other research, innovation and development actors with a methodological approach to develop a white paper that is, above all, replicable, not costly, and adaptable to a wide range of situations and contexts. An open public consultation was thus the most adapted approach, especially compared to a poll with a randomly selected representative sample, typically more costly. The main important point, however, was to favour informed judgements and critical participation, like in citizen conferences.

### 2.2 Two complementary processes to favour informed judgement and critical participation

#### 2.2.1 Two processes, based on a new voting method

The DIVINFOOD methodology relied on two complementary processes<sup>11</sup>:

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<sup>11</sup> Complying with the RGPD.

- i) **an online survey**, targeting the largest population possible in the 7 countries involved in the project (Denmark, France, Hungary, Italy, Portugal, Sweden, Switzerland), and inviting respondents to express their expectations and aversions regarding the use of agrobiodiversity in food chains, from breeding/selecting varieties to marketing food products;
- ii) the implementation of **focus groups**, allowing to focus on specific underutilised crops, and to discuss about the reasons justifying their expectations and aversions regarding the use of these crops in food chains.

In both processes, respondents have been invited to express their expectations and aversions regarding the use of agrobiodiversity in food chains through the 'majority judgment' method, recently developed by researchers to renew voting in political elections. This method allowed each respondent and participant to express an independent opinion on different options for using agrobiodiversity, not just one (see box 1).

**Box 1. The 'majority judgment'** is a recent voting method designed to elect one candidate among several, proposed by two researchers in the early 2010s (Balinski, Laraki, 2011). This method allows each voter to vote independently on all candidates, not just one. Judgements are called through words, for example using the qualifiers “Excellent”, “Very Good”, “Good”, “Average”, “Poor”, “Insufficient”, “Reject”. The vote thus consists, for each voter, in attributing one of the qualifiers to each of the candidates.

Rather than an evaluation by a numerical score, this voting method can satisfy a need for expression, which is one of the components of democratic sentiment<sup>12</sup>. Moreover, the voter is not obliged to choose a single candidate, but can express his or her support for several candidates or, on the contrary, his or her rejection of all the candidates.

## 2.2.2 Key stages in the development of the online survey and lessons for replication

- The online survey was co-constructed with interested DIVINFOOD members, including two consumer associations used to involve citizen-consumers in their activities, which was an asset.
- A first version was tested with a set of diverse citizen-consumers, and the final version was translated in all national languages, that supposed to use notions and phrases that make sense for all the countries, to ask the same questions to all respondents. This was very challenging in some cases but essential in order to obtain homogeneous results.
- The questionnaire<sup>13</sup> was designed to be easy and quick to answer (15-20 min). However, it was not a poll that simply asks people to answer yes or no, it required some thought.

<sup>12</sup> Laslier J., 2019.

<sup>13</sup> To view the questionnaire, see Chiffolleau Y., Dourian T., Perényi S., Gulyás E., 2022. Deliverable 1.1 – White paper for food chains actors using agrobiodiversity, listing consumer expectations and aversions. DIVINFOOD H2020 project, report, November 2022. <https://zenodo.org/record/7459517#Y6DFe9WZM2w> (Open access)

Although we received almost 2,500 processible responses, which is a large number, we could have further optimised the questionnaire to reach more people. The time needed to test the questionnaire with consumers of different profiles and cultures should not be underestimated. Of course, we acknowledge that an online consultation excludes people who are not familiar with or do not have access to digital tools.

- The final version of the questionnaire was disseminated through DIVINFOOD members' personal and professional networks, national/regional consumer associations<sup>14</sup>, NGOs, local authorities, social media, etc. As highlighted in the presentation of public consultations, dissemination needs a specific effort to reach numerous and diverse respondents. DIVINFOOD partners that are in contact with consumers (e.g. consumer associations, researchers used to develop community-based participatory research) reached more easily respondents than others.
- Respondents were asked to vote for the different options for biodiversity use in food chains, i.e. to judge each one on a scale of 'excellent', 'very good', 'good', 'passable', 'poor', 'rejected'. However, to favour informed judgements, before judging, respondents were given information on the 4 major steps (breeding, production, processing, and marketing) of a generic food chain. Moreover, for each option relative to a step, basic information was given about a main impact highlighted in the academic literature for respondents to make a more informed judgement about an option. With more time and resources, the information, typically provided by experts in citizen conferences, could have been given via videos of experts presenting each option, before the respondents had to give their judgement online. This was not possible in the case of DIVINFOOD but could be considered in other projects.
- Two options per step were proposed, except for the marketing step divided in 3 sub-steps. In each case, one of the proposed options referred to the one on which the DIVINFOOD project planned to focus, and which could be considered more alternative than the second proposed option, commonly implemented in food chains. For example:

- |   |
|---|
| <ul style="list-style-type: none"> <li>○ <i>Food is produced from locally selected and/or traditional plant varieties that often present interesting characteristics (taste, resistance to pests, high nutritional value...) [alternative option in food chains, on which DIVINFOOD planned to focus]</i></li> <li>○ <i>Food is produced from new varieties adapted to a large range of situations, selected from recent breeding techniques and presenting desired characteristics (taste, resistance to pests, high nutritional value...) [conventional option in food chains]</i></li> </ul> |
|---|

The two options (alternative, conventional/ traditional) were randomly proposed for each step or sub-step, to limit biases in answers.

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<sup>14</sup> We are very grateful to all the organisations that helped to disseminate the online survey, for example, regarding the consumer associations, The Swedish Consumers' Association, Altroconsumo (Italy), LA FEDERATION ROMANDE DES CONSOMMATEURS (Switzerland), CODICI – Centro per i Diritti del Cittadino (Italy).

- Additional questions were proposed to characterize respondents' concerns regarding environment and food, knowledge about agrobiodiversity, socio-demographic and shopping profiles.
  - We have tried as much as possible to propose questions and variables used in other studies, to compare results. For example, environmental concerns are the subject of an annual barometer<sup>15</sup> in France, we used their list of concerns.
  - On the other hand, we produced a list of socio-economic groups, with the list of all concerned professions per group, from the European Socio-Economic Groups classification (ESEG), which is very general and not easy to use for respondents in self-declaration. This list has been validated by partners from the 7 countries involved in DIVINFOOD and can be used by other European projects using online self-declaration surveys (see Annex 1).
  - Shopping profiles were detailed in 4 categories, based on the number of channels used to buy food (< 3 = non-diversified; ≥ 3 = diversified), and the use of at least one short or organic channel (< 1 = conventional; ≥ 1 = alternative).
  - The most difficult characteristic to capture was the level of knowledge about agrobiodiversity, which was important to assess from a critical participation perspective. We chose to ask respondents to indicate the last main dish they had eaten, and to name the main plant species, and if possible varieties, present in that dish. In self-declaration at a computer, just asking people to name a vegetables or cereal variety, for example, would not have been a good indicator of their knowledge as they could have looked up the answer on the internet. Data processing on the composition of the last dish, however, is difficult. We recommend exploring other approaches to address this knowledge issue.
- Participants were invited to receive news about the project and to participate in future activities.
- Data were processed by R, which is one of the main tools used to make statistics, and by the CorText management software, which is an on-line tool, freely accessible (<https://www.cortext.net/projects/cortext-manager/>) that is useful for the treatment of textual content (e.g. extraction of important terms) and for geospatial exploration (e.g. geocoding of addresses), among other uses.

### 2.2.3 Key stages in the development of the focus groups and lessons for replication

The online survey was complemented by focus groups (inspired by public, locally based, consultations) conducted in each region<sup>16</sup> where DIVINFOOD partners will develop participatory research and innovation. The aim was both to focus on specific neglected and underutilised crops, and to provide a more in-depth, qualitative insight into the reasons/justification of the judgements made by consumer-citizens in the online survey.

<sup>15</sup> Source: SDES, Environment platform of the "Cammé" survey conducted by INSEE (National Institute of Statistics of France) since the 1990s.

<sup>16</sup> 9 regions within the 7 countries involved in the project. For more information about DIVINFOOD, see the website of the project: <https://divinfood.eu>

- Focus groups were organised by DIVINFOOD partners, with the use of common guidelines that were co-designed for the partnership. Using the detailed instructions in the document, not only researchers but also representatives of other organisations (e.g. consumer associations) were able to apply this method.
- The focus group was divided into 4 sections: the 3 first ones were designed to ensure that all participants understood the concept of ‘neglected and underutilised crops’, and the 4 main steps of a food value chain, and a 4th section, longer, to discuss the options for using agrobiodiversity in food chains, in line with the ‘majority judgement’ approach.
- The guidelines initially provided were for focus groups composed solely of consumers (7-8), who were supposed to be diverse in terms of age, gender, socio-economic group and shopping profile, and not to work in the agricultural or food sectors. However, the implementation of more diversified focus groups was accepted, in relation to the project's objective of creating local stakeholder networks around agrobiodiversity, associating consumer-citizens, farmers, value chain actors, researchers: the focus group appeared to be an excellent opportunity to move in this direction in regions where participatory research was emerging. In such conditions, nevertheless, the opinions of consumer-citizens may have been somewhat biased or less audible, and we took this into account in the analysis of the data collected from the focus groups.
- Some focus groups were in person, while others took place online or in a hybrid format. Most of the focus groups were organised for the occasion, but in one case, discussions took place during an event (a bread festival in Hungary). More largely, food-related events are interesting opportunities to involve consumers in participatory research.
- Participants received a basket of local products as compensation for their time spent in the focus group.
- Participants were invited to receive news about the project and to participate in future activities.
- Although the focus groups were diverse, it was important to use the same template for summarising the discussions.
- Multiple languages made it complicated to compare in detail the discussions between the focus groups. The discussions that took place in each focus group were summarised and translated into English, including some interesting transcribed and translated verbatims.

Combined, the online survey and the focus groups have been used as the basis for developing a citizen-led white paper: data about citizen-consumers’ expectations and aversions regarding the use of agrobiodiversity in food chains have been translated into recommendations for DIVINFOOD research and innovation activities and, more largely, for all actors concerned by the use of agrobiodiversity in food chains. The white paper (DIVINFOOD’s Deliverable 1.1) will be published on the DIVINFOOD website, disseminated through various media channels, and citizen-consumers will be invited both to participate in the project activities, and to follow them, as ‘third-party monitors’<sup>17</sup>.

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<sup>17</sup> The notion of ‘third-party monitor’ appeared in participatory environmental research projects in France in the 2010s (Sciences citoyennes, 2020). We retained the principle of giving third parties, not directly involved in a project, the possibility of monitoring and criticising the actions carried out in this project.



Table 6 presents the main DIVINFOOD's methodology characteristics, including the two complementary processes.

<b>DIVINFOOD's methodology to elaborate a white paper</b>	
<b>Level</b>	European, national and local
<b>Participants</b>	<ul style="list-style-type: none"> <li>• In the online survey: as many and diverse citizen-consumers as possible (voluntary participation)</li> <li>• In the focus groups: diverse citizen-consumers not related to the agriculture-food sectors, and, in some cases, value chain actors and researchers</li> </ul>
<b>Time-duration</b>	<ul style="list-style-type: none"> <li>• About 2 months of preparation</li> <li>• Online survey to be completed in 15-20 min</li> <li>• 2-hour long focus groups</li> <li>• Respondents and participants are invited to take part to the project activities and to become 'third-party monitors'</li> </ul>
<b>Conditions of implementation</b>	<ul style="list-style-type: none"> <li>• Personal involvement of DIVINFOOD partners to disseminate the survey in various networks and to recruit participants to the focus group from various networks</li> <li>• Survey and focus group organised in the national language for each country</li> <li>• Project-related compensation for focus group participants (basket of local food products)</li> </ul>
<b>Inclusion of consumer-citizens</b>	Direct
<b>Means for a citizen critical participation</b>	Basic information given to participants on the used concepts (e.g. food value chain), and on impacts of agrobiodiversity use options
<b>References/resources</b>	<ul style="list-style-type: none"> <li>• Chiffolleau Y., Dourian T., Perényi S., Gulyás E., 2022. Deliverable 1.1 – White paper for food chains actors using agrobiodiversity, listing consumer expectations and aversions. DIVINFOOD H2020 project, report, November 2022.  <a href="https://zenodo.org/record/7459517#.Y6DFe9WZM2w">https://zenodo.org/record/7459517#.Y6DFe9WZM2w</a> (Open access)</li> </ul>

**Table 6.** Characteristics of DIVINFOOD's methodology

## Conclusion

Involving consumers in the construction of food chains valuing agrobiodiversity is one of the foundations of the European DIVINFOOD project, in line with the implementation of a food democracy. Not reducing the consumer to a mere purchaser of products but considering him/her as a citizen, the project started by inviting consumer-citizens to formulate recommendations concerning food chains. In other words, consumer-citizens were invited to participate in the drafting of a white paper on food chains using agrobiodiversity, aimed at guiding the research and innovation activities of the project. The methodology for developing a consumer-citizen-led white paper in DIVINFOOD was inspired by different approaches, the main characteristics of which are described in this document. DIVINFOOD's methodology, whose key stages and characteristics are presented and commented on here, can be replicated or adapted in other projects and contexts, by all value chain actors, development services, policy-makers, researchers or citizen associations seeking methods to make consumer-citizens decision-makers in their innovation, policy or research activities concerning food chains.

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# Annexes

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Annex 1: DIVINFOOD's adaptation of the European nomenclature of socio-economic groups, with concerned professions

## **Annex 1: DIVINFOOD's adaptation of the European nomenclature of socio-economic groups, with concerned professions**

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*Adaptation from the European socio-economic nomenclature, Working document No. F1604, Insee, February-March, 2016.*

### **1. Managers of enterprises (> 49 employees)**

- 1.1 Heads of enterprises, self-employed (> 49 employees)
- 1.2 Senior managers of enterprises, salaried (> 49 employees)

### **2. Intellectual and scientific professions**

- 2.1 Engineers, researchers
- 2.2 Doctors and health executives
- 2.3 Administrative, financial and commercial managers (sales manager, etc.)
- 2.4 Legal, social and cultural professionals (lawyers, journalists, etc.)
- 2.5 Teachers and education professionals (lecturer, school teacher, etc.)

### **3. Intermediate occupations**

- 3.1 Intermediate occupations in science, technology, information technology and communication (technicians, project managers, etc.)
- 3.2 Intermediate health occupations (nurses, etc.)
- 3.3 Finance, sales and administration associate professionals (accountants, etc.)
- 3.4 Legal, social and related service associate professionals (court clerks, social workers, etc.)
- 3.5 Non-commissioned officers in the armed forces

### **4. Small (self-employed) entrepreneurs (< 50 employees)**

- 4.1 Farmers, self-employed (farm < 50 employees)
- 4.2 Traders and similar professionals, self-employed (enterprise < 50 employees)
- 4.3 Artisans, self-employed (enterprise < 50 employees)
- 4.4 Other entrepreneurs, self-employed (enterprise < 50 employees)

### **5. Skilled employees**

- 5.1 Clerical and similar staff
- 5.2 Receptionists, counter clerks and similar professionals
- 5.3 Assistant nurses, childminders, teacher assistants
- 5.4 Skilled employees in sales and services (postmen, hairdressers...)
- 5.5 Protective and security services and military personnel

### **6. Skilled workers**

- 6.1 Skilled construction workers, except electricians
- 6.2 Skilled food, wood and clothing workers
- 6.3 Skilled metal, mechanical, printing, electrical and electronic workers
- 6.4 Machine and plant operators, skilled assembly workers
- 6.5 Drivers of vehicles and mobile equipment

### **7. Other employed occupations**

- 7.1 Service and shop employees (home assistants, shop assistants, etc.)
- 7.2 Low-skilled workers and labourers
- 7.3 Maintenance workers
- 7.4 Agricultural workers

**8. Retired and out of the labour force, aged 65 or more**

- 8.1 Retired managers
- 8.2 Retired professionals and scientists
- 8.3 Retired intermediate occupations
- 8.4 Retired small entrepreneurs (enterprise < 50 employees)
- 8.5 Retired skilled employees
- 8.6 Retired skilled workers
- 8.7 Other retired employees
- 8.8 Other persons aged 65 and over, not in the labour force

**9. Other unemployed persons**

- 9.1 Students
- 9.2 Disabled unfit persons under 65
- 9.3 Unemployed persons not classified in another category
- 9.4 Other persons outside the labour market and under 65