



SCAR FOOD SYSTEMS SWG

Activity Report Second Mandate December 2019-December 2023

01/06/2023

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INTRODUCTION: Second mandate and current status

The SCAR FS SWG has committed to continue providing strategic advice and orientation during its 2nd mandate and to support the EU R&I Policy framework Food2030, as well as contribute to the achievement of the Green deal objectives and its Farm to Fork Strategy.

The second mandate of the SCAR FS SWG was endorsed by the SCAR plenary, held on 6th December 2019. The SCAR FS SWG presented at the Plenary its Terms of Reference for the second mandate (December 2019-December 2022) and a detailed work plan for 2020-2021.

The kick-off meeting launching the 2nd mandate took place in Brussels on 18 and 19 February 2020. The meeting brought together SCAR FS SWG members, representatives of the EC (DG RTD, DG AGRI and DG SANTE); JPIs: HDHL, FACCE; ETP 'Food for Life and BIOEAST Food Systems TWG. A full list of meetings and workshops can be found in **Annex 1**.

SCAR FS SWG successfully implemented many of the planned activities and contributed significantly to the development of the Sustainable Food Systems Partnership, which was one of the main action of the group.

However, SCAR FS SWG activity and performance was affected due to the unexpected COVID-19 pandemic in 2020. Therefore, the FS SWG requested an extension of the current mandate until December 2023, in order to complete ongoing SCAR FS SWG actions and to finalise the Strategic Research and Innovation Agenda (SRIA) for the Sustainable Food Systems Partnership.

During the extension of its mandate (2022-2023), the FS SWG focused on finalising the SRIA of the SFS Partnership, the action on translate science into policy (Action 3), as well as the action on Digitalisation and Artificial Intelligence (Action 6) and the preparation of the new terms of reference for the 3rd mandate (Dec. 2023- Dec. 2025)

This report summarises the activities undertaken by the group in order to accomplish the work plan and to meet the goals set out in Terms of Reference (ToR). The report provides information about specific activities carried out in the context of each priority action identified to be addressed by the group and provides information on what has been achieved.

The report also describes the difficulties encountered by the group in accomplishing several tasks and planned activities that were not conducted.

Annex 2 provides an overview (a list) of all activities carried out, relevant EU policies, initiatives, projects and networks presented to the SCAR FS SWG members during the meetings.

The list of all deliverables can be found in **Annex 3**.

1. Priority actions to be addressed during the second mandate of SCAR FS SWG

After an interactive brainstorming and consultation with the SCAR FS SWG Member States (MS), the FS SWG identified six-priority issues to address during the second mandate in June 2019.

- **A1: Food systems of the future**
- A2. Monitoring impact
- **A3: Translate science into policy**
- A4: Consumers and Food Systems
- A5: Food system waste management
- **A6: Digitalisation (DG) and Artificial intelligence (AI)**

To be realistic and able to provide the deliverables set in the second mandate Terms of Reference (ToR), the group decided to focus on three actions:

- **A1: Food systems of the future**
- **A3: Translate science into policy**
- **A6: Digitalisation (DG) and Artificial intelligence (AI)**

In addition to the priority actions, SCAR FS SWG served as a convening platform for discussion for the development of the **Sustainable Food Systems Partnership** to be part of the Horizon Europe framework programme. A coordination team has been set up to guide a co-creation process involving SCAR FS SWG members and invited external experts in the field of Food Systems.

Many meetings and workshops have been organised in order to discuss challenges and opportunities of the partnership and to prepare main documents (for more information, please refer to section 4. Actions/ Sustainable Food Systems Partnership).

2. Meetings and Workshops

The SCAR FS SWG held 3 meetings per year as proposed in the Terms of Reference. However, the group scheduled only 2 annual meetings in 2020 due to the Covid-19 pandemic and unexpected changes and new way of organisation of meetings. To catch up, the group organised 4 meetings in 2021.

All SCAR FS SWG meetings were organised with the support of the DG RTD and with the support of the SCAR Framework Contract in 2022/2023.

DG RTD and DG AGRI actively participated in the FS SWG work and were represented at each of the FS SWG meetings during the mandate. They also regularly updated the members on ongoing EU policy initiatives and events.

In addition to the ordinary meetings, FS SWG also organised nine workshops on specific topics within the framework of the priority actions and targeted specific stakeholders groups.

Annex 1 provides a list of all meetings and workshops organised during the 2nd mandate.

3. SCAR FS SWG Members and Target Groups

During the lifetime of the SCAR FS SWG, a few MS representatives have left the group and have been replaced by representatives from their organisations. New representatives from AT, DE, ES, IE, HR, HU, IE, IT, NL, RO, SE and UK joined the FS SWG during the second mandate.

One of the ambitions of the FS SWG was to attract new members to integrate the FS group. As a result, Croatia (HR) and Czech Republic (CR) joined the group during its second mandate. Copa Cogeca and CIHEAM-Bari are new observers involved in FS SWG and joined the group in April and June 2021.

The SCAR FS SWG observers which participated in meetings during the 1st mandate were also active during the 2nd mandate. JPIs HDHL, FACCE and OCEANS continued to actively participate in the SCAR FS SWG actions and meetings as observers.

Moreover, thanks to some activities (FS Partnership preparation, Action 3 and Action 6) the SCAR FS SWG linked with other EC services such as: DG SANTE, DG ENV, DG GROW, DG REGIO and JRC.

Numerous workshops, open to a wide audience and involving various stakeholders, allowed to connect with interested stakeholders and organisations: FAO, EFSA, ICT-AGRI FOOD etc.

The FS Partnership development co-creation process was a good opportunity for the FS SWG to reach out to many experts and stakeholders from Eastern Europe, the Balkan region and other associated countries.

4. ACTIONS

Sustainable Food Systems Partnership

SCAR FS SWG coordination team, guiding the co-creation process:

Monique Axelos, INRAE, FR

Minna Huttunen, Ministry of Agriculture and Forestry, FI

Hugo de Vries, INRAE, FR

Niels Halberg, Danish Centre for Food and Agriculture, Aarhus University, DK

The SCAR FS SWG has been actively involved in the development of the Sustainable Food Systems Partnership (SFS) for people Planet and Climate. The FS SWG served as a convening platform for discussion and initiated and guided a co-creation process. A coordination team was set up to lead the process involving external experts and SCAR FS SWG members. Thanks to the involvement of the experts and the SCAR FS SWG members, the group developed important documents, which were crucial for the building of the Partnership (narrative, template and SRIA)

The building of the SFS Partnership started in September 2019 (1st SCAR FS SWG mandate) with a first workshop to reflect on the **priorities and the main challenges** to be addressed and to discuss expected impact.

The second important event bringing together various stakeholders acting in the area of the food systems took place on 1st October 2020, online. It was jointly organised with DG RTD. This online workshop was based on the public consultation launched previously in June 2020 and aimed at collecting stakeholders' opinions on challenges and opportunities for the development of the partnership.

Following this workshop, 47 volunteers expressed interest in joining a drafting group and preparing a narrative, which gave a direction to the SFS Partnership.

The **narrative** addresses the questions: why, what and how. It also aimed to provide input to the development of a comprehensive document (template) and to convince MS funding agencies, the EC and potential partner to commit and take part in the partnership.

The final consolidated version of the narrative was published in June 2021 and it is available on the SCAR FS SWG website.

The next step was the development of the '**template**' – a **draft proposal of the SFS partnership**. This phase of the partnership preparation involved almost 75 experts.

The objectives of the template are to provide guidelines for preparing the FS Partnership and to set the frame and present main elements of the partnership: context, objectives, expected impact, planned implementation (activities; resources; governance, openness and transparency). It was finalised and published in April 2022 and it is available on the EC website: https://research-and-innovation.ec.europa.eu/system/files/2022-04/ec_rtd_he-partnership-sustainable-food-systems-april_2022.pdf

Another important phase of the SFS Partnership development was the drafting of the **Strategic Research and Innovation Agenda (SRIA)**, which involved at least 60 external experts (2nd circle of experts) and a task force of 9 people.

You will find in **Annex 4** a schema of the organisation of the co-creation process and a list of the meetings and activities carried out in Annex 2, under section “Sustainable Food Systems Partnership”.

During this phase of the partnership preparation, a **public consultation** was launched from October to December 2022 to collect input to further develop and strengthen the SFS partnership SRIA.

The final SRIA draft including contributions from the public consultation was submitted to the Commission on 31 January 2023, and presented to a large audience (265 registered participants) during a dedicated webinar on 14 February 2023.

The SRIA provided a framework for topics and joint activities and defined the actions to be undertaken during the lifetime of the partnership. The document also identifies measurable expected outcomes and serves as a basis for an annual work plan and for the elaboration of the SFS Partnership proposal coordinated by the French National Research Agency (ANR, France).

Many meetings involving external experts (2nd circle of experts) and open workshops were organised during the co-creation process. During the 2nd mandate, SCAR FS SWG held 4 workshops on the FS Partnership, which were open to interested stakeholders, other SCAR SWGs/CWGs and relevant partnerships.

A specific time slot for the FS Partnership update and discussion has been reserved during each ordinary SCAR FS SWG meeting. In addition, a FS SWG meeting dedicated to the partnership took place in April 2022. The full list of meetings and workshops where the FS Partnership was discussed is included in **Annex 2**, Section “Sustainable Food Systems”.

As previously mentioned, all Sustainable Food Systems Partnership related documents are available on the SCAR FS SWG website, in heading “Food Systems Partnership” and they have been widely disseminated to SCAR members, external experts and stakeholders involved in the process and interested in joining the partnership (see **Annex 3**. Deliverables).

SCAR FS SWG will contribute to the future Sustainable Food Systems Partnership by providing strategic advice and connecting the Partnership with the Member States. A specific task dedicated to the FS Partnership will be considered in the new Terms of Reference (ToR).

In addition, FS SWG is collaborating closely with the new coordination and support action (CSA) project **FOODPathS** launched on 1st June 2022. FOODPathS aims to support the establishment of the partnership by providing a prototype partnership, including suggestions for the governance model, modus operandi, sustainability chart, best practices, potential trade-offs and co-benefits both local and globally. The suggestions are translated into practical tools.

Action 1. Food Systems of the Future

Task leaders:

Hugo de Vries, INRAE, FR

Niels Halberg, Danish Centre for Food and Agriculture, Aarhus University, DK

The second mandate of the SCAR FS SWG had the ambition to elaborate further on the understanding of the complexity of the food systems.

Integrate a food systems approach in our thinking and acting should lead to balanced sustainable consumption and production. This approach is based on the interactions between the actors and other elements across the FS.

Understanding these interactions and interdependences between different FS actors is crucial to reach the sustainability of the FS.

In this sense, the development of the SFS Partnership SRIA included the reflections on FS approaches and the understanding of the complexity of FS.

Another activity carried out in the context of this Action 1 was to **exploit scenarios for understanding interdependencies between the FS stakeholders.**

One of the planned activities was to organise an online joint workshop with [FIT4FOOD2030](#) on **utilising scenarios to prioritise future R&I breakthroughs in Food Systems.** The workshop took place on **October 28th** and **October 29th 2020** via Zoom.

FIT4FOOD2030 partners and SCAR FS SWG members as well as representatives of FAO and various EU-wide operating networks took part in the joint event. They reflected and exchanged insights on different scenarios for potential future food systems and their utilisation for prioritising R&I options.

The aim is not to develop scenarios but to become familiar and use a short list of existing scenarios. Therefore, we need a scenario methodology and contrasting scenarios not only the positive ones but also the negative ones in order to identify possible pathways, prioritise options, and avoid going in one direction only.

Scenarios are descriptions of potential futures, not predictions of the future, using a set of multiple stories: good and bad, expecting and surprising. Key characteristics of scenarios are plausible, relevant, divergent and challenging. They attempt to structure our thinking and help policymakers to make adequate decisions.

Exploring scenarios will allow having critical views on the current situation, understanding the dynamic of the food systems and interdependencies of the actors.

This kind of reflection enables to identify possible pathways and to prioritise options for R&I programmes and policy measures to contribute to achieving sustainable and resilient food systems, necessary to meet global demand respecting the environment.

The organisation of the workshop required a preliminary preparation and several meetings between the SCAR FS SWG and the FIT4FOOD2030 organising teams.

First, we defined core questions related to food systems, then we selected the scenarios to work on and finally, a scenario methodology has been developed in order to become familiar with their utilisation.

The workshop has been split into two parts, scenario building (part 1; day 1) and working with the scenarios (part 2; day 2).

The discussions in small groups were focused on the different scenarios that had been elaborated based on trends, drivers and challenges.

The scenario methodology, the core questions and the outcomes of the discussion are presented in details in the workshop report “Prioritising future R&I breakthroughs for food systems via scenarios” available on the SCAR FS SWG website: <https://scar-europe.org/food-deliverables>

The workshop was attended by 47 people from SCAR FS SWG and FIT4FOOD2030 partners.

The success of the workshop in particular was related to the limited number of participants in each discussion group, which enabled all participants to actively participate, to digest the information and to elaborate concrete options within different scenarios.

Scenario thinking is interesting exercise, which could help countries to identify their priority issues and innovation programmes and participants were encouraged to use the methodology at national level.

Communication and dissemination of the outcomes

The workshop presentations as well as the full workshop report explaining the methodology and discussion outcomes have been shared with the participants. The workshop report has been uploaded to the SCAR FS SWG Website.

The joint action between SCAR FS SWG and FIT4FOOD2030 and the results were presented at the FIT4FOOD2030 final conference on the 24th and 25th of November 2020. The event had more than a hundred participants during the presentation of this specific activity.

A presentation of the methodology and the results were given at the SCAR FS SWG meeting on 29 March 2021 (online).

Portfolio analysis on EU funded R&I Projects (Action 1)

In addition to the scenario activity, a **participatory portfolio analysis** on EU-funded R&I projects related to Food Systems (FS) and adopting a specific FS approach was conducted in the context of Action1. The study aimed at feeding the development of a Strategic Research and Innovation Agenda (SRIA) intended for the preparation of the new Horizon EU Sustainable Food Systems Partnership.

The work started in March 2022 and ended in January 2023. The methodology was co-designed and implemented based on the collaboration of FS SWG Thematic Support Team with FS SWG chair, co-chair, and Action 1 leaders, with the support of an expert of the University of Florence, IT, and the assistance of the Management Support Unit.

Activities carried out included: i) the mapping, overview analysis, and synthesis of a purposeful sample of 30 EU-funded R&I projects (H2020 and beyond) (database creation); ii) the selection and in-depth thematic analysis of 10 illustrative project cases in the SRIA focus areas (project fiches realisation); iii) the gathering, elaboration, and narratives synthesis of data for the identification of relevant R&I gaps and needs contributing to the SRIA development.

Findings were presented, enriched, and validated during both the FS SWG 9th Meeting (30th November 2023) and other six seminars and conferences (both national and international). A **R&I**

gaps/needs report was produced and published on SCAR official website (January 2023). The report will be also published through EC Publication Office (expected by late 2023).

Action 3. Translate Science into Policy

Task leaders:

Noeleen McDonald -Department of Agriculture, Food and the Marine, IE (until January 2023)

Aida Turrini- former researcher at CREA, IT (from July 2021 to present)

Andrea Gyorffy- Hungarian Chamber of Agriculture, HU (until June 2021)

Viktória Szűcs- Hungarian Chamber of Agriculture, HU (until November 2020)

Supported by Niels Halberg and Susanne Hansen - Danish Centre for Food and Agriculture, Aarhus University, DK, and Minna Huttunen, Ministry of Agriculture and Forestry, FI

Supported by SCAR Thematic Support team in 2022 and 2023:

Silvia Scaramuzzi, Francesca Gerini, Sara Gabellini - University of Florence, IT

Action 3 on Translate science into policy focused on the examination of where and how science has been effectively translated into policy and further implemented into practices.

The objectives of this action are:

- Explore, within MS, the links between government ministries (departments) and independent research bodies (e.g. research centres and universities) where research outcomes are considered as part of policy formation.
- Evaluate and identify examples within MS of existing policies where scientific/research outcomes have influenced policy, focusing on the key contributing and hindering elements in the translation of science into policy.
- Identify the key requirements e.g. training, funding, and the strategic areas along the system from science to policy, where such key resources would benefit.
- Establish a set of best practice principles that enables effective translation of science/research outputs for future policy.

A survey to identify examples from across the Member States and Associated countries of where food systems research has translated into policy were carried out in 2021 – 2022. The survey was launched on 1st July 2021. The questionnaire was developed by the task leaders in collaboration and consultation with SCAR FS SWG members. A first processing was done in 2021 and then, given the interest demonstrated by several organisations, a second round was performed in 2021-2022. Finally, 59 examples have been collected and the results were analysed in 2022.

The survey results were presented at the online workshop organised by SCAR FS SWG on 20 October 2022.

The workshop purpose was to present the preliminary results of the survey, discuss key aspects of the survey findings and identify projects, experiences and best practices helpful in formulating guidelines for translating science into policy.

The participants from SCAR FS SWG, JPIs, EU projects, EU partnerships, EC, EC High Level Expert Group as well as representatives of JRC attended the workshop. A total of 120 participants from 23 countries have registered to the workshop.

Based on the survey results and the workshop discussions, the FS SWG will provide a policy brief encapsulating measured identified that can effectively translate science into policy. The policy brief is under construction and is expected to be provided in September 2023.

In addition, to the policy brief, a supplementary report summarising the survey results will be prepared and provided as an annex to the policy brief.

However, the finalisation of this action faced some difficulties. The main issue is the lack of human resources to contribute to the action. The initial task leaders left the group due to other obligations or a change of position and it was difficult to find new volunteers willing to invest time in this activity. The Covid pandemic and the new remote way of work and meetings also prevented the group from direct exchanges. We would have appreciated having more face-to-face meetings and interacting directly with the experts.

Finally, the team has been strengthened by SCAR FS Danish and Finnish members having a very appreciated expertise that will be greatly helpful in finalising the policy brief, and by the SCAR Thematic Support Team (TST) who has supported the group for the organisation of the workshop and drafting the policy brief and provided also a portfolio analysis. Their contract is ending in mid-July 2023. Thanks to the involvement of task leader and the supporters, the action should be successfully finalised and the policy brief based on the survey findings and workshop discussions.

Particular attention will be paid to the **dissemination of the deliverables**. The policy brief and the report will be shared with the SCAR FS SWG and SCAR SWGs/CWGs and the member states will be encouraged to share the documents at national level and within their networks.

Portfolio analysis based on the survey results (Action 3)

Within Action 3 framework, a portfolio analysis is realised based on the results of the international survey carried out in 2021-2022 for the identification of MS virtuous project examples (both nationally and EU funded), where Food Systems (FS) research has been translated into policy. The study intends to analyse in-depth 12 project cases - selected among the ones identified in the survey, working as good practices of translating science into policy. As a result, relevant insights can be provided feeding the realisation of Action 3 deliverables.

The process started in March 2022 and will last by July 2023. The methodology design and implementation were conducted in collaboration between FS SWG Thematic Support Team and FS SWG Action 3 task leaders, chair, and co-chair, with the assistance of the Management Support Unit. Some of the selected cases were also presented and anticipatively discussed in breakout sessions during the Action 3 workshop held on the 20th of October 2022.

As an outcome of the study, both 12 project fiches and a related database will be realised to map and characterise relevant good practices characteristics as well as major contributing and hindering factors (expected by July 2023). Also, inputs deriving from selected projects are included in the Action 3 policy brief.

Action 6. Digitalisation and Artificial Intelligence

Task leaders:

Alvija Salaseviciene- Kaunas University of Technology, LT

Loreta Basinskiene - Kaunas University of Technology, LT

Livia Ortolani MASAF - Ministry of agriculture, food sovereignty and forestry General Direction Rural Development, IT

The role of Digitalisation (DG) and Artificial Intelligence (AI) has increased in the policy strategies and it seems that the need for DG transformation of the food sector is taken into account by the policy makers. The DG represents many types of challenges but also opportunities helping the FS transformation. In this context, Digitalisation and Artificial Intelligence topic has been identified as a priority for the 2nd mandate of the FS SWG.

The FS SWG set out as objectives to:

- Identify best practices capability and technologies which support realizing DG/AI within food systems (FS) and other interconnected Systems
- Evaluate and monitor indicators against the DG / AI criteria that drives the DG/AI process within FS and other interconnected systems
- Set out the risks and potential future opportunities for DG/AI within FS and other interconnected systems

The action on DG and AI started in 2022 and a **1st workshop** to assess the role of DG/AI for food systems sustainability transition took place on 25 November 2022.

The workshop aimed at identifying best practices and enabling technologies currently used in the Food Systems area and discussion threats (i.e. trade-offs, contradictions and knowledge gaps) and opportunities of addressing FS through DG/AI.

The invitation to the workshop was widely shared and representatives of SCAR FS SWG, EC, JPIs, agri-food industry and IT sector attended the workshop (140 registered participants and 107 attended the online event).

The discussion outcomes have been summarised in meeting minutes kindly prepared by SCAR Thematic Support Team (TST).

The meeting minutes and all workshop presentation are available on the SCAR FS SWG website: <https://scar-europe.org/food-events/eventdetail/158/-/workshop-on-assessing-digitalization-in-food-systems>

A second workshop was organised on 4th May 2023 in the afternoon to reflect the question “Towards Sustainable Food Systems digitalisation: challenges and opportunities applying systematic approach”. The discussion outcomes and shared insights will contribute to draft a policy brief on “Risk and Benefits” when introducing DG/AI. The target group was SCAR FS SWG members, but a few representatives of EC (Agriculture of data partnership), FoodDrinkEurope and EUFIC, representing also the new project DRG4FOOD project participated in the event and discussions.

In addition to the policy brief as a deliverable, it has been planned to develop a **methodology** to assess the level of digitalisation of the food systems in different EU countries, based on the Lithuanian example. The methodology will allow to evaluate digitalisation level of the country (region) food system in the different integration perspectives, while proposing the metrics and

criteria for identifying both, the current digitalisation status and to evaluate the future potential - how significantly the integrated AI based solutions can influence the whole food system, including all the stakeholders.

The methodology will be carried out by the Lithuanian members of SCAR FS SWG and Lithuanian external experts in the area of Digitalisation and Artificial intelligence from Kaunas University of Technology, Lithuania. The study is kindly funded by Ministry of Agriculture of the Republic of Lithuania.

The methodology will be presented at the SCAR FS SWG meeting and a connection with FOODPATHS project and its activities on this topic is also foreseen. The results will be shared with SCAR and interested stakeholders. As the methodology and recommendations provided in the policy brief will be useful for the Member State, special efforts will be made to disseminate the results at national level.

Portfolio analysis on EU-funded R&I projects

A **portfolio analysis** is carried out of EU-funded R&I projects concerning Digitalisation (DG) and Artificial Intelligence (AI) integration in Food Systems and adopting a specific FS approach. The study wants to contribute to evaluating and enhancing DG/AI role in FS sustainability transition, also in relation to the Strategic Research and Innovation Agenda (SRIA) development.

The work started in May 2022 and will last by July 2023. The methodology was designed and implemented in collaboration between FS SWG Thematic Support Team and FS SWG Action 6 leaders, chair, and co-chair, with the support of an expert of the University of Florence, and the assistance of the Management Support Unit.

Targeted participatory research steps are: i) the mapping, overview analysis, and synthesis of a purposeful sample of 30 R&I projects (H2020 and beyond) (database creation); ii) the selection and in-depth thematic assessment of 10 illustrative project cases concerning good practices of DG/AI integration in FS (project fiches realisation).

Early findings were presented, validated, and enriched during the FS SWG Action 6 workshop on the 4th of May 2023. Deliverables are expected to be realised by the end of 2023.

Action 5. Food System waste management

The action on Food System waste management was identified by the FS SWG member as a priority action during the preparation of the 2nd mandate. Therefore, the group decided to focus on this action and planned to deliver an overview of the undertaken research activities, to share knowledge and best practices and to provide recommendations to strengthen a system approach regarding the reduction of food loss and waste.

The EU Platform on Food Losses and Waste and the EU projects FUSIONS and REFRESH were contacted and invited to present their results at the SCAR FS SWG meeting in February 2020. The EU roadmap on Food Waste was also presented during the meeting.

However, the fact that many initiatives and actions have been undertaken at EU level made, the FS SWG was wondering what the added value would be, and how the group would contribute to

all these initiatives. After reflection and discussion with the members, the group decided not to go further in this action and to focus their efforts on Action 6. Digitalisation and Artificial Intelligence.

Collaboration with SCAR SWGs/CWGs

The area of SCAR FS SWG is transversal and in order to avoid duplication, but also to create benefit and align actions, collaboration with other SCAR SWGs/CWGs was necessary.

SCAR FS SWG interacted with **SCAR Agroecology**, that presented their objectives and ongoing work at the June's 2021 meeting.

SCAR AKIS also approached the FS SWG and arranged an exchange on our priority actions. Probably further joint activities would be planned for the next mandate.

SCAR FS SWG was regularly informed of the **Foresight 5th** exercise and the future Foresight exercise. Indeed, FS SWG was consulted on the 5th Foresight exercise and the ongoing Foresight work as well as the final report were presented to the FS SWG members.

The FS SWG were willing to collaborate closely with **SCAR Bioeconomy (BWS)**. The BWG was invited to the FS SWG kick-off meeting in February 2020 to present its mission, achievements and future plan. The exchange on identifying common topics to work on was fruitful and several ideas came out, such as: science to policy, impact of the EU bioeconomy strategy on food related policy in different countries, trade-off, policy coherence and synergy.

However, no concrete action was undertaken during the 2nd mandate. Some of the reasons are lack of resources but also lack of time as FS SWG has been fully involved in the development of the FS Partnership.

Recently SCAR FS SWG has started collaborating with SCAR ARCH on the international dimension of the SCAR FS SWG activities. A joint workshop between SCAR FS SWG, SCAR ARCH and SCAR Bioeconomy should take place by the end of 2023. The purpose of the workshop is to identify, together with external experts and SCAR SWGs members, research challenges and issues to be addressed in order to support a green transition in the interconnected food systems at EU and global level.

5. Communication and Dissemination of the SCAR FS SWG deliverables

SCAR FS SWG pay attention to widely disseminate the deliverables provided by the FS SWG. They are all available on the SCAR FS SWG website and they have been shared with the FS SWG members and various stakeholders participating in the workshops and meetings organised by the group during its second mandate. Indeed, the workshops organised on specific topics and open to external experts and stakeholder is a good way for the group to enlarge its network and reach out to different actors in the field of Food Systems.

Moreover, the group collaborates and exchange information with relevant organisations and networks, such as: EIT FOOD, FoodDrinkEurope, CORE ORGANIC, TP ORGANIC, FAO, One Planet Network (Sustainable FS Programme), BIOEAST Initiative, FOODPathS CSA and of course the other SCAR SWGs/ CWGs.

The FS SWG members also contribute to spread the message and communicate the deliverables at national level. The DG RTD also help the group to promote its work at EC level and help to create the link with other DG SANTE, GROW, ENVI etc.

CONCLUSION

During its 2nd mandate SCAR FS SWG realised almost all of its planned activities set out in the ToR. Despite delays due to the Covid-19 pandemic, the FS SWG kept working on its priorities and provided significant deliverables, in particular documents related to the FS Partnership development (narrative, template and Strategic Research and Innovation Agenda). Furthermore, the Covid-19 pandemic highlighted the need for food system transformation and gave further significance to the work of the SCAR FS SWG.

Indeed, not all specific actions undertaken to deliver the FS partnership documents were clearly foreseen in the work plan, but the FS SWG carried them out successfully and managed to achieve the objectives and to meet the deadlines.

Moreover, SCAR FS SWG continued to serve as a platform for exchange, strategic discussions and mutual learning. The ordinary meetings enable to share policy best practices and experiences and to learn more about national FS strategy in different countries. In this context, Sweden and Poland presented their FS policies. BIOEAST also informed the group about their activities, SRIA and shared examples of cooperation between Central and Eastern European Countries.

The group also contributed to the EU on investment gaps in European Food Systems R&I and to the work of the High Level Expert Group on International Platform for Food Systems Science (IPFSS).

As stated in the ToR, the group work and the specific recommendations provided through the priority action deliverables will support the R&I Policy development at EU level and attempt to contribute to the policy coherence.

ANNEX

Annex 1: Meetings and Workshops

SCAR FS SWG – ordinary meetings –Second Mandate (December 2019 – December 2023)

Date	2020	
18 -19 February2020	Kick-off Meeting 2nd Term	Brussels – Face-to-Face meeting
02 October 2020	2 nd SCAR FS SWG Meeting	Online - Cisco WebEx
	2021	
29 March 2021	3 rd SCAR FS SWG Meeting	Online - Cisco WebEx
13 April 2021	4 th SCAR FS SWG Meeting	Online - Zoom
15 June 2021	5 th SCAR FS SWG Meeting	Online - Cisco WebEx
03 December 2021	6 th SCAR FS SWG Meeting	Online - Cisco WebEx
	2022	
08 April 2022	7 th SCAR FS SWG Meeting	Online - Cisco WebEx
16 June2022	8 th SCAR FS SWG Meeting	Brussels - Face-to-face meeting
30 November2022	9 th SCAR FS SWG Meeting	Online - Cisco WebEx
	2023	
04 May 2023	10 th SCAR FS SWG Meeting	Brussels - Face-to-face meeting
Sept. –Oct. 2023 (TBC)	11 th SCAR FS SWG Meeting	tbc
Nov. –Dec. 2023 (TBC)	12 th SCAR FS SWG Meeting	tbc

SCAR FS SWG WORKSHOPS- Second Mandate (December 2019 – December 2023)

Date	Event	Topic	
	2020		
1st October 2020	Workshop on SFS Partnership	Survey results, examples of EU platforms	Online
28th -29th Oct. 2020	Joint workshop with FIT4FOOD2030	Prioritising future R&I breakthroughs for food systems via scenarios	Online
	2021		
3rd March 2021	Workshop on SFS Partnership	Discuss synergy and identify complementarities with other partnerships.	Online
29th September 2021	Workshop –SCAR FS SWG and DG RTD- on SFS Partnership	Sustainable FS Partnership- to reflect the scope and the outcome expectations of the SFS partnership and to guarantee open access and involve further stakeholders to the preparation process.	Online
	2022		
23th May 2022	Workshop on SRIA- SFS Partnership	Strategic Research and Innovation Agenda- co-creation workshop to clarify the focus points of each thematic area and each transversal activity and secure the coherence between them.	Brussels and Online
20th October 2022	Workshop Action 3	Translate Science into Policy-Best Practices and Challenges	Online
25th Nov. 2022	Workshop Action 6	Assessing Digitalisation in Food Systems	Online
	2023		
14th February 2023	Webinar –SFS Partnership	Presentation of Final draft SRIA of the Sustainable FS Partnership	Online
04th May 2023	Workshop Action 3	Towards Sustainable Food Systems Digitalisation: challenges and opportunities applying systematic approach	Brussels

Annex 2: List of activities, relevant policies, initiatives, projects and networks presented to the SCAR FS SWG

EU POLICIES and STRATEGIES

The main mission of the SCAR FS SWG is to provide strategic advice and orientation, and to support the implementation of the EU R&I policy framework Food2030, Horizon Europe R&I programme, Green deal and its Farm to Fork strategy and other priority EU policy initiatives in the field of Food Systems. In this sense, the SCAR FS SWG members were regularly informed and updated on the EC policies and strategies such as:

Farm to Fork Strategy:

2nd October 2020 – 2nd SCAR FS SWG meeting- **Farm to Fork Strategy**: implementation of the strategy; How to best support the F2F strategy with the partnership? - Discussion- *Henk Westhoek (DG SANTE)*

15th June 2021 – 5th SCAR FS SWG meeting - **Farm to Fork Strategy** and discussion on How to link Food Systems partnership activities to the Farm to Fork actions? - *Cindy Schoumacher, DG RTD; Adrian Leip, JRC; Luis Vivas-Alegre, DG SANTE ; Hans-Joerg Lutzeyer, DG RTD*

Common Agricultural Policy Reform (CAP):

15th June 2021 – 5th SCAR FS SWG meeting - The **European Green Deal** and the **CAP Post 2020**- *Florence Buchholzer (DG AGRI)*

High-Level Expert Group (HLEG) and The UN Food Systems Summit process

29th March 2021 – 3rd SCAR FS SWG meeting –update on the **HLEG** to assess the options, needs and possible approach for an **International Platform for Food Systems Science (IPFSS)** –*Karen Fabbri, DG RTD*

15th June 2021- 5th SCAR FS SWG meeting- presentation of the **HLEG work** in progress and the **1st concept note** and the preparation of the UN Food Systems Summit- *Karen Fabbri, DG RTD*

16th June 2022 – 8th SCAR FS SWG meeting **HLEG on IPFSS**- presentation of the final report and the recommendations - *Karen Fabbri, DG RTD*

Sustainable Food Systems framework initiative

8th April 2022- 7th SCAR FS SWG Meeting – presentation of **Sustainable Food Systems framework initiative** - *Luis Vivas-Alegre, DG SANTE*

4th May 2023- Digitalisation workshop- **Sustainable food systems law** – overview of the content and the process- *Isabel Paliotta, European Environmental Bureau*

RELEVANT PROJECTS and NETWORKS PRESENTED to the SCAR FS SWG

29th March 2021 -3rd SCAR FS SWG Meeting - Presentation of **ERA-NET FOSC** (Food Systems and Climate)- *Martine Vernooij, NL*

29th March 2021 -3rd SCAR FS SWG Meeting- Presentation of Sustainable Food Systems Programme of the **One Planet Network** - *Allison-Marie Loconto, FR*

03rd December 2021 – 6th SCAR FS SWG Meeting- Status update **JPI HDHL**: results of the first ten years and new Implementation Plan 2022-2024 -*Chrissie Brierley and Beatrice Morio, JPI HDHL*

8th April 2022 - 6th SCAR FS SWG Meeting - Presentation of **CO-FRESH** project - *Edelbis López Dávila, Gent University, BE*

30th November 2022- 9th SCAR FS SWG meeting-Presentation of the project '**MicrobiomeSupport**'- recommendations for future food system microbiome research - *Emmanuelle Maguin, INRAE, FR*

4th May 2023 – 10th SCAR FS SWG meeting- **CLEVERFOOD**: New Project to transform the EU Food System- *Justyna Cieślukowska, PL*

4th May 2023 – 10th SCAR FS SWG meeting - **BIOEAST High**-level event in March 2023, the BIOEAST SRIA and concept papers- *Justyna Cieślukowska and Paweł Chmieliński, PL*

RELEVANT STUDIES and REPORTS PRESENTED to the SCAR FS SWG MEMBERS

Study on investment gaps in European food systems R&I (2nd Mapping exercise)

15th June 2021- 5th SCAR FS SWG meeting-**Mapping of R&I funding** related to Food Systems (2nd exercise) - *Cindy Schoumacher, DG RTD*

3rd December 2021- 6th SCAR FS SWG meeting- Presentation of the **Study on investment gaps** in European Food Systems R&I - *Caroline Chandler, IPSOS*

Other relevant studies:

15th June 2021 – 5th SCAR FS SWG meeting- Presentation of **SAPEA** (Science Advice for Policy by European Academies) and the main recommendations of the report “A Sustainable Food System for the EU” - *Celine Tschirhart, SAPEA*

30th November 2022 -9th SCAR FS SWG meeting- Connecting Science for Policy across Europe and Commission Staff Working Document: “**Supporting and connecting policymaking in the Member States with scientific research**”- *Agnieszka GADZINA – KOŁODZIEJSKA and Alessandro ALLEGRA, JRC*

SCAR FS SWG CONTRIBUTION to SEVERAL STUDIES:

SCAR FORESIGHT 5th Exercise – SCAR FS SWG members have been asked to reflect on the 5th SCAR Foresight exercise from their point of view (sectoral view)

The **High Level Expert Group on IPFSS (International Platform for Food Systems Science)**

20th October 2021- Joint meeting with the **HLEG on IPFSS**, online - discuss with Member States and Associated Countries status of Science –Policy Interfaces process in their countries. The SCAR FS SWG members from Denmark, Poland, Finland and Italy shared their experience and gave a presentation during the meeting.

Study on investment gaps in European food systems R&I (2nd Mapping exercise) – SCAR FS SWG members provided input on the countries fiches

NATIONAL FOOD STRATEGIES - COUNTRY EXAMPLES:

15th June 2021 – 5th SCAR FS SWG meeting – presentation of **National Food Strategy in Sweden** and the Strategic Research Agenda -*Erika Ax, Formas/Vinnova*

3rd December 2021 - 6th SCAR FS SWG meeting 'Research, innovation and strategic approaches for the food system transformation' in **Poland** - *Pawel Chmielinski, Polish Academy of Sciences and Justyna Cieslikowska, Ministry of Agriculture and Rural Development, PL*

LINK WITH OTHER SCAR SWGs and CWGs

SCAR FORESIGHT:

2nd October 2020 – 2nd SCAR FS SWG meeting- **SCAR FORESIGHT 5th Exercise** “Natural Resources and Food Systems, transitions towards a “safe and just” operating space” - *Sebastien Treyer, IDDRI*

16th June 2022- 8th SCAR FS SWG meeting- **SCAR FORESIGHT – Food security in time of crises** – presentation of the workshop outcome and preparation of the next Foresight exercise – *Johannes benders, DE*

30th November 2022- 9th SCAR FS SWG meeting- **SCAR FORESIGHT – foresight reflection considering crisis** - *Elke Saggau, DE*

SCAR AGROECOLOGY:

15th June 2021 –5th SCAR FS SWG meeting- Presentation of SCAR SWG on AGROECOLOGY- *Torsten Rodel Berg, co-chair of SCAR-AE*

SCAR AKIS

25th October 2022 – SCAR AKIS face-to-face meeting in Budapest, HU – SCAR FS SWG presented its activities to SCAR AKIS members- *Andrea Gyórfy, HU*

SUSTAINABLE FOOD SYSTEMS PARTNERSHIP

1st October 2020 – **Workshop** on Sustainable Food Systems Partnership – jointly organised with DG RTD

3rd March 2021 – FS Partnership **workshop** – synergy with other partnerships – core group, coordination team and representatives of the other partnerships

13th April 2021 – 4th SCAR FS SWG meeting – dedicated meeting on HE Partnership for Sustainable Food Systems – Presentation of the **consolidated narrative: Why, What, How**

15th June 2021- 5th SCAR FS SWG meeting- update on the development of the FS partnership- **Template process** and next steps. Discussion with SCAR FS SWG members. Discussion on **the link with Farm to Fork Strategy**- *Minna Huttunen, FI; Niels Halberg, DK; Hugo De-Vries, FR; Hans-Joerg Lutzeyer, DG RTD*

3rd December 2021 – 6th SCAR FS SWG Meeting - Presentation of the current version of the **Template** for the **Sustainable Food Systems Partnership and planned activities (development of the SRIA)**- *Minna Huttunen, FI; Hugo de Vries, FR, Niels Halberg, DK*

8th April 2022 – 7th SCAR FS SWG Meeting - **FS Partnership** – Strategic Research and Innovation Agenda (**SRIA**) preparation- Discussion with the members- *Minna Huttunen, FI, Niels Halberg, DK and Hugo De-Vries, FR*

16th June 2022 – 8th SCAR FS SWG meeting - SUSTAINABLE FOOD SYSTEMS PARTNERSHIP – SRIA – toward a **1st draft of SRIA** – short presentation and discussion with the participants -*Minna Huttunen, FI and Hugo de Vries, FR*

30th November 2022- 9th SCAR FS SWG meeting – presentation of the 2nd version of the Strategic Research and Innovation Agenda (**SRIA**) of the Sustainable Food Systems partnership. **Public Consultation**- Minna Huttunen, FI; Hugo de Vries, FR, Niels Halberg, DK

04th May 2023- 10th SCAR FS SWG meeting- presentation of the final proposal for the FS partnership “**FutureFoodS**” – Minna Huttunen, FI

ACTION 1. FOOD SYSTEMS OF THE FUTURE

18th February 2020 – 1st SCAR FS SWG meeting- **presentation of Action 1** on Food Systems of the future and planned activities. **Preparation of the joint workshop on scenario building** with **Fit4Food2030** –Hugo de Vries, FR and Niels Halberg, DK

2nd October 2020 – 2nd SCAR FS SWG meeting- Action 1. -Presentation of **work in progress** and the upcoming joint workshop with Fit4Food2030- Hugo de Vries, FR

28th and 29th October 2020 – Joint workshop, online - “**Prioritising future R&I breakthroughs for food systems via scenarios**”

29th March 2021 – 3rd SCAR FS SWG Meeting- Action 1. Food Systems of the Future- presentation of the joint workshop with Fit4food2030 and the usage of **scenario methodology** –Hugo de Vries, FR and Niels Halberg, DK

30th November 2022- 9th SCAR FS SWG meeting- Mapping Food Systems R&I actions and needs in Europe: insights from a **SCAR portfolio analysis** – *TST Team: Silvia Scaramuzzi, Francesca Gerini, Sara Gabellini, IT*

ACTION 3. TRANSLATE SCIENCE INTO POLICY

19th February 2020 – 1st SCAR FS SWG meeting- 1st **presentation of Action 3** on Translate science into policy –Noeleen McDonald, IE

2nd Oct. 2020 – 2nd SCAR FS SWG Meeting – presentation of the **survey methodology, action plan** and presentation of science to policy **Hungarian example** - Noeleen McDonald, IE , Viktória Szűcs, HU and Andrea Gyórfy, HU

29th March 2021- 3rd SCAR FS SWG meeting – Translate science into policy – presentation of the **survey criteria** –Noeleen McDonald, IE

15th June 2021 – 5th SCAR FS SWG Meeting - Action 3. Translate science into policy- presentation of the **survey (questionnaire)** - Noeleen McDonald, IE

3rd December 2021 – 6th SCAR FS SWG Meeting - **Action 3**. Translate science into policy- presentation of the **first survey results and planned activities**- Noeleen McDonald, Department of Agriculture, Food and the Marine, IE and Aida Turrini, CREA, IT

8th April 2021 – 7th SCAR FS SWG Meeting -Presentation of the **survey results and Workshop preparation** -Noeleen McDonald, IE and Aida Turrini, IT

16th June 2022 – 8th SCAR FS SWG Meeting - **organisation of the workshop** Action 3 – objectives and expected outcomes – SCAR TST, Silvia Scaramuzzi, IT

20th October 2022- **online workshop**- Translate Science into Policy-Best Practices and Challenges

30th November 2022 – 9th SCAR FS SWG meeting- presentation of the **workshop report and preparation of the policy brief** – Noeleen McDonald, IE and Aida Turrini, IT

ACTION 6. DIGITALISATION and ARTIFICIAL INTELLIGENCE

15th June 2021 – 5th SCAR FS SWG meeting- **1st discussion on Action 6** on Digitalisation and Artificial Intelligence

3rd December 2021 – 6th SCAR FS SWG Meeting- Action 6. Digitalisation and Artificial Intelligence- presentation of the **planned activities**- *Alvija Šalaševičienė and Loreta Basinskiene, Kaunas University of Technology, LT*

8th April 2021 – 7th SCAR FS SWG Meeting - Action 6. Digitalisation – **preparation of the workshop** - *Alvija Salaseviciene and Loreta Basinskiene, LT*

16th June 2022 – 8th SCAR FS SWG Meeting - **organisation of the workshop** – objectives and expected outcomes – *SCAR TST, Silvia Scaramuzzi, UNIFI, IT*

25th November 2022- Online workshop- Action6: Assessing Digitalisation in Food Systems

30th November 2022 – 9th SCAR FS SWG meeting- presentation of the **workshop outcomes** and planning activities – *Livia Ortolani, IT; Alvija Salaseviciene/ Loreta Basinskiene, LT*

04th May 2023- Workshop (face-to-face, Brussels) - Towards Sustainable Food Systems Digitalisation: challenges and opportunities applying systematic approach

- Including presentation on preliminary **portfolio analysis results**: Digitalisation and Artificial Intelligence for sustainable food systems.

ACTION 5. FOOD SYSTEMS WASTE MANAGEMENT

19th February 2020 –1st SCAR FS SWG MEETING:

- Introduction of Action 5. Food Systems **waste management**- *Nikola Hassan and Johannes Bender*
- Presentation of the **EU Platform on Food Losses and Waste** – *Bartosz Zambrzycki, DG SANTE, Unit E1*
- Presentation of the **Roadmap on Food Waste** – *Tatiana Tallarico, DG RTD, Unit C2*
- Scaling innovation for food loss and waste reduction across the supply chain - **outcomes** of **FUSIONS** and **REFRESH** projects- *Hilke Bos-Brouwers, scientific coordinator*

2nd October 2020 – 2nd SCAR FS SWG Meeting – Presentation of Action 5 work in progress – *Johannes Bender, DE*

29th March 2021- 3rd SCAR FS SWG meeting – discuss the future of the action

Annex 3: Deliverables (December 2019- December 2023)

Sustainable Food Systems Partnership (SFS):

- November 2020- June 2021 – **Narrative**
- May 2021 –April 2022 – Partnership Draft Proposal (**Template**)
- January 2022- January 2023 - **SRIA** – Strategic Research and Innovation Agenda

Action 1. Food Systems of the Future:

- March 2021 - **Workshop report** on Prioritising future R&I breakthroughs for food systems via scenarios
- January 2023 – **Portfolio Analysis** of R&I EU project “Food Systems R&I Needs and Gaps Report”

Action 3: Translate Science into Policy

- February 2023 – **Workshop report** summarizing the workshop discussion outcome (workshop 20 Oct. 2022)
- September 2023- **Policy Brief** - encapsulating measures identified that can effectively translate science into policy
- September 2023-**Supplementary report** summarising the survey findings (as an annex to the policy brief)

Action 6. Digitalisation and Artificial Intelligence

- February 2023 -**Workshop report** summarising the key elements (workshop 25 Nov. 2022)
- July 2023 -**Portfolio analysis**
- End of 2023- **Policy brief** “Risk and benefits” when introducing DG/AI and DG/AI impact.

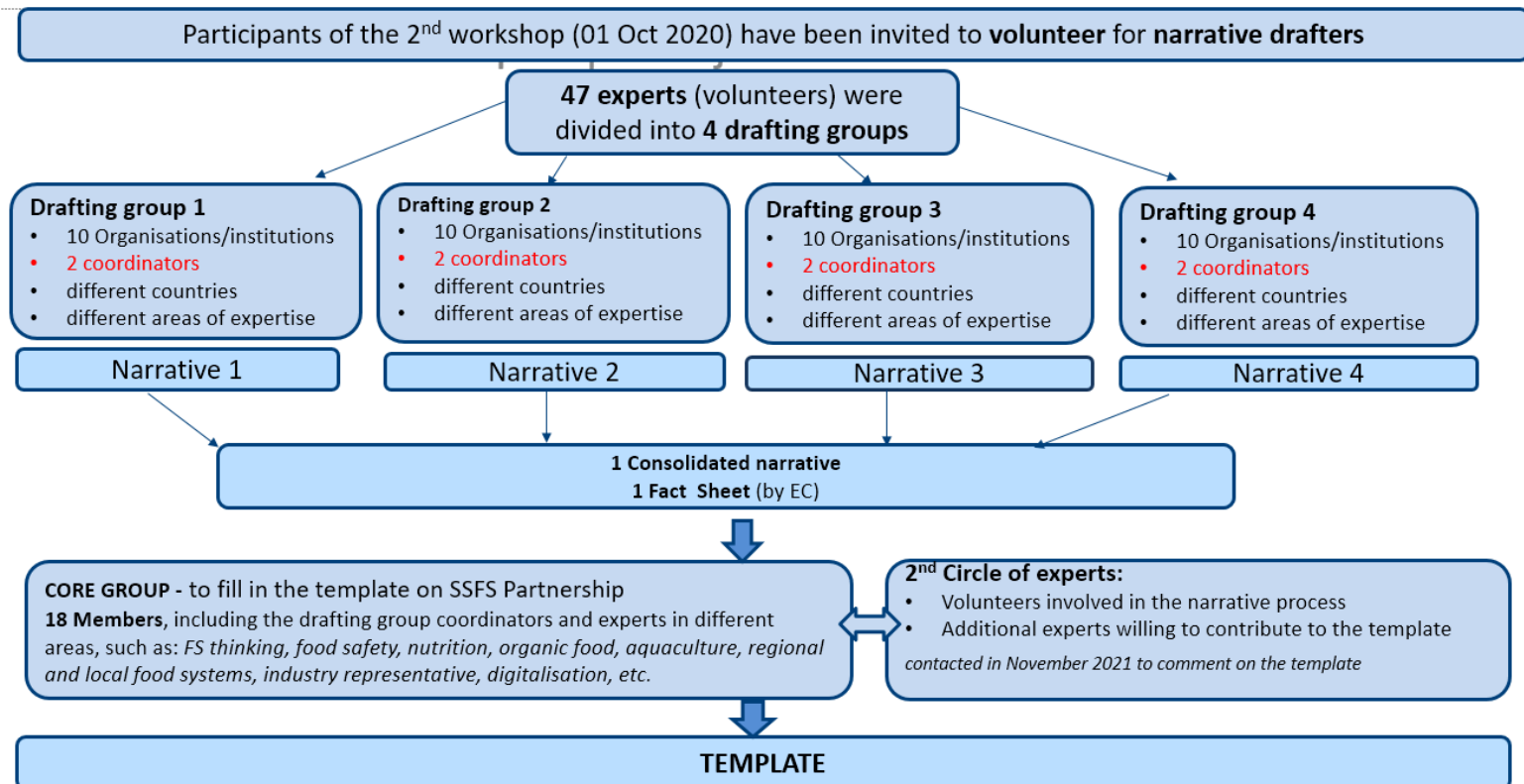
SCAR FOOD SWG Deliverables available on:

SUSTAINABLE FOOD SYSTEMS PARTNERSHIP	
Narrative	https://scar-europe.org/index.php/food-main-actions/food-systems-partnership
Template	https://research-and-innovation.ec.europa.eu/system/files/2022-04/ec_rtd_he-partnership-sustainable-food-systems-april_2022.pdf
SRIA	https://scar-europe.org/index.php/food-main-actions/food-systems-partnership
Action 1. Food Systems of the Future:	
Workshop report on Prioritising future R&I breakthroughs for food systems via scenarios	https://scar-europe.org/index.php/food-deliverables
Portfolio Analysis of R&I EU project “Food Systems R&I Needs and Gaps Report”	https://scar-europe.org/index.php/food-deliverables
Action 3: Translate Science into Policy	
Workshop presentations (20 th Oct. 2022)	https://scar-europe.org/index.php/food-events/eventdetail/157/-/workshop-on-translating-science-into-policy-best-practices-and-challenges
Workshop report (20 th Oct. 2022)	Will be uploaded soon: https://scar-europe.org/index.php/food-deliverables
Policy brief encapsulating measures identified that can effectively translate science into policy and survey findings	To be published in September 2023 at: https://scar-europe.org/index.php/food-deliverables
Action 6. Digitalisation and Artificial Intelligence	
Workshop presentations	https://scar-europe.org/index.php/food-events/eventdetail/158/-/workshop-on-assessing-digitalization-in-food-systems
Workshop report (25 th Nov. 2022)	Will be uploaded soon: https://scar-europe.org/index.php/food-deliverables
Portfolio Analysis	To be published in July 2023 : https://scar-europe.org/index.php/food-deliverables
Policy brief “Risk and benefits” when introducing DG/AI and DG/AI impact.	To be published by the end of 2023 https://scar-europe.org/index.php/food-deliverables

Annex 4: Schema of organisation of Sustainable Food Systems Partnership co-creation process

NARRATIVE and TEMPLATE CO-CREATION PROCESS

DRAFTING PROCESS



ORGANISATION of the SRIA DEVELOPMENT CO-CREATION PROCESS

- **Coordination team** - SRIA process coordination
- **SRIA Task force** - 9 people involved in SRIA preparation, in charge of specific SRIA “focus areas” and consulting the relevant experts
- **Expert Groups: 2nd circle of experts** – to co-develop the R&I Thematic areas and interconnected activities; to improve and strengthen specific topics (incl. members of Template Core Group).
- **Food2030 Pathway Owners + DG Santé and DG AGRI:** regular exchange
- Public consultation with **SCAR FS SWG members, SCAR SWGs/CWGs, MSs, EC** and various **stakeholders**

