

SWOT of the SCAR: The Results

D3.2: A detailed overview on the
state of play and analysis
within SCAR

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The overall objective of CASA, a Coordination and Support Action (CSA), is a **consolidated common agricultural and wider bioeconomy research agenda** within the European Research Area.

CASA will achieve this by bringing the Standing Committee on Agricultural Research (SCAR), which has already contributed significantly to this objective in the past, to the next level of performance as a research policy think tank. CASA will efficiently strengthen the strengths and compensate for the insufficiencies of SCAR and thus help it evolve further into “SCAR plus”.

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List of Abbreviations

ACs – Associated Countries
 BBI JU – Bio-Based Industries Joint Undertaking
 CAP – Common Agricultural Policy
 CASA – Common Agricultural and wider bioeconomy reSearch Agenda
 CFP – Common Fisheries Policy
 COP – Conference of Parties
 CWG – Collaborative Working Group
 DG – Directorate General
 EIP – European Innovation Partnership
 EJP – European Joint Programme
 ERA – European Research Area
 ERA-NET – European Research Area Network
 EU – European Union
 EC – European Council
 FAO – Food and Agricultural Organization of the United Nations
 FP – Framework Programme
 IBF - International Bioeconomy Forum (IBF)
 JPI – Joint Programming Initiative
 MS – Member States
 R&I – Research and Innovation
 SCAR – Standing Committee on Agriculture Research
 SDGs – Sustainable Development Goals
 SWG – Strategic Working Group
 UN- United Nations

Executive Summary

1. Building on the results of an extensive review of the European bioeconomy research and innovation (R&I) policy landscape, this report details the principal findings of 13 key informant semi-structured interviews and a SWOT workshop attended by 68 international delegates assessing for the strengths, weaknesses, opportunities and threats associated with the EU's Standing Committee on Agricultural Research (SCAR). This phased research approach aimed to review and assess the structure, operations and performance of the SCAR in its current configuration, providing part of a much needed evidence-base for the development of recommendations as to how the SCAR might improve its functions, strategic advice capabilities, impact and activities in the context of a changing environment. Presenting the diversity of opinions that exist across professional associations, SCAR affiliations and geographic contexts, this report provides an insight into the range of attitudes, experiences and perceptions that stakeholders have regarding the present and, potentially, future SCAR.

2. The research interviews and workshop that form the foundation of this report facilitated the involvement of a cross-section of SCAR stakeholders that will be impacted by any decisions made regarding the future orientation of the committee. Following the systematic review of the European bioeconomy R&I policy landscape (Phase I), 13 semi-structured interviews were completed with stakeholders from across geographic regions and professional affiliations that interact with the SCAR in a variety of ways (Phase II). Phase III involved a quality check and elaboration of the interview findings with 68 SCAR delegates from 28 countries at the SCAR 2017 conference (Estonia), utilising a series of bespoke workshop exercises. This included breakout activities to: confirm (or otherwise) the identified SCAR strengths, weaknesses, opportunities and threats; carry out a ranking of SWOT elements; and a 'Postcard from the Future' exercise to develop a vision and pathway for development for the SCAR. All data from interview and workshop phases were collated and analysed in keeping with best practice in qualitative research, including full interview transcription and computer-assisted thematic analysis.

Strengths

3. Overall, the phased research approach adopted in this SWOT analysis indicated a broad consensus between the opinions, hopes and perceptions of the 13 key informant interviewees and those of the 68 international workshop participants. The interactions and discussions enabled by the additional workshop phase nevertheless revealed important contradictions, caveats and nuances regarding each of the identified SWOT elements. Thus, while the majority of workshop participants agreed with the strengths, weaknesses, opportunities and threats identified in the key informant interviews, some questions remained regarding the precise meaning of terms and their significance in relation to the standing committee. For example, in terms of SCAR strengths, some questioned: the identified independence of the SCAR; the reality of its "flexible" structure; and considered there to be limitations associated with its parental structure under DG R&I. Similarly workshop commentary regarding the "Broad Scope" of the SCAR (seen as a strength by many interviewees) revealed concerns that this may represent a simultaneous weakness if it results in fragmentation, difficulties in management and dispersed priorities. Overall, however, the knowledge exchange and research coordination benefits provided by the SCAR are considered to represent its key strengths, along with the dedication of the people involved in the committee.

Weaknesses

4. Concerning SCAR weaknesses, while initial research exercises indicated that the highest levels of agreement were regarding limited visibility and limitations of representativeness in the SCAR, more focused workshop discussion led to participants connecting and relating the different elements of weakness rather than viewing them in isolation. As a result, weaknesses associated with SCAR visibility, inconsistencies in political commitment and lessening policy impact were considered to be interconnected, with the perceived overlaps and inefficiencies in the SCAR structure deemed to be at the root of many of these problems. This provided an opportunity to explore potential solutions for one SCAR weakness that may cascade and help to improve others (for example, by enhancing SCAR's

communications, internal administration (e.g. relating to organisation and management of meetings) and policy engagement, improvements in representativeness and policy impact may be achieved).

5. Interestingly, despite the high levels of concern regarding limited country representativeness in earlier CASA research phases (and indeed SCAR reflection papers (e.g. SCAR, 2015), this issue did not dominate weakness discussions in the SWOT interviews or workshop. While this partly may be attributed to the line of questioning (with other CASA work packages dedicated to issues of representativeness specifically), more fundamental structural issues within the SCAR were perceived of higher priority at present. Indeed, reflecting the possibility for cascading solutions, there is also the potential that addressing some of the four primary weaknesses (related to SCAR visibility, political commitment, policy impact and structural inefficiencies) may also have a knock-on effect in improving representativeness and engagement generally. Thus, by viewing the connections not only across, but within, SWOT categories proves to be beneficial for a more holistic SCAR strategy development.

Opportunities

6. Meanwhile, the consideration of opportunities for the SCAR was not clear-cut, with a number of questions, caveats and conditions highlighted in the workshop related to potential opportunity pathways. This included, for example, low support for increasing the role of sub-national actors (e.g. regional governments) in the SCAR (at least formally) and wariness about increasing multi-actor steering in its everyday business. Opportunities for increased global influence were also more readily translated to incorporate “lower” level opportunities for global ‘relevance’ (e.g. ensure relevance to the UN SDGs rather than actually influencing such initiatives at the development stage), while the potential for increased interaction with various European Commission DGs was viewed more positively overall in the workshop, than by some key informant interviews. However, no one clear pathway to change was identified.

7. Deciding on appropriate options for change will require a reflection in the SCAR as to its role, mission, purpose and mandate, as well as a consideration of the scales at which it wishes (and has the capacity) to exert influence. A “*reprioritisation*” exercise, as suggested by some workshop participants, holds promise here, with potential for multi-actor/stakeholder engagement in this (albeit being aware of the potential for participant bias, interests and agendas). The opportunity areas presented do, however, have the potential to address a number of the main SCAR weaknesses, while also capitalising on some of its key strengths. Opportunities arising from new research agendas, the need for a cohesive bioeconomy policy and R&I landscape and European Research Area (requiring contact with different Commission DGs) and the ever evolving bioeconomy (providing opportunity to alter the scope of the SCAR) were deemed particularly relevant by participants.

Threats

8. Finally, and rather unexpectedly, workshop analysis revealed distinct levels of positivity and resilience associated with many of the external threats to the SCAR that were identified during the semi-structured interviews. Indeed, for many workshop participants, some threats were also considered as opportunities (for example, related to the challenge of multi-disciplinarity), while others were deemed irrelevant at the level at which the Committee works (for example, the varying definitions of the bioeconomy or the impact of geopolitical tensions). Similarly, many threats were considered to be manageable so reducing the severity of their potential impact. This meant the only threats considered insurmountable/significant related to the need to maintain relevance in the growing complexity of the bioeconomy landscape, human capital vulnerabilities associated with member turnover and/or potentially reduced level of dedication, and continued differences in member state research systems across the EU.

Conclusions

9. Combining report insights, Figure 1 summarises the priority strengths, weaknesses, opportunities and threats identified through the research process of CASA Task 3.2, portrayed in an interconnected diagram to prompt reflection on the levels of interaction, interdependence and inter-changeability of the four SWOT quadrants.

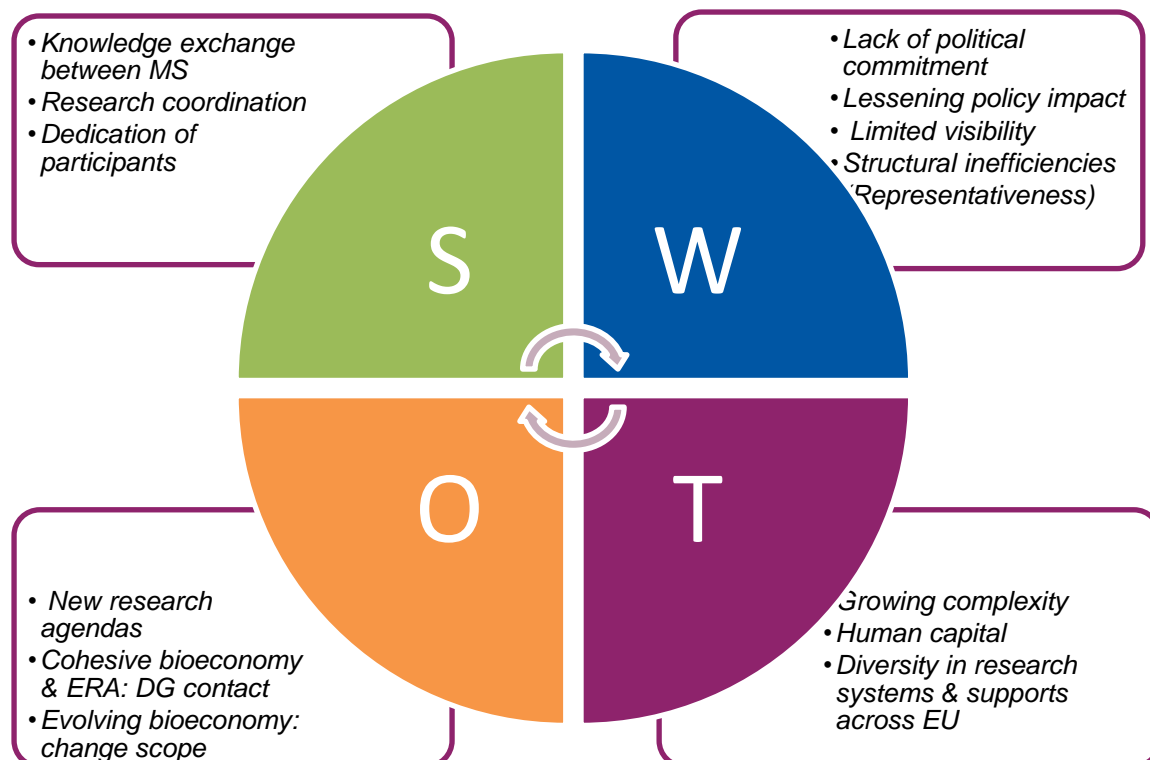


Figure 1: SWOT of the SCAR: summary of priority areas¹

This analysis highlights potential 'easy-wins' for the SCAR (e.g. improving its online and social media presence) as well as some of the more immediate barriers to change. The visions and next steps identified in the 'Postcards from the Future' workshop exercise provide further aspirations, ideas and actions for the development of the SCAR over the next 10 years or so including relating to: enhanced country and topic representation; increased power and reputation; greater political buy-in at EC and MS levels; more direct policy impact; and providing solutions to global societal challenges. The SWOT workshop participants identified the following (non-exhaustive) steps crucial to achieving change: mechanisms to involve all MS and relevant Commission DGs; a boost in R&I funding; the development of more transparent, interactive and inclusive communications; and the creation of simplified and enhanced working group structures and outputs within the SCAR.

10. Measures of success identified by participants in the workshop include the active participation by all countries in the SCAR, an increase in the number of activities that engage multiple stakeholders and end-users, enhanced dissemination and realisation of added value at MS and EC level, evidence of SCAR contribution to effective bioeconomy R&I policy including aligning national bioeconomy R&I policy, and contributions to the European sustainability transition (e.g. to a more bio-based economy with a reduced dependence on fossil fuels). Overall, these visions, hopes and ambitions provide an optimistic conclusion to this analysis, as well as highlighting potential steps towards achieving them.

11. The utilisation of results in planning decisions and strategy development is the ultimate aim of any SWOT analysis (Dyson, 2004). Thus it is hoped that the conclusions of this report will be taken forward by other CASA work packages and that the various SCAR groups will critically reflect on the results and incorporate insights into future decision-making and activities. This inclusive SWOT analysis has enabled the SCAR to listen to its diverse stakeholders, which should facilitate more evidence-based and inclusive decision-making in the future.

¹ Representativeness is presented in brackets to reflect the fact that while it is an important consideration for SCAR, it was not a priority element in this research project. Representativeness is dealt with comprehensively in another CASA work package.

Introduction

The aim of this project was to conduct a SWOT analysis of the Standing Committee on Agricultural Research (SCAR) to provide the evidence needed to underpin an assessment of the current structure, organisation and functionalities of the committee as a basis for making recommendations for how it might improve its performance and impact in the future. Following a desk-based phase, an approach involving both expert interviews and stakeholder workshops was adopted. This facilitated the involvement of multiple SCAR stakeholders, most of who may be affected by any changes to the committee.

Task 3.1 of CASA laid the foundations for the types of stakeholders to be included in this analysis, incorporating a stakeholder mapping exercise of those most influenced by, and influencers of, the SCAR. Bringing these ideas forward, Task 3.2 was thereafter conducted in three key phases. Phase I involved a systematic review of the European bioeconomy R&I policy landscape, which has already been reported (D3.3; Devaney and Henchion, 2017). Phase II consisted of the completion of 13 semi-structured interviews with key informants from across geographic regions and professional affiliations that interact with the decision, implementation, output and overview tiers of the SCAR. Phase III involved a quality check and elaboration of preliminary results from the interviews with 68 international SCAR delegates in attendance at the SCAR 2017 conference utilising a series of bespoke workshop activities. Results from both phases of the SWOT analysis of the SCAR (Phase II and Phase III) are presented in this deliverable report.

Methodology

SWOT analysis is an established social science methodology originating in business and case study contexts (Ghazinoory and Azadegan-Mehr, 2011) and has been utilised to explore diverse topics from the competitiveness of food industries (Bohari et al., 2017) to the concept of ecosystem services (Bull et al., 2016) to health arenas including blood and marrow transportation (Niederwieser et al., 2016). SWOT analysis has also been noted as *“an established method for assisting the formulation of strategy”* as applied by Dyson (2004, p631) in the development of strategy for the University of Warwick. In this research context such a framework allowed research participants (the researchers and the interviewees and workshop participants) to engage in both an internal reflection regarding the SCAR structure and organisation (S, W) as well an external horizon scanning deliberation to help predict changes in the future (O, T) (Ghazinoory and Azadegan-Mehr, 2011). The SWOT analysis of the SCAR adopted a phased research approach that combined a depth of knowledge and expertise through the completion of individual key informant semi-structured interviews followed by a breadth of input and consensus-reaching through the elaboration of these preliminary interview results in tailored group workshop activities with a much larger pool of SCAR stakeholders. Acknowledging the need to demonstrate credibility, trustworthiness, rigor, integrity and competence in any kind of interpretative or qualitative research processes, it is important to be transparent regarding the methodologies applied and approaches taken leaving a *“trail of evidence throughout the research process to demonstrate credibility or trustworthiness”* (Fereday and Muir-Cochrane, 2006, p81). This section of the report thus clarifies the logic, reasoning and evolution of approaches taken.

Phase I: Review of R&I Policy Landscape

Activities within CASA Task 3.2 involved a comprehensive review of the bioeconomy research and innovation (R&I) policy landscape in Europe. The primary aim, through a desk-based approach, was to review the principal bioeconomy-related R&I policy frameworks at EU level and to identify any gaps in the system (see Devaney and Henchion, 2017). This task also set the wider context within which SCAR operates thereby informing this research exercise.

Phase II: Key Informant Interviews

It is widely accepted that one of the most reliable methods for ascertaining people's opinions, motivations, perceptions and attitudes is to simply ask them. Thus, the qualitative interview, concisely defined by Berg (2009, p101), as a *"conversation with a purpose"*, is regarded as an important and reliable source of data collection (Bell, 2006; Kvale and Brinkmann, 2009). Interviews offer the opportunity to explore complex, value-laden issues in detail, on a one-to-one basis, allowing for hidden agendas, political conflicts, perceptions and biases to be surfaced (Gray, 2004). Semi-structured interviews additionally enable a skilful interviewer to follow up ideas, clarify and develop answers, investigate motives and probe responses (Bell, 2006). As such, confirming the suitability of interviews for the Phase II the SWOT exercise, Kvale and Brinkmann (2009, p116) contend that:

"Interviews are particularly well suited for studying people's understanding of the meanings in their lived world, describing their experiences and self-understanding, and clarifying and elaborating their own perspective."

Contributing practical knowledge, personal experiences and historical context related to the SCAR, semi-structured interviews were therefore conducted with a diverse range of stakeholders. This included a purposeful sampling approach of participants from across the SCAR steering group, strategic, collaborative and foresight working groups, ERA building initiatives and a number of EC delegations. This selection process was adhered to in an effort to minimise bias in the context of vested interests and to avoid overly steering the results (Devaney and Henchion, 2018a). Interviewee profiles were thus repeatedly revisited and debated amongst CASA team members to ensure the highest levels of objectivity, with final interviewees chosen according to a number of selection criteria including professional affiliation, geographical location and level of experience with the SCAR. The selection of key informants in this way aimed to access a variety of perspectives across the different structural tiers of SCAR, different geographical contexts and different stakeholder groups. Where possible, interviewees that held multiple roles related to SCAR were pursued to ensure a breadth of expertise and experience.

As highlighted in Figure 2, the diversity of interviewees subsequently obtained for this preliminary analysis ensured a significant geographical reach across Europe (each star in Figure 2 represents an individual interviewee and his/her associated country). Figure 3 meanwhile demonstrates the range of interview participants across the decision-making, implementation, output and overview² tiers of the SCAR showcasing the diversity of professional affiliations. The numbers on the right in Figure 3 indicate the number of interviewees per SCAR working tier. Anonymity was guaranteed to all those who took part in the research in an effort to increase trustworthiness, objectivity and reliability of the data collected. A letter of consent outlining such anonymity and confidentiality was circulated to prospective interviewees in advance of the interview taking place with signed letters kept on file.

It is important to state however that while every effort was made to ensure a diversity of participants both in terms of SCAR and MS affiliation, results from the key informant interviewees cannot be considered as representative but rather importantly highlight the range of opinions that can exist related to the strengths, weaknesses, opportunity and threats of the SCAR. Thus reflecting on research participants and aware of the potential for expert bias in selection processes (Devaney and Henchion 2018a), the principal reason for the Phase III workshop, which leveraged perspectives from 68 international SCAR stakeholders, was to ensure inclusion of a wider range of opinions as well as to establish levels of consensus regarding the preliminary data collected.

² "Overview" refers to stakeholders from the EC, who are not members of SCAR but participate in its activities, e.g. provide the secretariat.



Figure 2: Key informant interviewee profiles: geographic diversity

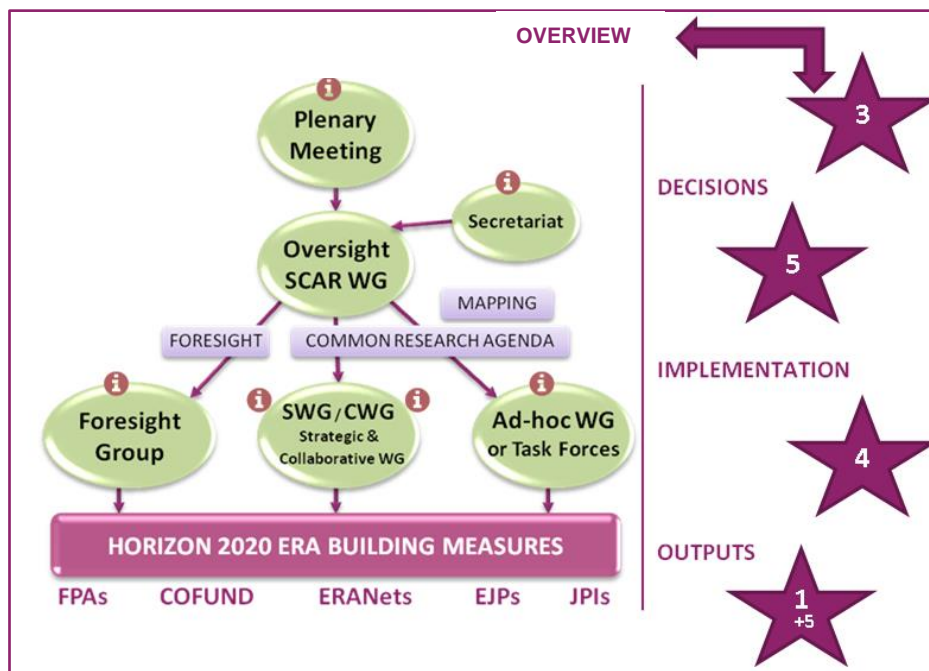


Figure 3: Key informant interviewee profiles: mapping onto current structure of the SCAR³

In consultation with the literature detailing best practice in semi-structured interview guide construction (Gray, 2004; Bell, 2006; Berg, 2009; Kvale and Brinkmann, 2009), the SCAR website

³ The "+5" in the outputs category indicates the multiple 'hats' being worn by many interviewees, for example, sitting as a member of the Steering Committee while also participating in a JPI.

and related policy documents, a semi-structured interview guide was devised and refined following feedback obtained from other CASA team members. Overall objectives of the interviews were first set and included to:

1. Analyse the current SCAR structure, influence and coordination mechanisms so as to identify opportunities to improve the overall organisation, communication and dissemination of SCAR activities, outputs and outcomes for greater impact;
2. Investigate the legitimacy, influence, relevance and political impact that arise as a result of the SCAR's internal structures and activities;
3. Acknowledge and horizon scan for threats and opportunities to SCAR in the future;
4. Consider the evolution of SCAR in the evolving agricultural and bioeconomy landscape and the changes that may be required of the SCAR structure and organisation to meet new demands.

Adhering to these objectives, the interview guide was thus structured around distinct sections related to the purpose, relevance and influence of SCAR, its structure and organisation, political impact and relevance and an overall SWOT. The overarching aim of the interview guide was to ensure sufficient coverage of desired topics within the interview setting and to allow for analytical comparatives to be established between interviewee responses as a result of standardised questioning. Its semi-structured nature however enabled sufficient flexibility in the interview setting allowing for other topics to be raised by interviewees and further probed by the researcher as appropriate.

Cognisant of researcher bias, this flexibility also ensured that the discussion was dominated by the participants' experiences and perceptions of the SCAR and the issues deemed most important to them (as opposed to the researcher). This was seen as particularly important given the cross-national nature of the interview participants and previously reported differences in SCAR representation, inclusion, experience, and impact across members (SCAR, 2015; te Boekhorst, 2017). The flexibility evoked by the semi-structure nature of the methodology thus allowed for nuances in both national contexts and professional affiliations to be revealed and probed as appropriate.

Each interview was conducted by Author 1 of this report, and digitally recorded for data validation purposes. Author 2 was additionally present and assisted with three of the thirteen interviews conducted. Where possible, interviews were conducted in person (a total of seven of the thirteen interviews) but, where practical and geographical constraints existed, some interviews were conducted over the phone (the remaining six interviews). Each interview lasted approximately 45-60 minutes and was sent for verbatim transcription to a professional transcription agency. The received transcripts were further checked and proofed by Author 1, clarifying any gaps in audio pieces or incorrect transcription.

Phase III: SWOT Workshop

The SCAR 2017 conference was held during the Estonian Presidency of the Council of the European Union on 4th and 5th December 2017 in Tallinn, Estonia. Entitled *"Research and innovation policy, state-of-play and the role of SCAR in the European Bioeconomy"*, the conference was attended by 68 participants, from 28 countries, mostly from national ministries responsible for agriculture and food (with some forestry and fisheries also) as well as representatives from international research institutes and funding bodies. A full report of the conference can be accessed on the conference website⁴, highlighting the diversity of speakers and topics discussed over the two days. Representatives from CASA, including the co-authors of this report, were on the organising committee for the conference.

On the first day of the conference, the afternoon session was entirely dedicated to a series of group discussions and workshop activities on the SWOT and future of the SCAR. A detailed report on the SWOT workshop session has been produced⁵. In summary, the session began with results from the

⁴ <https://scar-europe.org/index.php/home-scar/events/conferences>

⁵ <https://scar-europe.org/index.php/casa-workpackages> under the section "WP3".

Phase I review of the European bioeconomy R&I policy landscape to provide broader context for the workshop discussions. Preliminary interview results from the Phase II key informant interviews were then presented to workshop participants and the session invited comments and feedback through tailored group activities. Key aims of the workshop included confirming and elaborating preliminary SWOT results to work towards recommendations for improved SCAR functioning and organisation in the future. This meant Phase III functioned as an important quality control check to increase trustworthiness of the research results. This format also helps to ensure buy-in by SCAR stakeholders to any ensuing changes to the standing committee and to move the results beyond the preliminary identification of S, W, O and Ts to develop a common vision for the future.

Conference participants were split into eight pre-assigned discussion groups that aimed for a diversity of affiliations and country representations per group. Breakout Activity 1 involved a 'sense check' of preliminary Phase II interview results. These results were developed and initially drafted by Author 1, followed by corroboration and discussion with Author 2 to streamline preliminary results into seven distinct elements each for SCAR strengths, weaknesses, opportunities and threats. This pragmatic decision was made in the interests of workshop manageability and involved reviewing, combining, and consolidating the preliminary interview results obtained. Breakout Activity 1 in the workshop probed areas of agreement and disagreement amongst the 68 international delegates with the preliminary SWOT categories identified. This allowed for any miscommunications, factual inaccuracies and/or missed opportunities to be highlighted by this wider group of participants. Participants first worked in pairs to confirm or deny each SWOT element before contributing to a group consensus poster. In total, seven strengths, seven weaknesses, seven opportunities and seven threats were assessed for the SCAR (detailed in full below), with further post-its added by participants to elaborate any areas of disagreement.

Breakout Activity 2a involved a ranking prioritisation of the identified SWOT elements. Each group was assigned one SWOT quadrant with which to work (i.e. SCAR strengths, weaknesses, opportunities or threats) and asked to rate the associated elements in order of importance. This allowed for more in-depth discussion on each SWOT element while also obtaining group consensus as to the relative importance of each element in relation to one another. The final research exercise conducted by workshop participants aimed to develop a vision for the future of the SCAR. A 'Postcard from the Future' exercise was utilised to achieve this, with each participant asked to write to the SCAR in ten years' time outlining what changes have occurred by 2027 that they would congratulate the SCAR on, what was a crucial step in achieving this change and what represented the final measure of success (see Devaney and Henchion, 2018b).

To conclude the workshop, volunteer table hosts fed back results of the priority ranking exercise to the entire conference group, with a focus on the group reasoning behind the top two rated SWOT priorities as well as the rationale behind the lower ranked elements. Results from the SWOT workshop were collated and analysed utilising a series of techniques including qualitative assessment of the priority ranking exercise, thematic assessment of the workshop recording from the feedback session and story board reporting of the postcards from the future. Elaborating, confirming and developing the preliminary interview results, workshop findings are presented alongside the semi-structured interview results below and further integrated for a more concrete overview of the current structure, organisation and functions of the SCAR.

Data Analysis

Following an initial preliminary analysis to reveal SWOT categories for the Tallinn-based workshop, the qualitative data management software NVivo 10 was utilised to assist with the detailed coding and thematic analysis of the interview transcripts. A deductive thematic analysis approach was adopted in keeping with best practice guidelines (Crabtree and Miller, 1999; Braun and Clarke, 2006; Fereday and Muir-Cochrane, 2006). This helped to analyse and distinguish patterns of meaning within the wide array of datasets gathered according to pre-defined nodes or themes (based on the SWOT framework). Thematic analysis minimally organises, groups and describes data in rich detail, while a deductive approach allows for a template of codes to be applied that draws on a predetermined framework or structure for this analysis (Crabtree and Miller, 1999).

A deductive approach is particularly relevant when specific research questions already exist to frame the main themes (FoodRisC, 2016), as was the case here. Through this approach, a template in the form of codes can be applied allowing for the organisation of data for subsequent interpretation and reporting. This was developed before the in-depth NVivo-assisted analysis of the transcripts. The template was based on the researcher's field notes (excerpts drafted directly after each interview took place, summarising the key points of discussion and overall participant sentiments and interview themes), preliminary scanning and overview analysis of the transcripts and brainstorming with another CASA team member who was present at some of the interviews and highly familiar with the topic under investigation. Using the template analytic technique (Crabtree & Miller, 1999), codes from the codebook were entered as nodes into NVivo 10 and applied to the data with the intent of identifying and matching meaningful and representative units of text (Fereday and Muir-Cochrane, 2006).

Although presented as a linear process, as with the majority of cases of qualitative inquiry, the research analysis adopted for the SWOT of the SCAR was iterative and reflexive. Working to mitigate bias and the limited flexibility of analysis often associated with deductive thematic approaches (FoodRisC, 2016), data collection and analysis were thus undertaken concurrently with constant questioning, reflection and brainstorming around the emergent SWOT categories and themes both before and after the Tallinn-based workshop. Sense-checking of these categories amongst the wider CASA team, and indeed through the 68 workshop participants at the SCAR 2017 conference, provided an additional level of credibility and objectivity to the final codes selected. Previous stages of the research process were also repeatedly reread before undertaking any further analysis to ensure continuous interactivity between research phases and a grounding of the results in the original data and participant experiences (Fereday and Muir-Cochrane, 2006).

In summary, combined with the background context provided by the Devaney and Henchion (2017) review of the bioeconomy R&I landscape, the phased data collection approach enabled by the research stakeholder interviews and workshop activities facilitated an inclusive, comprehensive and holistic analysis of the SCAR in its current configuration. Engaging stakeholders from a variety of backgrounds and member states proved particularly useful for a complete analysis of the SCAR and in particular its legitimacy, influence, relevancy and political impact across scales and contexts. Results of this phased research approach are now presented adhering closely to the SWOT framework desired and implemented with respect to this CASA task.

Results: SWOT of the SCAR

The results portion of this report is divided into three distinct sections. The first details Phase II results from the thirteen semi-structured interviews conducted with SCAR stakeholders across geographic contexts and professional affiliations. Focusing on the preliminary identified strengths, weaknesses, opportunities and threats of the SCAR, these results are elaborated with direct quotations from the research participants highlighting their experiences, perceptions, attitudes and understanding related to the current functioning and organisation of the SCAR. The second section elaborates these preliminary results through the presentation of data related to the SWOT confirmation and ranking activities conducted as part of the SWOT workshop with international SCAR stakeholders. This includes an assessment of prioritised rankings as well as the qualitative rationales behind final attributions and ranking profiles. The final element of this second results section details story boards relating to the postcards from the future, completed by workshop participants and detailing their ideal visions and ambitions for SCAR for the next decade. The third section summarises the findings from Task 3.2 and details principal themes relevant to strengthening strategic advice from the SCAR in the evolving bioeconomy R&I landscape.

Phase II: Interview Results

Following the completion of thirteen semi-structured interviews, all audio recordings were transcribed verbatim and analysed utilising the qualitative data management software package Nvivo 10. The completion of detailed field notes following each interview further aided the analysis process, drawing out priority themes, topics and repeated discussion points from each conversation. Mindful that these results were not representative but indicative of significant themes of importance to the selected interviewees, seven strengths, seven weaknesses, seven opportunities and seven threats were identified for further assessment and reflection. These elements were finalised through an iterative and systematic process of reflection amongst CASA team members with the aim of ensuring a sufficient breadth of topics for further confirmation, denial and elaboration in the SWOT workshop as well as significant depth for each headline topic areas (for example, combining previously separated elements into one summary heading).

The resultant 28 SWOT elements are summarised in Figure 4 below and further elaborated, accompanied by further thematic analysis and direct quotations from interviewees for illustration and enhanced data richness. To further understand and give insight into levels of potential bias, anonymised interviewee identifiers are assigned alongside each quotation, identifying the professional affiliation of the interviewee in question particularly in terms of their relationship to the SCAR. While, naturally, several interviewees are members of several different SCAR communities (for example, they might serve on the SCAR Steering Group (SG) as well as on a Strategic Working Group (SWG) or a Joint Programming Initiatives (JPI)), their primary affiliation is utilised in this instance. This is in keeping with the participant profiles detailed in Figure 3 and represents the primary reason they were selected for interview. As such, anonymised participant identifiers include, for example, SCAR SG 2, SWG 1, JPI 1, SCAR Foresight 2, EC Delegate 3, etc.

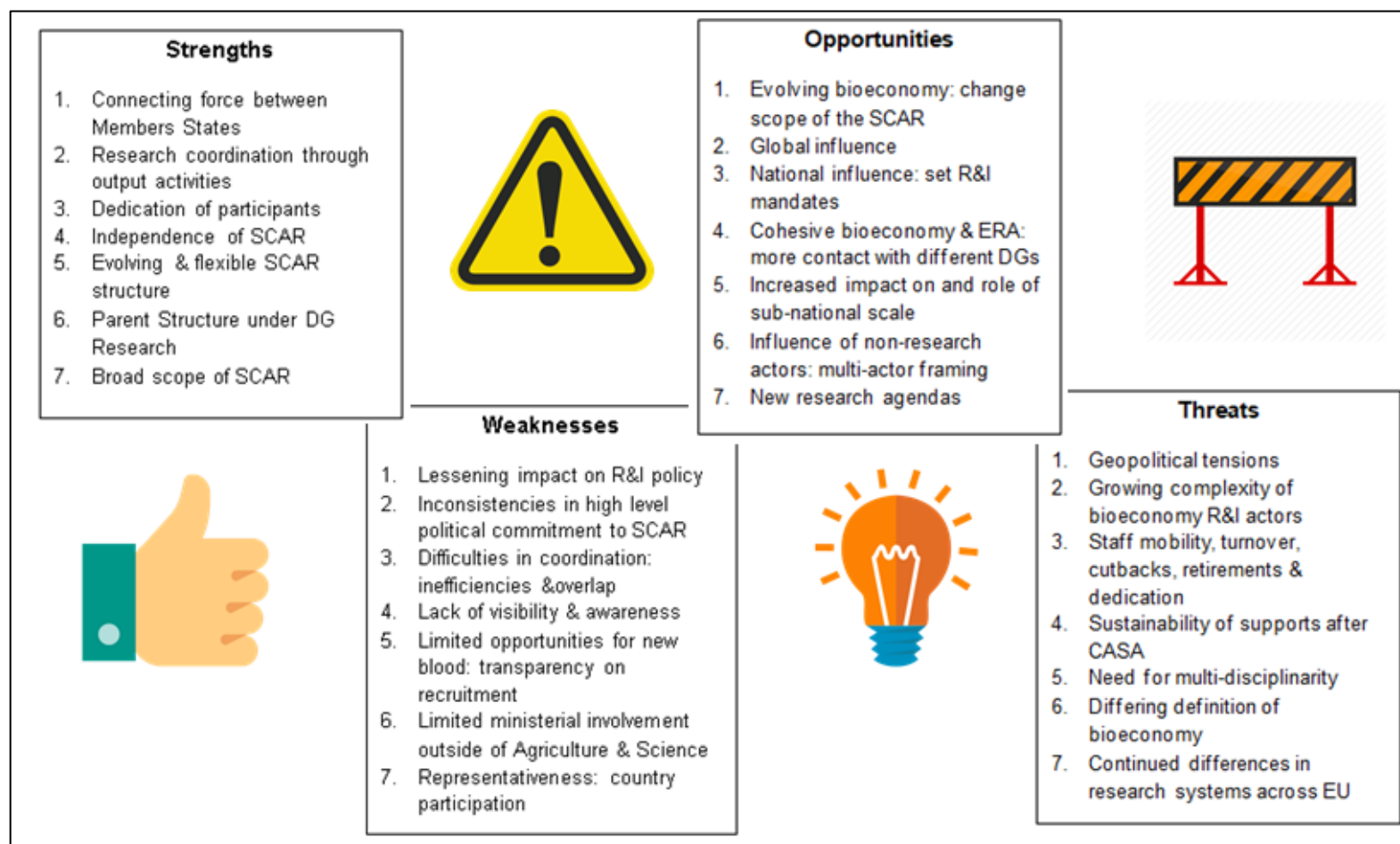


Figure 4: SWOT of the SCAR: summary of preliminary interview results

Strengths



Figure 5: Preliminary Interview Results: SCAR Strengths

As highlighted in Figure 5, a number of strengths were associated with the SCAR structure, organisation and activities by selected interviewees, highlighting a diversity of strengths and general appreciation for the SCAR and its coordination and output activities. Indeed, several specific entities of the SCAR structure were particularly praised by individuals, including the importance and success of the Foresight exercises as a horizon scanning tool and the coordination and impact of the AKIS (Agricultural Knowledge and Innovation Systems) strategic working group in supporting the development of the multi-actor network approach adopted in EIP-AGRI (the European Innovation Partnership on Agriculture and Innovation). A distinct element of pride was associated by many interviewees regarding such elements. The seven strengths identified within the Phase II interview process include:

Connecting force, knowledge exchange, networking and collaboration between Members

States: SCAR was perceived as an organisation that successfully brings member states (MS) together, something that was considered rather unique in a European governance context. This function was perceived to be invaluable by many interviewees, allowing Members States to learn from one another, exchange ideas and engage in knowledge transfer; particularly at the research programme and research policy level (researchers themselves are already considered to be well-networked). The vast amount of information available through the SCAR as a result of this international expertise was particularly praised by interviewees with SCAR members in general thought to have an excellent knowledge of the research landscape (especially in agriculture). The potential to combine MS insights to establish a common European Agricultural and Bioeconomy Research Programme was also important in this context. For example, according to interviewees:

“The fact that we can in a very open way discuss the atmosphere and way of work in the SCAR, it's really appreciating [sic] that we can openly exchange some views, opinions and so on” (SCAR SG 1)

"I think that their main strength is their knowledge and to bring the member states together...I learn a lot from other countries how they work and I personally learn a lot of what kind of opinion they have or what they suggest. It's also some kind of knowledge transfer as well, to learn, and this knowledge is I think very, very valuable and useful" (SCAR SG 3)

"The key strength ... I think, oh that's a good point, by combining different insights from the member states has been effective as regarding grouping the European Agricultural Research programme" (SCAR Foresight 2)

- 1. Research coordination through output activities (e.g. JPIs, ERA-Nets etc.):** Cognisant of original SCAR aims to establish a cohesive and coordinated European Research Area, for many interviewees the true impact and strength of the SCAR lies in its output activities related to the ERA-Nets (FP6 and FP7), Joint Programming Initiatives, CoFunds (Horizon 2020), etc. (i.e. the bottom 'output' tier of the SCAR structure highlighted in Figure 3). According to many research participants, it is within and through these initiatives that SCAR succeeds in coordinating research, secures funding (particularly for agricultural research) and achieves its impact (including on policy).

While for the majority of interviewees these coordinating mechanisms represent a strength of the SCAR, for others, questions were raised concerning the efficiency of these mechanisms (with issues of duplication and overlap discussed more thoroughly with regard to weaknesses below) and ability to attribute their existence to the SCAR as a 'parent' structure (i.e. a belief that some of the initiatives came into being independent of the SCAR). Nevertheless, for the majority of interviewees, the research coordination aspect enabled by its output activities represented a distinct positive and mark of success alongside broader SCAR efforts to create a European Research Area. For example, according to interviewees:

"It has of course a clear role in aligning or in the Framework Programmes in programming European research that is attractive for the different member states. It has some role through the JPIs and ERA-Nets, although can discuss the effectiveness of ERA-Nets, but in aligning research between the member states" (SCAR Foresight 2)

"I think that sometimes you're also forgetting a little bit some of the more concrete outcomes that we have been producing and that has been ERA-Nets, that has been JPIs and these things are a little bit forgotten in new structures. In the old days I remember that was really something which was a very, very big outcome if we could agree on making a new ERA-Net or making a new JPI. Now they are just something among a lot of other things and the situation is that these ERA-Nets, JPIs, EJPs they are also working on strategies and also trying to see how they can align and get a better connection in the national funding landscape" (SCAR SG 2)

"Me personally I see the coordination is the main focus, I'm not sure that's how others might see it sometimes because I think the remit becomes wider and wider you know that people start talking about SCAR supporting policy and I think well supporting research policy, that's okay because it can do that through best coordination and research that comes out of SCAR activities" (SCAR SG 4)

"I think it's done a huge amount for agricultural research. I think in its absence there wouldn't have been the kind of investment that's been in agriculture research over the last number of years" (JPI 1)

- 2. Dedication of participants:** The quality and commitment of the people involved in SCAR represented a significant and commonly articulated strength of the standing committee according to many interviewees, with the majority of SCAR participants deemed to be dedicated and enthusiastic in their roles and with strong policy, funding and research connections. In other words, the 'people power' of SCAR was seen as a significant positive for many interviewees who observed largely positive and long lasting working relationships between countries. While the importance of having 'new blood' in SCAR was highlighted by some interviewees (discussed further in the weaknesses section), the simultaneous need to also have consistent and committed members was obvious for SCAR success. For example, according to a variety of Steering Group members across national contexts:

"It sounds like a cliché, I guess, but I would say the manpower. Actually, I'm a strong believer in like who is involved when it comes to leadership. So it's all about people. And I generally say that the representatives of SCAR and the connections they have, the know-how they have, it is really by far the biggest strength" (SCAR SG 5)

"Often I think members of SCAR they know quite a lot of what is taking place" (SCAR SG 2)

"Key strength. I think it's got the members or the people working in the SCAR have got a good overview of the research landscape in this area, particularly in the agricultural area....I think it has a good working relationship between countries as well because people involved tend to stay involved for a while and that's really important to build relationships" (SCAR SG 4)

- 3. Independence of SCAR:** The relative independence of SCAR from perceived political and industrial interests was seen as a crucial facet of its identity by several interviewees, and indeed, perceived as essential to fulfil its think-tank duties and provide objective advice for both European and national R&I policy. Notwithstanding that the European Commission provides the chair and secretariat support for SCAR, and that national ministries are directly involved, for some interviewees, SCAR was seen to have a clear image that is separate from such bodies, giving it a higher degree of freedom in terms of the judgements and findings it delivers that can influence research policy. This was crucial for many interviewees for the trustworthiness of the strategic advice provided by the SCAR. This level of independence was also perceived to be particularly noteworthy in SCAR Foresight exercises with those involved in the process believing that they promote "free thinking" by detaching from the restraints and individual needs of the present to focus on a future common goal. For example:

"Foresight is important because it detaches from the present and looking forward helps people to be more independent in judgement, you know? Because if you have to decide then what to fund today everybody will have to consider their own needs first. If you try to open to the future you have more room of manoeuvre for free thinking and this is really what is key" (SCAR Foresight 1)

"Detaching from national agenda, from particularity and to find a kind of common approach to research and agriculture....relatively independent....This is very important because research should be detached from....political games and political compromise" (SCAR Foresight 1)

"Keep the think tank and keep the programme committee where the officials position and the think tank is [then] free and can discuss [openly]" (EC Delegate 3)

"From my point of view, it's very important because SCAR is taking an advisory function for member states and also for the Commission....And for the member states it is very important

to be there because the SCAR is a bit independent...we can also call it a think-tank because different peoples are in, it's not only ministries, it's all agencies and this is more free thinking. [It is] not under the pressure of a ministry or something else, yeah" (CWG 1)

"I have participated to several stakeholders meetings but the common, we'll say, rule is that everybody should talk about common good and not private good. So if there is a space for lobbyists, this space in SCAR is much more limited than in other settings and circles so I think that this is very important" (SCAR Foresight 1)

- 4. Evolving and flexible SCAR structure:** An overall satisfaction with the SCAR structure was apparent amongst the majority of Phase II interviewees, with several believing it to have evolved quite organically but succeeding in its function and purpose as a result of this strong structural foundation. Indeed, the SCAR is considered well organised by many interviewees, with the Steering Group portrayed as a particularly effective 'engine' of the standing committee. The inner framework of SCAR is thought to work particularly well, with a feeling that SCAR participants can obtain information from the working groups and participate in them as desired without obstacles (i.e. the potential is there to contribute but willingness to participate and actual participation can indeed be problematic at a national level as reported elsewhere also (see te Boekhorst, 2017).

Perceived improved coordination internally of late has further enhanced this SCAR strength for several interviewees, which was attributed to the appointment of a new SCAR chair and a new EC funded Coordination and Support Action allowing support by the CASA project. Combined, this has resulted in more regular reports from the SWGs in Steering Group meetings (enhanced vertical integration) and increased communication between (enhanced horizontal integration). A belief that the structure of SCAR is flexible and can adapt to any new role contributed to this strength for several other interviewees, with a belief that SWGs and CWGs in particular can be added or removed as context demands. The fact that the SCAR structure is emulated by the International Bioeconomy Forum represented a further hallmark of success for one participant in particular. For instance:

"I'm, in the bigger picture, quite OK with the organisation of SCAR. Not least because I feel like the inner framework actually works quite well. I can get a lot of information on the outcomes of the working groups, the Foresight. I can participate as I feel I want to, at least if I'm willing to put in work, I'm able to. So it's [an] inclusive process in that sense...We get introductions or presentations from the different working groups at meetings, the plenary meetings. I feel the secretariat is... what I'm seeing so far is actually very good work ...So I'd say the inner workings are quite good" (SCAR SG 5)

"I think that the structure what we have right now is okay, it's good. This is you know the question because always we can introduce some changes and plan the changes" (SCAR SG 1)

"The steering group, I mean I think of it as the sort of the engine of the SCAR and there should be good connections between the SCAR steering group members and the members in the strategic working groups and collaborative working groups because they should have been involved in their selection in the first place....I don't think there'd be a lot going on without the steering group" (SCAR SG 4)

"I think the structure has evolved over time. I think any structure for anything needs to be very much fit for purpose and whatever the purpose is the structure needs to align to it.... And...until the purpose is absolutely crystal clear and everybody has bought into the purpose then the structure will just fall out of it, you know?" (JPI 1)

- 5. Parent Structure under DG Research and Innovation:** For the majority of interviewees, the shift of the SCAR from DG Agriculture to DG Research and Innovation in 2005 was deemed an appropriate move. This was attributed to the dormancy of the Committee following the move of research responsibility from DG AGRI to DG R&I along with the understandable focus of DG AGRI on the Common Agriculture Policy. Continued support and coordination from DG Agriculture was nevertheless also deemed a positive by the majority of interviewees (notwithstanding some commentary relating to the political and funding-related motives of this joint coordination effort) and a further strength to the current parental structure of SCAR. For many, DG R&I represented the most appropriate fit for the standing committee with its remit broadened beyond agricultural research and this is consistent with enhancing its research policy influence. For example:

“SCAR...was written into the CAP, launched in '73. So with the advent of the research programme, [DG] Agri let it go over, in the fifth round programme, they transferred it over to DG Research and it stayed there ever since. But with Horizon 2020, Agri came back into co-managing research and wanted to take it back....said no....keep it [in DG R&I] because it has a policy role, a policy influence” (EC Delegate 1)

“You can imagine that the European Commission, especially the DG Agri, is considering CAP as its own, its own, her daughter. And so maybe that would affect research only consolidating their views rather than looking out of the box. So having this kind of independence or relative independence I think would help to create some long term vision” (SCAR Foresight 1)

“The shift in terms of who chairs SCAR, kind of the co-chairing relationship that's there now...that's there because a significant portion of the budget for Societal Challenge 2 comes from DG Agri. If that wasn't the case, like it wasn't in the past, then SCAR was here and DG Agri was over there” (JPI 1)

- 6. Broad scope of SCAR:** Finally the increasingly wide remit of the SCAR was seen a positive for several (but not all) interviewees. This positivity stemmed from an appreciation of SCAR evolution as agriculture has also evolved over the last several decades (for example, to consider a more thorough farm-to-fork approach and non-food uses from agriculture including bioenergy and bio-chemicals as well as the multifunctional role of agriculture). The incorporation of forestry and marine biomass into SCAR considerations of late, through dedicated strategic working groups, was also considered testament to SCAR's continuous ability to evolve and adapt to the bioeconomy approach, as required by recent policy, research and practice. The challenges raised by this are addressed in the weakness category below, but in general, the broad scope of the SCAR was seen as a significant strength, in conjunction with its wide ranging knowledge and expertise. For instance, as interviewees highlighted:

“In general, I think SCAR, it serves its purpose, definitely. I would say that. I'm generally pleased with the activities with the organisation's ambitions, I'd like to say, of SCAR. That would be my overall perspective....it's not an organisation which is just for itself, definitely not; it's an organisation that actually wants to serve its purpose and do good in that context” (SCAR SG 5)

“I think that SCAR has a lot of information, the knowledge that SCAR has, it's huge” (SCAR SG 3)

“The SCAR provides me with the most broad and the most overarching fora of discussion, what's going on at policy level in EU. So this is also very big advantage. Also the workshops and the foresight process” (SCAR SG 1)

“There was a communication I think, 2007, which summarised the new approach to SCAR and it outlined already that agriculture is meant to encompass food, fisheries, forestry, research and this broad definition was since then adopted. Because changing a regulation of 74 would not be something very useful. It would be a very heavy procedure and at the end maybe there wouldn't be any regulation at all and then the whole SCAR process could digress while it is quite useful committee actually” (EC Delegate 2)

“I mean SCAR will exist because it is now broad. Call it bioeconomy or call it, you know, food and agricultural research” (EC Delegate 1)

Weaknesses

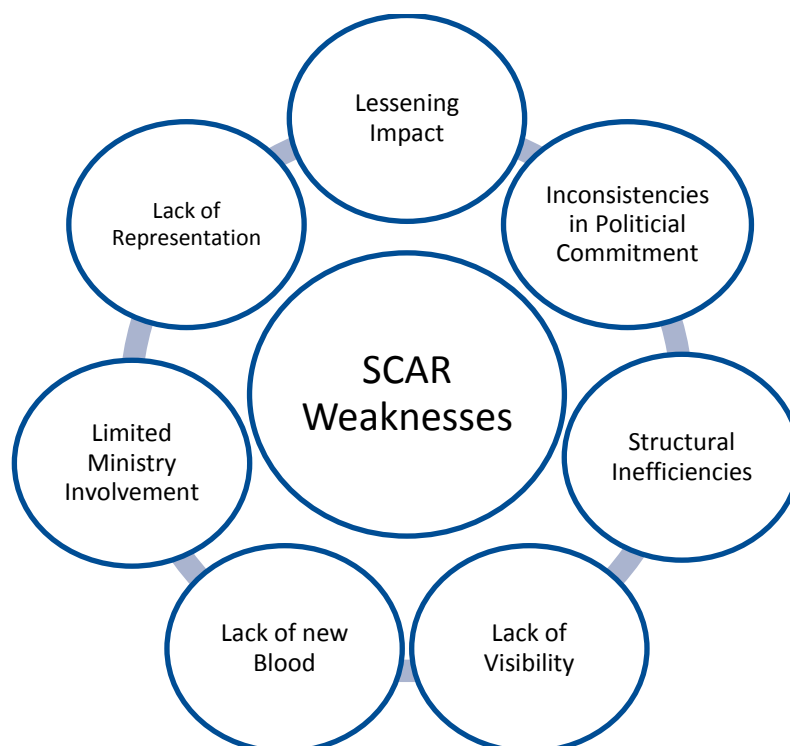


Figure 6: Preliminary Interview Results: SCAR Weaknesses

Similar to SCAR strengths, a number of SCAR weaknesses were also revealed and probed through the semi-structured interview process. For the purposes of this analysis and in keeping with the interview aims, the seven weaknesses to emerge from research Phase II revolved around the structure, organisation and relationships of the SCAR including in terms of participant recruitment, visibility, coordination and political buy-in. These are summarised in Figure 6 above and elaborated below with the inclusion of interviewee quotations for further richness and clarity:

- 1. Lessening impact on R&I policy and programmes at EU and national levels:** There was increasing concern amongst interview participants regarding SCAR's influence and impact on both European and national R&I policy and programmes. In this sense, an implementation deficit was perceived to exist whereby the knowledge and information gathered by the SCAR and its structures is thought to not infiltrate national or European policy circles. Participants emphasised that while the knowledge exchange features of SCAR are important (Strength 1), this knowledge needs follow-up action and implementation to be effective. This is currently lacking in SCAR according to many of those interviewed, with several lamenting the demise of the proactive SCAR of the past and its perceived greater influence over FP7 and Horizon 2020 compared to the FP9 programme currently in development. For example:

"Influencing national R&I policy, that I think we can improve" (EC Delegate 1)

"Well that's a tricky one. I would say it would definitely serve a purpose as advisory in that context...To try to understand the different funding mechanisms in the different countries., I don't think it's realistic to actually align them within SCAR. But actually, proposing or advising regarding alignments would make sense to me....I'm not a lawyer, but I can't picture the

situation where...governments will all say, yes we will do it that way, because SCAR says so" (SCAR SG 5)

"It is a situation today is that SCAR is not doing so much. We are only having one paper which is of that [policy] level and I think that's the SCAR foresight... I don't think that we have anything that is really of a standard which can be used by a member state. So I think we need also to see if we can do something more than just this foresightwhat other kind of things can be of use and have an input for policy discussions" (SCAR SG 2)

"What I see is that the influence in the recent past has decreased. I could see that the influence of SCAR in Framework Programme 7 and starting of Horizon 2020 has been higher...I do have the feeling that the influence and the power has decreased....I just think that the Commission still organises meetings, we have this workshops programme committee in SCAR together, where we discuss one day on flip charts...Then you go home and you receive the almost finished work programme where you think - where is [the input] now? What happened?...And then we go back to the Commission and [they] say, 'We have consulted in both of them but then they were all different diverging opinions, not from the SCAR but from others and we had to decide on this'. I feel a little bit more sceptical... more and more ticking the box and not getting into the [final] concept" (SWG 1)

"The aim of SCAR is that the target group should be the ministries but sometimes there is a lag and this is also the reason why we have CASA on board" (CWG 1)

"I think SCAR is nice because you always get a lot of information but sometimes it's not enough just to be informed because you also have to use all these data and this information" (SCAR SG 2)

- 2. Inconsistencies in high level political commitment to SCAR (national and EC levels):** A perceived lack of political engagement at MS level as well as EC scale raised concern for several interviewees, furthered by a belief that governmental hierarchies are often not willing to invest in a knowledge exchange, discussion platform such as SCAR. The difficulty of achieving 'buy-in' at high political levels was emphasised in this regard, with commitment to SCAR seen to be highly dependent on national interests and political priorities in terms of resources invested (human and financial) and politician engagement at EC level also perceived to be difficult and limited at present. This weakness raises limitations for SCAR given that influence on R&I policy strongly depends on the political resources invested at both national and European scales. The recent legacy of financial cutbacks in the civil service across Europe has further impacted this weakness area according to several interviewees, resulting in lessening resources attributed to formulating national research and innovation agendas. For instance, according to interviewees:

"There has been a huge trying to save money on the civil service...so the quality and the amount of time to dedicate to research agenda is not, I'll try to say it politely, but it can be improved, I think it has become more problematic than 10 years ago" (SCAR Foresight 2)

"The SCAR has a very good opportunity if it has commitment from member states and the Commission...there is a need that it is recognised both by the Commission and by member states and the member states also use it. [SCAR is] not only for having influence on what is coming into the Horizon 2020 or what will follow after that, but also to use it for national purposes...I think that is something which has to be improved. I think today member states are participating, they are coming with input but they are not good enough really in making use of the outcomes from SCAR" (SCAR SG 2)

"The understanding what you should do at EU level, what you should at member state level, this is not there. It's not just let's say a nice club to discuss, but we should think about as a member state, the representatives should understand that there should be also the next step...sometimes maybe it is the question that even the member states send their representatives to SCAR but, you know, the decision maker who is going to decide that are at a more higher level" (SCAR SG 3)

"I think the weakness that's been in the past, the linkage to the Commission which was not very strong" (EC Delegate 2)

"I think one issue is buy-in at home...There's no point in someone turning up at SCAR discussing and saying this is a good idea and it's just one person. It needs to be more of a sort of a community at home taking forward activities" (SCAR SG 4)

"There are official SCAR delegates for the plenary which would be on a high level in the ministry. But as I can see when I go to, when I see who is in the plenary, they are all delegated downwards...that should maybe change because there is only two meetings of SCAR per year and then the higher decision making delegate should be there" (SWG 1)

"[SWG attendance] is something where I think that motivation in the countries is partly not there because the policy importance is too low, they are on a too low level in this" (SWG 1)

3. Difficulties in coordination vertically and horizontally within the overall structure:

inefficiencies and overlap: Some interviewees highlighted a number of inefficiencies and overlap within the structure and coordination of SCAR, including regarding the organisation of the Steering Group (SG) meetings and perceived duplication between a number of the SWGs, CWGs and ERA-building measures (ERA-Nets, JPIs, etc.). Concerning the former, concerns related to the SG agenda and the amount of time allocated to giving feedback from the SG tier to the WGs predominated, while for the latter, a belief emanated that the same people are often working across SCAR 'output' entities, duplicating agendas and work programmes. Weaknesses in cooperation between the output tiers of the SCAR were also highlighted by interviewees along with a feeling that some JPIs, ERA-NETs and EJPs are somewhat forgotten in the new structure of SCAR. A lack of coordination between individual SWGs in particular were also reported, with some often organised to meet around the same time and in the same places but failing to connect with one another:

"My criticism is also to the steering group, that we have too few time for discussion with collaborative working groups and where it was also critical, they haven't asked mandate for the SCAR plenary and then it is even difficult for the member state to join this group because there is nothing there official....we decided that each working group should report to the SCAR steering group I think, but there I think that our agenda is not very well prepared...I think [it's] very important to give them the feedback...but if you have five minutes, it is nothing" (SCAR SG 3)

"See where we can do something together...so looking to efficiency, where can we help each other, ERA-Nets, can we do things together to avoid overlap...[also] insufficient effective two way communication between the steering groups and the working groups" (EC Delegate 3)

"I'm a little bit sceptical because I think that the whole SCAR organisation has been much too complicated. I think it is taking too many resources...I think it's something which is reflected among the small countries, we have discussed it about it, and in the northern countries and they agree with me. That it is too complex, too time-demanding and

sometimes a little bit difficult really to see what are the outcomes of not just having talks, working groups” (SCAR SG 2)

“What I would change, maybe we have too many collaborative and strategic working groups. It makes more sense to put them together from my point of view. And something you should also if there are not any more focus on a topic then you should also stop with a group” (CWG 1)

“I think it hasn’t worked well before CASA started. Then there was nothing within the strategic working group, very loose connections to the Foresight group, some but not very much. There was no oversight on it, that’s still is missing a little bit” (SWG 1)

“The EIP I feel might be mimicking what’s going on in this collaborative working group level with their, what do you call the groups they have...operational groups. There’s a potential for overlap there” (EC Delegate 1)

- 4. Lack of SCAR visibility and awareness:** For the majority of interviewees, a limited awareness of the SCAR outside of those already involved in it was perceived to exist; a weakness thought by interviewees to be compounded by SCAR’s limited online presence and perceived poor communications and outreach. SCAR was reported to lack visibility in online search engines and social media platforms with perceptions of an overdependence on traditional communications in the organisation. Partly attributed to the age and skill profile of SCAR members by some interviewees, the importance of better communications was emphasised in a world of fake news with communication seen as the foundation for risk assessments, organisational transparency and more holistic awareness. An identity crisis was also associated with the standing committee’s acronym as SCAR; when some felt it should be SCBR to incorporate the new bioeconomy research dimension. Legislative difficulties in changing the name of the standing committee were nonetheless cited as hampering a shift in this visible branding element. For example:

“On a social media level if you want it now, it’s the world we live in now and websites, blogging, twitter account, whatever you want. It’s non-existent [for SCAR]. Even pictures of who these people are...The website is dreadful. But that’s another reason we’re restricted by having the work under DG RTD rules. We can’t go out set up our own website...there is nothing wrong with external people telling us...that it needs improvement to be brought up to standard” (EC Delegate 1)

“I sometimes feel that we are not aligned to newer generations, or younger generations. We are still communicating in fairly old-fashioned ways... I’ve asked about the SCAR Twitter account at least five times, and not too much has happened....Last time I googled SCAR, I actually found, I think it was a kid somewhere I found with a Twitter account. So it’s not really visible outside those who know it, in that context.... And it’s even more important now than ever, because there is so much fake information around, and we shouldn’t forget that science is really the basis of our risk assessment, generally increasing transparency in society [and] making the citizens aware” (SCAR SG 5)

“The member states they did not catch really the added value of SCAR and this really weak point... people standing outside SCAR, they did not understand what SCAR is really doing” (CWG 1)

“When we were on SCAR our colleague from [member state] she said something like ‘Oh yes because SCAR you know this is about agricultural production...’ And it was you know the big movement ‘No, no this is not like that’...I would like to show you the very broad perspective and landscape when we are talking about SCAR” (SCAR SG 1)

“So maybe a good way of, you know, to some extent you might say SCAR in name only. It should be SCBR, Standing Committee on Bioeconomy Research” (SCAR SG 5)

“It’s taken on this identity of bioeconomy but as I said to you earlier, it should be the SCBR but as I tried to say in my talk, the bioeconomy is a difficult word out there” (EC Delegate 1)

- 5. Limited opportunities for new blood with lack of transparency on “recruitment” process:** A lack of clarity was associated by interviewees with the process of plenary and SG delegations and the expert selection process for WGs beyond personal contacts and connections. Lacking transparency and consistency, recruitment processes appeared to vary across countries with representativeness limitations also noted in terms of the age profile of the delegates chosen. Two interviewees in particular desire younger participants alongside more experienced members for improved outreach, to continue breaking down language barriers in SCAR and to ensure fresh thinking. For several others, SCAR was perceived as a difficult organisation to infiltrate with the selection of experts and delegates often thought to take place in an ad hoc manner and as a result of recommendations by personal contacts, and dependent on the availability of people to contribute without payment. Fears of the standing committee becoming stale as a result of these processes were of concern:

“You’re speaking about selection process, there is no selection process so member states in the plenary say ‘this is our plenary member’ but for the rest to the Steering Group there’s no payment so there’s no official representation” (EC Delegate 3)

“All those processes, it’s to some extent or to a lot of extent based on who do you know and who has the time to actually do something. So it’s not perfect, of course, rather than any other process. At the same time, I feel that those who are truly interested, they have an open door at least to suggest experts and make their mark on the process... I would try to at least get input, if not representatives from younger generations” (SCAR SG 5)

“We usually involve other departments who are responsible for this topic level. But I think that in some cases, member states, involve research institutes. I’m not against that but I have the feeling that sometimes it’s not very clear for the research institutes what is their responsibilities. It is not anymore just to present the institute but already the member state...to collect information and to discuss and make a suggestion from your country, the point of your country” (SCAR SG 3)

“A lot of people have been sitting at the table for a very long time....I mean people are wedded to these...and they’re comfortable in this space and all of a sudden they’re being asked to think a little bit more differently” (JPI 1)

“I think if a country is interested in an area they’ll find somebody. I think sometimes there can be a misunderstanding about what the group’s going to do...you do need new blood, you don’t want the same old fogies going all the time, you want new people coming in, then they pick up the process and I’ve seen this... and then they take things forward with new ideas and it stops it becoming stale. So you definitely don’t want it to be an old fogies network that’s been sitting there for 15 years talking about the same stuff. You want new people coming in with new ideas and particularly with a wider remit you do need new people but we just need to make sure... if SCAR is that there is resources available” (SCAR SG 4)

- 6. Limited ministerial involvement outside of Agriculture and Science limiting bioeconomy potential:** As a result of the legacy of parental structure under DG Agriculture, it remains that the majority of delegates at Steering Group and Plenary level emanate from Agricultural ministries.

For many interviewees, this is problematic given the wider remit of SCAR in holistic bioeconomy development (e.g. to include forestry and marine biomass) and results in persisting conservative and limited discussions at SCAR level to agricultural production affairs compared to wider bioeconomy effects and progress. Furthermore, the tendency for national R&I policy to be created by Ministries of Science was highlighted in the context of dominant Agricultural Ministry representation, and proposed as one explanation to SCAR's limited influence on national R&I policies (i.e. a critical ministry representative is absent):

"The scope of the SCAR has been broadened very much recently...this is not only agriculture, this is also forestry and maritime and also bioeconomy. And this is for me the key question about the scope because when I observe at our national level, still for example, Minister of Agriculture is the leading ministry in SCAR. In their domain they have only agriculture and rural development. They don't have, for example, forestry and they don't have... marine and maritime and this concerns bioeconomy" (SCAR SG 1)

"Blue growth is considered one of the key elements of economic growth in the world, including Europe. And I often feel there is a lot of conservatism [in SCAR] when it comes to discussing this. There definitely has been progress on this side; but I still feel we are quite conservative. Maybe not least due to the fact that it's most representatives actually coming from agricultural ministries... if you've got people which are solely or almost solely interested in agricultural research and agricultural development, you're not likely to actually align [land and sea]" (SCAR SG 5)

"Research [policy] is usually done by the Ministry of Science...and SCAR is more dedicated to the...Ministry of Agriculture, Forestry and Environment. And this ministry doesn't have a real big agenda on research. I think it is lacking a little bit while the persons behind that, are doing a very good job. But then...the influence in the [national] policy level is not really visible...as in the Ministry of Agriculture not a lot of interest in shaping research...They try to feed it back but the science minister says 'Well that's yours...' So then it's pushing around and it's difficult for the delegate... doing a great job in trying, for instance, to bring together the strategic working groups and collaborative working groups...but then when we have some recommendation that's the level and then there is nothing unfortunately" (SWG 1)

"As I said, they've been around the table for a long, long time...And you can't just increase the scope without thinking about whether you having the right people driving it forward, you know, you really can't. I mean this should be a mix of economists and health researchers and, you know, behavioural scientists and the social side, real kind of, you know, really multidisciplinary or interdisciplinary because this is it as it is we'll just continue to deliver good things for agriculture and, you know, and not necessarily good things for other things" (JPI 1)

"The links with things outside agriculture; research and innovation [needs improving]. So what is going on in food and health or what is going on in forestry or fisheries. That is perhaps eh... I don't necessarily see them as weak for the past but it is the current position" (SCAR Foresight 2)

- 7. Representativeness limitations regarding country participation:** An acknowledged weakness of SCAR (SCAR, 2015) and explored in more depth in other CASA work packages, the issue of uneven country representation and participation in SCAR was inevitably raised by interviewees in discussions of SCAR weaknesses. In particular, frustrations regarding the need to include high potential but low participating member states was obvious, with this issue thought to run much deeper than mere lack of financial capacity (for example, related to national priorities, political buy-in, human resources, relevancy, the voluntary nature of contributions, etc.) (as addressed in

more detail in te Boekhorst, 2017). Issues of representation were further highlighted with regard to the composition of the CASA team, also thought to not be inclusive of the countries the SCAR is trying to represent. Representation in terms of topic and subject area were also highlighted in the context of SCAR representativeness by some interviewees including both in terms of production bases and consumption spheres (covered for example in some SWGs and JPIs but not higher decision making tiers in the SCAR). For example:

“He actually advised me not to try to participate in working groups too much. Simply because, it would be too time consuming and too expensive, simply. And this has been an issue which has been discussed briefly within SCAR. For small countries to participate in many working groups or in working groups at all, it’s quite costly” (SCAR SG 5)

“There are so many other weaknesses. Again, but it’s down to member state voluntary compliance. And that’s always difficult...they’ve other jobs to do” (EC Delegate 1)

“And one weakness for this it is in some cases is that let’s say some countries, even if they are in plenary, presented in plenary, in steering groups maybe they are presented and sometimes not” (SCAR SG 3)

“It can’t be all about resources. It is something where I think that motivation in the countries is partly not there because the policy importance is too low” (SWG 1)

“[At specific SWG level] we are struggling...again very few people who are active...I would say one third is not even coming to the meetings and one third that comes to the meetings is not talking in them or not active in the meeting. So it’s again always the same persons” (SWG 1)

“Weakness [of SCAR] that there are only few member states active in it, so the activity potential of the member states has to be increased...CASA is one way already [but] what I missed in CASA is that CASA is, again coordination action that is dominated by the usual suspects. And you will not find people actively in task leadership or work package leadership from those countries that would urgently need it” (SWG 1)

Opportunities



Figure 7: Preliminary Interview Results: SCAR Opportunities

With a forward-looking vision and horizon scanning aim, further opportunities for SCAR were also considered by interviewees. As opposed to the internal focus evident in the strengths and weaknesses sections above, the emphasis in this section relates to external opportunities for the standing committee in the context of the evolving agricultural, bioeconomy and R&I landscape in Europe and beyond. This is in keeping with the SWOT framework recommendations proposed by Ghazinoory and Azadegan-Mehr (2011) that allows for an internal reflection regarding the SCAR structure and organisation (S, W) as well an external horizon scanning to help identify opportunities and threats (O, T). Summarised in Figure 7, perceived opportunities for the SCAR identified by interviewees include:

- 1. Evolving bioeconomy: change the scope of the SCAR:** Connected with the opportunities presented by the continuous evolution of agriculture and ideals of a holistic bioeconomy and the achievement of a comprehensive ERA, two principal options were uncovered by interviewees with respect to the potential of a changed remit in the future of the SCAR. The first considers an expanded SCAR remit in response to the evolving bioeconomy with an associated opportunity to fully extend the SCAR remit to bridge the land and sea divide, align all biomass resources and address production and consumption considerations for fully supported and holistic European bioeconomy development. This reflected a desire amongst some interviewees for SCAR to truly reflect and represent all of its members, reiterating the lack of representation felt by some not only in country membership but in some topic areas. Potential to branch into providing strategic advice for other policy areas outside of R&I policy was also mooted as part of this opportunity context.

More cautious perspectives nevertheless emphasised the need to streamline and re-focus on the original SCAR remit to ensure greater relevance in an increasingly complex R&I landscape.

Refocusing on original aims to establish the European Research Area through the provision of strategic advice for R&I policy that aligns agricultural research was thus more appealing for others. For these interviewees, the SCAR has gone too broad in its remit (e.g. perceived attempts to influence other policy areas outside of R&I), with several considering a 'do it right and do it well' mantra. For several, this connected with a belief that the SCAR has become over-ambitious with regards to its strategic policy advice remit (introduced from 2005 onwards), perceived to lead to disappointment when these aims are not met. While still including wider bioeconomy arenas such as forestry and marine, a refined focus on research coordination, and the mapping and planning of this, as the key role of the SCAR was thus considered more important for several interviewees; with broader policy influence perceived to instead occur through research outputs rather than the SCAR itself. For example:

"There's a need for a bit of a more holistic conversation, farm to fork or, you know, sea to fork, sea and farm to fork.... to be fair to the fisheries people or the forestry people, you could say, you know, you kind of need to change [the SCAR] name. Now from a comitology perspective and...regulatory perspective there would have been a whole raft of stuff that would have to happen and I can understand the Commission's kind of reticence around that. But, you know, if they really are thinking into the future for FP9 then... you could see a new SCAR being more aligned to either the full bioeconomy...to provide the science and evidence base to inform policy....there is definitely opportunities for a good deep...look at it" (JPI 1)

"I don't think you really need permanent [strategic working groups]. I think you need more that these things permanently are in the agenda for the SCAR meetings, that you permanently make sure that SCAR is not only dealing with agriculture but also the food, food, food system, bioeconomy, fisheries. So, that has to be much better reflected....to have importance you have to lift it up also to the Plenary...make sure that they get good feedback information about what is taking place within these areas" (SCAR SG 2)

"I think they are already at their limit now, it's too much. And now for the refocus...there are a number of things more and more international, so in a way I don't think we can really avoid it but it is how to slim down...I think we have to think, reflect and refocus...and keep things really very slim because what's happening now from the CASA comes the burden on the strategic working groups to have a work plan and have extra" (EC Delegate 3)

"[Keep] still that level of 'think tank' so not building policies but at least creating principles on which policies can be effective at a certain point" (SCAR Foresight 1)

"The whole structure for SCAR, should we focus in the domain we have now on board and we already broadened that or should we go further? This is the key...Yes, could be, but currently we said no because then it's too big and if we have such a big tanker then you cannot go, you cannot switch direction or something else. So...maybe we will go a little bit back to be a bit narrow, to focus on special things, yea? It's important to have also the connection to other policies or to keep it in mind for your work but it should not get too broad, then you lose the overview....we have the risk that SCAR is losing its identity" (CWG 1)

"I think to work with other policy areas more closely is an opportunity to understand these other policies a better way and to give them the research and innovation input. I think that it is, yeah, this is one of them. As it is also mentioned that we build together the European Research Area and that it's not only the research policy" (SCAR SG 3)

"I think Horizon 2020 is something which should also be linked to SCAR, but there might be other initiatives and also because the Commission trying to work with some focus areas and

some more global strategies. So therefore SCAR should also be able to be used by the Commission to come where it could to other areas where food bioeconomy are also dealt with because it's not only within DG Research and bioeconomy directorate, there are other areas where it could also be relevant" (SCAR SG 2)

- 2. Global influence opportunities:** In response to global drivers related to environmental, social and economic challenges, a second potential opportunity area for the SCAR considers its potential to extend its influence and impact beyond the European scale to global policies, programmes and organisations. This represented a point of contention for the interviewees with some adamant that SCAR is, and should remain, Euro-centric and focused, while for others opportunity existed for SCAR to not only be influenced by, but to influence, global agendas (e.g. related to the Sustainable Development Goals, COP commitments, FAO policies). In particular, several interviewees alluded to the use of existing structures to achieve this ambition with the potential role of SCAR in the International Bioeconomy Forum (IBF) particularly referenced by interviewees. This was perhaps due to the pending decision at the time of interviews regarding the appointment of a SCAR representative to the board of the IBF and how this might be enacted. For several interviewees, the potential to extend SCAR's global influence beyond niche WGs or JPIs and internationalise the impact of SCAR was firmly rooted in a "why not" attitude and belief in the process of continual evolution in SCAR. This was bolstered by a conviction that strong foundations and structures exist in SCAR to work off to achieve these aims and truly open European science to the world. For example:

"I can't see why not really. Again, you got the structure in place,.. you have a theme or a challenge which this hugely influencing the economy, the environment, society and the whole. We have our...experience of actually aligning within Europe...I can't see why not. But it would definitely require I'd say, a fairly firm leadership within SCAR to do so" (SCAR SG 5)

"I think it has an opportunity to have that influence, but that needs also commitment again from member states and from the Commission because member states are involved in all kinds of international organisations, discussions, both bilateral discussions but also discussions in FAO and OECD. ...[but] different people are dealing with different topics and issues. So therefore it's also something how do you coordinate, how do you make sure that this information is distributed and discussed and used also for other purposes. So I think it has the potential but I think also it's something which is difficult and which you should avoid... I think also it is something which goes the other way because if FAO, OECD, some other countries are making foresights interesting it should also be something which should be used by SCAR. So it's not just so that SCAR can go one way with their ideas, but they should also be open to taking ideas from the outside" (SCAR SG 2)

"I think that we should more go into this direction.... how to combine our discussion with some particular policies. So and also the global context and you know, so this is also advantage but unfortunately this is also disadvantage because it's demanding so much resources that sometimes we can't foresee" (SCAR SG 1)

"I think that all these strategic discussions should take into account, global issues should and should we be active on a global level, I feel I'm not sure. I'm not sure because I see that we have a lot of the EU level, at least the member states level. If we improve that of course we can go....I at least feel that at the moment we should work more at EU level and we should take into account the global issues" (SCAR SG 3)

“Well there is no buy-in. I am looking forward how that will develop, you know, the International Bioeconomy Forum that would make an outreach, that would give SCAR the challenge or the opportunity to reach above Europe...if it can grab ground then it would be an influence on the global level as bioeconomy is not going to happen in Europe alone, most likely it will be much more advanced in other parts of the world hence therefore it would be very important to have a connection..... So don't miss the opportunity when the International Bioeconomy Forum is set up. It's now at the beginning, at the beginning you have the possibility to structure, now the opportunity is to crack that” (SWG 1)

- 3. Set clear SCAR mandates regarding national R&I policy influence:** In response to the perceived lessening influence of the SCAR at the national scale (Weakness 1) and in acknowledgement of the significant levels of R&I funding available at national level which should be managed to achieve a coordinated ERA, according to interviewees there is potential to formalise the influence of SCAR on national R&I policy. Setting clearer mandates at Working Group, Steering Group and Plenary levels was proposed as one way to achieve this. Interviewees also alluded to the need to set clear demarcations between Plenary and Steering Group levels as well as having clear mandates for those delegates operating within them (e.g. regarding the role of research organisations at Steering Group level). The need for measurable targets and deliverables to improve knowledge transfer efficiencies were also highlighted by interviewees including clearer objectives, mandates and deliverables across all structural tiers of SCAR. Opportunities for greater national policy influence were particularly thought to exist in the evolving bioeconomy landscape with a distinct need expressed to formalise this process for policy influence and input. A clear mandate from plenary level for SWGs and SG to achieve this would be crucial to avoid differentiated implementation and impact. For example:

“We need to make sure that fisheries is put on the SCAR agenda, the bioeconomy is there. So all these initiatives, all these policy areas be visible also in SCAR, but I think perhaps it was better that they came out also in the SCAR plenary... I think what SCAR can do is they can bring these things also further into a system both in member states and in the Commission so that when you make these strategies that you also use SCAR and the SCAR members to expose it, to communicate what's done because today it can be difficult” (SCAR SG 2)

“We should improve some issues, some topics at national level. The informational flow is there but you know, we still need to work on that....I think that we should go more to the politicians to present the results, to politicians as well....come to present the results in a minister council...for example outcomes of a Foresight exercise and to present to the country and to have some kind of discussion on that and to ask actually ministers how they think they can implement at the national level, or what kind of activities they need, what kind of instruments they have available for implementation” (SCAR SG 3)

“[Policy influence] would be much better if it is structured....It has to be from the plenary, the plenary has to give the mandate to the strategic working group to do that... it should be a mandatory to connect to things like that...expanding the mandate” (SWG 1)

“It's more important to have a clear mandate, what is really the goal of the working group. And that was in the past sometimes in my experience also a little bit searching” (SCAR Foresight 2)

- 4. Cohesive bioeconomy and ERA: more direct and two-way contact with different DGs:** In the context of the evolving bioeconomy that demands input and communication with other DGs (including, for example, DG Mare, DG Grow, DG Environment, DG Connect and DG Clima), interviewees expressed opportunity for more direct, iterative and two-way contact between SCAR and all relevant DGs of the EC. This opportunity was further framed in the context of overcoming issues of limited awareness of SCAR in DGs outside of DG R&I and DG Agriculture. It was seen to particularly be necessary given lessening resources across the EC yet strong recognition of the opportunity to work with other policies and DGs beyond R&I policy to build a cohesive European Research Area. Practical suggestions from interviewees regarding this contact included dedicated SCAR presentations to DGs, an increased role of the Secretariat in communication efforts, designated DG staff members to interact with SCAR and DG representative attendance and presentations at SCAR meetings to present latest DG thinking, strategies and developments. The use of SCAR members to expose and communicate progress to ministries at EC and MS levels was also mooted by interviewees in the context of a desire to involve other DGs in SCAR but the difficulty of achieving this in practice. The importance of monitoring SCAR awareness at European Council level was also mooted, reflective of some of the founding principles of SCAR. For example:

"I think there is a good communication between the SCAR and the Commission but this is only the DG Research and the DG Agri but not the others. And the bit missing, for example, the DG Mara because they should be in better contact with the strategic working group on fish. And this is missing...we need also the DGs have to work have to collaborate better because if you're looking for the working programmes now or the different challenges, some items are overlapping or they are not really fitting and they have to cope more. This is not only the SCAR... DG Connect I think is important and [DG Sante]...and we should also provide them more our results I think and this is also missing" (CWG 1)

"Within the Commission system I think also there's a need to have a more clear connection concerning SCAR and its inputs into the Horizon programme because of course it has as an influence but it is not always so easy to see...for me the Commission, they have to use it, they have to be committed so that means when you make decisions within the relevant directorates and divisions they should see how they can use what SCAR has made...And I think what we have done in the past to expose SCAR at the Council level from time to time. I think that's a good idea. We need to make sure that that means that from time to time also get informed about SCAR and what SCAR is doing" (SCAR SG 2)

"It needs to be picked up politically and I think there would be a better chance if in some sense that it was in DG Agri because I think a guy like [NAME] would run with this and say "My SCAR committee has done this" but he doesn't....I don't think we are giving it the profile it needs or could have. Because I think it has a very strong potential. And that would be a good mechanism because it...it would give a feeling of influence from the member states at a higher level" (EC Delegate 1)

"There should always be an open invitation of Commission services to join but realistically all Commission services are super busy with their quarters. So if there is no immediate need I think probably it will, we should, it's already an effort to keep DG Agri and DG RTD jointly in business" (EC Delegate 2)

"With the other DGs I think that's just very naïve to think that DG Grow and DG Environment and that they all should come to all these to the SCAR working group and the strategic working groups.... we're all so slimmed down...we're all running, running, running" (EC Delegate 3)

"Maybe having a [DG] staff dedicated to SCAR would help to improve certain activity in SCAR" (SCAR Foresight 1)

- 5. Regional R&I: increased impact on and role of sub-national scale in SCAR:** The external context driving this opportunity area relates to the tendency for R&I programmes to be rolled out at a regional level, particularly in larger member states, thus providing an opportunity for exploitation of SCAR knowledge and achievement of impact at a sub-national level. Investigating alternate scales of influence therefore represented a fifth opportunity area highlighted in the Phase II interviews, with particular reference to the increase role of the regional (sub-national) scale in SCAR. This opportunity was framed in the context of regional R&I activity and programmes often holding a significant role in the R&I landscape in a number of larger European countries. Thus, potential was seen to exist to include regional level representatives in the SCAR Steering Group rather than just national level delegates. For one interviewee, this linked with a need to infiltrate perceived old-fashioned, sectoral-based regional development schemes and allow regional representatives to bring back SCAR thinking to influence regional R&I funding policy and developments in the evolving bioeconomy. Opportunity to thus influence both policy and practice were evident here. For example:

"The funding for research is very little compared to what you can get from regional governments or for other funding agencies. So sometimes the national level is irrelevant simply and there is not much communication between the national level and regional agencies. They don't have a common strategic agenda, they are let's say relatively independent from each other and this is a problem because sometimes yes people in research are more linked to regional authorities rather than the national authorities" (SCAR Foresight 1)

"I think that now regions are starting to be aware of the role of SCAR so they are trying to have a connection to SCAR but, you know, as membership is based on national participation it is not so easy...some regions are pushing to be involved...To what extent the national levels are eager to involve regions I'm not sure" (SCAR Foresight 1)

"The regional level which should be much more influenced in this regard because, you know, when you read regional development schemes you don't see these things, you see very old things and a very sector based approach. So in this regard there is very much to do to push the agenda at this level...And especially where the funds are distributed because rural development schemes are distributed at a regional level and sometimes the design capacity and the strategic capacity of regions are very low and sometimes they are not aware that there are these kinds of discussions" (SCAR Foresight 1)

"Having more involvement of regions yes. I don't know in terms of if they decide that the assembly have to manage it but I think that to reserve some seats to regions or networks of regions would help a lot to involve regions in this....in the higher level. But in the groups I think that it is much easier to involve people....Because here you have to change I suppose the regulation here [SCAR SG]. I think you don't need, you have to just to invite [to WG] some people who is....I think that they would be happy to be involved" (SCAR Foresight 1)

- 6. Increasing influence of non-research actors: multi-actor framing:** In the era of increasing influence of multinational corporations (MNCs), non-governmental organisations (NGOs), cities, regions and researchers in bioeconomy research arenas (for example, increases in number of public-private-partnerships such as the BBI JU), the potential to engage new players in SCAR

was highlighted by several interviewees. Given that these actors inevitably bring their own (and competing) agendas to SCAR, the importance of engaging them in a transparent way was emphasised. For example, for some interviewees, it is not clear how these voices are currently included in the SCAR or how they influence calls for proposals. Perceived to attend events and conduct their own lobbying, how these agendas reach SCAR remains rather opaque for some. This opportunity area was thus seen to particularly reflect increased calls from the SWG AKIS to open the multi-actor frame and provide fora for knowledge exchange in the context of responsible research and innovation. Indeed, further engagement with researchers, was particularly emphasised by several interviewees in the hope to encourage researchers to think outside of their discipline, better address societal challenges, communicate their research for holistic ERA, align their work with EU thinking and engage with SCAR to influence strategic R&I policies. The potential for increased citizen science was also alluded to in the multi-actor context in a bid to create more open processes and fora for engaging with new stakeholders for a common and inclusive European Science Agenda (e.g. asking farmers, scientists and citizens what they want on the R&I agenda and their investment priorities). Finally, increased connections with other bioeconomy relevant organisations such as the Bioeconomy Observatory and the Biobased Industries Consortium was seen as essential to avoid duplication and further develop an informed and multi-actor engaged SCAR. For example:

"If you look to the changes in society that you have new players in the research area that are first of all multinational companies and that have their own agenda and not only in food, also in ICT or whatever. And then there are...the environment NGOs or animal welfare NGOs and that play more and more a role at least in a societal debate if you were to look to responsible innovation. The other is I think in a number of cases it is a regions and cities. So if we want innovation in some domains you have to align with cities...to make the system more robust you should open for that type of partners, you should open the research with those type of partners anyway and then you know the multi-actor frame. But then of course the dispute becomes in how far you also need fora for...where you invite those people. Probably you would not put them in the SCAR but at least in your discussions with all the research policy you should have mechanism to have those voices expressed" (SCAR Foresight 2)

"They don't have to be a member of the SCAR. Of course some of them show work...part of their normal lobbying process but I hardly see any call for proposals where I think well this is clearly influenced by this NGO or that group...it's a little bit of opaque how the agendas of those parts in society reach the SCAR, that's not so clear for me....I think that their agendas are relevant...at least some of the issues that need attention are very often raised by NGOs in that sense with all respect to governments but your workers are a little bit slow to pick up these early signals" (SCAR Foresight 2)

"The way I see it, the customers of SCAR are actually scientists that actually receive funding from the Horizon 2020 and the Framework Programmes. So we should actually emphasise, the importance of this effective communication when it comes to the outreach to society" (SCAR SG 5)

"You really have the capacity to set societal challenges and discuss this sorts of challenges and then let's say an open space...[civil society organisations and NGOs] sometimes they provide some, let's say some needs or some very radical maybe opinions but it's something that should be considered....it is very important to take into account their opinion but of course you don't need to endorse them but at least they can...have this voice, this is quite important" (SCAR Foresight 1)

“Get an involvement of the society in where are we and where the society should go and which topics should we investigate. So organising that type of process in Europe based partly on these citizen and researcher activities and partly of Commissions let's say review papers would be an interesting thing. If you say, if SCAR says in its research programme we need more citizens science and more open processes then perhaps it would be a way to go if you would like to do what we preach....and then the results are in a European science agenda in the bioeconomy or for agriculture” (SCAR Foresight 2)

“We should look what kind of different bodies are discussing which policy topic and what is the most appropriate for the SCAR and also bring attention to SCAR work” (SCAR SG 3)

- 7. Opportunities through new research agendas:** Finally the opportunity presented by new research agendas such as Food 2030 and FP9 mission-orientations was highlighted by participants along with the potential for more social value-added research. The importance of acknowledging the changing research landscape was emphasised, mindful of how SCAR (and its structure) might adapt to this. Food 2030, for example, reportedly ensures that food is not lost in the evolving bioeconomy with potential for significant impact and opportunity according to the priorities that are finalised in such strategies and programmes. Similarly, increased mission-orientated research and SCAR's adaption to this was thought by some interviewees to hold promise for more accurate representation of topics in SCAR according to how these missions are set and prioritised (prompting reflection in SCAR of its priorities, perhaps through a Foresight exercise). Finally, opportunities for more social value-added research were highlighted that considers wider EU issues and themes such as rural development and renaissance, migration and trans-disciplinarity; all aspects with which the future SCAR may engage. For example:

“I think that more and more SCAR should look at the public part of research, so really developing what is the social added-value of research and looking for new themes. I see, for example, now the sort of ethics for example is quite important...[also] trans-disciplinarity, what does this, you know, how to push these issues...It is already doing this but, you know, there's an opportunity to focus even more on this... it is now so important because the rural areas are really undergoing a new process of abandonment, restructuring so I think a reflection of rural areas is something that is still very important” (SCAR Foresight 1)

“This is not just specific to SCAR ...could we develop a shared [research] agenda...in Europe that we would then implement through the various different initiatives and instruments that we have available to us but that we would set that in the overall sustainable development goal context” (JPI 1)

“In the Foresight there is an option to play an authoritative role in research planning by organising or basing bases on, let's say these review papers, commission some of the review papers or be involved with them or bring experts together to do that or perhaps just programme that in Horizon 2020 and say well this area and we would like to have review paper” (SCAR Foresight 2)

“With FP9 there would be a new structure on the Commission side. So there are opportunities to think about what it could mean for Commission and member states. For example, if the European Innovation Council is existing, there could be a matter of advice and also the new mission based approach what makes it different from challenges also opens opportunities for advice” (EC Delegate 2)

Threats

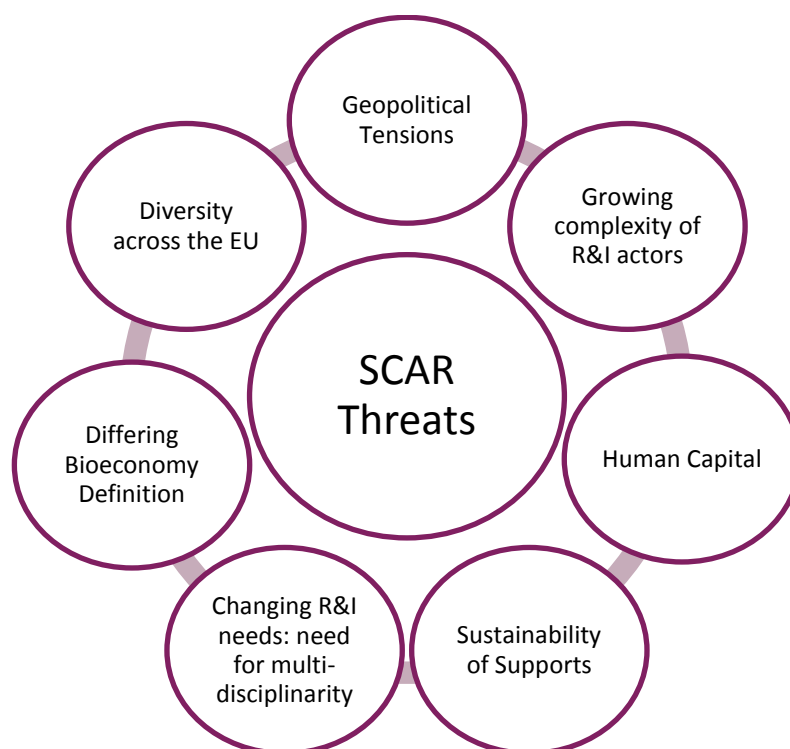


Figure 8: Preliminary Interview Results: SCAR Threats

Horizon scanning for future external threats to the SCAR and its structure represents the final step in the SWOT analysis framework. Encouraging interviewees to think about potential challenges, pressures and/or risks to the future of SCAR is an important proactive step to identifying and pre-empting any potential hurdles or barriers in the external environment that the standing committee may face in its next decades of existence. Indeed, it is through the early identification of problems that solutions can be proactively sought, encouraged and implemented. As such, participants were encouraged to consider elements that particularly would be outside of the control of SCAR i.e. again prompting an external reflection for the organisation as opposed to any internally-face challenges. According to Phase II interviewees, potential external threats to the future of the SCAR, summarised in Figure 8, include:

1. **Geopolitical tensions:** The impact of Brexit was at the forefront of the majority of interviewee responses when thinking about potential threats to the future of the SCAR. This included in terms of future UK commitments and participation in the SCAR, particularly given that associate countries are currently only granted 'observer' status in the SCAR Steering Group. This was especially poignant for many given reported strong representation and commitment to SCAR activities from the UK in the decades to date. Further concerns related to the potential of other countries to follow in the same vein as the UK were also mooted, raising higher level anxieties regarding the future of the EU on which the SCAR is based and serves to connect and align. Other geopolitical tensions noted by participants included the power of the US in global arenas

that may impact SCAR if it expands to reach a more global remit (e.g. US desires for EU to act as one body in IBF rather than having 28 separate votes) and the impact of wider EU politics and membership noted in the context of Switzerland that resulted in Swiss delegates no longer actively participating in SCAR and its working groups.

Perceived difficulties in decision-making in SCAR due to sensitivities of member states was also raised in the context of threatening geopolitics (including the prevalence of more dominant representatives in SG meetings), while the pursuit of regional (supra- or cross-national as opposed to sub-national) R&I policies or bioeconomy strategies were reported to have the potential for both positive and negative impacts on EU development and coordination. Overall, the threat and influence of changing geopolitics over the work of SCAR was impossible to ignore for the vast majority of interviewees. For instance, according to interviewees:

"I'll also be interested to see what happens the UK in this because I mean SCAR is a formal configuration effectively unless they're invited to be an observer" (JPI 1)

"There is always a struggle to get sufficient broad base of delegates from member states who are ready to provide analysis and share thinking...Switzerland was more active in the past and then there was an issue of negotiations, because Switzerland rejected the freedom of movement. That's between Switzerland and the EU and then somehow the European Commission closed participation in the Framework Programme at the beginning of Horizon. And then the Swiss delegate was still very interested to come to SCAR and then I think two years ago, this problem between EU and Switzerland was overcome. And Switzerland is now very, let's say prominent participant attending Horizon but the Swiss SCAR delegates never came back [to the SCAR]... in my view they are less vocal than in the past. And somehow a similar threat exists with Brexit" (EC Delegate 2)

"We have no say in the [Steering] Group...we write a letter to the Ministries of Research from DG Research to invite a representative to sit on the SCAR and we have to take who they say. And as I said there are varying degrees of performance. Some countries come and they say nothing at all and they don't contribute....I've been in many of these working group meetings and it's over-powering, that 4 or 5 countries always say...there is that reluctance to commit in these new member states or say anything...The [member state] and the [member state] could be quite dominant but it's pragmatic. They are driving it and their suggestions are often useful and pragmatic but they are the ones who are shaping this" (EC Delegate 1)

"I mean there's some political issues around [International Bioeconomy Forum] as well because the Americans would like the EU just to be one body and not have 28 votes from different countries but this is quite an informal forum. It's not involved in any money at the moment so someone from SCAR can go...and make sure there's a connection" (SCAR SG 4)

"There's a risk that overall politics influences, they are too drastic on SCAR. I think the same is maybe with the [block of countries] ...in the big political picture there are quite some differences now between [member state], [member state] and [member state] . So I think in like a general political system they go more into an autocratic governance structure. And so there's a kind of notion of separation from the EU. And there's also a [block of countries] in agricultural research which is discussing about the bioeconomy but I think they are very constructive, maybe defining an agricultural bioeconomy research agenda to the needs of the new countries you could say and if they keep this constructive approach then it's an enrichment....But if general politics would become very influential then it's a threat" (EC Delegate 2)

- 2. Growing complexity of bioeconomy R&I actors: maintaining relevance:** Several interviewees expressed a fear that SCAR may become redundant or irrelevant as the number and complexity of bioeconomy R&I actors continues to evolve. In this sense, participants spoke of the danger of SCAR becoming just one of many players in the field, competing with alternate research agendas (e.g. JPIs that hold specific research agendas). A realisation that SCAR was established in a different time and context was obvious in interview discussions, with several interviewees noting that while SCAR has indeed evolved since 1974, more evolution is required to maintain relevance for the future. For others, SCAR is believed to have played an important but considerably hidden role in the decision-making behind the establishment of a number of ERA-Nets but this role is often not formally recognised. The need for this role is also perceived to be diminishing as the R&I policy landscape moves towards FP9. Desires to ensure the continued relevance of SCAR and its valued positioning in the evolving EU and member state R&I landscapes was thus obvious amongst many interviewees. For example:

“That is a certain risk I think that SCAR becomes just one of the players because you have the JPIs with research agendas and you have the others with research agendas and you have the member states, on the other hand because SCAR is closely linked to the budgets for research and innovation in RTD and Agri that is probably as long as they make use of those agendas. And then that should not necessarily be a threat but there are of course a lot of other who issue let's say research agendas. So the role for SCAR is probably to put that all together and come up with what we think that parliament should vote in as being the final societal agenda” (SCAR Foresight 2)

“I think that sometimes you're also forgetting a little bit some of the more concrete outcomes that we have been producing and that has been ERA-Nets, that has been JPIs and these things are a little bit forgotten in new structures” (SCAR SG 2)

“I think it's about also to make sure that SCAR is relevant and keeps its relevance because things are changing and you also have to change the organisation and how we are working....If it doesn't have a role to play in the Horizon programme or what will come after that or if it doesn't have a role to play in the member states then there is a big risk that it becomes really irrelevant” (SCAR SG 2)

“Concerning the bioeconomy you also have to be aware that bioeconomy is discussed many places because SCAR has a role there but there's a Bioeconomy Panel, there is a BPI and a lot of community initiatives around the bioeconomy” (SCAR SG 2)

- 3. Staff mobility, turnover, cutbacks, retirements and dedication:** As with any standing committee or organisation, vulnerabilities associated with changing and diverse human capital in SCAR were evident throughout interviewee discussions. The success of SCAR, and indeed particular working groups and internal structures, was viewed as highly dependent on participant buy-in, commitment, enthusiasm and dedication, raising concerns for the sustainability of impacts and resulting in diversity in the success of different sub-groups through time (including at Steering Group and Working Group levels). Vulnerabilities associated with budget and priority constraints at member state level were also mooted as threatening core membership of SCAR, with wider threats also association with staff turnover, cutbacks and retirements at both EC and member state level (e.g. losing a particularly enthusiastic and connected working group chair or dedicated DG delegate that drove success in the past). The importance of maintaining a 'family' feel in WGs was noted as crucial for success demanding continuous and committed members to achieve impact along with a chair that demonstrates qualities of effective leadership, expertise, teamwork

and with a participatory character. The importance of identifying the right people internally and externally for greater SCAR impact (and to implement any future changes) was thus obvious amongst interviewees. For example:

"It was just because our Chair knew the [member state] delegate there and connected to them and he said, well that's very important, this is important....[but] for instance our Chair in the strategic working group is retiring in December, so when there, how, what will do the next one if he doesn't know that person anymore? So it would be much better if it is structured" (SWG 1)

"I felt there was a strong core group there, I believe the [member state] were quite emphasising the importance of this. So you actually had the people that you always need, you need the core team to do it; but it wasn't just that. Everybody understood the importance of it, as I said, it was presented through the process, it was not something they kept close to themselves. So, as Linda Hill says it, it was the collective genius type of working" (SCAR SG 5)

"There has been a huge trying to save money on the civil service in the regions here. So the quality and the amount of time to dedicate to research agenda is not, I'll try to say it politely but it can be improved" (SCAR Foresight 2)

"It is dependent on resources from countries and that means it will do what countries want, what will they prioritise. If they're not interested they won't provide the resource so that's one way of separating the wheat from the chaff" (SCAR SG 4)

"No, I think it is more maybe new tasks in the administration and that person who was in charge maybe retired or has other functions now and that this functionality linking to SCAR was lost in the administration" (EC Delegate 2)

"Yeah, and of course it's not only the countries, it is of course the question that some people they have very good experience, they are active and then you're a new one, you think okay, I should know more about that, I can't say anything, I can't say anything" (SCAR SG 3)

"The officers I know they are very good and they are very, very active but I have the feeling that they are understaffed so they have a very little number and I don't know how much they, let's say they link up to the rest of the DG Research" (SCAR Foresight 1)

"There have been unsuccessful [working groups] but sometimes it's viewed to that in the end the reports does not fit directly with the policies at hand. So it's not necessarily the group that is not working and sometimes you actually have a group where for some reason, the energy is not there or the ideas are very different between people and then it doesn't work" (SCAR Foresight 2)

4. **Sustainability of support after CASA:** While high praise was attributed to the work and support of CASA to the SCAR working groups in particular, a threat was associated with the sustainability of these activities once the CSA project finishes. In this sense, there was a fear amongst several interviewees regarding a potential over-reliance on the support of CASA for improved coordination and connections in SCAR and its working groups. Limited coordination was perceived internally within SCAR previous to CASA including between WGs and also between the Steering Group and WGs, with a fear of returning to this situation once the CSA is ended. Concerns also existed regarding the use and accurate implementation of CASA results following the end of the project to truly effect change and improve SCAR impact. For instance, as alluded to by interviewees:

"I think also one of the weaknesses with the SCAR CASA is that there's a risk that it will be a project in itself because you have people there who are not really linked to the SCAR or the SCAR plenary. So therefore I think they need a very, very good communication with SCAR, with member states to make sure that they are relevant and not just doing a project" (SCAR SG 2)

"My only concern at the moment is it becoming reliant on CASA because CASA brought in this wedge of funding. At the end of it we'll have some, we'll have learnt lessons from the different activities, certain working groups will have had support from CASA in terms of funding for whatever report they're looking to develop...But when the money stops we may end up if we become reliant on it like the JPIs they're wondering how did they sustain in the long term, do they have subscriptions and that sort of thing. Whereas the SCAR it's been based on voluntary inputs, that's been a problem" (SCAR SG 6)

"What I see as a threat in this context is when CASA ends, we're out of resources, where do they come from? Hopefully, there is enough for it but that's something CASA and SCAR should start to think about" (SWG 1)

- 5. Need for, and challenge of, multi-disciplinarity:** The all-encompassing nature of the bioeconomy has resulted in a mismatch between it and human resources available within the European R&I landscape. Researchers are often trained to have deep disciplinary expertise but this alone is not sufficient in the bioeconomy context, i.e. R&I needs are changing in a bioeconomy with pressure to hold expertise across a large number of research domains. While much knowledge is available, this is challenging for individuals to process it all, particularly in the era of information overload. A threat was thus identified that SCAR may not have the capacity, in terms of individual expertise nor in terms of ability to work in a multidisciplinary context, to respond to the challenges and opportunities raised by the development of the bioeconomy. The challenge of retaining a depth and quality of expertise in SCAR while still achieving a sufficient breadth of issues to objectively influence R&I policy directions remains a threat for SCAR into the future. In other words, the challenge of retaining a broad brush stroke required of multi-disciplinarity remains an issue for SCAR to be able to connect the dots and see the bigger picture for strategic policy advice.

For interviewees, this threat manifested in discussions regarding the types of delegates at Steering and Working Group levels and concerns regarding a lack of high-level policy expertise in working groups to prevent disciplinary silos from dominating and steering discussion. In this context the challenges for SCAR members to remain updated of all developments in the bioeconomy was also highlighted by some interviewees, signalling individuals that are under pressure to remain up-to-date on developments beyond their area of expertise (be it food, agriculture, forestry, marine, innovation, biotechnology or otherwise). This was particularly poignant for one interviewee in the era of information overload where SCAR members are thought to be overwhelmed with documents and reports in a context of increasing communications and information heavy world. For this interviewee, members are reported to no longer be able to reflect on one report for a time before making decisions but rather need to remain abreast of multiple topics, policies and developments. This threatens the evidence base and decision-making ability of SCAR in the future. For example:

"The big challenges in terms of implication for the integration of all this kind of stuff. I think it's the big issues at European level would have a kind of resonance in SCAR, would need to have a resonance in SCAR. And yes, for example, but I can say that everything of this is already taken into consideration, trans-disciplinarity, what does this, you know, how to push these issues ...It is already doing this but, you know, there's an opportunity to focus even more on this" (SCAR Foresight 1)

"Everything is changing so quickly and you have so a lot of sources of information. So a lot of initiatives, reports and papers and policies, this is really very, very difficult to follow everything...right now you have so many resources of information and data and that you have to be prepared to take some actions and some decisions on some part of the knowledge you have" (SCAR SG 1)

"You can't just increase the scope without thinking about whether you having the right people driving it forward...This should be a mix of economists and health researchers and, you know, behavioural scientists and the social side...really multidisciplinary or interdisciplinary because this is it as it is we'll just continue to deliver good things for agriculture and not necessarily good things for other things" (JPI 1)

- 6. Differing definition of bioeconomy may pull SCAR in different directions:** differing definitions and meanings attributed to the bioeconomy revealed interesting discussions and contradictions in interviews including in terms of perceived priority sectors for the bioeconomy and alternate visions on appropriate development pathways. Resulting contradictions may cause difficulties for SCAR in the future in deciding the most appropriate development pathways and satisfying all stakeholders involved. Problems caused by differing definitions of the bioeconomy are echoed in the literature (for example, see Brunori (2013), Bugge et al. (2016) and El-Chichakli et al. (2016)) including challenges in progressing cohesive and coordinated bioeconomies across diverse nation states and developing common development pathway visions in the first instance (for example, biotechnology, bioresource or bioecology driven (Bugge et al., 2016)). Differing definitions and opinions threaten SCAR ambitions for a coordinated European Research Area and may also hamper efforts to align R&I policy across European member states. This threat is particularly elevated in the context of the bioeconomy according to some interviewees; a concept that demands new and different communities of experts, policies and policy frames to interact and that needs space for discussion but which with an increasingly complex number of elements involved can alter according to definition chosen. For example:

"The bioeconomy is a difficult word out there because when we launched the strategy, it got overtaken a little bit by EUROPABio, by a lobby group.... they pushed their agenda on biobased products....food is in there but it doesn't have the focus it should have....Now I'm not sure the people I work with would agree with that, you know? They would say, no we have enough food, we need to use the land for other purposes, for renewables and biobusiness....shaped the BBI and it was one of the tools that the bioeconomy strategy was used for was to justify....But food suffered from that and I didn't get into that internal politics inside but that's one of the reasons we have Food 2030 was to balance, to bring back the balance for food which you know was completely hammered in Horizon 2020 because of this transfer to the BBI. But so that's just the internal politics" (EC Delegate 1)

"There is of course civil servants I also confronted in some areas with very different opinions on what the food system should look like in the future and where the problems are. So it's a contested area where in the 90s that was much less the case" (SCAR Foresight 2)

"When we were on SCAR our colleague from [member state] she said something like 'Oh yes because SCAR you know this is about agriculture production...' And it was, you know,

the big movement 'No, no this is not like that'. ...And I remember that we had not one but few times the discussion, even what the agriculture means right now...bioeconomy how broad this is, the complex[ity]" (SCAR SG 1)

- 7. Continued differences in research systems and associated support across the EU:** The final threat associated with the future orientation, operation and success of SCAR relates to persisting differences in research systems, capacities and support across national contexts in the EU. For some interviewees, this diversity particularly impacts on even country representation in SCAR. After all, differing national priorities, budgets, human resources and relevancy attributed to SCAR impacts significantly on national participation rates and the related inclusiveness of any decisions made or actions taken by the SCAR. For example:

"You also need to look at the countries represented in SCAR, they are very different sizes, and they have access to very different systems, when it comes to resources. So if you really want to align within SCAR, you will have to invest more in direct costs at least, when it comes to travelling and accommodation" (SCAR SG 5)

"I mean there is some farmers, you know, who will take on precision agriculture, like, you know, some countries are capable of doing that, other countries are not, you know, other countries are capable of taking on board the whole genetic information that's available now, others are not. The structure of farm is very different right across [Europe]" (JPI 1)

"On the Commission level as well and what I can say that they are really trying, I see that they are trying to reply to our needs, to react for our needs. I would like to underline this, I see that lack of resources and a problem at EU level not national" (SCAR SG 1)

"I mean that sometimes seen as a weakness is that there's so much activity going on. Countries can't cope with all this coordination they've got the same people....in SCAR, the ERA Nets and some countries are struggling at the moment to do everything and my view is if it's important we do it. It can be important but remember the resource, if we won't do it so I don't sort of try and flog a dead horse. I try and focus on the wins and then if we haven't got the resource or it's not important enough we keep an eye on an activity" (SCAR SG 4)

Phase II Reflection and Next Steps

Overall, as evidenced throughout this section, the thirteen semi-structured interviews yielded vast amounts of qualitative data and information that provided a significant depth and richness to Phase II of the SWOT of the SCAR. While exploring the strengths, weaknesses, opportunities and threats of the SCAR from thirteen diverse perspectives (both in terms of affiliation to SCAR and geographical contexts) highlighted a number of differences in SCAR experiences, it also highlighted an unexpected number of commonalities in terms of opportunities and challenges faced by all stakeholders when engaging with the SCAR. While differences have been found to exist particularly between experiences and participation of more established member states compared to newer participating ones (SCAR, 2015; te Boekhorst, 2017), this research reveals that many of the same issues, themes and sentiments were expressed across diverse groupings when it came to overall perceptions of the SCAR and hopes for its future. This provides a solid foundation on which to build a common vision for the future SCAR, inclusive of diverse voices and opinions from diverse backgrounds but sometimes with unexpectedly similar standpoints. Mindful however that such results are not representative of the entire SCAR stakeholder population, the next step in the research process involved 'sense-checking' or conducting a quality check of these preliminary SWOT categories with a wider number of SCAR stakeholders. The SCAR 2017 conference in Tallinn, Estonia, provided a suitable opportunity to do this, as explored in the next section.

Phase III: SWOT Workshop

As summarised above and elaborated in full in Devaney and Henchion (2018b), following a number of introductory presentations, conference participants were split into eight pre-assigned discussion groups to complete their first workshop exercise. Breakout Activity 1 focused on the confirmation or otherwise of preliminary interview results, probing areas of agreement and disagreement amongst the 68 international delegates. Participants first worked in pairs to confirm or deny each SWOT element (7 in each category) by placing a ✓, X or ? next to each element indicating their agreement, disagreement or uncertainty regarding the presence of this element in the SCAR. They then contributed to a group consensus poster serving to collate all responses from each pair. Participants were encouraged to add further post-its to identify additional areas and to elaborate any areas of disagreement with the preliminary interview results. Written post-its were added to each group poster and collated for assessment following the workshop conclusion (see Image 1). Four groups posters were prepared by each group, i.e. 1 each for strengths, weaknesses, opportunities and threats.



Image 1: Breakout Activity 1: pair work, group consensus and post-it additions

Analysis of Breakout Activity 1 was carried out for each of the 8 workshop groupings (32 SWOT posters in total), assessing the majority responses from the pair work. These are detailed in the tables below. It should be noted that a different number of ticks were found per group and per exercise, as some workshop attendees continued to work in pairs while others took a more flexible approach and opted to discuss aspects of confirmation or dissensus as a group. Further, a * in the tables indicates that not all in the group were in agreement on a certain element (i.e. alternate opinions existed in the group). Qualitative analysis of the supplied post-its provided additional commentary on aspects of disagreement; these are presented thematically below. While some of these post-its contained some positive commentary related to the various SWOT elements, it is worth noting that participants were specifically probed for areas of disagreement or deviation from interview results. Thus, while the qualitative commentary below may initially seem rather negative in nature, it should be remembered that 'no commentary' in each case is indicative of wider stakeholder agreement with the preliminary interview results.

The focus of Breakout Activity 2a involved a ranking/prioritisation of the identified SWOT elements. Each group was assigned one SWOT quadrant with which to work (i.e. SCAR strengths, weaknesses, opportunities or threats) and asked to rate the associated elements in order of importance (see Image 2). This means that each quadrant was discussed by two groups. Analysis of Breakout Activity 2a involved a qualitative assessment of priority rankings, showcasing the most/least important elements on the basis of group consensus and/or dissensus. The objective of the ranking exercise was to reveal what were the strongest strengths, weakest weaknesses, etc. amongst diverse workshop participants, and also to facilitate more detailed discussion with regard to each element. For this reason, and given the inconsistent scales implicitly attributed by workshop participants in each exercise that prevented vertical hierarchies from being established (for example, with some elements dismissed entirely and/or groups attributing the same level of importance to two or more elements and thus grouping such elements horizontally), the qualitative assessment detailed below was deemed more appropriate than a limited quantitative ranking. A second wave of analysis was also conducted following the audio recording of the 'Group Feedback' session whereby dedicated Table Hosts elaborated the rationale behind the group ranking decisions made. Table Hosts were asked to concentrate on providing the rationale behind the top two rated elements in their group, as well as the bottom two. The qualitative analysis below reflects this focus.



Image 2: Breakout Activity 2a: SWOT ranking/prioritisation exercise

The results of both Breakout Activity 1 ('sense-checking') and Breakout Activity 2a (priority ranking) are presented by SWOT category below, highlighting areas of consensus, dissensus, nuances and uncertainties associated with each element.

Strengths: sense-checking results

Overall, as evidenced in Table 1, a high level of consensus was obvious amongst SWOT workshop participants regarding the preliminary strengths identified in the Phase II interviews. Indeed, for five of the seven elements presented seven of the eight discussion groups overall agreed with the existence of that strength for the SCAR. For the other two elements, six of the eight groups agreed with their existence in the SCAR representing another high level of agreement. Different levels of uncertainty were nevertheless associated with each element by one or two groupings, with the rationale for this uncertainty and/or potential disagreement elaborated further through qualitative post-it additions.

Table 1 Breakout Activity 1 Results: Quality check on identified SCAR Strengths (n=8)⁶⁷

SWOT Element Strengths	Agree (✓)	Disagree (X)	Unsure (?)
1. Connecting force, knowledge exchange, networking and collaboration between Members States	7		1*✓
2. Research coordination through output activities (e.g. JPIs, ERA-Nets etc)	7****????		1*X
3. Dedication of participants	7****????		1
4. Independence of SCAR	6*?	1	1
5. Evolving and flexible SCAR structure	7**** XX??		1*✓/X
6. Parent Structure under DG Research and Innovation	6** X?		2
7. Broad scope of SCAR	7****????		1

Concerning **Strength 1**, the “**Connecting force, knowledge exchange, networking and collaboration between Members States**” facilitated by the SCAR, Table 1 demonstrates the highest level of agreement amongst SWOT workshop participants regarding the existence of this positive characteristic. Indeed, the only element of uncertainty associated with this element was attributed to the diversity of participation obvious within the SCAR, with one participant pair commenting that this strength “*depends strongly on [the] origin and involvement of [the] member (SCAR delegate)*”. Otherwise, seven of the eight groups overtly agreed with the presence of Strength 1 within the SCAR.

By comparison, while **Strength 2** “**Research coordination through output activities (e.g. JPIs, ERA-Nets etc)**” also received an overall level of agreement regarding its existence as a strength in the SCAR, higher degrees of uncertainty were recorded compared to Strength 1 (see Table 1). Additional qualitative commentary collected in this regard highlighted the perceived differences in research coordination effectiveness believed to exist across topics, instruments and indeed countries. For instance, some participants commented that Strength 2 is “*different for small countries*” while, for others, coordination is more obvious through some of the ERA-Nets created compared to the JPI instruments (i.e. a diversity of effectiveness exists). “Ownership” of the SCAR over these instruments was also contested by some workshop attendees (as with the stakeholder interviews) who perceived a lack of causality between SCAR and these output activities. For others, a perceived tendency for overlap and duplication between output activities raised further questions regarding the true effectiveness of research coordination by the SCAR while for another participant, the definition of research coordination was relevant and particularly whether or not this definition included physical

⁶ The numbers presented in the tables represent the numbers of groups involved rather than the number of individuals.

⁷ In all tables presenting results from Breakout Activity 1, * represents areas of disagreement within overall group ratings i.e. alternate opinions existed in the group. These alternate opinions are denoted following the * indicating that other pairs in the group placed a ✓, X or ? in contrast to the majority group opinion.

coordination between the various instruments (e.g. JPIs, ERA-Nets, etc.) (perceived to be lacking by several interviewees in Phase II). Thus overall, while there was significant positivity regarding the presence of a research coordination strength in the SCAR, a number of caveats and interpretations of definition revealed nuances regarding the reality of Strength 2.

Strength 3, the **“Dedication of participants”** received similar levels of agreement and uncertainty as Strength 2. Again, while seven of eight groups agreed overall on the existence of this element as a strength within the SCAR, a small number of uncertainties and alternate opinions were also reported. In the main, this revolved around issues of uneven participation and representation in the SCAR (previously reported) with dedication levels believed to vary considerably across SCAR members and countries. This led to a difficulty for some participants to wholeheartedly attribute elements of dedication and enthusiasm to ALL of those that participate in the SCAR. Indeed, this thinking led to one participant pairing questioning if it is even the majority of SCAR participants that this strength could be attributed to or merely a limited few: *“Several committed participants but also the same ones every time. Is it a majority?”* In this sense, an overall feeling was portrayed by this group that while there are committed and enthusiastic individuals in the SCAR, there are many others who do not attend and contribute. The issue of *“passive participants”* was raised in this regard and therefore seen as a weakness as opposed to an overarching strength for the standing committee. A perceived *“over-dependence”* on this element raised further concerns for others, linking with aspects of human capital vulnerability revealed in the Threats section. Elsewhere, there was a belief that a problem stems further back in the SCAR, i.e. that those who participate are dedicated BUT that there is not sufficient participation in the first place. Thus, as a whole, while the dedication and enthusiasm of SCAR participants was overall acknowledged and praised in the workshop, significant nuances in the applicability of this strength to all involved were also obvious.

The **“Independence of SCAR” (Strength 4)** meanwhile represented the only strength element to receive an outright disagreement rating by one discussion group (see Table 1). This stemmed from a belief that the SCAR is still dependent on ministry and national delegates and is also under considerable pressure from the EC to support its work. The independence of the SCAR *“from what”* thus raised doubts and provoked additional discussion amongst SWOT workshop participants. In this context, another group reported desires for even more independence of the SCAR from different DGs, also seeking a more even *“balance between [the] DGs”* involved beyond DG Agriculture and DG R&I (branching into some opportunities considered later). Nevertheless, despite these alternate options, it is obvious that the majority of workshop participants agreed with Phase II interviewees in believing that the independence of the SCAR is crucial in a modern political landscape to fulfil its think-tank duties and is something that exists in an overall capacity.

Meanwhile, the extent of the **“Evolving and flexible SCAR structure” (Strength 5)** raised questions for several individuals within different groups in Breakout Activity 1, though again with an overall level of agreement on this element as a strength of the SCAR. Levels of disagreement were elaborated to include commentary such as the *“SCAR structure is not very flexible”* and *“Yes but due to Ministry dependency....slow to evolve”*, though with limited further explanation amongst these participants. This aspect is thus examined in more detail in the analysis of Breakout Activity 2a.

Consideration of **Strength 6 “Parent Structure under DG Research and Innovation”** sparked further discussion amongst workshop participants including regarding the language utilised to describe this SWOT element, the original origins of the SCAR and connections with and between other DGs. For example, one group preferred to phrase this strength as a *“coordination/facilitation role”* rather than a parental structure, while another group similarly emphasised the *“heritage”* of the SCAR as existing under DG Agriculture. For these participants, this latter connection in part explains the strong agricultural focus of the current SCAR. Nevertheless, six of the eight groups agreed that nesting the SCAR under DG Research represents a positive attribute, with only two groups unsure about this hierarchical positioning. On this latter perspective, one group desired for better coordination between SCAR and a range of different DGs, *“missing bonding with other DGs”* and emphasising a desire to return to a previous systems that was believed to enhance better coordination in this respect. Nevertheless, there was an overall sense that the R&I focus of the SCAR makes its positioning under DG Research appropriate and positive, earmarking Strength 6 as a reality for many participants.

Finally the **“Broad scope of SCAR” (Strength 7)** garnered overall support from workshop participants but with a number of question marks remaining. For instance, for three groups, the broad remit of the SCAR was seen to represent a simultaneous strength and a weakness. Similar to the themes revealed in the qualitative analysis of the interviews, this element thus represented a highly interchangeable element depending on the perspective adopted. For example, while seven groups overall agreed that its broad scope represented a strength of the SCAR, the resultant multitude of working groups was seen to be problematic to manage. This was seen to especially be the case for small countries. Others raised concerns regarding the *“risk of fragmentation”* due to the multitude of initiatives operating within the SCAR, with others further questioning if more *“focus [is] needed”* in the standing committee. This links with some of the opportunities discussed in the qualitative interviews as well as later in the SWOT analysis related to the future SCAR scope and remit.

Strengths: priority ranking

Overall, qualitative assessment of the priority ranking exercise (Breakout Activity 2a) revealed consistently high importance attributed to three particular strengths of the SCAR: facilitating “Knowledge Exchange between Member States”, its “Research Coordination” role and the “Dedication of Participants” in the SCAR by the two groups assigned to rank the strengths. A gap then existed to the next top-rated strength concerning the “Broad Scope of the SCAR”, closely followed by strengths related to the “Evolving and Flexible SCAR structure” and its “Parent structure under DG Research”. The strength deemed of least applicability according to workshop participants related to the level of “Independence of the SCAR”.

Further examination of the rankings however highlights differences between the prioritisations conducted by the two breakout groups dealing with SCAR strengths. This was most obvious concerning the level of importance attributed to the “Evolving and Flexible SCAR structure” and its “Parent Structure under DG Research”, with both of these elements ranking last for one group but deemed of higher importance by the other. The top three elements nonetheless remained consistent for both groupings, despite slightly different ordering attributed to their importance.

Qualitative reasoning behind the rankings revealed further disparities and commonalities between the two ‘Strengths’ groups and their rationales behind the rankings. For example, for Group 1, “Dedication of Participants” was considered to represent the strongest strength of the SCAR. For these workshop participants, while it is considered important to have representation from all countries and organisations in the SCAR, the success of the standing committee and its various working groups is perceived to highly depend on the extra time, enthusiasm and commitment of individuals outside of their everyday commitments. The voluntary nature of this participation and need to often perform SCAR duties outside of regular working hours was emphasised raising concerns regarding the future sustainability of this strength in the future. For example:

“The group is founded by organisations and countries but in the end it is all about people[it is because of] the dedication and extra time that people do in addition to their normal work that the SCAR is quite a good success and there is whole cooperation between countries”
(Group 1 Table Host)

By comparison, Group 3 designated the “Research Coordination” activities of the SCAR as its key strength with beliefs emerging that SCAR has high impact on transnational cooperation as well as in strategising for national research policy and roadmaps in many of the countries involved. This latter element contradicts interviewee findings that typically doubted the impact of the SCAR on national R&I policies. Group 1 similarly attributed high importance to the coordination of research across the EU through SCAR, rating it third in their overall assessment.

Levels of “Knowledge Exchange” facilitated between member states (ranked ‘second’ in importance by both groupings) was meanwhile fuelled by agreement on the connecting force, networking and collaboration between countries facilitated by the SCAR. Indeed, Group 1 expressed belief that SCAR enables countries to learn from one another both through formal discussions as well as in the informal time between meetings (time deemed to be equally important). Allowing country representatives to

draw national comparisons was considered important in this context along with publishing mapping exercises reported to help individual countries to action the knowledge gained through the SCAR. Group 3 similarly agreed that significant learning takes places between members from diverse country perspectives as a result of their participation in the SCAR, with particular importance attributed to the SCAR strategic and collaborative working groups to achieve this. In these settings it is believed that knowledge is exchanged that showcases examples of good practice while also helping to address national gaps in knowledge. For example, according to workshop participants:

“SCAR does bring together people from different countries that learn from each other...in the SCAR plenary but also a lot in the time that is available between to speak to people so we exchange between member states” (Group 1 Table Host)

“Knowledge exchange between member states to learn from each other especially in the SCAR working groups, learning from cases to make things a bit more simplified....best practice” (Group 3 Table Host)

For both Group 1 and Group 3, the rationale behind some of the lower prioritised strengths centred on a reasoning that the elements were important but perhaps not wholly true with respect to the SCAR. This signalled some areas of disagreement between workshop participants and the key informant interviewees. For example, the independent nature of the SCAR was questioned by both groups in the context of its perceived dependence on national strategies as well as sectors in which it is/has been working. The SCAR was thus not viewed as completely independent in this sense:

“We think they are important [elements]...but maybe not totally true...people are always dependent on many different things. They are country delegates so there is dependence on country strategies...or on the sectors in which they are working....so there is dependency always” (Group 1 Table Host)

“We questioned if SCAR was independent also...if it is completely independent” (Group 3 Table Host)

Similarly, the capacity to describe the structure of the SCAR as “evolving” and “flexible” was also questioned by Group 1 who cited the existence of specific Terms of Reference that have to be met by the standing committee. While new methods of working can be introduced, a certain degree of consistency in how the SCAR is organised and achieves its mission was obvious. This was not necessarily seen as a negative by Group 1, with caution expressed regarding the pace of change possible in the SCAR and the importance of functions and structure not changing too abruptly.

“The way it works in SCAR, [there are] Terms of References....how things are organised...sometimes new methods of working are tried out but in general there is also continuity of how it is being organised, how it is being done” (Group 1 Table Host)

“If things change too fast people cannot keep up” (Group 1 Table Host)

Meanwhile, the lower ranked element for Group 3 (related to the “Parent Structure under DG Research”) was questioned due to a perceived limited role of DG Research in coordinating knowledge exchange with other relevant DGs (for example, DG Clima). The ‘parental’ effect here was thus considered to be rather limited. Reflecting potential opportunity areas to connect with other DGs highlighted by interviewees, Group 3 commented:

“The value of the parent structure under DG Research is a low priority because it also has the limitation...that it doesn’t necessarily help with the broader communication with other DGs” (Group 3 Table Host)

Overall, while certain nuances and inevitable alternate interpretations existed, there was a strong sense overall amongst workshop participants that the strengths highlighted by the Phase II interviews represented apparent and positive attributes of the SCAR i.e. an overall level of agreement existed with the seven presented elements. Indeed, only one additional strength was added by participants of the SWOT workshop, the lowest number of ‘new’ elements added in all of the SWOT quadrants analysed and indicating a large degree of consensus with the interview results obtained. This highlights a strong degree of consensus regarding the SCAR strengths identified in preliminary

interview phases, with only the “*informality in WGs*” highlighted as an extra element that brings positivity to the standing committee. Indeed, the disagreement notation ‘X’ was used rather infrequently with regard to the SCAR strengths compared to other SWOT categories, resulting in mainly relatively undisputed elements. The range of caveats highlighted through participant uncertainties are nevertheless noteworthy as further probed in the Breakout Activity 2a analysis.

Weaknesses: sense-checking results

Overall, the weaknesses category represented the most undisputed categories of all the SWOT quadrants analysed with respect to the SCAR, with three elements receiving overall agreement from all eight discussion groups, two elements receiving confirmation from at least seven groups and the remaining two elements still finding agreement with at least six of the discussion groups present (see Table 2). Such results indicate a very high level of consensus amongst workshop participants regarding the SWOT elements identified in Phase II of the SWOT analysis of the SCAR. Nevertheless, as with the other SWOT quadrants, where levels of dissensus existed, workshop participants were encouraged to add further commentary to detail the rationale behind any level of disagreement regarding weaknesses of the SCAR.

Table 2 Breakout Activity 1 Results: Quality check on identified SCAR Weaknesses (n=8)

SWOT Element Weaknesses	Agree (✓)	Disagree (X)	Unsure (?)
1. Lessening impact on R&I policy and programmes	6** (??)		2^ (Neutral)
2. Inconsistencies in high level political commitment to SCAR	8* (?)		
3. Difficulties in coordination: inefficiencies and overlap	7*** (X??)		1^
4. Lack of SCAR visibility and awareness	8		
5. Limited opportunities for new blood with lack of transparency on “recruitment” process	6** (?,?)	1	1
6. Limited ministerial involvement outside of Agriculture and Science limiting bioeconomy potential	7	1	
7. Representativeness limitations regarding country participation	8* (?)		

Commencing with **Weakness 1, “Lessening impact on R&I policy and programmes”**, six groups overall agreed that this was a real weakness of the standing committee and believed this to exist at both the EC and MS levels. For those more uncertain of this element (for example, those not working in ministries found it difficult to judge this), a need to recognise the higher complexity of the EU agenda-setting landscape was mooted i.e. there is a need to recognise that the EU is now also more complex with “*more attention paid to other policies...[and] industries [are] more powerful*” too. The nature of this changing political landscape may thus lessen the impact of the SCAR according to these participants, and thereby be a threat rather than it representing a weakness of enacted organisational operations. By comparison, other participants point to the lack of structure in the SCAR as an advisory body resulting in a more limited impact as any subsequent outputs or advice are “*not binding at MS level*”. Others in this group also noted a “*limited transparency*” on this matter, suggesting that it may be difficult to trace cause and effect impacts of SCAR outputs on policies and programmes. Another discussion group preferred to add a ‘Neutral’ category in their consideration of Weakness 1, deeming national level influence to be relatively stable but warning that impact at the EU level should not be overestimated. Thus, while there was overall confirmation of Weakness 1 as a feature of the SCAR, attributions of responsibility for any perceived lessening impact were manifold and complex.

Meanwhile, higher levels of consensus were obvious in **Weakness 2** regarding perceived “**Inconsistencies in high level political commitment to SCAR**”. All eight discussion groups agreed that this is an issue for the SCAR, with seven of the eight groups wholeheartedly agreeing on this matter. Further, only one participant pairing indicated uncertainty regarding this element, admitting

this was due to their lack of familiarity with the issue, finding it difficult to judge when holding a position outside of national ministries. Thus, a clear degree of consensus can be said to exist regarding this featuring as a current SCAR weaknesses. Further, one group clarified this element pointing to inconsistencies in commitment at national, European Council and DG level also (outside of DG Agriculture and DG R&I). A perceived *“lack of resources at national level to participate”* was noted while others linked this with Weakness 1 connecting political commitment inconsistency with further lessening SCAR impact at both EC and MS level.

Weakness 3, “Difficulties in coordination: inefficiencies and overlap” overall received high levels of confirmation amongst workshop participants, with seven groups overall agreeing on its existence and the eight group preferring to stay neutral on this issue. Commentary added by participants included an acknowledgement that coordination ability, capacity and success varies considerably across the SCAR, with participants reporting inefficiencies to be *“true for some SCAR CWGs/SWGs [that] some connect well [and] some do not”*. Another participant pairing questioned if this weakness applied to the SCAR alone or to the EU initiatives considered to be outputs of the SCAR (e.g. EIPs, JPIs, etc.). Implying that there may be inefficiencies in this latter category, this element is discussed further in Breakout Activity 2a.

Weakness 4, “Lack of SCAR visibility and awareness” gained the highest level of consensus amongst the SCAR weaknesses identified with all eight discussion groups agreeing wholeheartedly with the existence of this negative attribute of the SCAR. For some, this connected with Weakness 1 concerning the lessening policy impact of the SCAR and was perceived to be a problem at the national scale in particular. For example, in this latter context one pairing reported that there is *“too little knowledge in the national offices/departments about what colleagues do in SCAR”* with the *“SCAR Force in France”* presented as a potential *“idea for improvement”* on post-its here (whereby a ‘mirror’ SCAR committee exists at the national scale to coordinate national positions and SCAR connections and communications). Concerns that issues of SCAR visibility and awareness would not be resolved before the end of the CASA project were also highlighted by workshop participants connecting with sustainability concerns beyond CASA also raised in the Threat quadrant by interviewees: *“What happens if CASA stops before this is remedied?”* Highlighting this concern in the context of Weakness 4 signals a considerable expectation of the CSA to overcome SCAR challenges identified, both internally and externally.

Alternating opinions were meanwhile uncovered with regard to **Weakness 5 “Limited opportunities for new blood with lack of transparency on “recruitment” process”**. While six groups overall indicated agreement with the existence of this weakness, one group entirely dismissed its applicability to the SCAR and another was unsure. Meanwhile, some participants in the group that agreed on the existence of Weakness 5 indicated that they agreed with the limited opportunities for ‘new blood’ but believed in an overall transparency on the delegate and expert recruitment process. For the group that disagreed with the existence of this weakness in the SCAR, post-it commentary suggested that the prevalence of this weakness *“depends on the country”* under consideration, suggesting differences in selection processes across member states.

Meanwhile, representing the second highest level of undisputed consensus in the Weakness quadrant was **Weakness 6 concerning “Limited ministerial involvement outside of Agriculture and Science limiting bioeconomy potential”**. Seven discussion groups agreed wholeheartedly with this statement, perceiving it to be an inherent weakness of the SCAR and something that is perhaps further hindered by a *“lack of national awareness and communication of [the] bioeconomy concept”*. The potential for national delegate to *“coordinate at home”* was also discussed in the context of a potential solution to this weakness, suggesting coordination of the opinion of different ministries before delegates attend SCAR meetings as the country representative. For the group that disagreed regarding the existence of **Weakness 6** in the SCAR, a belief that *“Agriculture and Science is what SCAR is about (mostly)”* predominated and resulted in a designation of this element as a *“characteristic, not a weakness”*. The concept of ‘bioeconomy potential’ was also questioned by another group with perceptions apparent that SCAR is not an economic body; rather it is R&I potential that it should be committed to. Thus, while there was overarching confirmation from workshop participants regarding the existence of Weakness 6 in the SCAR, it is obvious that further considerations of the scope and remit of SCAR by some participants resulted in some divergent

opinions. The importance of accurately and succinctly defining, and agreeing upon, an exact remit for the SCAR is obvious in this context and further considered in the opportunities quadrant below.

Finally, in keeping with wider SCAR reporting and literature (SCAR, 2015; te Boekhorst, 2017), **Weakness 7** concerning “**Representativeness limitations regarding country participation**” was considered a limitation by the overwhelming majority of workshop participants. Indeed, only one participating pairing placed a question mark on this element, admitting that this uncertainty only arose as a result of their personal “*lack of knowledge*”. For everyone else, issues of representation in SCAR remain a pressing and concerning weakness. Indeed, this weakness was raised repeatedly across SWOT quadrants and discussions and connected with various other SWOT elements. It also represents the focus of another distinct work package within CASA, results of, and recommendations for, which were presented to workshop participants the following day within the SCAR 2017 conference (available [here](#)), reflecting of the overarching awareness and concern for this element in SCAR operations of late.

Overall, Breakout Activity 1 revealed a high degree of confirmation regarding the identified weaknesses of the SCAR indicating a high level of consensus between the perceptions and experience of the 68 workshop participants and the 13 key informant interviewees. Sparking further discussion and consideration, four additional weaknesses were added to the SWOT analysis by workshop participant groupings including:

1. The lack of financial means in MS to support participation in SCAR
2. A perceived language barrier in the organisation (with business mostly conducted through English)
3. The exclusion of end-users such as farmers in the SCAR
4. The limited balance between macro-regions.

While representing distinct additional concerns highlighted by workshop participants, consideration of national financial limitations can be connected with Weakness 7 and what may represent one reason behind uneven representation in the SCAR. The second issue can also be connected with Weakness 7 and was also discussed within Phase II interviews. However, one key informant (from a non-English speaking country) somewhat dismissed this element in the present day SCAR, deeming English to represent “*the language of science*” and thus the need to conduct standing committee affairs in this way (EC Delegate 2). Another commented on the English language skills that continue to improve in the newer MS with the progression of a new generation of government officials. Its addition in the SWOT workshop should nevertheless not be dismissed, evidently representing a valid and remaining concern for some SCAR delegates present. The third additional weakness, concerning the exclusion of farmers in the SCAR links with later discussions regarding the potential for increased multi-actor framing in the SCAR and the potential benefits and drawbacks of this (Opportunity 6). The final issue regarding differences in macro-regions across Europe also links with later discussions and concerns raised in the context of SCAR threats (Threat 7), representing something that is out of the control of the SCAR and thus worthy of discussion in the context of SCAR’s external environment.

Out of all the SWOT categories, it is important to note that attributions of uncertainty in the weakness category (?) was openly due to participants lack of knowledge or experience on certain elements rather than indicating disagreement with interviewee results. Indeed, the utilisation of the X categorisation signalling absolute disagreement on an issue was at its lowest in the Weakness category, again symptomatic of the high levels of agreement and confirmation obtained in this sense-checking activity between workshop participants and key informant interviewees.

Weaknesses: priority ranking

Group 2 and Group 7 conducted a priority ranking exercise on the weaknesses of the SCAR. Specific differences were obvious between this priority ranking exercise and those conducted on the other SWOT elements. For the weaknesses category, both groups were unable to agree upon a system for this priority ranking activity. Instead, both independently resorted to coupling a number of weaknesses

together and grouping elements as such. This included weaknesses related to “Inconsistencies in high level political commitment” and its “Lessening impact on R&I policy and programmes” for Group 7 (ranked joint ‘first’) and interconnected links between “Inconsistencies in high level political commitment”, issues of “Limited visibility and awareness”, “Lessening impact on R&I policy and programmes” and “Structural Efficiencies and Overlap” (4 elements clustered as priorities in Group 2). A hierarchical quantitative order is thus impossible to decipher with regard to the workshop analysis of the weaknesses category, again marking a qualitative assessment as more appropriate.

Adopting a qualitative approach, some commonalities and clear priorities were nevertheless obvious in terms of principal SCAR weaknesses according to the workshop participants. This includes concern regarding “Inconsistencies in high level political commitment to SCAR” (a top rated concern in both groupings), the perceived “Lessening impact on R&I policy and programmes (EU & national)”, “Structural inefficiencies and overlap” and “Lack of SCAR visibility and awareness”. Representing interlinked elements for several participants, the priority ranking of these elements nonetheless set them apart from the other weaknesses considered in this SWOT workshop analysis. Similarly, the bottom ranked weakness in both groupings concerned “Limited opportunities for new blood with lack of transparency on “recruitment” process”. This highlights consensus amongst both groupings that this weakness is not considered as significant as others to the functioning and operations of the SCAR.

Differences between groupings were nevertheless obvious with regard to the importance attributed to the “Limited ministerial involvement outside of Agriculture and Science” reported in interviews to limit the potential and development of the bioeconomy. This perceived weakness did not feature at all in the priority ranking proposed by Group 7 (it was dismissed to the bottom of the listing), while for Group 2, it warranted a comparatively strong position on the list of priority weaknesses.

From a qualitative perspective, the group feedback session revealed important reasoning behind the chosen group rankings and, in particular, the perceived interconnected nature of the proposed weaknesses. This included particular connections between issues of political commitment to SCAR, lessening policy impact and limited SCAR visibility and awareness; with the perceived structural inefficiencies in SCAR believed to be at the heart of these problems according to Group 7. In their words:

“There are four things more or less connected to one another....if you are not visible...you get no [political] commitment...[and] you cannot be involved that much in political activities. So these three [weaknesses] have large connections: political willingness, visibility, impact”
(Group 7 Table Host)

For this group, possible solutions to such weaknesses included an improved organisation of the SCAR plenary with potential for better preparations from different MS and DGs and a more structured way of operating to avoid overlap with and between SCAR working groups. Potential new challenges regarding human and financial resources to achieve this were also raised by Group 7. For instance:

“Part of the matter is how can we...better organise it...try to have more structural way of doing things and not to have too much overlap between groups....If you have political willingness, you have to have the financial resources...CASA is trying to help for a limited time...we have to think about what we are going to do after this time. It is also about human resources” (Group 7 Table Host)

Meanwhile for Group 2, inconsistencies in high level commitment to the SCAR and a perceived lessening impact on policy and programmes were reported as crucial weaknesses that require addressing. While not representing complete failures of the SCAR (i.e. it was considered not to be the fault of the SCAR if national delegates are not interested in a given topic), similar to Group 7, these weaknesses were connected with the perceived structural inefficiencies in the organisation:

“The discussion we had...it is quite difficult to discuss some of them without talking about the others” (Group 2 Table Host)

Weaknesses considered less obvious and/or more contested in the group concerned the limited opportunities for new ‘blood’ in the SCAR and limited ministerial involvement outside of Agriculture

and Science departments in plenary and steering groups. These matters linked with issues of country representation for Group 2, with a realistic approach adopted that not everyone can be interested in all issues (and therefore a lack of participation can be a smart and strategic decision on behalf of the MS). A problem was nevertheless deemed to arise if this lack of representation and participation was as a result of a lack of awareness; something that is thought to be an issue in certain countries and contexts. For example:

“Someone said that, for example, if a country is not delivering or participating, it is not a weakness or failure of the SCAR because not everybody can be interested in all of the issues. On the other side, it has been said that it is different in [other] countries....that some groups...or the SCAR is just not so important, and this is a wise decision....but in some cases countries just do not know [about SCAR] and this is a lack of representativeness” (Group 2 Table Host)

Group 7 similarly agreed that limited ministerial involvement outside of agriculture is of low concern given the perceived remit and origins of SCAR as an agricultural research policy advisory body. This perception comes in spite of its increasingly broad remit in the bioeconomy as alluded to in the key informant interviews. This created a perception in Group 7 that other DGs do not need to be involved in the SCAR (as also alluded to in some key informant interviews) with a greater need identified for the SCAR to connect with DGs and get information out to them as opposed to having their direct involvement:

“Because that is the heart of SCAR...science and agriculture...you don’t really need to have the other DGs actually always involved. Just need to get the information out and that they ask for information for you, that it becomes connected” (Group 7 Table Host)

Opportunities: sense-checking results

Out of all the SWOT quadrants analysed, the opportunity category prompted the most discussion amongst participants, evidenced through the high volume of additional post-its added to the group sense-checking poster in Breakout Activity 1. As illustrated in Table 3, the quadrant received the highest number of 'Unsure' responses amongst workshop participants with numerous caveats, uncertainties and conditions highlighted with respect to the majority of the opportunity areas presented for the SCAR. This reflects the highly complex and difficult task of assessing the external environments pertinent to the case study under examination in a SWOT analysis framework (Ghazinoory and Azadegan-Mehr, 2011). Indeed, Opportunity 7, "Opportunities through new research agendas", represented the only SCAR opportunity area presented from the results of the semi-structured interviews that received undisputed agreement from the workshop participants present. This was closely followed by Opportunity 4 regarding the need for "More direct contact with different DGs: two way interactions" and Opportunity 1 to "Change the scope of the SCAR: to re-focus or extend". While Opportunity 2, "Global influence opportunities", also received strong support amongst workshop attendees, there were differences in the levels of group consensus on this matter. Opportunity 1 regarding changing the scope of SCAR was also broadly supported but with naturally differing opinions as to where SCAR should re-focus or extend its remit (echoing the debate held in the key informant interviews). Qualitative discussion on these elements provides some further insights as to the mind-sets and rationales behind ear-marked uncertainties, aided by the post-its elaborated in Breakout Activity 1.

Table 3 Breakout Activity 1 Results: Quality check on identified SCAR Opportunities (n=8)

SWOT Element Opportunities	Agree (✓)	Disagree (X)	Unsure (?)
1. Change the scope of the SCAR: to re-focus <u>or</u> extend	5		3*✓
2. Global influence opportunities	6*** X?X		2* X
3. Set clear SCAR mandates regarding national R&I policy influence	1*?	2	5*** X✓ ✓✓
4. More direct contact with different DGs: two way interactions	6		2* ✓
5. Increased role of regional scale in SCAR (sub-national)	2	2*✓	4* ✓/X
6. Increased multi-actor framing: potential to engage new players	4*	1	3** ✓✓
7. Opportunities through new research agendas (e.g. Food 2030, FP9 mission-orientations and social value-added research)	8		

To begin, **Opportunity 1, "Change the scope of the SCAR: to re-focus or extend"**, raised a dilemma for several participants. A sense that the "*back focus*" of SCAR is completely "*out of question*" for many workshop participants i.e. reverting to a pure agricultural focus or the remit established in 1974 was not desirable for the majority in the room. Indeed, for some, this sparked a desire to instead re-focus the scope of the SCAR back on the 2008 mandate, thus including forestry, fisheries and the concept of interlinked bioeconomy value chains. This reflected a distinct preference and wide-ranging workshop consensus that the scope of SCAR needs to become more focused and consolidated (rather than further extended), but with a more modern and evolved twist. This echoes commentary received in the key informant interviews and led to some workshop participant pairs calling for a "*reprioritisation*" exercise acknowledging of the need for distinct clarification of what is wanted from and by the SCAR. As a result, extending the scope of the SCAR was perceived by the

majority to represent a threat to the future of the standing committee with warnings perpetuated by pairs who desired to not make the scope *“too broad”* and stating that it should be *“limited to bioeconomy research”*. Instead, a sense that SCAR should work in a cross-sectoral manner and with a value chain orientation was obvious for many, with a mere desire to consolidate and refocus on research and innovation policy now that *“all areas are covered”*.

Considering **Opportunity 2, “Global influence opportunities”**, while there was general agreement amongst workshop participants that this represented a valid opportunity for the SCAR, a number of caveats were simultaneously presented. This included a distinct sense that the EU should be a global player, thus perhaps making this more of a priority for the EC rather than the SCAR itself. Other participant pairs predicted distinct difficulties for the SCAR in pursuing this opportunity, with some merely believing it would be too difficult for the SCAR to achieve this level of international influence. On this matter, for example, some claimed that SCAR was *“too weak”* as a structure to achieve it, while others were concerned that it would *“get lost in the opportunities”* presented. Perceptions that the SCAR needs to align internally first before participating in debates at OECD/FAO level also existed, while others believed that international countries (e.g. USA) would not be interested in SCAR activities. For these participants, they felt that the desired *“influence is not there”* but perhaps the *“information”* provided by SCAR could be of relevance internationally. Other workshop participants nevertheless believed in a higher purpose for the SCAR and an increasing scalar influence at global level. This reflected the *“why not”* attitude unveiled in some key informant interviews. Indeed, similar to several interviewees, some workshop participants reported the potential of the Sustainable Development Goals as an ideal avenue through which it could pursue this opportunity. Further, others felt that the SCAR is more than capable of adapting to this *“scope when called for [or] there is a specific need”*. The flexibility of the SCAR was thus important with regard to this opportunity area (highlighted previously as a strength of the standing committee).

Opportunity 3, “Set clear SCAR mandates regarding national R&I policy influence”, meanwhile represented the opportunity area of the least certainty by SWOT workshop participants. Indeed, the majority of groupings (5 of 8 discussion groups) overall stated that they were unsure of SCAR’s pursuit of this opportunity area. For several participants, this was as a result of the language utilised in this phrase, believing that *“mandate”* was perhaps too strong in legislative terms and that *“guidelines”* would perhaps be more appropriate to consider. This stemmed from a belief that the SCAR *“does not ‘dictate’ national R&I policies”* and that the *“SCAR cannot have a mandate for a national strategy”*. This echoes commentary obtained in interviews whereby one interviewee proclaimed that *“proposing or advising regarding alignments would make sense to me... I’m not a lawyer, but I can’t picture the situation where...governments will all say, yes we will do it that way, because SCAR says so”* (SCAR SG 5). Thus for many workshop participants, it was unclear how the SCAR could achieve such formal national policy influence in practice, with the importance of monitoring tools flagged by one participant pairing in particular. Others did not feel in a position to comment on the reality of this opportunity area for the SCAR (attributing this to a lack of experience in the standing committee operations), while for one grouping in particular it was felt that policy *“targets would help”* but that these must be *“set at national level”* i.e. that it is up to the member states to set and determine the level of desired formal influence from the SCAR.

The desire for **“More direct contact with different DGs and two-way interactions” (Opportunity 4)** meanwhile represented a strong area of consensus amongst workshop participants compared to levels of uncertainty expressed in key informant interviews (primarily by EC delegates questioning the reality of achieving this in increasingly resource-constrained environments). Clear desires for more direct *“involvement by EC”* were expressed in Breakout Activity 1 in this regard. The high levels of uncontested group agreement (6 out of 8 discussion groups overall provided a ✓ for this opportunity) is testament to this positivity (see Table 3). While for some workshop participants, it was unclear how Opportunity 4 would be achieved in practice, for others it was a clear opportunity to pursue in a way that the SCAR is *“not influenced by others but benefits”* a number of DGs. In this sense, it was important for these participants to *“be clear [that] SCAR provides added value”* to DGs across the Commission.

Meanwhile, notwithstanding that two SWOT discussion groups outright agreement with the potential for the **“Increased role of regional scale in SCAR (sub-national)”**, **Opportunity 5** was overall

greeted with significant levels of scepticism by workshop participants. Indeed, two groups overall dismissed the existence of this opportunity area, while four other groups were unsure. Merits and disadvantages of this opportunity were thus added on post-its for further clarity by several participant pairings with a main emphasis that Opportunity 5 may not be applicable to all countries. For example, for some participants an increased relevance was noted for the *“MS-13 rather than other EU countries”* while others similarly dismissed its relevance for smaller member states. This led to some participants reporting that the decision to involve the sub-national scale *“should be up to the country [so as] not to overload”* all SCAR members with additional duties. Alternate scalar divisions were also proposed by other participants including consideration of a *“macro-regional focus”* over the *“micro-regional”* one presented and another pairing highlighting potential for *“administrative or agro-ecological regions for synergies of coordination”*. Overall, for other workshop members, there was concern that a bias in participation would predominate the SCAR if this opportunity area was realised, with some believing that *“representation should remain [at] national to keep it simple”* and democratic in the Steering Group. The group that dismissed the potential of Opportunity 5 entirely believed that the *“SCAR should [already] connect to national level and national to regional level”*, symptomatic of the overall uncertainty associated with this opportunity for the future SCAR.

The existence of **Opportunity 6 “Increased multi-actor framing: potential to engage new players”** was similarly greeted with levels of uncertainty, with one group dismissing its relevance entirely and three others uncertain. Even for those that agreed with its potential for SCAR, certain caveats were presented on post-its for how this may be enacted. For example, this included consideration that this should not apply to the *“SCAR as a whole”*, that it was *“ok, but not [for] inside”* the SCAR and that any pursuit of this opportunity should ensure that no lobbying of the SCAR would ensue. The need for this opportunity to be accompanied by appropriate checks and balances was highlighted in this latter context. For one group, for example, this resulted in a discussion whether industry should be involved in driving policy agendas, with a belief also that the different *“language”* utilised by different players could be a hindrance to the realisation of Opportunity 6. For others, there is a need to protect the *“safe space”* that is SCAR for public actors to discuss pertinent issues, with a belief that the inclusion of other actors (particularly private sector) may reduce the free interaction between active public participants. Thus overall, while some positivity existed regarding the pursuit of Opportunity 6 as per the key informant interviews, increased areas of caution were obvious in the workshop discussions.

The final opportunity area considered by participants (**Opportunity 7**) involved the potential for **“Opportunities through new research agendas: Food 2030, FP9 mission-orientations and social value-added research”**. Limited discussion was evoked by this opportunity area in Breakout Activity 1 compared to the other opportunities presented. This however may be reflective of the more limited time available for this exercise and/or the uncontested positivity associated with it. Indeed, all participant pairings (and thus subsequently 8 out of 8 groups) placed a ✓ next to this opportunity area, indicating a high level of consensus regarding its relevancy for the SCAR. Additional commentary provided on post-its included a sense that pursuit of this opportunity would indeed be *“very beneficial”* with potential to use the SCAR as a *“conduit”* for new research agendas. The only caveat presented in Breakout Activity 1 with respect to this opportunity included a need to *“be aware of overlaps between work in EU and international from OECD”*.

Overall, consideration of future opportunities for the SCAR resulted in dynamic and enthusiastic discussion amongst participant pairings in Breakout Activity 1. Few opportunity areas were viewed as straightforward for implementation in the future SCAR with a number of conditions, warnings and caveats highlighted as evidenced in this analysis. These ideas are probed further in Breakout Activity 2a, where two discussion groups were asked to rank, prioritise and discuss more deeply the preliminary opportunities highlighted by the Phase II of the SWOT analysis. It should be noted that three additional opportunities were also added by workshop participants on consideration of the future of the SCAR including potential to:

1. Inform other research actors (e.g. research institutes, universities, NGOs, CSOs, MSs, political parties, sectors) about SCAR activities and products
2. Cooperate with international organisations (OECD, FAO)

3. Capitalise on increased concerns for climate change to increase visibility of the SCAR

While the first two of these additional opportunity areas could be incorporated into Opportunity 6 (multi-actor framing) and Opportunity 2 (global influence) respectively, the third elements highlights an additional avenue through which to enhance SCAR impact in the future. With the SCAR's core remit in providing strategic advice for research and innovation policy and processes of innovation are regularly endorsed by the EC as central to developing a sustainable future (EC, 2016), the potential to connect with climate change agendas is promising and increasingly essential to maintain relevance (helping to address Threat 2 of the SCAR).

Opportunities: priority ranking

Similar to the prioritisation of SCAR weaknesses, one group assessing the opportunities for the SCAR (Group 6) were unable to create an ordinal ranking for priority opportunity areas. Similar also to the weaknesses category, some opportunity elements were completely disregarded by both groupings (Group 6 and Group 8) as irrelevant to the SCAR and/or warranting further discussion before featuring in any prioritisation exercise. It must also be noted that both groups left significant visual gaps between their top and bottom rated elements further warranting the qualitative discussion below as opposed to an overt and over-simplified quantitative ranking. Similarly, in Group 8, while a ranking order was more evidently established, the group were clear to signal a clustering of four opportunity areas as 'high' priority for the SCAR, two opportunity elements as 'lower' priority and one as requiring further discussion. Moreover, the precise wording of the "Global influence opportunities" element was altered in Group 8 to instead read "Global relevance opportunities", backed up by additional commentary on the collected group poster that the SCAR should at least be consulting at the EC level but ultimately cannot "*do everything*".

Overall, four opportunity areas were clearly highlighted as holding greater priority by workshop groupings. Three of these opportunities were common to both groupings indicating a high level of consensus on the prioritisation of these elements for the SCAR. These included increased "Two-way contact with different DGs", "Opportunities through new research agendas" and the potential to "Change the scope of the SCAR: to re-focus or extend". The groups however diverged in terms of the level of importance attributed to the potential to "Set clear SCAR mandates for national R&I policy influence". This element was considered of upmost priority in Group 6 compared to Group 8 that exercised clear caution with regard to the use of the term "mandate" believing that mandates exist at government level and not at the level of the SCAR (echoing commentary obtained in Breakout Activity 1). Similarly, opportunities associated with influencing the global scale were viewed differently by the two groupings, with global influence of considerably lower priority in Group 6 but a changing of the element wording to global "relevance" in Group 8 resulting in a higher ranked position (but alluding to SCAR consulting at EC level rather than directly influencing OECD, FAO, etc.). The potential for "Increased multi-actor" framing also represented another element viewed slightly differently by the two workshop groupings, with Group 6 dismissing its relevance entirely and Group 8 keeping it in but considering it a low ranking priority. Both groups also dismissed the increased role of the sub-national scale in SCAR, with neither willing to commit it to a prioritised ranked category. Thus overall, it can be said that consensus was reached in the SWOT workshop regarding three top-rated opportunity elements as well as four lower ranked, changed or indeed redundant, opportunities. This SWOT quadrant thus demonstrated the highest levels of divergence from the key informant interviews, partly reflective of the deliberately provocative and vague wording utilised to describe the opportunity areas that sparked debate accordingly over their meaning and relevance.

Examining the qualitative commentary in the Group Feedback session, clear thematic patterns emerged with regard to the need for caution to be exercised in the pursuit of SCAR opportunity areas. In particular, justifications related to the lower-ranked element of "Increased multi-actor framing" prompted conversations in both workshop groups regarding the need to preserve the "*safe space*" for public organisations to discuss issues without the influence or listening ear of potential strong lobby groups, industry bodies or NGOs (reflective of commentary also obtained in Breakout Activity 1 but

not in interviews). The positioning of these additional stakeholders in ad hoc and other working groups was thus seen as more appropriate by workshop attendees compared to allowing these actors participate at the SCAR plenary or SG level in any formal manner. In this sense, workshop attendees expressed fears that increased multi-actor framing could indeed pose a threat to the functioning, transparency and active participation of public funders and delegates in the SCAR, perhaps further negatively impacting SCAR representativeness, political commitment and policy impact (priority SCAR weaknesses). For example:

"We thought this might be an opportunity but maybe a threat concerning new players not [currently] active in SCAR or not invited to SCAR so if there are new players, [existing public] delegates... may become silent in voicing their concerns because of the new players" (Group 6 Table Host)

"It is a safe space, the SCAR, for public funders to discuss issues. It could be open and transparent if we want to bring in NGOs, industry, etc. they can be part of expert groups or on an ad hoc basis. In terms of SCAR itself, it would be a preference to keep that a public funder organisation" (Group 6 Additional Participant)

"Partly the same things that were discussed in the other group but the question is, who drives public funding? Is it the policy people or is it the industries? Is it lobby? Or is it multi-involvement? So be careful basically that is the most important thing that was said" (Group 8 Table Host)

Significant attention was also given in the feedback session by both groupings to the potential of setting clear SCAR mandates regarding national R&I policy influence. Contrasting the levels of uncertainty expressed in Breakout Activity 1 by the wider group of 68 stakeholders, this was seen as a principal and obvious opportunity area in Group 6. This positioning was justified in the context of member states learning from one another through the SCAR and using this knowledge back at national level (echoing calls for knowledge implementation and action also expressed in the key informant interviews). This opportunity was nevertheless dismissed by Group 8, with feedback commentary warning that if everything was placed into a formal structure and written as mandates, this would decrease the freedom in the SCAR to discuss pertinent and emergent issues. Warnings were thus placed against pursuing this opportunity area by Group 8 compared to Group 6, particularly in terms of the formality assigned to this process of national influence:

"What is very important as an opportunity is to set clear mandates for national research and innovation policy influence so to have a real benefit for the members coming to the meetings, learning from other countries, for example, so that they can use this opportunity for bringing this home for their own policies and strategies" (Group 6 Table Host)

"This is not really so important, and this is a difficult word [mandate]. But contrary to your group and what you have been discussing, 'setting clear mandates for national R&I policy influence' was something that was dismissed basically in this group because for two reasons. The national governments have the mandate, not SCAR...so what mandate does SCAR have then? And if you are going to put everything in formalised structures with clear mandates then you also are decreasing the freedom of communication and the freedom to discuss. So those were sort of warnings with this one" (Group 8 Table Host)

"We came up with slightly different results but I think that a lot of it has to do with wording" (Group 8 Table Host)

Outside of these two opportunity areas, commentary in Group 6 also touched upon the potential for other DGs to come to the SCAR and inform the plenary and/or SG about their recent strategies and programmes to allow for mutual benefit to ensue (part of the discussion around increased two-way communications with different DGs). Benefits were also seen for member states in this regard, allowing them to benefit from what different DGs are doing and, if meaningful, to use it in their specific national context. For instance:

"Two-way contact with different DGs...we concluded that...it would be an opportunity if the other DGs come to the SCAR, tell us about their strategies, their programmes for the future"

so that we benefit from their information of what they are doing and if needed, what is meaningful to input it into in our work. Of course this also works the other way but the benefit is clearly seen for the member states” (Group 6 Table Host)

This opportunity area was similarly not disputed in Group 8, representing one of the higher prioritised opportunity areas along with the opportunities perceived to be presented by new research agendas. Group 6 provided some additional commentary on this latter element, linking it to a potential changed scope in the SCAR that would allow it to refocus on third level collaborations. For instance:

“Through new research agendas, you create opportunities....quite clear and rather important also is the two-way communication that the SCAR has with the different DGs and...so that SCAR is not somewhere here and the European Commission somewhere here [gestures distance] or the other way around but these are different players having a two-way communication” (Group 8 Table Host)

The most problematic opportunity area for both groupings however concerned the potential for an increased role of the regional (sub-national) scale in the SCAR (an element that received particularly passionate support in one key informant interview). Commentary provided in the group feedback session justifying its dismissal related to a need to avoid creating a “chaotic” atmosphere within the SCAR whereby it would be increasingly difficult to reach conclusions if too many actors and interests were involved. The need to assign clearer definitions to the term “regional” was also expressed (Group 8), along with a sense that it is ultimately up to the member state who they wish to assign to plenary, SG and WG levels (Group 6). This could result in more regional representation in the SCAR without actively pursuing it as an opportunity area. In this way, increasing sub-national representation in the SCAR was thus regarded cautiously by both groupings, simultaneously representing both a potential opportunity and problem area:

“Increase role of regional scale....this could be an opportunity but it could also be a problem because if too many actors are in the working groups...it could be very difficult for cooperating....and to come to a conclusion” (Group 6 Table Host)

“On the regional aspect, I think it would be up to a country who they take to different working groups, the steering group [etc.]. So if a country wants to bring a regional player, they can do that. And then there is always a space capacity so it is important that the right organisation is at each working group and the SCAR steering group” (Group 6 Additional Participant)

“Most difficult one, we put it on the side as well more or less is when you go to look at the regional scale. Because first of all, what is the regional scale?...there are different forms of regions...also if you are going to do sub-national you are opening up whole new discussions so we put that on aside” (Group 8 Table Host)

The final opportunity discussed in the feedback session included a dismissal of the global influence opportunity area in both groups, with the SCAR seen primarily to serve member state and EC interests.

“The least opportunity we saw was the global influence opportunities. We think that the SCAR is there for the member states and associated countries and also for the European Commission and so the global influence opportunities are ranked the lowest” (Group 8 Table Host)

The issues around changing the scope of the SCAR were also deemed challenging by both groupings with no consensus as to whether refocusing on the original remit or extending to a broader remit was most desirable. Additional discussion prompted in the wider workshop audience related to this topic nevertheless emphasised that, for some workshop participants, to “re-focus” the SCAR remit does not mean a reversal to the 1974 agenda, but rather the already expanded 2008 remit that includes the bioeconomy (echoing some key informant interviewee commentary also). Therefore, the only element of consensus seemingly apparent in the room included a lack of desire amongst the majority in attendance to revert to an agricultural focus only but with a simultaneous desire expressed to consolidate and provide focus to the SCAR to ensure a wise use of resources (Group 6). This was mirrored in additional commentary provided on the poster ranking of Group 8 (“don’t go back to only

agri”) and wider questions raised in Breakout Activity 1 regarding the lack of visibility related to fisheries and the marine sector in the SCAR. Echoing the identity crisis themes expressed in key informant interviews, this included, for example, contestations regarding the name of the SCAR itself as representing the Standing Committee on Agricultural Research (as opposed to the SCBR for Bioeconomy Research) and perceived miscommunications in the diagrammatic representations of SCAR activities on the SCAR website that points to the development of the “European Research Area for Agriculture in the Bioeconomy” only. The scope of the SCAR thus remains contested already in its current configuration with desires expressed for further clarity, focus, visibility and transparency on this matter in the future:

“The SCAR has already extended its remit...to bioeconomy. There isn’t a need to go backwards so we don’t want to go back to an agricultural focus. But there is a need to consolidate what we’re doing in different areas because it is such a broad remit.... We need to have some focus, otherwise the resources are too spread” (Group 6 Additional Participant)

“Re-focusing on the so-called original SCAR remit...we had a small discussion here also....started from 1974....as of 2008 we already had bioeconomy without using the word ‘bioeconomy’.... So we in fact chose in our group to refocus on the 2008 original situation” (Group 7 Additional Participant)

Threats: sense-checking results

Finally, considering external threats to the future functioning of the SCAR, Table 4 reveals a high level of group consensus regarding the potential negative impact of “Staff mobility, turnover, cutbacks, retirements and dedication”, “Continued differences in research systems and associated supports across the EU” and the “Growing complexity of bioeconomy R&I actors: maintaining relevance” (Threats 3, 7 and 2 respectively). A lesser, but still significant, degree of consensus was associated with Threat 4 concerning the “Sustainability of supports induced by CASA” (the majority of groups (5) overall still agreed with the existence of this threat). Threats 1, 5 and 6 received the least level of agreement amongst participants, with competing ideas obvious related to the reality of “Geopolitical tensions”, the “Challenge of multi-disciplinarity” and that a “Differing definition of bioeconomy may pull SCAR in different directions”. These threats are discussed in turn below, complemented by the additional qualitative commentary and rationale provided by participant pairs through the addition of post-its in this final sense-checking exercise.

Table 4: Breakout Activity 1 Results: Quality check on identified SCAR Threats (n=8)

SWOT Element Threats	Agree (✓)	Disagree (X)	Unsure (?)
1. Geopolitical tensions	4*X	2	2*X
2. Growing complexity of bioeconomy R&I actors: maintaining relevance	6*X		2*✓
3. Staff mobility, turnover, cutbacks, retirements and dedication	8		
4. Sustainability of supports after CASA	5**X?	1	2*✓
5. Challenge of multi-disciplinarity	4*X*X	3	1
6. Differing definition of bioeconomy may pull SCAR in different directions	4**XX	2	2**X/✓X
7. Continued differences in research systems and associated supports across the EU	6*?		2*X

While four workshop groups overall agreed with the existence of **Threat 1, “Geopolitical tensions”**, two groups outright dismissed its applicability while two others were unsure of its significance. The majority of the additional commentary provided fleshed out these areas of disagreement and included perceptions that geopolitical tensions are a *“problem for the EU”*, not SCAR and that migration is *“an even bigger challenge”* in the future (though not necessarily to the future of the SCAR). With the majority of workshop participants considering the impact of Brexit with respect to this threat area (given the high political and media attention to this issue at the time of the Phase II interviews and subsequent SWOT workshop), another group dismissed this as a threat to the SCAR reporting that Britain can become an Associated Country and thus can still be part of SCAR if/when Brexit is realised. Contrasting the level of attention given to Brexit in the key informant interviews, elaborations in the workshop thus denoted Threat 1 to be largely an *“overestimated threat”* and something more relevant to the very long term future of the SCAR. Such thinking sparked the significant degrees of uncertainty and dismissal associated with Threat 1, with one group also actively pushing to erase it off their final group poster submitted.

By comparison, the level of consensus associated with **Threat 2, the “Growing complexity of bioeconomy R&I actors: maintaining relevance”** represents a stark contrast to the uncertainties expressed regarding Threat 1. Here, five groups agreed outright with the existence of Threat 2, while the majority of participant pair confirmations overall also indicated levels of agreement in a sixth. Given this high level of initial consensus, limited additional commentary was provided in Breakout Activity 1 with respect to this aspect (though discussed further in Breakout Activity 2a). For the pairing

that disagreed with the existence of this threat, this perception was fuelled by a belief that the “*SCAR is flexible enough to adapt to the changing conditions*”. In other words, a noted strength of the SCAR (Strength 5 related to the evolving and flexible SCAR structure) was utilised to dismiss the impact of this threat on the future of the standing committee. This again highlights the interdependency and interconnected nature of SWOT elements, discussed further with respect to Breakout Activity 2a.

Similarly, limited additional commentary and discussion was associated with **Threat 3 “Staff mobility, turnover, cutbacks, retirements and dedication”** given the level of consensus achieved with respect to this threat area. No pairing contested the existence of this threat to the SCAR, with all 8 groups agreeing that Threat 3 threatens the future functioning of the standing committee.

Concerning the “**Sustainability of supports after CASA**” (Threat 4), there was an overall level of agreement amongst workshop participants regarding the existence of this threat, echoing the worries cited in interviews regarding the perceived over-reliance on CASA for the support of SWGs and CWGs in particular. One group nevertheless disagreed with the prevalence of threat 4, while two others were unsure of its existence. These levels of disagreement were framed by beliefs that the SCAR managed without CASA previously and that it is too early to judge the effectiveness of CASA in any case (i.e. an evaluation would first be required of its impact). For other participants, there was a strong sense that organisations like the SCAR “*should not rely on projects*” for finance and support anyway with perceived impacts on independency, flexibility and reflexivity otherwise. Similarly, another participant pair stated that the “*Main challenges [facing the SCAR] cannot be solved by CASA*” with particular reference to issues of EC coordination and input. Thus overall, while concerns were indeed highlighted regarding the sustainability of the supports provided by CASA similar to the key informant interviewees, for others there should not be a reliance on these supports in the first place. This does not necessarily dismiss the significance of the threat posed (particularly given dependency perceptions uncovered in the interviews) but lowered its significance for many workshop members.

Similarly the “**Challenge of multi-disciplinarity**” (Threat 5) received a range of competing views in Breakout Activity 1, with a significant proportion of discussion groups (4 of 8) reporting that this element represents an opportunity rather than a threat. As a result, three groups disagreed with the existence of Threat 5 to the SCAR, one was unsure and disagreeing participant pairs existed in two of the four groups that overall agreed that Threat 5 was relevant and real. This point was further clarified by one grouping that stated that “*Multi-disciplinarity is an opportunity [and] gaps are overcome by communication*”. Similarly others insisted that multi-disciplinarity should be viewed as an opportunity; that it no longer represents a challenge in the current SCAR configuration and that larger threats exist regarding the broad remit of the standing committee. Threat 5 thus for many participants duplicated as an opportunity, representing an interchangeable element in the SWOT analysis depending on the perspective taken.

A similar uncertain profile was obtained regarding **Threat 6** that warns of the “**Differing definition of bioeconomy may pull SCAR in different directions**”. While four groups overall agreed with the existence of this threat, levels of dissension were obvious within these groupings with several participant pairs disagreeing with the presence of this element. A further two discussion groups disagreed, while the final two groups were uncertain overall, indicating competing and contradicting claims. As one participant pair commented, the reality of the threat presented “*depends on how you interpret this*”, with several others reporting that this threat may be more applicable to the national scale rather than the SCAR itself. For example, according to one post-it elaboration: “*SCAR has one definition but for MS this is true*”. Other workshop participants pointed to the need to “*follow [the] EC definition (bioeconomy at large)*” while for another pairing “*Differences in definitions are not so big. Common concept of bioeconomy is rather clear*”. Thus overall, while there was some acknowledgment that Threat 6 may emerge as a challenge to the SCAR in the future, a sense that this threat can be managed, controlled and/or was relevant at other scales was obvious.

Finally, a significant level of agreement existed regarding **Threat 7**, concerning the “**Continued differences in research systems and associated supports across the EU**”. Six groups overall agreed with the existence of this threat, five of which were in complete agreement on this matter (i.e. there were no alternate opinions amongst group pairings). For the minority that disagreed or were

uncertain regarding the existence of Threat 7, commentary added by post-its related to the positive nature of diversity, the potential to overcome differences and the continued ability *“to cooperate without similarities”*. For example, for some participants: *“Diversity is not necessarily bad as it brings new ideas in the forum”*, while for others this SWOT element is *“not necessarily a threat [and] could be bridged with good will”*. Thus, while Threat 7 was a reality for many, the potential to overcome it was mooted by others bringing a further positivity to this challenge-orientated quadrant.

Five additional threats were nevertheless added by workshop participants, the highest number of new elements in all the SWOT categories. These included:

1. Continued differences across North, South, East, West Europe
2. The *“unprecedented speed of change causing major crises”* that *“systems are not prepared for and science is not fast enough to bring solutions e.g. drought up into Europe”*
3. The risk of capacity saturation due to multiplication of WGs
4. The dependence of the SCAR on the ERA and impact of potential future rules for FP9 instruments such as ERA-Nets and JPIs
5. The downscaling of staff at EC level reported to be *“a bigger threat than geopolitical tensions”* in particular.

The diversity of threats added by participants highlights the diversity of concerns amongst workshop participants regarding the future of the SCAR. These threats exist across scales from macro-regional (European regions) through institutional (EC staffing) and down to the internal working of the SCAR (multiplication of working groups). Issues both inside and outside of the control of the SCAR are thus obvious in this listing indicating both internal weaknesses and external threats with some (including the speed of crisis occurrence (and inevitable solutions lag)) more difficult to control than others (for example, potential to influence the new FP9 rules). The diversity of additional threats added by SWOT workshop participants nevertheless highlights the importance, and inevitable challenges, of accurate and reflexive horizon scanning to secure the future of the SCAR. Changing SCAR practices to mitigate and avoid identified threats will be essential for future success. This is elaborated further below in the context of the relationships between SWOT elements as revealed by the SWOT workshop discussions.

Threats: priority ranking

The most striking comparison in the prioritisation exercise related to SCAR threats concerns the directly opposing ranking applied to the top and bottom elements between both groups assigned to this SWOT quadrant. In other words, for Group 4 assessing SCAR threats, the “Challenge of multi-disciplinarity” represented the biggest and most important threat to the SCAR while “Geopolitical tensions” were ranked as least concerning. In direct contrast, “Geopolitical tensions” represented the top-rated threat in the prioritisation categorised by Group 5, while the “Challenge of multi-disciplinarity” represented their least prioritised element. This indicates significant dissensus amongst these groupings as to the most and least threatening aspects of the SCAR, raising a challenge for any researcher, delegate or policymaker attempting to make strategic decisions related to the evolution of the SCAR. It also highlights the diversity of opinion that can exist amongst country representatives when horizon scanning for common external threats, and highlights the advantages of the SWOT prioritisation in exposing these. Disparities were also obvious in the rankings attributed to “Continued differences in research systems and supports across the EU” (ranked higher in importance by Group 5 compared to Group 4). Obtaining qualitative commentary and justification behind threat ranking rationales, as enabled by the SWOT workshop activities, was thus particularly crucial with regard to understanding potential SCAR threats.

Similar to the other SWOT categories, the horizontal grouping of two elements occurred in both Group 4 and Group 5 whereby the “Challenge of multi-disciplinarity” and the “Growing complexity of bioeconomy actors” were seen as interlinked by Group 5 participants, while the “Growing complexity of bioeconomy actors” was linked with “Differing definitions of the bioeconomy” in Group 5. Thus for

both groups, maintaining SCAR relevance in the growing complexity of bioeconomy actors was thus viewed as an interdependent element, albeit with differing connecting elements. Meanwhile, higher degrees of agreement existed between Group 4 and 5 related to some of the higher and moderately ranked threat elements including, for example, “Staff mobility, turnover, cutbacks, retirements and dedication”, “Continued differences in research systems and supports across the EU” and “Differing definitions of bioeconomy”.

Overall however, it is hard to distinguish a clear prioritisation of threat areas for the SCAR when solely examining the data of Breakout Activity 2a, compared to other SWOT categories. Combining results from Breakout Activity 1 and qualitative commentary related to SCAR threats obtained in the feedback session is thus extra important to add weight and give clarity to ranking prioritisations. It is important to note also that in the threat feedback session, discussion of many of the elements resulted in a seamless and simultaneous discussion of potential solutions to the challenges posed to the SCAR. In some cases, this even turned some threats into opportunities for the SCAR to develop and harness. This resulted in a rather positive feedback session for what could have been a more negative and challenging SWOT quadrant to discuss. For example, in Group 5, solutions were seen to be within reach for several of the threat elements proposed, including “Staff mobility, turnover, cutbacks, retirements and dedication” (they considered it possible to provide safeguards against this loss of knowledge) and the “Differing definition of the bioeconomy” (as with results in Breakout Activity 1, consensus was believed to exist within the SCAR on the bioeconomy definition and thus this was seen as a bigger problem for national ministries instead). Thus, overall the threats for which groups were able to identify a solution were deemed of lesser priority in this ranking exercise (for example, through enacting more effective communication, collaboration and/or mitigation plans) compared to threats which were more difficult to mitigate. Such reasoning resulted in a lower prioritisation assigned to a number of threat elements. Group 4 similarly attributed a low threat level to the differing definition of the bioeconomy believing that the SCAR is constantly evolving so any diversity in input and definition might actually be beneficial to discussions. For instance:

“The threat becomes lower the more we can do against it” (Group 5 Table Host)

“The differing definition of bioeconomy.... but SCAR is actually constantly evolving and adapting to the bioeconomy fields and therefore actually the diversity might be beneficial” (Group 4 Table Host)

“The staff mobility, turnover, cutbacks, retirements, dedication, this all comes together for us as ‘loss of knowledge’. However, we have not put this on the very top because this is something that I think we can do about. So you can do something against people leaving to a certain limit....so this is not as big as the geopolitical tension for example” (Group 5 Table Host)

“The different definitions wasn’t that big of a threat because we think that in SCAR there is a lot of consensus on the definition of bioeconomy. When it comes down to member state level it’s difficult again because different ministries talk about different things but on SCAR level we think we have communicated very well about that” (Group 5 Table Host)

The same solution-orientated reasoning applied to the “Growing complexity of bioeconomy R&I actors” by Group 5, with participants believing that this threat may be mitigated through better communications and collaboration in SCAR to maintain its relevance. With a member from the CASA team in Group 5, threats related to the sustainability of supports induced by CASA were also of lesser concern with a sense that this issue is already being taken into consideration and planned for within the CSA itself through other work package tasks. Similarly, the challenge of multi-disciplinarity was viewed by Group 5 as holding potential to be a “win” for SCAR if actors and delegates communicate well. In other words, multi-disciplinarity could represent a positive defining characteristic and ‘modus operandi’ for the standing committee if executed correctly. For example:

“Our least threats was on the sustainability of supports after CASA because this is something that we can take into consideration already now. We have developed a plan for sustainability and try to keep this in mind and this is something we can influence a lot” (Group 5 Table Host)

“The challenge of multi-disciplinarity was actually an opportunity for us...if you are communicating very well, multi-disciplinarity is a win and not a threat” (Group 5 Table Host)

Nevertheless, representing the marked difference between ranking prioritisations in both groupings, assigning “Geopolitical tensions” as the top priority in Group 5 was justified by the reasoning that the SCAR requires a cohesive EU to be successful. For these participants, if member states do not exist, the SCAR will have no agendas to influence:

“Whoever was in Group 4 thinking that geopolitical tension was a big threat, welcome to our group because we think this is actually the biggest threat of all! Because if we don’t have a European Union, we don’t have member states, we don’t have SCAR. And this is also something that we cannot influence at all” (Group 5 Table Host)

By comparison in Group 4, and echoing levels of dissension evident in Breakout Activity 1, significant disagreement existed regarding the prioritisation of geopolitical threats, with the majority of Group 4 participants instead insisting that Brexit in particular is not a threat to the SCAR and that it will continue to function regardless of this political change. One member of Group 4 however disagreed strongly with this. Nevertheless, in general, an acknowledgement existed in Group 4 that if a big player stops collaborating through the SCAR, this might be more problematic. Thus, while the geopolitical aspect was perhaps initially more narrowly interpreted in this group to focus on recent UK politics, acknowledgement did exist within the group that the level of the geopolitical threat depends on the country involved and political moves enacted:

“The geopolitical tensions.... we were discussing about that for a long time because one of us was disagreeing so I try to show both sides....So the first one is that, for example, that Brexit is not a threat to SCAR. It might be a threat to Europe if a big player is stepping out of the EU but for SCAR it is actually not a big threat because SCAR will continue to run. The argument against that....was that of course if a big player stops collaborating, it might always be a problem depending of course on the country involved” (Group 4 Table Host)

Meanwhile, a higher prioritisation was given to the threat of “Continued differences in research systems and supports across the EU” in Group 5 as opposed to Group 4, with Group 5 justifying this rating by arguing that if national intentions are different, it becomes harder to work on the same topic. For example:

“We had a lot of discussion...and decided in the end to have continuous differences in research systems and supports across the European Union as the second biggest threat because if the national intentions are different, it is very hard to work on the same topic” (Group 5 Table Host)

Finally, considering difficulties associated with the growing complexity of bioeconomy actors, Group 4 strongly linked this threat with a need for the SCAR to be aware of these other players and to ensure that the expertise of the SCAR is used to maintain its positioning and relevance. There is no desire to duplicate the work of others in the wider field of bioeconomy with a need thus expressed to prioritise activities so as to prevent the SCAR becoming irrelevant (reflecting the reprioritisation exercise also explored in Opportunity 1 with respect to re-focusing or broadening the scope of the SCAR). Potential solutions proposed by Group 4 included enhanced linking and use of synergies between actors and organisations, collaboration and cooperation with others, the use of knowledge in which SCAR is an expert and a prioritisation of activities:

“It is very important that SCAR is aware of other players and other research agendas...and the expertise of SCAR should be used. And that means not to duplicate work in the wider field of bioeconomy but to prioritise and therefore to prevent the SCAR becoming irrelevant. So linking areas is very important, use of synergies and to collaborate and cooperate” (Group 4 Table Host)

Such reasoning is typical of the wider solutions-orientated approach adopted by workshop participants when considering threats to the future operations and functioning of the SCAR. This represented an unexpected outcome of the SWOT workshop session and demonstrated the SWOT framework in action whereby participants, perhaps unintentionally, began connecting up quadrants to

leverage existing strengths, address weaknesses, exploit opportunities and resolve future threats, truly maximising the benefits of the SWOT as a strategic planning tool (Dyson, 2004; Ghazinoory and Azadegan-Mehr, 2011; Niederweiser et al., 2016; Bohari et al., 2017).

Phase III Reflection and Next Steps

As evidenced throughout the workshop analysis, the importance of conducting a sense-checking exercise with a wider group of SCAR delegates and stakeholders as an important quality control check of the preliminary SWOT element results identified by the selected 13 preliminary interviewees is obvious. It helped to confirm the existence of a large number of these elements while also highlighting more of the nuances, caveats and conditions associated with others. This was particularly facilitated by the qualitative post-it gathering and group feedback discussion element fostered through the design of the workshop activities. In this sense, and as similarly connected by workshop participants, SWOT elements can be said to be highly interconnected, and indeed interchangeable in places, depending on the perspective taken (including by geographical affiliation, professional background and length of experience with the SCAR). This point is further elaborated and supported by the recorded discussions related to Breakout Activity 2a and active connections between SWOT quadrants evidenced in these discussions.

Following the identification of these nuances and subsequent application of them in any future strategy development by the SCAR (the ultimate aim of any SWOT analysis results (Dyson, 2004)), more structured quantitative surveys could be utilised in the future to track progress on the achievement or otherwise of the identified SWOT elements (for example, leveraging strengths, addressing weaknesses, exploiting opportunities and/or mitigating threats). A quantitative Likert ranking scale could be utilised in this regard to 'force' participants into rating their level of agreement with the SWOT element proposed (for example, from 1-5 or 1-7) to allow for a quick and easy assessment of SCAR progress. Additional qualitative commentary boxes would be conducive to providing a holistic assessment, as evidenced by the level of interaction and discussion evoked in this SWOT workshop activity. The final segment of the SWOT of the SCAR results section outlines the results of the final workshop exercise where participants were asked to complete a Postcard from the Future, showcasing stakeholder ambitions and wider future visions for the SCAR in the next decade.

Postcard from the Future: Analysis of Future Visions for the SCAR

As a final workshop exercise, each participant was asked to write an individual postcard to the SCAR in ten years' time outlining the changes that have occurred by 2027 that they would congratulate the SCAR on, any crucial step in achieving this change and the final measure of success. Analysis of the postcards involved both story board reporting techniques and thematic clustering (as depicted in Images 3-5 below).



Image 3: Thematic clustering of Postcards from the Future

The results were as follows:

1. *What would you congratulate the SCAR on? What changes have occurred?*

The central themes to emerge on the successful operation of SCAR in 2027 related to issues of country and topic representation, enhanced power and reputation, greater political buy-in at EC and MS levels, increased policy impact and success in addressing global societal challenges (for example see Image Set 3) . More specifically, this included participants congratulating the SCAR on:

- **Enhanced country representation:** namely the inclusion and, perhaps more importantly, the active participation of all member states in the SCAR.
- **Enhanced topic representation:** namely the inclusion of all bioeconomy-related topics in the SCAR, connecting different knowledge bases in a cross-sectoral, multidisciplinary and value chain orientated manner. With only one participant in this exercise emphasising the agricultural dimension of the bioeconomy for the SCAR, a wider systems approach was evident in the majority of postcard responses.
- **Power and reputation:** several participants alluded to the development of a SCAR that is inherently more powerful, well-known and well respected in policy circles. For several, this linked with putting Europe back on the agricultural research map in terms of a global reputation with R&I policy seen to depend on the SCAR for informing decision-making.
- **Political buy in:** greater participation of, and enhanced relationships with, all relevant DGs at European Commission scale was mooted by many workshop participants on

consideration of the SCAR of the future with several believing this to represent an opportunity for real impact from, and on, R&I policy. Greater political buy-in at MS level was also strongly suggested, including enhanced uptake of SCAR products, wider SCAR recognition and clear added value in policy advice at national levels.

- **Policy impact and coordination:** the SCAR was also congratulated by many for holding a more crucial role in the strategic research agenda of the EU by 2027, also succeeding in aligning national R&I policy in agriculture and the wider bioeconomy. SCAR assistance with the development of national bioeconomy strategies was further suggested by several participants as an important aspect of success in the future.
- **Solving Societal Challenges:** finally, SCAR was congratulated for having contributed to the wider sustainability transition including in terms of greener food production, achieving zero waste, addressing sustainable economic growth, solving global challenges and promoting the widespread development of the bioeconomy as a result of its work and support. This theme is explored in more detail below with respect to measure of success for the SCAR (Q3 below).

Other, more minor, themes unveiled with regard to the first element of the postcard exercise included:

- **SCAR as a strong coordination unit:** several participants alluded to enhanced coordination both within and by the SCAR in research and policy circles. This included coordination roles in the future FP10, centralised reflexivity circles to mitigate the fragmentation of topics, the wider coordination of research activities and clear working structures that prevented the duplication of efforts with respect to the development of the bioeconomy.
- **Global reach:** several other individuals congratulated the enhanced global reach of the SCAR by 2027. This included, for example, participation in global research networks, assistance in the alignment of national research policy internationally and the participation of ACs (and the USA) at SG, SWG and CWG levels.

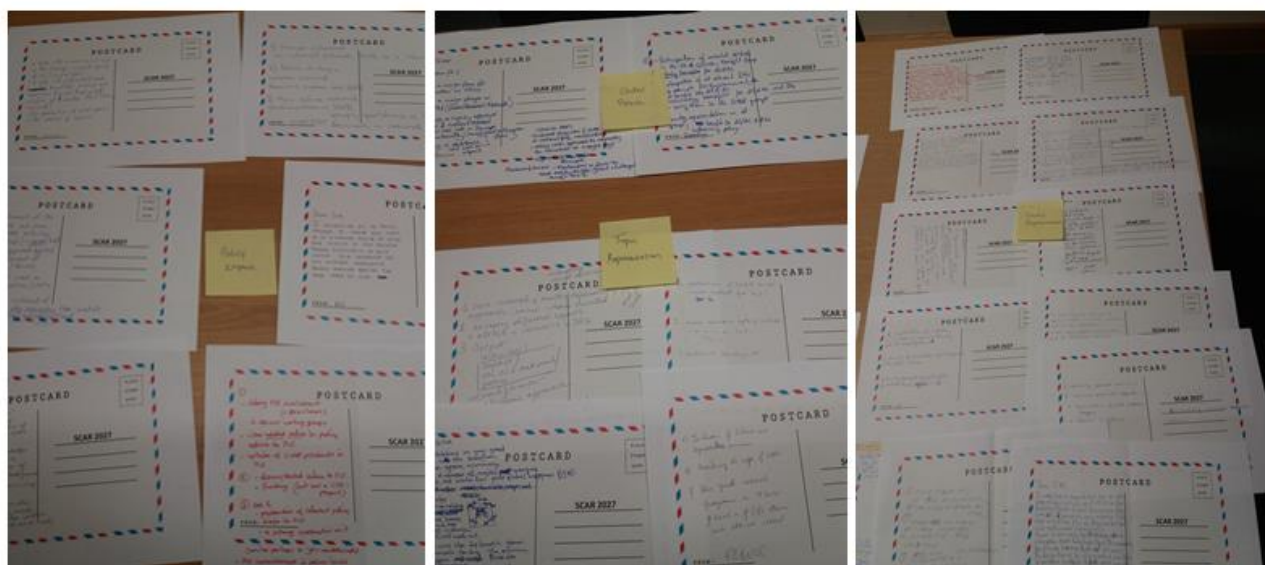


Image 4: Thematic postcard clustering according to themes of policy impact, topic representation, global reach and country representation

2. What was a crucial step in achieving this change?

While by no means exhaustive, crucial steps in achieving identified changes to the SCAR, as identified by SWOT workshop participants, included:

- **Involving all MS and relevant DGs:** the importance of attracting and supporting the right delegates and participants at national and EC levels in the SCAR was reiterated in the postcard exercise for a successful future. Practical steps suggested for achieving this level of inclusion, representation and buy-in included the establishment of platforms and networks for collaboration; support (financial and otherwise) for less involved and less resourced countries; and assistance from CASA to increase SCAR visibility at EC level. Demonstrating SCAR value to MSs was also stressed to increase recognition of the SCAR at national scales, open doors for discussion and create societal awareness of the SCAR to motivate the MSs to use its outputs and services. A small minority of participants also envisaged this national involvement beyond Europe at a global scale.
- **Boost in R&I funding:** clear financial support and backing for transitions-orientated SCAR research was emphasised by workshop participants. This included both EC and MS support for bioeconomy related research themes, political willingness to invest in circular- and bio-economies and a consolidating role by the SCAR to channel currently diverse R&I funding into cross-boundary innovations by 2027.
- **Open, transparent, interactive and inclusive communications:** improvements in both internal and external communications were flagged as necessary by SWOT workshop participants to achieve enhanced visibility and awareness of the SCAR. This included suggestions, for example, of enhanced internal communication systems with shared calendars, task lists and ability to post comments and questions between SWGs and CWGs (all under the umbrella of the 'bioeconomy' as the lynchpin for collaboration) as well as better knowledge flows between the WGs, the SG and Plenary levels. This latter exchange is perceived to allow countries to debate issues at WG level that then have meaningful interactions with the SG. Externally, the need for closer dialogue between national decision makers and the SCAR was highlighted as well as broader knowledge and experience exchanges both including and beyond representatives and ministries. Reducing the complexity of communications and associated tools was central in this step for many.
- **Simplified and enhanced structures:** achieving structural coordination and alignment within the SCAR, simplifying group structures within WGs and streamlining the range of SCAR outputs (e.g. JPI, ERA-Nets, etc.) was suggested by several participants as a means to increase commitment, dedication and representation in the SCAR by 2027. Better organisation of the SCAR secretariat was also mooted including improved preparation of agendas, better and quicker reporting of meetings, and prompt 'reflection papers' following meetings taking place. Less complex structures to allow new members to integrate were also noted as essential to enhance SCAR representativeness by 2027.

While some questioned the potential for a natural evolution of the SCAR compared to the active re-structuring of initiatives, other, less frequently repeated "steps" suggested by participants included:

- Engaging different experts, actors, communities and DGs (perhaps through more modern and enhanced online communication channels)
- More bottom-up governance: a desire for issues to arise from MS level that can apply to FPs, ERA-Nets, national research and CAP innovation projects
- Integrating agriculture, research, environment and regional development policies at European scale

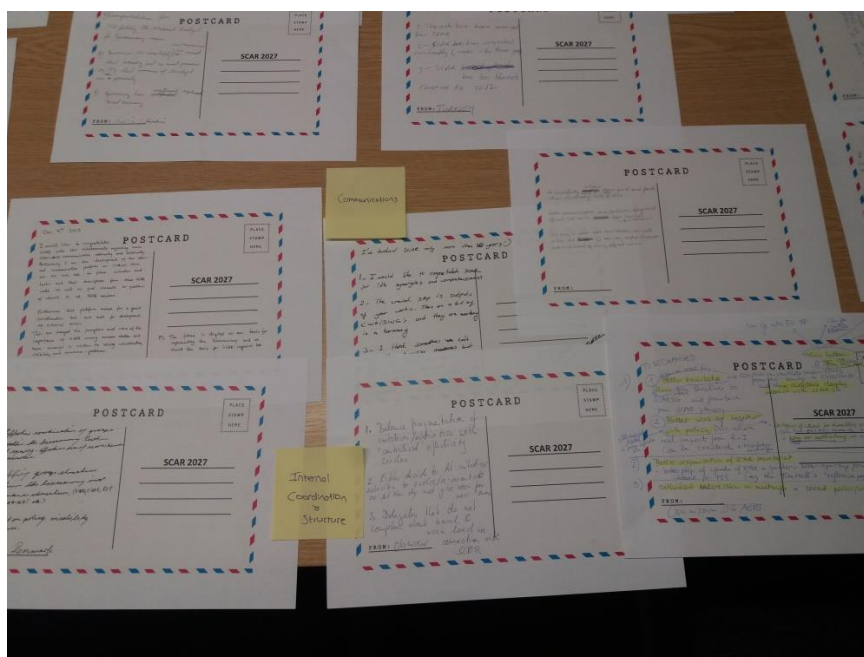


Image 5: Thematic clustering according to improved communications and internal structure

3. What is the measure of success?

While the difficulty of measuring performance and success was acknowledged in the workshop context, evidence of future success in the SCAR according to participants included:

- **Active participation by all countries:** measured by the wide representation of nations from all regions in all SCAR groups, the number of countries involved, R&I policy input from all countries, the new and extended networks created and particular attention to the enhanced involvement of the EU-13 across all output, implementation and decision-making tiers of the SCAR (required to increase three-fold according to one participant with implications for enhanced social status of these countries). More difficult to measure, but perhaps possible to assess qualitatively, signs of success regarding country representation for participant would also include the enthusiastic participation of all MS with dedication deemed to be a measure of success in and of itself.
- **Increased number of multi-actor and collaborative projects:** desires to engage multiple stakeholders and end-users in the SCAR were obvious in several postcard responses in keeping with the multi-actor framing. For some participants, this includes the involvement of farmers, advisors and stakeholders other than scientists at national and regional levels. For others, evidence of involving European partners from north, south, east and west in new collaborative projects and initiatives was paramount. Another desired to see the monitored and positive impact of projects on SMEs and businesses in all countries involved in the SCAR to prove real world impact and success of SCAR efforts. Caveats regarding biases, agendas and interests revealed in Breakout Activity 2a however must also be recognised here.
- **Enhanced dissemination and realisation of added value:** achieving and measuring greater impact of the SCAR was considered paramount by workshop participants with practical measures of success including the number of policy briefs produced for MS (and potentially beyond), the evidence of quotations from SCAR outputs in national programmes and policy impact at national and EC level (including greater impact of the SCAR on European common policies (e.g. CAP, CFP). These measures tied into the visibility and relevance of the SCAR across scales.

- **Evidence of alignment:** tracing the development and existence of common research agendas and prioritised themes was considered essential by participants to determine SCAR influence on R&I policy across Europe. Evidence of a systems approach is relevant here in keeping with the enhanced topic representation in the SCAR to encompass the entire bioeconomy.
- **Tracking the sustainable transition:** an overwhelming majority of participants looked at measures external to the SCAR as a sign of its success. Though difficult to prove cause and effect relationships, participants applauded SCAR 2027 for overseeing the transition from the fossil-based society to the biobased one with measures of success including reduced climate change effects, increased food security, positive biodiversity impacts, less waste, an infiltration of bioeconomy topics in everyday public thinking and increased publications and fora related to the circular bioeconomy. Social implications and measures regarding migrants, gross global happiness, animal welfare, fulfilled scientists and satisfied SCAR experts were also alluded to. Economic progress is also noted by others who foresee measuring a stronger EU economy because of the progress made by the SCAR and inclusion and support of less represented countries. Achieving sustainable development across regions and rural areas was thus attributed to the work of the SCAR by many, with particular emphasis on the strengthening of national bioeconomies across Europe (including the EU-13) and the solving of numerous societal challenges and global problems in its wake.

Other measures of success, highlighted by fewer participants include:

- SCAR as almost superfluous as MS and EC are convinced of collaboration needs: instruments and processes for SCAR research coordination and influence have been developed so that by 2027 they just monitor outcomes. SCAR has a clear mission and vision of strategy and may even be ultimately replaced by an overarching European Bioeconomy Council. The foundations provided by the SCAR represent an ultimate success in this regard
- Less threats to SCAR: the threat elements identified in the SWOT no longer apply to the SCAR by 2027
- Instruments for innovation driven by sector and social needs: mechanisms to tackle global challenges through R&I policy are evidenced and clear.

Overall, the visions, hopes and ambitions provide an optimistic conclusion to the SWOT analysis of the SCAR, highlighting the degree of ambition and change perceived possible in a ten-year timeframe and potential steps towards achieving them. The postcards thus provide further insight and motivation for the SCAR in carving out a more strategic, representative and impactful future.

SWOT of the SCAR: Summary Discussion & Implications for the Future

Overall, the phased research process enacted in this SWOT analysis of the SCAR indicated broad agreement between the opinions, hopes and perceptions of the 13 key informant interviewees and those of the 68 international SWOT workshop participants. The interactions and discussions enabled by the additional workshop phase nevertheless revealed some contradictions and more nuances regarding each SWOT element while also enabling SCAR stakeholders to debate, contradict and support one another in their assessment of the SCAR from unique and varied geographical backgrounds and professional affiliations. Completing this second phase of research was essential to engage significantly more SCAR stakeholders in the current assessment of the SCAR in advance of any changes made to its structure, organisation, functions and/or communications in the name of strengthening its strategic advice capabilities in the evolving bioeconomy R&I landscape.

Representing a key portion of the stakeholders who will be impacted by any decisions or actions taken as result of this SWOT analysis and the wider CASA CSA, this aspect of stakeholder inclusivity is firmly in keeping with principles of good governance (Graham et al., 2003; Papadopoulos, 2007; Devaney, 2016; Devaney et al., 2017) and principles of responsible research innovation (Von Schomberg, 2013) to accurately serve the community under investigation. While a significant and important depth of knowledge, expertise and experience was obtained in the Phase I bioeconomy R&I policy review and the Phase II key informant interviews, this was substantially complemented by the Phase III SWOT workshop that allowed for a greater diversity and breadth of opinions, lived experiences and reactions to be obtained.

Overall, while it can be seen that even though the majority of workshop participants confirmed interviewee results and approved the strengths identified for the SCAR, some questions remained regarding the precise meaning of terms and their prevalence in the SCAR. As the priority ranking exercise and associated discussion revealed, most doubts were expressed regarding the absolute independence of the SCAR, the reality of its “flexible” structure and limitations associated with its structure under DG Research. Similarly commentary in Breakout Activity 1 regarding the “Broad Scope” of the SCAR revealed concerns that this element may represent a simultaneous weakness if it creates problems of fragmentation, difficulties in management and a need to focus priorities in the SCAR. This particular strength element thus interacts firmly with the opportunity element discussed by interviewees relating to streamlining the scope and focus of the SCAR and echoes calls for a reprioritisation exercise by the SCAR mentioned in workshop discussions. Overall, however, combining interview and workshop results it is evident that the knowledge exchange and research coordination benefits provided by the SCAR represent its key strengths, along with the people power behind the organisation i.e., these represent the priority strengths of the standing committee.

Concerning SCAR weaknesses, some slight differences were apparent between the weaknesses garnering support in Breakout Activity 1 (assessment by all 8 workshop groupings) and the priority ranking assigned in Breakout Activity 2a (detailed assessment by 2 groupings only). While the former exercise indicated highest levels of agreement regarding visibility and representativeness limitations in the SCAR, it is evident that the more focused discussion on weaknesses facilitated by Breakout Activity 2a led to workshop participants connecting and relating elements rather than viewing them in a hierarchical ordering. As a result, issues around SCAR visibility, inconsistencies in political commitment and lessening policy impact were particularly interconnected by workshop participants with perceived overlaps and inefficiencies in SCAR structure deemed to be at the root of many of these issues. This level of joined-up thinking provides opportunity to explore potential solutions for one SCAR weakness that may cascade and help to improve others ((for example, by enhancing SCAR’s communications, internal administration (e.g. relating to organisation and management of meetings) and policy engagement, improvements in representativeness and policy impact may be achieved)). Interestingly, despite the high levels of agreement regarding limited country representativeness in Breakout Activity 1 (and indeed continuous reference to this failure to include newer member states in the SCAR in key informant interviews, other CASA work packages (te Boekhorst, 2017) and SCAR reflection papers (e.g. SCAR, 2015)), issues of country representativeness did not dominate weakness priority rankings or discussions in the SWOT workshop. This suggests a lesser importance attributed to this issue for the international delegates in

attendance, with more fundamental structural issues with the SCAR perceived of higher priority at present. Indeed, reflective of the possibility for cascading solutions, there is potential also that addressing some of the four primary weaknesses of the SCAR may also have a knock-on effect in improving country representativeness should issues around SCAR visibility, political commitment, policy impact and structural inefficiencies first be addressed. Indeed, addressing these weaknesses first would inevitably create a more powerful, impactful and discernible SCAR whereby engagement by currently low participating but “*high potential countries*” (SWG 1 interviewee) may be easier to achieve. Thus, viewing the interrelated tendencies not only across but within SWOT categories may be beneficial for more holistic SCAR strategy development and improvement.

Meanwhile, similar to the key informant interview phase, a number of questions, caveats and conditions were highlighted by workshop participants related to the pursuit of any of the proposed SCAR opportunities to arise from changing external contexts. Compared to the key informant interviewees, this included, for example, an outright dismissal of increasing the role of sub-national actors in the SCAR (at least formally) and wariness of increasing multi-actor framing in the everyday business of the standing committee. Opportunities for global influence were also more readily translated to incorporate opportunities for global ‘relevance’ in the workshop, while increased interaction with various DGs was viewed more positively overall compared to some wary perceptions obtained in key informant interviews. Thus, as with the key informants, varying opinions also existed in the SWOT workshop regarding each opportunity element with no clear-cut pathway identified for future success but further careful consideration of each proposed option provided. Fundamentally, consideration of opportunity areas relates back to a need for a reflection of the SCAR as to its role, mission, purpose and mandate as well as the scales at which it wishes (and has the capacity and reception) to exert influence. Conduction of a “*reprioritisation*” exercise in the SCAR as suggested by some workshop participants again holds promise here, with potential for multi-actor and stakeholder engagement on this matter (perhaps even incorporating aspects of “*citizen science*” as suggested in the key informant interviews to obtain views of scientists, “*farmers and ordinary citizens what that they would like to see in 2050 or 2030*” (SCAR Foresight 2) albeit with a level of consciousness regarding participant bias, interests and agendas). The opportunity areas thus presented should nevertheless be viewed as holding promise to address a number of priority SCAR weaknesses identified by this SWOT analysis (for example, related to SCAR visibility, impact, structural inefficiencies and political commitment) while also capitalising on some of its key strengths (including for instance, its knowledge exchange and research coordination capabilities as well as the dedication of SCAR participants).

Finally, and perhaps unexpectedly, the SWOT workshop analysis revealed distinct levels of positivity and resilience associated with many of the external threats to the SCAR. Indeed, for many workshop participants some threats doubled up as opportunities (for example, related to the challenge of multi-disciplinarity), while others were deemed irrelevant to the standing committee scale and perhaps more impactful at MS or EU levels (for example, related to the differing definition of the bioeconomy and the impact of geopolitical tensions). In particular, it was observed that where threats were thought to be manageable, this lessened the severity of their potential impact in participants’ minds. Making several threats more controllable in the future, workshop discussion thus linked strongly with other SWOT quadrants reflecting desires to again overcome priority SCAR weaknesses related to structural inefficiencies, political impact, lack of visibility and impact and to leverage existing SCAR strengths such as its knowledge exchange capabilities as a connecting force between member states and high levels of expertise evident in its dedicated range of participant profile. Thus, given the solutions-orientated approach adopted by workshop participants, the only remaining insurmountable/significant threats to the SCAR, with widespread group consensus in Breakout Activity 1 and relative consensus in Breakout Activity 2a, related to the need for the SCAR to maintain relevance in the growing complexity of bioeconomy actors, human capital vulnerabilities associated with staff turnover, cutbacks and dedication and continued differences in member state research systems and supports across the EU. Thus, as with the other SWOT categories, these three elements can be considered as priority threats for the SCAR, representing particular challenges to be aware of, and requiring the design of interventions where necessary, in future SCAR strategy development.

Combining report insights, Figure 9 summarises the priority strengths, weaknesses, opportunities and threats of the SCAR, portrayed in an interconnected diagram that represents the levels of interaction, interdependence and inter-changeability of the four SWOT quadrants.

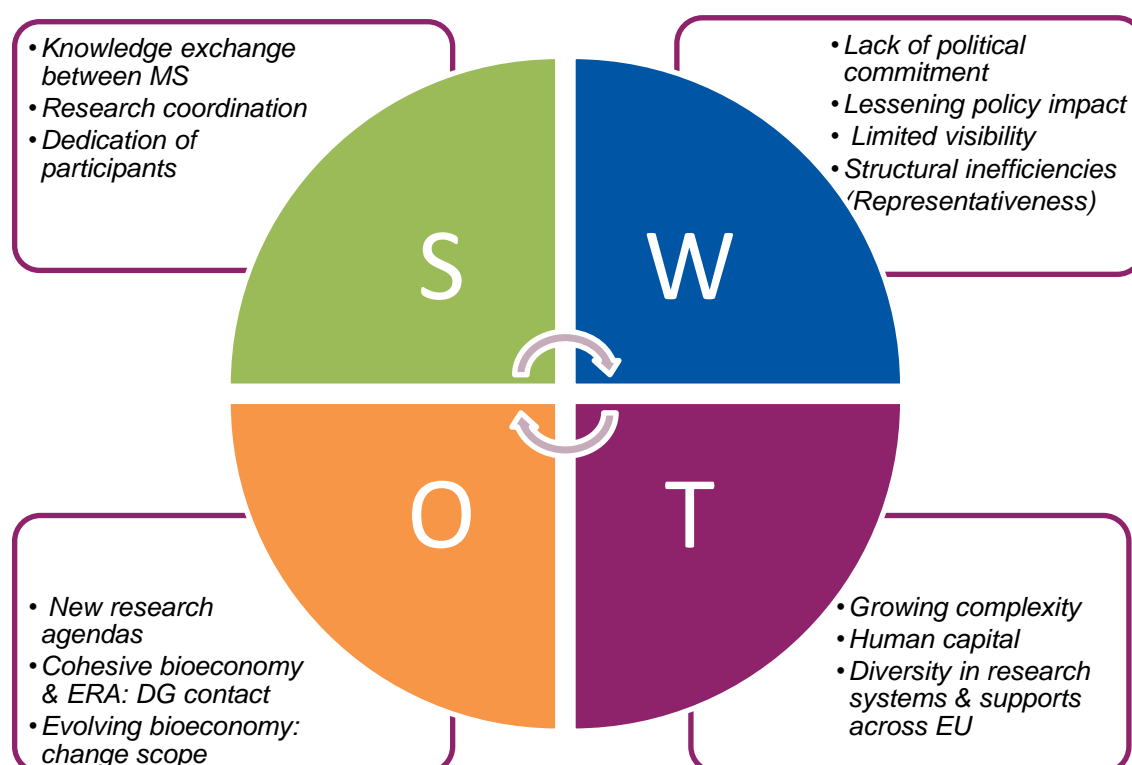


Figure 9: SWOT of the SCAR: summary of priority areas

Overall, adopting the phased research approach and presentation of SWOT analysis results in this way indicates the potential 'near-wins' for the SCAR as well as some of the more immediate barriers to change that the SCAR may encounter in implementing any of the resultant recommendations or decisions in the future. The visions and 'next steps' identified in the Postcards from the Future exercise further provide concrete ambitions, ideas and actions for the development of the SCAR towards 2027. After all, the implementation of results in planning decisions and strategy development is the ultimate aim of any SWOT analysis (Dyson, 2004), with the opportunity now presented for the SCAR Plenary, Steering Group, Strategic and Collaborative Working Groups and Foresight Group to critically reflect on the results and to incorporate relevant insights into future decision-making and action-taking.

Conclusion

Efforts were made to ensure as inclusive and broad a range of stakeholders as possible in the analysis of the SWOT of the SCAR. However, it is important to note that the research carried out with SCAR Steering Group, Foresight, SWG, CWG, JPI and EC and national delegates, while extensive is not representative of their wider populations. Thus, generalisations cannot be made that the views held by the participants will apply to all SCAR stakeholders. However, this SWOT of the SCAR represents an important first step in the ongoing reflective process related to the current status, structure, impact and functionalities of the SCAR in a bid to strengthen its strategic advice capabilities and impact in the future. The SWOT analysis provides part of a much needed evidence-base for the development of further recommendations as to how the SCAR might adapt to improve its functions, impact and activities in the future, to be taken forward by both other CASA tasks as a foundational report and directly by the SCAR across output, implementation and decision-making tiers. Presenting the diversity and range of opinions that exist, this report provides an insight into the range of attitudes and feelings that stakeholders have regarding the present and future SCAR, enabling further understanding of the different perspectives across professional affiliations and uncovering the motivations and factors that underpin their beliefs. This report thus establishes the state of play 'plus' for the SCAR, identifying priority areas and SWOT nuances that can be taken forward for improved SCAR structure, activities and impact.

The rationale for stakeholder engagement in decision-making is based on three broad sets of arguments which Fiorino (1990) termed as normative, instrumental, and substantive. The normative argument proposes that engagement ensures transparency and democracy in the decision-making process. The instrumental argument proposes that by involving the stakeholder in decision-making, there will be greater credibility and legitimacy in the resultant decisions, and therefore, increased support for decisions and increased trust in organisations. Finally, the substantive argument proposes that engagement will ultimately generate better quality outcomes and decisions, given that the lived experiences and knowledge of end-users and those on the 'front line' will be accounted for. A stakeholder consultation should thus not be viewed as a form of tokenism or a tick-box exercise, nor is involvement an end in itself (Rowe & Frewer, 2000). The dialogue undertaken with stakeholders needs to be used to meaningful effect:

"All too often, results from public engagement activities are left to gather dust on a shelf rather than being used to make a difference" (Anderson et al., 2013, p2)

The insights outlined in this deliverable can now be brought forward to the next phase of SCAR strategy development, support and improvement where concrete actions and decisions can be made with due consideration of the views of a wide range of its stakeholders. Above all, this inclusive SWOT analysis has allowed the SCAR to listen to and understand its diversity of stakeholders, enabling more evidence-based and inclusive decision-making for the future.

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