



CASA

Common Agricultural
and wider bioeconomy
reSearch Agenda

Representation and inclusion in SCAR

Task 1.1 Analysis of the key factors of
involvement and representativeness



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Written by: Dorri te Boekhorst

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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0. EXECUTIVE SUMMARY

The Standing Committee on Agricultural Research (SCAR) coordinates agricultural research in the broader bioeconomy remit between European Member States and associate countries. It acts as a platform for them to exchange on research priorities and demands, and has an advisory function to both European Commission and the member states. One of the main challenges of SCAR, published in its 'Reflection Paper on the Role of the Standing Committee on Agricultural Research' is representation and inclusion of SCAR members across its governance bodies and working groups. This study focused on the following questions: 1) How are countries represented in SCAR bodies; 2) What national institutions are usually involved (in terms of research domains, Ministries and funders); and 3) Are all areas in the bioeconomy sufficiently represented?

SCAR operates through a number of Strategic and Collaborative Working Groups (8) and the Foresight Group. All are overseen by the Steering Group, the 'daily management' body that reports to the Plenary; the official decision-making body. All working groups deal with specific topics of the bioeconomy. Countries participate in SCAR bodies for several reasons, of which the most valued one is the rather informal exchange and learning opportunity between its participants. SCAR allows for expression of national interests and priorities with regard to agricultural research, also to a degree in the Framework Programmes, and enables alignment of national and European policies and research. More general SCAR facilitates countries in a better understanding of how the European Union work, thus enhancing effective cooperation.

Country involvement in SCAR governance bodies and working groups

There is underrepresentation of the newer European Member States (the EU-13 countries) and associate countries in SCAR. This is widely recognised as undesirable, as SCAR functions in bringing together national priorities of the thirty-seven members of SCAR, but also because climatological differences across regions lead to specific priorities for countries in those regions. In addition to underrepresentation of countries, underrepresentation of *regions* is undesirable as well, as it may lead to priorities becoming less visible. Underrepresentation occurs in both working groups as well as in the governance bodies; the Steering Committee and Plenary. Underrepresentation in the latter is regarded as the most pressing challenge. Underrepresentation is both visible in formal participation levels of countries and in actual participation; whether people are present at meetings and have actual contributions. This study identifies three sets of participation challenges: i) resources restraints; ii) familiarity with the EU, national priorities and internal organisation, and iii) familiarity with SCAR and expectation management.

Resources restraints in terms of time, money, and people is a clear challenge for all participating countries, that forces to prioritise participation to those working groups that deal with topics of national priority. Negating such restraints is less clear, as suggested options are not straightforward and could even have adverse effects. Reducing the number of meetings or use telecommunication tools may be more time-efficient, they also decrease informal

exchange capacity. Compensating travel costs could attract participants without a strong national incentive, and could have effects on the independent position SCAR has as a member-state driven initiative instead of an EC body. Organising meetings outside of Brussels has been shown to be effective, but may affect the strong participation of EC delegates.

The **relative unfamiliarity that newcomers may still have with the European Union and its governance mechanisms** is a less clear-cut challenge, especially where it involves prioritising and organisation at the national levels. Return on investment in European cooperation is a long-term process that requires substantial attention for both transnational cooperation and for creating structures that can coordinate at the national level. It requires a national strategic view on what the value of cooperation is for a country in both policy influence as well as cash return on investment from large European funding programmes such as the Framework Programmes. It also needs a European environment that allows countries to catch up with the front-runners in European cooperation at both policy and scientific levels.

SCAR could benefit from more awareness and visibility of its work and the impact of that work at both national and European level. In order to improve this, the timing of products (e.g. policy advices) is essential as is the need to get and keep the right people participating in SCAR. Strengthening the working groups in their activities is important in this respect. New participants in SCAR can benefit from a learning environment or mentoring system that capitalises on the experience of their colleagues, thus supporting more quick and effective participation and reduction of disappointment due to unrealistic expectations.

Organisational representation, participants roles and remit representation

Most policy participants in SCAR are linked to the national Ministry that oversees agriculture. Though not surprising, this raises some concerns as the broadened bioeconomy remit also touches upon policy areas that are handled by different Ministries. Participation of EC staff in the different working groups is limited to mainly DG RTD and DG AGRI, raising similar concerns. National developments such as drafting Bioeconomy strategies can provide opportunities to widen participation to more Ministries. Coordinating this at the national level could happen through 'mirror groups' or inter-Ministerial platforms.

There is general consent that Plenary and Steering Group members should be policy makers or mandated delegates. The various working groups include other roles for participants. On average about a third of the participants are experts and in general this is seen as satisfactory. There is discussion about stakeholder involvement because this (is argued) increases viewpoints and the out-of-the-box thinking capacity of the working groups. Such inclusion of stakeholders could be arranged as observers.

The working groups cover the bioeconomy remit sufficiently, either in their respective mandates or through interlinkages with each other. There is some concern whether cross-cutting issues get the attention they need, and if there is sufficient attention for specialised topics. However, scarce resources limits the capacity to increase the number of working groups. This points towards a more clear demarcation of SCAR responsibilities and other initiatives in the public-to-public landscape that work on closely related topics.

1. INTRODUCTION

The Standing Committee on Agricultural research has a long history dating back from 1974. Its purpose was -and is- to enhance coordination between European Member States on agricultural research. After a period of two decades in which it was sleeping, in 2005 its mandate was renewed and it became a valuable platform for Member States to exchange on agricultural research priorities and demands and act as advisory body to the European Commission and its Member States (renewed mandate, 2005).

In 2015, SCAR published a '*Reflection Paper on the Role of the Standing Committee on Agricultural Research*' (SCAR, 2015a), addressing five challenges that it needed to deal with in order to remain an effective player in a growing complex landscape (box 1).

Box 1: Five challenges for SCAR.

1. **Markers of change:** addressing the role SCAR has in relation to new strategies published by the European Commission (e.g. Bioeconomy Strategy), emerging new issues such as food security, food trust, the new H2020 with its emphasis on job, growth and innovation, new instruments and initiatives like the Joint Programming Initiatives (JPI) and the Knowledge and Innovation Communities (KIC) raised under the EIT, that operate in SCAR's remit;
2. **Member State representation and inclusion:** the widening of SCARs remit to the wider bioeconomy has positioned SCAR as a player with a unique overview of the broad research and innovation landscape. However, this has also raised concerns of the capacity and interest of members to partake in working groups. Especially the inclusion of newer Member States or Candidates is regarded as difficult. Apart from this, questions were raised on how to bridge gaps between the national ministries that are operating in the SCAR remit.
3. **Alignment of national research programmes:** this has been described by the GPC as key for successful joint programming of research activities. With the evolved public-to-public partnerships' landscape (P2P), SCAR could provide inspiration, learning and exchange on how to approach the joint programming process. SCAR has shown its success in establishing ERA-NETs (mainly under FP6 and FP7) from dedicated Collaborative Working groups. Self-sustainability of the ERA-NETs and JPI's remains an issue.
4. **Transparency, communication and outreach:** Much of SCARs achievements are not very visible. The existence of ERA-NETs is not often related to SCAR in communications. Influence on policies is not clearly visible or communicated. In order to open up results to end-users, SCAR wishes to have its communication tools improved. Also cooperation with international partners could benefit from consorted joint actions;
5. **Resources:** SCAR is operating on a voluntary basis. This means in practice the EC funds travel and sustenance (T&S) costs for the Plenary Members and hosts Plenary and Steering Group meetings. Dedicated secretariat support from the EC also available. SCAR member countries pay T&S for participants of working groups and the Steering Group. This constellation particularly affects small countries with limited human and financial resources and creates a situation where participation may be affecting effectiveness choices, thus limiting a full representation of countries in SCAR working groups.

This study focuses on the second challenge: Member State representation and inclusion of SCAR members across its governance bodies and working groups. The study has been conducted in 2016 and 2017. It will form the basis for discussing representation and inclusion at the Tallinn Conference in December 2017 and is a deliverable for the SCAR coordination and

support action CASA, to be completed after the conference with the outcomes of the discussion sessions. The main topics that are analysed are: 1) How are countries involved in SCAR represented in the governance bodies and working groups; 2) What national institutions are usually involved in SCAR (in terms of research domains, Ministries and funders); and 3) Are all areas in the bioeconomy sufficiently represented in SCAR? Its purpose is to identify factors that enable and hinder representation of countries in SCAR bodies.

2. REPRESENTATION AND INCLUSION

To define and appreciate concepts of representation and inclusiveness in the context of SCAR, first the role SCAR in the European agricultural research area has to be set. In policy literature, both the concepts of representation and inclusion are studied extensively, but usually referring to individual people or a group of people. Taking this into account, such concepts still hold much sway when applied to states instead of (groups of) people. In the idea of a territorially defined nation-state; a notion that consist of a more or less contained national society, with a clearly demarcated territory (Zurn, 2000), such a nation state can be regarded as a group of people co-existing together under a same set of (national) laws and conventions¹.

2.1 What is representation and inclusion in the context of SCAR?

Representation is often framed in the context of ‘representation of a minority group’ in a social or political setting and as such is restricted to descriptive or demographic representation that implies that a functional group (work unit, team or governing body) should be a reflection of the society it operates or exists in. In classic democracy theory, representation is associated with the election of representatives in government. Both contexts differ from the context of this analysis. The review article of Urbinati (Urbinati & Warren, 2008) presents a principle that helps defining representation in the SCAR context. According to this review *“representation is an intrinsic part of what makes democracy possible”* and justifies distinction between generic norms of democracy and the institutions and practices through which the norms are realised. Democracy is conceived as *“any set of arrangements that instantiates the [democratic] principle that all affected by collective decisions should have an opportunity to influence the outcome”*.

Where representation is always coupled to the right of individuals to have this ‘opportunity to influence the outcome’ in democracy theory, a similar reasoning can be made for the nation states that make up the European Union and can be extended to the Associate Countries. Thus, ‘fair’ representation of nation states in SCAR is important because each one should have the opportunity to influence the outcome: a joint advice or recommendation, because it may affect them. Where the effect of a policy advice can be (very) indirect, giving advice on funding mechanisms, and priority themes that need to be addressed, can be seen as a more direct outcome, both can affect member states to a degree.

If representation is defined as the possibility of those affected to have an influence on the outcome, inclusion can be defined as the deliberate act of welcoming diversity and creating an environment in which all are able to thrive and succeed. Inclusion thus is about the actual steps that are taken to enable representation. Erman regards representation, equality and inclusion as three essential aspects of democracy (Erman, 2016).

¹The nation-state idea(l) is heavily contested in political sciences because of its oversimplification but is still used. Detailing critique at the nation-state concept goes beyond the scope of this report. For those interested: (Liu, Onar, & Woodward, 2014) reviews a more dynamic definition of state, (Bloemraad, Korteweg, & Yurdakul, 2008) offers further reading on citizenship and nation-states.

2.2 European governance and its Committees

Egeberg et al, state in their paper that “Committees are an essential part of the functioning of modern governance” and that they “play a crucial role in the daily operation of the European Union system of governance by providing expertise in policy developments and decision making by linking member states’ governments and administration with the EU level as well as by increasing the acceptance of European laws and programmes in the Member states” (Egeberg, Schaefer, & Trondal, 2003). While this paper focuses heavily on Council Committees, it can be applied to other Committees as well. Egeberg points at a two-way communication process where member states can help shape policy at the EU level, and in return, can increase public support and coherence at their national levels. It can be argued that the European Union can be characterized as a (unique) mode of governance, depending on the different policy areas that the European Union governs and what type of governance is predominant.

Borzel argues that in selected areas in the First Pillar (research and development), “the EU has no or very limited competencies and the influence of the supranational troika (Commission, Parliament and Court) is severely restricted”. She argues that in these areas a “new form of transgovernmental negotiation system or ‘state-centered multi-level governance’ has emerged, [...] in which national authorities co-ordinate their regulatory activities, although they still operate under some shadow of hierarchy [...] and are not necessarily controlled by their governments” (Borzel, 2010). In this line of reasoning, Commissions such as SCAR form part of the governance of the European Union, and as such are part of the democratic process. Then, by extension, representation of all involved or possibly affected individual nation states is a precondition.

2.3 Why are representation and inclusion important?

SCAR as a strategic advisory Committee towards the European Commission and participating Member States has been recognised as an important player in coordination of agricultural research (mechanisms) in Europe. As such, in its own rights, it merits involvement of the partners it represents in terms of functioning and legitimacy. Defining SCAR as a formal Committee to the European Commission and -as such- part of European governance adds to this, even when taking into account that SCAR does not formally decide since it has ‘only’ an advisory function. Apart from this, there is a sense that Europe will only work well when all members are working together in an atmosphere of trust, building relationships and acknowledging the different perspectives.

The matter of representation and inclusion gains importance as the European Research Area (ERA) and the efforts to improve it, increase. SCAR was established in an environment where the concept of the ERA had not been formulated. It was tasked with structuring and coordinating national research efforts and bring them in line with the aims of the Common Agricultural Policy (CAP). Since the inception of the ERA in 2000 (COM, 2000), and with the renewed mandate, SCAR became in an excellent position to be one of the ERA’s major structuring elements in the area of agricultural research alignment. The Committee is easily characterised as a public-to-public (P2P) cooperation that stimulates joint programming across member states and the European Commission. The renewed mandate enabled SCAR to give

advice to the EC and its broadened remit increased the width of SCAR advices to include the bioeconomy.

SCAR has shown to be able to align national priorities through a number of Collaborative Working Groups that have led to ERA-NETs, produced Foresight studies, performed mapping exercises and played an important role in conceiving the first Joint Programming Initiatives. Today, the ERA includes more P2P players, and the question of what roles each of them have is becoming more and more relevant.

3. STRUCTURE AND ROLE OF SCAR IN THE EUROPEAN BIOECONOMY RESEARCH LANDSCAPE

3.1 What is SCAR?

In 1974 the Standing Committee on Agricultural Research (SCAR) was established through a Regulation of the Council of the European Union (EU). The Committee was tasked with enhancing coordination of agricultural research and reported back to both the European Parliament and Council. The Regulation stipulated that such reports should contain information on the national organisation and developments of agricultural research, measures that were adopted under the Regulation and *“a forward study of developments which would be desirable in agricultural research in the Member States and in the coordination of that research at Community level, with reference to the aims of the common agricultural policy”* (EEC, 1974). SCAR was given a revised mandate by the Council in 2005 that included a provision to give advice to the Commission and Member States on the coordination of agricultural research in Europe. The European Commission’s Directorate-General for Research and Innovation (DG RTD) at this time took over Secretary responsibilities from the Agriculture Directorate-General (DG AGRI). The changing role of SCAR reflected the significant changes in the agricultural agenda over the years as well as the ambitions of the EU to shape the ERA. Today, SCAR has become a respected source of advice as well as a major driver for coordination of national research programmes on agriculture and the larger bioeconomy, has helped shape the beginnings of the ERA and continues to be an important platform for alignment of agricultural research.

3.2 SCAR members and organisation

At the conception time of SCAR, the EU consisted of nine members: Belgium, France, Germany, Italy, Luxembourg, The Netherlands, Denmark, Ireland and the UK. At present, SCAR represents thirty-seven countries from the EU Member States, Candidate and Associated Countries. The Plenary members usually are delegates from Ministries or Research Councils. In some cases, scientific experts are mandated by their national governments to the SCAR Plenary.

SCAR operates through a number of working groups that each have their own mandate and responsibilities. Each group reports to the Plenary meeting of the official delegates. The **SCAR Plenary meeting** (twice a year) brings together delegates from all EU Member States, candidate and associated Member States. The Plenary forms the governing body. It decides on the creation of dedicated working groups or any other initiative proposed by the Commission or the working groups. Draft policy papers from the working groups are discussed in the Plenary which then may decide on further actions. The Plenary meetings foremost provide a platform for discussions between the member countries and the European Commission to discuss on strategic direction and development of European research and innovation policies.

The **SCAR Steering Group** (SG) consists of the Plenary delegates and / or national officials nominated by the Plenary members. It is co-chaired by the European Commission and the EU Member State in the EU Presidency chair. Meeting on a regular basis (five to six times a year),

the SG plans the Plenary meetings, prepares discussion papers and documents up for debate and follows up on decisions made in the Plenary. The SG also supports the working groups and the establishment of new ones, is the overseeing body for progress in the individual working groups and Foresight process and serves as a platform for common reflection with other Member State driven initiatives such as the JPI's.

All working groups have EC staff actively involved. How chairs or co-chairs are appointed differs per Working Group. Membership is voluntary and attendance has to be funded through national sources. Though groups have a high level of autonomy in how they operate, each Strategic Working Group has specific Terms of Reference for a limited timeframe that needs to be approved by the Plenary. The Collaborative Working Groups have Terms of Reference, but no end-time to their mandate. They also prepare annual plans. In some cases, individual countries have made resources available to a group to support coordination efforts or expert input. Sometimes SCAR could decide to add an additional activity that does not fall into the scope or scale of one working group, or requires WGs to work together. In such instances, an ad-hoc working group or a task force may be put into place by the Plenary.

3.3 SCAR Working Groups

3.3.1 Foresight Group

The Foresight study is a separate task of SCAR and seen as one of its most important product. It is supported with separate resources from the European Commission through the Framework Programmes. The Foresight Group is currently formed by participants from Germany, Italy, France and Denmark. The group is formally tasked by the SCAR Plenary with horizon scanning through foresight studies. It is responsible for contracting experts that carry out the foresight activity, which can include reviewing other ongoing studies, scenario building and research prioritisation. The Steering Group is responsible for communication and dissemination activities of the outcomes. The working groups were involved in different steps of the previous Foresight process, starting with the call for experts and giving feedback at various stages of the drafting of the Foresight Study. Currently, the Fifth Foresight study is prepared.

3.3.2 Collaborative Working Groups

The Collaborative Working Groups (CWG) in SCAR exist since 2005. SCAR Collaborative Working Groups have been an important SCAR instrument since 2005. The members of Collaborative Working Groups usually are research funders that explore possible multilateral collaborations. The results of such groups often are agreements on common ways of working and the development of common research agenda's. Therefore, many of the CWGs have led to ERA-NETs. There are two Collaborative Working Groups currently active: Animal Health and Welfare, and Sustainable Animal Production.

3.3.2.1 Animal Health and Welfare

The Collaborative Working Group Animal Health and Welfare started in 2005 in the slipstream of the evolution of the STARIDAZ ERA-NET into the International Research Consortium Staridaz. It spiked the need for a more robust cooperation and asked for alignment between the European and the global animal health research perspectives. The groups' activities are in

close connection with relevant ERA-NETs (ANIHWA) and the Staridaz IRC and include a wide range of joint programming activities like mapping and foresight exercises, the formation of a joint Strategic Research Agenda and research prioritisation and alignment at the European and regional level. Participants furthermore engage in joint funding of collaborative projects and related activities such as call maintenance and enabling project and publication databases, financially supported by the partners. In addition, the group functions as advisory body towards the European Commission and the national governments with regard to Framework Programme topics and national programmes. The group is currently chaired by Italy, with an Austrian vice-chair, and has no end of its mandate. It is the only group that includes a member outside of SCAR (Russia).

3.3.2.2 Sustainable Animal Production

Closely interlinked with CWG AHW is the Collaborative Working Group Sustainable Animal Production formed after the 2013 Bioeconomy report (EC, 2013). Its goal is to *‘improve coordination and collaboration on research prioritization and procurement, with an holistic approach [...] to deliver the sustainable animal production research needs of the funding agencies and policy makers and the European livestock industry [...]’* ("A Proposal for A SAP CWG,"). Its goal is to *“consider all sectorial aspects [...] that will lead to a more sustainable animal production sector in the European Union”*. The group is currently chaired by Germany and has a vice-chair from Spain. There is no end of its mandate. The main outcome of the working group is the Sustainable Animal Production ERA-NET SusAn.

3.3.3 Strategic Working Groups

Rising from a later date are the Strategic Working Groups (SWG). The SGWs have been established as places to discuss strategic matters for which there is insufficient time or opportunity in the Plenary meetings. Such strategic matters usually cover broader issues and many groups focus on formulating research policy advice. There are six Strategic Working Groups currently active: agricultural knowledge and innovation systems (SWG AKIS), fisheries and aquaculture research (SWG SCARFISH), Bioeconomy (SWG BSW); a merger of the SCAR Biomass SWG and SCAR Biorefineries CWG, forestry research and innovation (SWG Forest), European Agricultural Research towards greater impact on global challenges (SCAR ARCH) and Food Systems (SCAR FOOD).

3.3.3.1 Agricultural Knowledge and Innovation Systems (SWG AKIS)

Agricultural Knowledge and Innovation Systems (AKIS) started as a Collaborative Working Group in 2010. The establishment of AKIS was driven by a set of questions posed upon SCAR, starting with the recommendation of the informal Council of the ministers of agriculture “[for SCAR to] *include questions of advisory services, education, training and innovation in their discussions*” (SCAR, 2015b). Under both the French (2008) and Swedish (2009) Presidency of the EU, the importance of a well-functioning knowledge triangle that included and integrated multiple knowledge systems, was stressed again and called for increased interaction between policy areas that up to then, were perceived as fragmented. In combination with requests for advice from the European Commission and attention in the Foresight reports, this led to the installation of AKIS, starting under French and Dutch co-chairs. Their first report “Agricultural Knowledge and Innovation Systems in Transition – a reflection paper” was published in 2012.

SCAR AKIS became a Strategic Working Group in 2014 after the launch of its third mandate and is currently working under its 4th Terms of Reference. AKIS has been instrumental in (co-)developing the European Innovation Platform (EIP) AGRI, conducted a Foresight, organises workshops and produces policy papers. Its focus under the current mandate is on *'all knowledge and innovations systems in the Bioeconomy, that stimulate research, knowledge generation and knowledge exchange, and innovation across the agri-food and biomass chains, from producer to consumer'* (SCAR Rolling Work plan, 2016, unpublished). The working group is currently co-chaired by France and Hungary.

3.3.3.2 Fisheries and aquaculture research (SWG FISH)

In 2012, the Strategic Working Group on Fisheries and Aquaculture Research was established with a view on supporting successful implementation of the Common Fisheries Policy 2012 and the development of Horizon 2020. The EC requested a Fish SWG to present its view and to develop its role as a provider of strategic advice to the member states and the Commission on future research needs. From its start, Fish clearly defined itself as policy-driven group, which close connections with the national Ministries defined its uniqueness in a landscape with other stakeholders and P2P players. Its first mandate laid out that it should offer *'strategic advice on the needed knowledge/science and technology and thus help preparing the knowledge basis for development of new strategies and new policies in the ministries of their respective member states and the EU'*. Therefore, the group should consist of representatives from the ministries of Fisheries and Aquaculture or have as close a contact to the ministries as possible (unpublished minutes). Fish includes in its work aspects of aquaculture developments, regionalisation, ecosystem approach, climate change, increasing demands for monitoring data and spatial planning. It was at that time also tasked with preparing a foresight. Better coordination of (declining) research funds and large infrastructures, more intelligent solutions. Its current mandate builds on this, with emphasis on *'climate change induced changes to fisheries, identifying potential gaps and most promising approaches to adaptive management of impacts in capture fisheries and aquaculture'* (SCAR Rolling Work plan, 2016, unpublished). In contrast to the other Strategic Working Groups, SCAR Fish SWG has no end of its current mandate. The chair rotates every 6 months.

3.3.3.4 Bioeconomy (BSW)

The Bioeconomy Strategic Working Group, initiated in 2012, discusses how renewable bio-resources can be sustainably produced for the bioeconomy. It covers topics relating to the production side of renewable biological resources, logistical questions, the biomass potential of different European regions, how much biomass is available and how much of that can be used. It addresses how the implementation of the Bioeconomy strategy impacts upon agriculture, forestry, fisheries and aquacultures, how it fosters new connections between well-established sectors and how this in turn might change these sectors and their sustainable and profitable operation in the future. The BSW also discusses more technical questions; such as those related to biorefineries, as well as strategic ones with respect to the relationship of the Bioeconomy policy to other policy areas (e.g., climate, water, food, forestry)². The group aims to oversee various initiatives within the bioeconomy and connects with stakeholders and other

² <https://www.scar-swg-sbgb.eu/>

fora such as the Bioeconomy panel and incorporates novel concepts like the circular economy. Under the current mandate the Bioeconomy working group focuses on delivering input to the revision of the Bioeconomy Strategy, the links between circular economy and bioeconomy and connections between the national Bioeconomy strategies and the European one. To this end, they published a policy brief on the future of the European bioeconomy recently (SCAR-BSW, 2017). The working group is currently operating under its third mandate that continues until December 2018 and is currently co-chaired by The Netherlands and Germany.

3.3.3.3 European Agricultural Research towards greater impact on global Challenges (SWG ARCH)

The Agricultural research towards greater impact on global challenges Strategic Working group (ARCH) was put in place in 2013 following two ERA-ARD networks. It was recognised that there was need for more structural cooperation in Europe on the topic of agricultural research for development (ARD). ARCH SWG was thus initiated as a joint effort between SCAR and the European Initiative for Agricultural Research for Development (EIARD); a permanent informal ARD policy coordination platform between the European Commission, Member States of the European Union, Switzerland and Norway. The working group strives to *'improve linkages between Agricultural Research and Agricultural Research for Development aiming at identifying and working towards ways to increase the contribution of European Agricultural Research investments to the solution of global challenges such as food security and climate change'*³. ARCH has a policy advisory and agenda setting role. Its main products consists of policy briefs and dedicated events such as the latest pre-event on *FOOD2030: Consumers and Global Food Systems*, together with the SCAR SWGs AKIS and Food Systems and EC DGs RTD, AGRI and DEVCO. The current mandate is extended until December 2017. The group is at present co-chaired by France and Germany.

3.3.3.5 Forestry research and innovation (SWG FOREST)

In 2014, the Strategic Working Group on Forestry was established. After its first mandate, in 2016 the group refocused its mandate. Its aim is to *'strengthen coordination of national research and innovation between EU, member states and stakeholders for the development of a coherent and ambitious EU forest based research area'* that is able to meet the challenges of forest adaptation to, and mitigation of climate changes. Its mandate further includes increasing the sustainability and competitiveness of the EU's forest-based sector by sustainably providing biomass and products for a growing bio-based economy, and other ecosystem services for societal wellbeing. The group provides strategic intelligence through mapping national R&I policies or strategies and aims to contribute to the implantation of the EU Forest Strategy and Bioeconomy Strategy Review. The group is currently co-chaired by France and Greece. Its current mandate ends at the end of 2019.

3.3.3.6 Food Systems (SWG FOOD)

The Strategic Working Group Food Systems was initiated in 2016 at the specific request of the European Commission to strengthen coordination on this theme and support its development

³ <https://www.ard-europe.org/arch/>

of the Food 2030 initiative. Food SWG is expected to 'adopt a wide Food Systems approach' similar to the one in FOOD 2030 and include the entire 'value chain' from inputs to consumer intake, - and back. Linking up with the work of the other relevant working groups was expressed explicitly at the first meeting, which included representatives from other relevant initiatives. Its objective is to provide strategic intelligence which includes mapping of existing and developing national research and innovation policies or strategies related to food and food nutrition and security (FNS). Food Systems is looking at the food chain in its widest definition, including packaging, distribution and retailing. Explicit attention is asked for consumers and consumers' needs. Thus, the group aims to support the FOOD 2030 policy framework as well as the Bioeconomy Strategy review, and in the broader context the 2015 Sustainable Development Goals and COP21 commitments. The group is chaired by France and its current mandate ends in 2018.

4. METHODOLOGY

4.1 Topic selection and subset description

Three major topics were analysed: country representation, organisational representation and scientific domain representation. Participants' roles were also analysed to some extent. Data was analysed in two subsets. Countries participating in SCAR were grouped either in political association with the EU or geographical distribution.

4.1.1 Subset description

Political association

Countries can relate in several ways to the European Union. They can be part of it or not. In case there is no formal membership of the EU, countries can have a candidate status, be associated with the EU or have any other kind of relation. All countries that participate in SCAR and belong to the latter group are recognised as associate countries (AC) under the Framework Programme regulations (EC)⁴. This group is referred to in analyses as 'AC'. Members of the EU that participate in SCAR are grouped as 'EU-15'; countries that have been part of the EU for a long time, or 'EU-13'; countries that gained EU membership in 2004 or later. Russia, member of the Animal Health and Welfare Collaborative Working Group, is left out of the analyses because this country is not a member country of SCAR.

Research and Innovation Performance

Another way of defining two distinct groups is in terms of research and innovation performance⁵. The H2020 Spreading Excellence and Widening Participation Work Programme used the 2013 Composite indicator of Research Excellence⁶ (with a corrective threshold of 70% of the EU average) to select "Low R&I performing" or "Widening" countries, as they fall behind in R&I performance compared to the other EU member states and associate countries⁷. In this report we refer to those countries as lower performing countries (LPC) and to the others as higher performing countries.

Geographical distribution

Another way to group the data is by assigning a regional distribution to the countries that participate in SCAR. As SCAR deals with agricultural research, regional division, and hence climatological differences between regions may affect priorities between countries from different geographical regions. A second rationale for this choice lies in the practical travelling distance to Brussels. As this city hosts most of the SCAR meetings, travel distances, time efforts and costs may play a role in participation rates. The geographical regions are according to the United Nations Statistic Division⁸.

⁴All five candidate EU-member countries (Albania, Montenegro, Macedonia, Serbia, Turkey) are part of SCAR. Of the eleven other Associated Countries under H2020, four are SCAR members (Switzerland, Iceland, Israel, Norway).

⁵H2020 Spreading Excellence and Widening Participation Work programme 2018-2020

⁶http://ec.europa.eu/research/innovation-union/pdf/state-of-the-union/2012/innovation_union_progress_at_country_level_2013.pdf

⁷LPC Member States: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia and Slovenia. LPC Associated Countries: Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Former Yugoslav Republic of Macedonia, Georgia, Moldova, Montenegro, Serbia, Tunisia, Turkey and Ukraine.

⁸ <https://unstats.un.org/unsd/methodology/m49/>

Box 2: subsets of countries

Political association

EU-15: AT, BE, DE, DK, EL, ES, FI, FR, IE, IT, LU, NL, PT, SE, UK

EU-13: BG, CY, CZ, EE, HR, HU, LT, LV, MT, PL, RO, SK, SI

AC: AL, CH, IL, IS, ME, MK, NO, RS, TR

OTHER: RU

R&I performance

LPC: AL, BG, CY, CZ, EE, HR, HU, LV, LT, LU, ME, MK, MT, PL, PT, RO, RS, SK, SI, TR

HPC: AT, BE, CH, DE, DK, EL, ES, FI, FR, IE, IL, IS, IT, NL, NO, SE, UK

Geographical distribution

Northern Europe: DK, EE, FI, IE, IS, LT, LV, NO, SE, UK

Western Europe: AT, BE, CH, DE, FR, LU, NL

Eastern Europe: BG, CZ, HU, PL, RO, SK

Southern-Europe: EL, ES, IT, HR, ME, MK, MT, PT, RS, SI

Non-European: CY, IL, TR

4.1.2 Desk study - data collection and analysis

The basis of the study is formed by a desk study looking at theoretical and actual participation of (Working Group and Steering Group) members. To this end, all WG chairs or co-chairs and the European Commission's SCAR secretary were asked to share their participants lists of the past years. These lists were used to determine theoretical participation and in some cases actual (some lists have actual information on whether participants indeed joined a meeting). Most groups responded to this request. Some groups sent in data across several years, allowing to analyse the development of representation to some extent. Data sets range from 2013 to 2017. All groups have data sets for 2016. Thus, this year forms the base-line for the analysis. An important restriction of the analyses is that for some groups it is not always clear whether the lists are distribution lists (and include a broader set of people beyond actual participants of the working groups) and others are participants lists. In case of doubt, either the working group chairs were contacted or the actual attending participants were included in the analysis.

The participants lists also reveals information on what the role of a participant is in a group. We defined four major roles, and in addition, allowed for a combination of roles. The main roles are: Policy representatives (P), Funders (F), Experts (E) and Stakeholders (S). Policy representatives usually are delegates from a national Ministry or individuals that are specifically mandated to participate by a national Ministry. Funders usually are employees of a national funding organisation, but may also be employed at a national Ministry (which usually is a reason to mark them as FP). Experts typically are researchers that are involved in groups because of their specific expertise. They may participate in working groups on their personal title (because of the relevance to their own work) or sent as a country representative. In the latter case, there is a formal appointment (and sometimes mandate) from a national Ministry or a national funding organisation. Stakeholders are typically spokespersons of a group that has relevance or interest in the specific topic. These can be P2P or Framework project representatives, or specific stakeholder groups.

Data analysis was done for each group separately. For each year available data was clustered and an overall analysis was done for average working group participation in 2016. Annual data was also clustered for each working group. Correlation between average data on participation was analysed against Eurostat data⁹ on population size, gross domestic product (GDP), gross expenditure on research and development (GERD) and number of scientist (in FTE). Correlation between average participation and Horizon 2020 contributions was analysed against data from the mid-term H2020 review. Correlation between participation and P2P involvement was analysed against data collected in the PLATFORM database¹⁰. Statistical analyses were performed with the data analyses tools in Microsoft Excel.

4.1.3 Interviews - data collection and analysis

In addition to the data retrieved from the participants lists, a series of interviews were conducted. The interviews were semi-structured (see annex 7.3) per subset of participants in SCAR. Interviews were held either face to face, by phone or by skype. In some instances, written input was received. Specific subsets of questions were targeted at the following cohorts: 1) all Working Group (co-)chairs; 2) selected Steering Group members; 3) selected Plenary delegates and 4) selected EC staff. All interviewees were allowed to read the interview transcript and make corrections and additions. Additional information was collected at the Task Force meeting in Bonn (9-10 March 2017) and through feedback from SCAR participants. The qualitative information retrieved from the interviews were used to 1) correct mistakes in the quantitative data; 2) gather additional information on the underlying reasons for (lack of) representation or inclusion; 3) complement a general frame of operation of the SCAR Groups and 4) gather opinions on ways to improve representation and inclusion.

⁹ <http://ec.europa.eu/eurostat/data/database>

¹⁰ <http://www.era-platform.eu/p2p-networks/platform-db/>

5. RESULTS DESK STUDY

5.1 Country representation

SCAR currently consists of thirty-seven countries. Figures 1a, b and c show their proportion according to political association, R&I performance level and geographical distribution. EU-15 countries make up 41%, EU-13 countries 35% and the nine associated countries account for 24% (figure 1a). In terms of R&I performance, 54% are Low Performing Countries, while the remaining 46% are Higher Performing Countries (figure 1b).

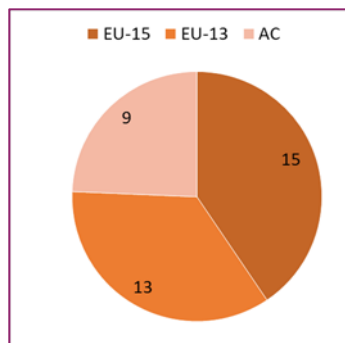


Figure 1a: Number and proportion of countries in SCAR according to their political association. EU-15 (15 of 15), EU-13 (13 of 13), AC (9 of 16).

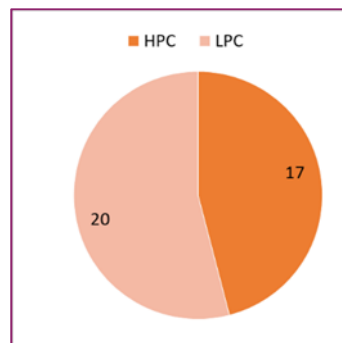


Figure 1b: Number and proportion of Lower Performing and Higher Performing Countries in SCAR.

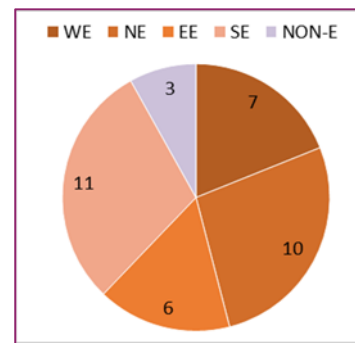


Figure 1c: Number and proportion of countries in SCAR according to their geographical distribution.

SCAR includes seven Western European countries (19%), ten Northern European (27%), six Eastern European (16%), eleven Southern European (30%) and three non-European countries (8%) (figure 1c).

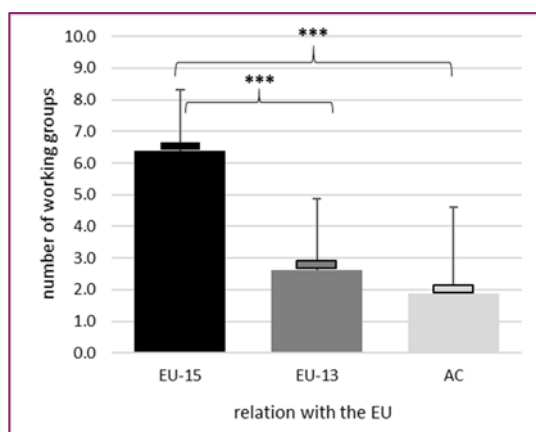


Figure 2a: Average country participation for EU-15 (6.4), EU-13 (2.6) and AC countries (1.9) in the eight working groups of SCAR. *** $p < 0.0001$. Bars above column show average participation in 2017 for EU-15 (6.5), EU-13 (2.8) and AC (2.0).

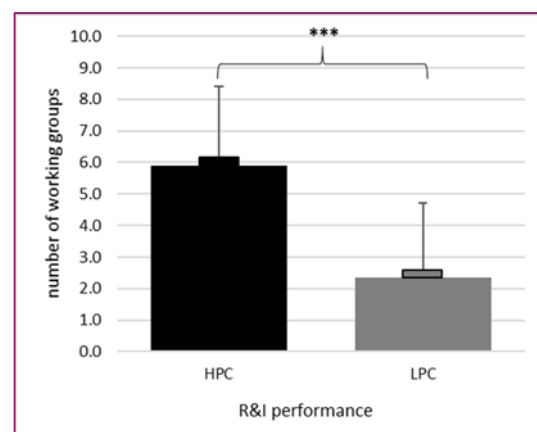
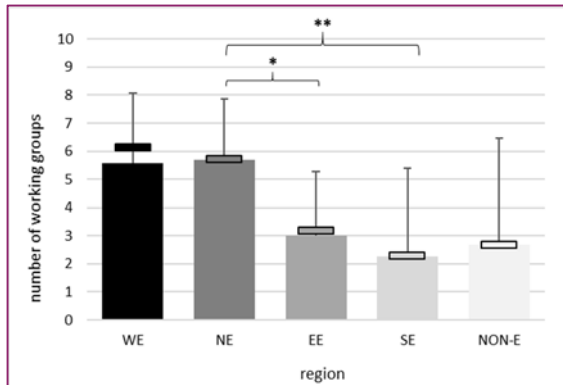


Figure 2b: Average country participation for Higher Performing Countries (HPC) (5.9) and Lower Performing Countries (LPC) (2.4) in the eight working groups of SCAR. *** $p < 0.0001$. Bars above column show average participation in 2017 for HPC (6.1) and LPC (2.5).



2016	WE	NE	EE	SE	NO-E
EU-15	6.17	7.20	none	5.75	none
EU-13	none	4.76	3.00	0.67	0.00
AC	2.00	3.50	none	0.00	4.00

Figure 2c: Average country participation per region in the eight working groups of SCAR. Significant differences were found between NE – EE countries ($p < 0.05$) and between NE – SE countries ($p < 0.01$). Bars above column show average participation in 2017. The table shows more detailed country participation per region in 2016. None = no countries from that group. Bars above column show average participation in 2017.

On average, in 2016, each country was formally part of four working groups of SCAR. The desk study results confirm the perceived underrepresentation (qualitative analyses) of both EU-13 and AC countries in SCAR bodies as well as underrepresentation of the Eastern-European and Southern-European regions (figures 2a and 2c) compared to northern Europe.

Within regions, average participation though varies greatly between countries (figure 2c). The relative high contribution of countries in the NON-E group is solely contributed to the high participation of Turkey. Also when looking at Lower Performing Countries, these are underrepresented compared to Higher Performing Countries (figure 2b).

5.1.1 Plenary and Steering Group representation

The Steering Group meetings are open to all plenary members. The invitation for the SG is sent out to both plenary members of SCAR and appointed (dedicated) SG members. However, there is no ‘formal’ list of Steering Group participants. This analyses is based on limited available data, but with the remark that *actual* participation in SG meetings is probably higher.

In 2016, 18 countries had appointed representatives for the SG (figures 3a and 3b) listed. This is half of all countries in SCAR Plenary. Of those, 11 were from EU-15 countries (61%), 5 from EU-13 countries (28%) and 2 from AC (11%). The EU-15 share is larger in the Steering Group, compared to SCAR composition. The share of both AC and EU-13 is lower.

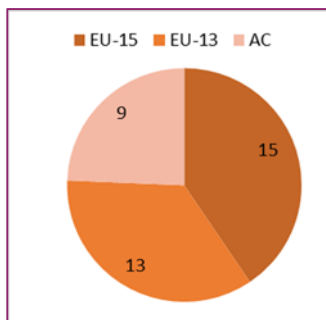


Figure 3a: Number of SCAR countries according to political association.

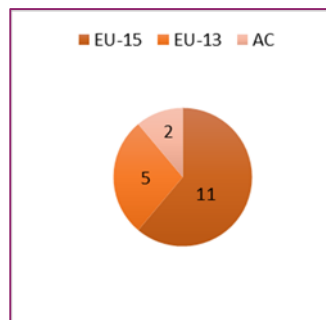


Figure 3b: Participation in the SG in 2016 according to political association.

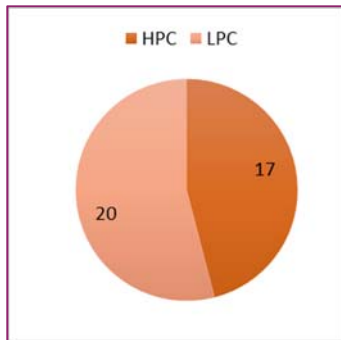


Figure 4a: SCAR countries according to R&I performance. HPC = Higher Performing Countries, LPC = Lower Performing Countries.

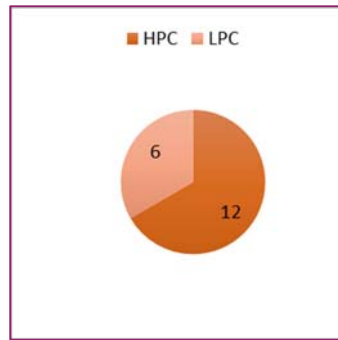


Figure 4b: Participation in the SG in 2016 according to R&I performance. HPC = Higher Performing Countries, LPC = Lower Performing Countries.

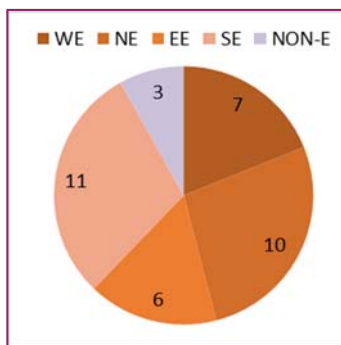


Figure 5a: SCAR countries per region.



Figure 5b: participation in the SG per region in 2016.

The same is visible looking at R&I performance; appointment to the SG is not in line with SCAR country numbers. Higher Performing Countries have appointed more SG representatives than to be expected based on proportion in SCAR (54% in SCAR compared to 33% in the SG). Also the geographical distribution (figures 5a and 5b) in the SG differs from SCAR composition: 5 Western European countries (28%), 6 Northern European (33%), 3 Eastern European (17%), 3 Southern European (17%) and 1 non-European countries (6%). The largest disparities between the regional distribution of SCAR and the SG are visible in the combined Northwest-European shares: 36% in SCAR and 61% in the SG respectively; and Southern European: 30% and 17% respectively.

5.1.2 Working Group representation

In 2016 on average, a SCAR working group has 18 out of the 37 SCAR countries listed as participant (average across all working groups). Based on the proportion in SCAR, EU-15 countries should make up 40.5% of the participants, EU-13 countries, 35.1% and Associated Countries 24.3%. Reality is that EU-15 countries have a share of 63.7%, EU-13 countries 24.0% and Associated Countries 12.3%.



Figure 6a: Working Group participation in 2016 along political association. For reference, the participation in the 2014 Biorefineries CWG is included.

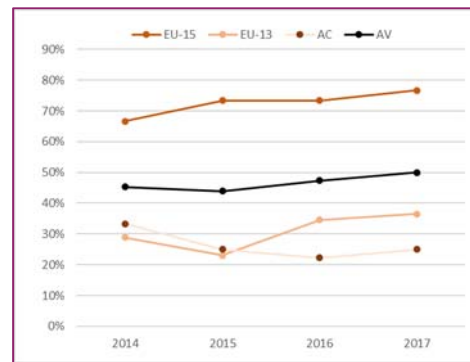


Figure 6b: Average Working Group participation in 2014-2017 for AKIS, FISH, BE and ARCH along political association. AV = average participation of all countries.

Table 1: 2016 participation in number of working groups across political association.

WG participation	0	1	2	3	4	5	6	7	8
EU-15	-	-	-	2	2	-	1	4	6
EU-13	2	4	1	1	3	-	1	1	-
AC	4	2	1	-	-	-	1	1	-

Figure 6a shows distribution of participants across the various WGs in 2016, grouped based on political association. The figure shows clearly the underrepresentation of both EU-13 and AC countries. Forestry, ARCH and AHW have the least EU-13 and AC countries participating. Longer-term analysis of participation (figure 6b) is only possible for four working groups, where data was available going back to 2014 (SWG AKIS, SWG FISH, SWG BIOEC and SWG ARCH). This analysis shows slight improvement in both overall and EU-13 representation, but also a decline in AC representation. Annex 7.4 details available data per working group. Table 1 shows that all EU-15 countries participate in at least 3 working groups; two-third participate in almost all. Participation in working groups for EU-13 and AC is scarcely in more than 4 groups.

5.2 Organisational representation and participants roles

The SCAR Plenary consists of the national delegates of the SCAR countries. The Plenary is the formal decision-making body of SCAR and as such, it is expected that the national delegates are mostly from the national Ministries as this body has to be able to make decisions. Typically, there is an official delegate and a substitute. With respect to the organisation representation, in SCAR plenary, most official delegates are from the National Ministries that oversee Agriculture. In 2016, 29 of the 37 Plenary officials (78%) were either Ministry delegates, or from institutions closely affiliated with Ministries such as research councils or operational partners. 22% of the Plenary officials were delegated from a research institute. In EU-15 countries almost all Plenary officials were from Ministries (93%), in EU-13 countries and Associated Countries this was about half (EU-13: 44%; AC: 50%).

Little over half of the SCAR countries (54%) participate in four or more working groups of SCAR. All countries who have mandated a Plenary member from a research institute participate in four or less working groups in SCAR. Of the twenty-nine Plenary officials from Ministries or

closely related bodies, the vast majority (83%) is from a Ministry or affiliated to the Ministry that oversees Agriculture. Three Ministries that oversee Science are present and two permanent representation delegates in Brussels. Five countries have Plenary delegates from both the Ministry that oversees agriculture, and the Ministry that oversees Science.

5.2.1 Working Groups

When assessing the roles participants have in WGs, there is often a combination of roles that apply to people. Many participants are also experts in their respective fields. What is the dominant role is not always entirely clear, or it is seen as inherent that people carry two roles (as Ministries can act as funding bodies). With this in mind, it is still possible to examine the roles participants carry in the WGs. Participants with a combination PF or PE are added to the 'P' group as one can be a policymaker and expert, but an expert per definition – e.g. working in a research institute – is not a policy maker or a research funder. With the same reasoning, FE is included in the 'F' group. Many groups discern between 'participants' and 'observers', the latter usually applying to EC participants and stakeholder organisations. Only when explicitly stated as member of the group, stakeholder representatives are included.

Table 2a: participants and their roles in WGs¹¹. Data excludes EC observers and stakeholders, the latter unless explicitly included as group members. P= policy maker, F= funder, E= expert, S= stakeholder.

In numbers	P	F	E	S
AKIS	24		24	
FISH	24	1	10	1
BIOECONOMY	21	2	12	
ARCH	16	2	15	
FORESTRY	10	3	3	
FOOD SYSTEMS	28	3	18	
AHW	38	5	6	
SAP	35	13	19	1

Table 2c: participants roles in WGs¹¹ in %. Data excludes EC observers and stakeholders, the latter unless explicitly included as group members. P= policy maker, F= funder, E= expert, S= stakeholder.

In %	P	F	E	S
AKIS	50%		50%	
FISH	66%	3%	28%	3%
BIOECONOMY	60%	6%	34%	
ARCH	49%	6%	45%	
FORESTRY	62%	19%	19%	
FOOD SYSTEMS	57%	6%	37%	
AHW	78%	10%	12%	
SAP	51%	19%	28%	2%

Table 2b: Participants and their roles in WGs¹¹. Data includes EC observers and stakeholder observers (each observer organisation, not person, is counted as 1). P= policy maker, F= funder, E= expert, S= stakeholder.

In numbers	P	F	E	S
AKIS	26		28	7
FISH	27	1	10	6
BIOECONOMY	24	2	13	
ARCH	19	2	15	2
FORESTRY	11	3	3	1
FOOD SYSTEMS	30	3	18	3
AHW	40	5	6	3
SAP	37	13	19	4

Table 2d: roles in WGs¹¹ in %. Data includes EC observers and stakeholder observers. (each organisation, not person, is counted as 1). P= policy maker, F= funder, E= expert, S= stakeholder.

In %	P	F	E	S
AKIS	43%		46%	11%
FISH	61%	2%	23%	14%
BIOECONOMY	62%	5%	33%	
ARCH	50%	5%	40%	5%
FORESTRY	61%	17%	17%	5%
FOOD SYSTEMS	56%	6%	33%	5%
AHW	74%	9%	11%	6%
SAP	51%	18%	26%	5%

¹¹All participants are counted per head, with the exception of observers(O): these are counted per represented organisation. It is not uncommon that more than one person from the same organisation participates in a working group. Observers are either EC participants or stakeholders, representing a specific interest. EC participants are counted per DG represented.

On average, almost 60% of the participants in WGs have a role as policy maker and near 10% as funder. Experts make up the remaining 30%. Stakeholders are usually participating as observers. Expert representation is highest in AKIS SWG and lowest in AHW CWG. The average of P and F participants in strategic working groups is 65.3%, a little lower than the collaborative working groups average: 79.2%.

5.3 Scientific domain representation

5.3.1 General

Overall SCAR consists of people who are mainly connected to organisations that are linked to the agricultural sciences or with agriculture (in the case of Ministries and affiliated organisations). Policy representation and participation also includes other domains, but mostly restricted to the Ministries that oversee Sciences. In the Plenary, all Ministry delegates are either from Ministries that oversee Agriculture or Science or are permanent representatives in Brussels. Delegates that are from scientific institutions, are almost all involved in the life sciences, most closely connected to agriculture.

5.3.2 Working Groups

Scientific domain representation in the working groups largely follows the specific working group and its remit. Policy participants in the working groups are almost always affiliated with the Ministry that oversees Agriculture. As in many countries the Agriculture Ministry includes fisheries, forestry and agro-knowledge, participants from these Ministries largely populate the various working groups, with the additional participant from a Ministry that oversees Science or Health. Those countries that have a different Ministerial organisation overseeing Agriculture (such as the Ministry of Trade, Industry and Fisheries in Norway, the Ministry of Enterprise and Innovation in Sweden and the Ministry of Economic Affairs in The Netherlands) have participants from such Ministries in the WGs. The Animal Health and Welfare CWG has participants from the Ministry of Health, Fish SWG from the Ministry of Trade, Industry and Fisheries, Food Systems SWG from the Federal Ministry of Health and Women's Affairs.

5.3.3 SCAR and the Bioeconomy

The bioeconomy definition we use follows the report 'A Bioeconomy for Europe': *"[...] encompass[ing] the production of renewable biological resources and their conversion into food, feed, bio-based products and bioenergy. Bio-based products are products that are wholly or partly derived from materials of biological origin, excluding materials embedded in geological formations and / or fossilised"* (EC, 2013)

It includes the sectors of agriculture, forestry, fisheries and aquaculture, food and pulp and paper production, as well as parts of chemical, biotechnological and energy industries (bio-based industries, bio-based chemicals and plastics, enzymes, biofuels). Several major areas within four overarching remits are discerned: Agriculture and forestry, Fisheries and Aquaculture, Bio-based industries and Food chain (table c).

Table 3: Bioeconomy remit and areas.

Agriculture and Forestry
Land use and transition towards more sustainable production
Agriculture and climate change
Livestock production
Forestry
Policies and public goods
Agricultural advisory and support services, extension services
Fisheries and Aquaculture
Sustainable fisheries
Sustainable aquaculture
Marine biotechnology
Bio-based Industries
Bio refineries
Waste as alternative biomass source
Biotechnologies
Bio-based products
Food Chain
Resource efficiency
Food waste
Packaging
Food safety
Nutrition and dietary choices

Analyses of the mandates of the working groups show that, with the addition of the SWG Food Systems, the various SCAR working groups cover these remits in general terms - and beyond. The Strategic Working Group Forestry and the Collaborative Working Groups Animal Health and Welfare and Sustainable Animal Production cover aspects of Agriculture and Forestry. Strategic Working Group Fish covers Fisheries and Aquaculture. Bio-based industries is covered by the Strategic Working Group Bioeconomy and Strategic Working Group Food Systems relates to the Food Chain. The Strategic Working Groups AKIS and ARCH go beyond the remit of the bioeconomy as defined here, with the incorporation of knowledge systems (broadening ‘agricultural advisory and support services, extension services’) and the international dimension of agricultural research for development.

6. DISCUSSION AND RECOMMENDATIONS

6.1 Representation of countries in SCAR

It is widely recognised among the interviewees that some countries in SCAR are underrepresented. The desk study underlines these observations, clearly showing an underrepresentation of EU-13 and associate countries in SCAR. In line with findings from PLATFORM (Turk, 2016) and the EC (EC, 2017), Lower Performing Countries are underrepresented in SCAR bodies as well. Country representation is regarded as important by all interviewees. Not only to be able to bring together the national priorities of the thirty-seven members of SCAR, but also because climatological differences across regions lead to specific priorities for countries. Thus, in addition to underrepresentation of countries, underrepresentation of *regions* is undesirable as well, as it may lead to priorities becoming less visible. Some working groups have better representation than others, but most would prefer a larger share of countries to participate. The effect of underrepresentation in specific working groups may vary depending on terms of reference the group is operating under. In some groups, underrepresentation may not be as big an issue than in others. Several interviewees therefore regard underrepresentation in working groups differently from that in the SCAR SG or Plenary. Though 'fair' representation in working groups is deemed important, most interviewees regard representation in the Steering Group and the Plenary as the most pressing issue.

Interview analyses show that active participation is not equal among participants in SCAR. Even when countries are listed as part of a working group, they are not always coming to meetings, nor being active in meetings. It is generally the same people that come to the meetings. As one chair pointed out, this is important because it builds long-term working relationships and trust between participants. Simple data analysis, confirmed by the Working Group chairs, shows actual presence is lower than formal participation. Second, actual representation only happens when there is active contribution. The most common input is delivered through the actual discussions at working group meetings. Good chairing is very important to stimulate active participation and helps to create an atmosphere where all participants can bring forward their opinion. This aspect is brought forward by several interviewees. In some groups, countries also deliver written input on absence. Many groups held mapping exercises, thus enabling participants explicitly to bring in national priorities.

6.1.1 Participation benefits

SCAR is seen as an important and unique advisory body for the European Commission and for the participating members. Its standing and expertise is recognised and acknowledged by its (active) members, the participating EC members and in other related fora. Outside of this remit, it is unclear whether SCAR is known that well. The explicit reference to SCAR in the Austrian Framework Programme 9 theses document (FP9.Think-tank, 2017) suggests a broader appreciation.

Countries participate in SCAR bodies for several reasons. Highly valued and explicitly mentioned by almost all interviewees, is the rather informal exchange between its participants. SCAR presents a forum in which it is possible to have a **free exchange with, and**

learn from other countries, and the European Commission. The knowledge gained is valuable at the national level. Several interviewees explicitly mention the **contributions to formulating national policies** (such as national bioeconomy strategies) or outcomes that are shared with research institutes at the national level. Apart from this, SCAR offers countries a forum to **express their national interests and priorities** with regard to agricultural research. SCAR enables countries to **align national and European policies** and it offers participating countries a **certain degree of influence on the Framework Programme**, especially through ERA-NETs but also in other topics of the Work Programmes. In a broader view, SCAR facilitates countries in a **better understanding of how the European Union works**, which is crucial for effective cooperation. Another important reason for participating in SCAR is the value it has for **transnational scientific cooperation**. It facilitates networking not only at the policy level, but also creates contacts through which scientific cooperation can be stimulated.

6.1.2 Participation challenges

6.1.2.1 Resources restraints

Resources refers to the availability of time, money, and people to perform the work. Nearly all interviewees mention lack of resources as a limiting factor to a (more active) participation. Though this may especially be a problem in EU-13 countries, it is certainly not limited to those.

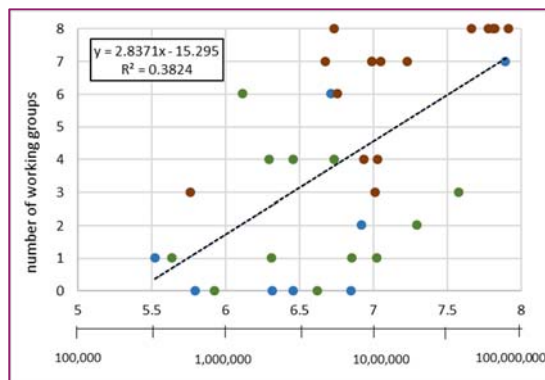


Figure 7a: correlation between country population in 2016 (Eurostat, 2017c) and participation in working groups in 2016. ● = EU-15 countries; ● = EU-13 countries; ● = AC countries. $p < 0.0001$

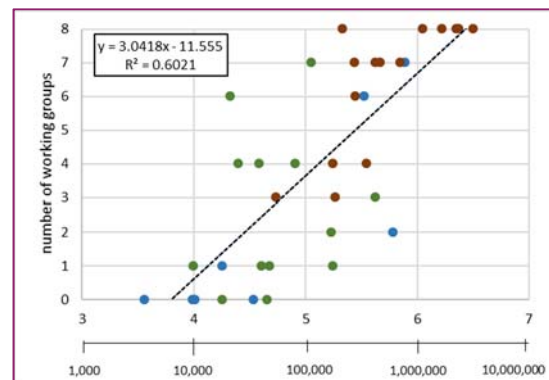


Figure 7b: correlation between 2016 GDP in million euro (Eurostat, 2017b) and participation in working groups in 2016. ● = EU-15 countries; ● = EU-13 countries; ● = AC countries. Data excludes IL. GDP 2016 not available for AL, ME, TR; 2015 data used instead. $p < 0.0001$

Figures 7a - d show correlation between working group participation in 2016 and population, GDP, GERD and share of the population that works in science (FTE in science / total population). The strongest correlations are between population size and GDP. Bigger countries, and those that have a higher GDP (also per head of the population) participate more in SCAR working groups. The dot colouring also shows that the lower left quadrant of the population size and GDP contain mostly EU-13 and AC countries.

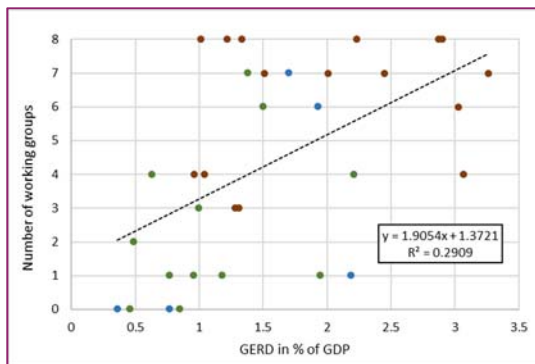


Figure 7c: correlation between GERD as percentage of GDP (2015 values) (Eurostat, 2017a) and participation in working groups in 2016. ● = EU-15 countries; ● = EU-13 countries; ● = AC countries. Data excludes: AL, CH, IL, MK. GERD 2015 not available for IE, ME, RS, UK; 2014 data used instead. $p < 0.005$.

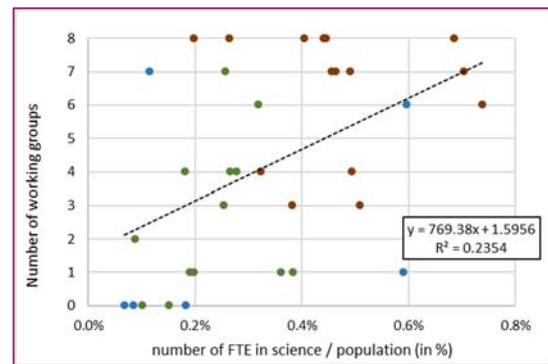


Figure 7d: correlation between part of population working in science (total FTE in research in 2015 / population in 2015) (Eurostat, 2017d) and participation in working groups in 2016. ● = EU-15 countries; ● = EU-13 countries; ● = AC countries. Country data on FTE for FR, ME, MK, RS and TR is from 2014. No data for CH and IL. $p < 0.005$.

In addition to population size and GDP, countries that have a bigger scientific sector (expressed in terms of GERD as percentage of GDP and share of population in science) participate more in SCAR working groups.

Time restraints are another commonly expressed delimiting factor. This is, in combination with high travelling costs, a practical but real barrier. Some countries have to travel a long time to Brussels, sometimes costing two days in travel time alone. When (working groups) organise meeting outside of Brussels, other participants are attracted to these meetings.

Lack of resources is clear and matters. But lack of resources is - as several interviewees pointed out - also about making choices on priorities. Without disregarding the very real pressures this puts on people, and on governments, one may argue lack of resources is primarily an *indicator* of underrepresentation and secondary the underlying reason.

6.1.2.2 Familiarity with the EU, national priorities and internal organisation

A factor that is mentioned quite often by the interviewees is a certain **familiarity with the way Europe 'works'**; the 'European project' and 'cultural diversity between countries'. This set of factors is best characterised as 'cooperation enabling factors'. Such factors range from language difficulties and cultural differences to national structures for cooperation. Data analyses supports a relation between familiarity with transnational cooperation in the EU and SCAR participation. Figures 7a and b show a correlation between P2P network and transnational project participation in the Bioeconomy area (figure 8a and b).

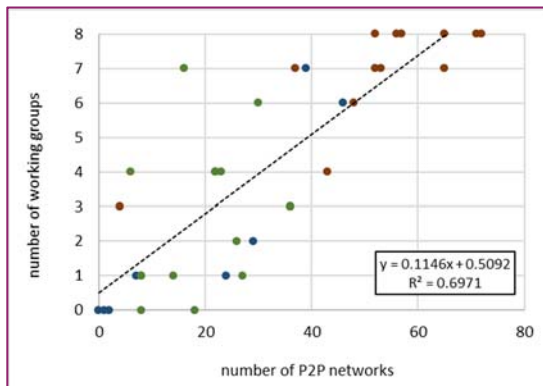


Figure 8a: correlation between country membership of P2P networks in the Bioeconomy area (both active and finished) (PLATFORM, 2017) and participation in working groups in 2016. ● = EU-15 countries; ● = EU-13 countries; ● = AC countries. No data for ME. $p < 0.0001$

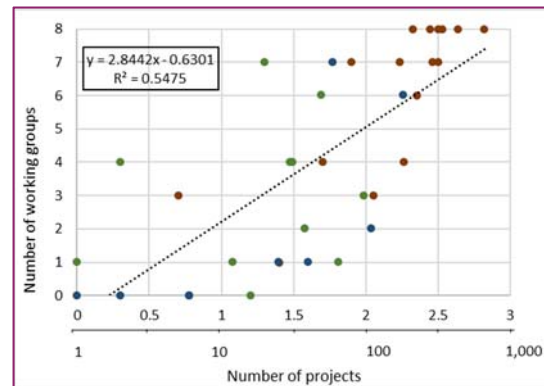


Figure 8b: correlation between number of joint transnational projects where a country in the Bioeconomy area where a country participates in (both ongoing and finalised), and average participation in working groups in 2016. ● = EU-15 countries; ● = EU-13 countries; ● = AC countries. No data on ME and MK. $p < 0.0001$

From the interview analyses it is clear that **national priorities and national interest** play an important role in joining a working group in SCAR or not. Some topics are either not important for geographical (no forestry/fishing sector of importance) or political reasons (target regions where ARD is focussed on differ) or, as some interviewees point out, some countries may not yet have advanced to certain working group topics. In countries that are well-familiar with European cooperation, national (or regional) priorities, in relation with available resources, mainly determines whether they participate in a certain working group.

Data analysis show a strong correlation between H2020 revenues (EC, 2017b) and working group participation, explaining almost 60% of the variance. However, these numbers are not corrected for national contributions to H2020, nor are they limited to the Societal Challenges pillar. This correlation points at a combination of factors that influence each other. Countries with a higher GDP contribute more to the EU budget and H2020. A higher GDP also indicates more expenditure on research and development, suggesting higher participation and success rates in the Framework Programmes.

In an effort to look more focussed at the H2020 country revenues, these were recalculated as a percentage of the total country (national) contribution to the EU budget H2020 for the years 2014, 2015 and 2017 (figure 9). Also with this recalculation, a correlation is visible between country H2020 revenue and working group participation. This is a clearer indication that countries benefiting more from H2020 put more effort in mechanisms that allow them to address national priorities and influence research agenda's.

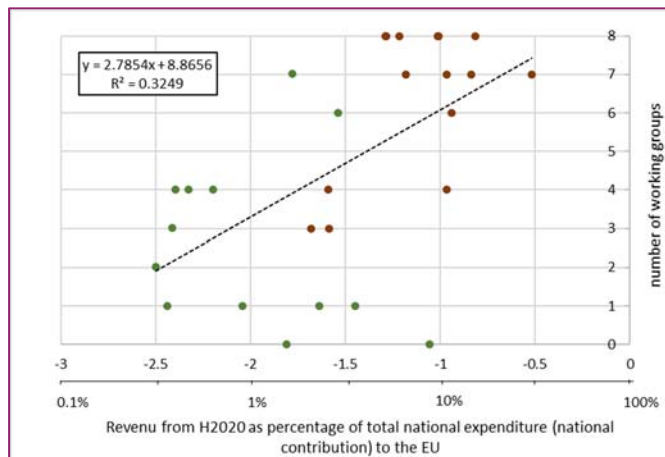


Figure 9: correlation between revenues from H2020 as percentage of total national contribution to the EU budget from 2014-2016 (EC, 2017) and average participation in working groups in 2016. ● = EU-15 countries; ● = EU-13 countries; ● = AC countries. Country data on EU budget exclude AC countries. $p < 0.005$.

The impact of SCAR on European R&I policy and investments may not always immediately be clear and require long-term investments, its value in terms of national return on investment appears well-understood in countries that are active in SCAR. This also implies that if the added value in the shorter term is not so clear, countries that have no current incentive to participate, may be difficult to convince otherwise, an implication that is supported by the interview analyses.

Often, but certainly not always, countries have put into place mechanisms that allow national participants in SCAR to exchange. Several countries have the advantage that all people active in SCAR work in the same department or in adjacent departments in the same organisation. Moreover, many of these countries either have the same people or colleagues participating in SCAR bodies (Plenary or SG) and the Programme Committee for Societal Challenge 2. Even if different Ministries are involved, usually the people involved know each other. Lacking such **mechanisms or (in-)formal inter-departmental or inter-Ministerial connections** may be a barrier for effective communication and cooperation. EU-13 country participants that are more active in SCAR, usually have formal relations in place or have informal connection that allow them to communicate about SCAR to higher-level policy makers. However, a more generally shared concern is the difficulty many countries have in establishing inter-Ministerial platforms that go beyond exchange of information towards more active involvement in SCAR bodies. Though this is understandable, given the origin of SCAR (being an Agricultural Committee), in view of the broadened mandate to cover the whole of the bioeconomy, it may become more urgent to strengthen such cooperation.

6.1.2.3 Familiarity with SCAR and expectation management

SCAR is a strategic advisory body; a 'think-tank'. This is not always clear for newcomers. **Unfamiliarity with how SCAR operates** and what the purpose of certain bodies are, seem to form a third set of limiting factors. In addition to this, **expectation management** and getting acquainted with SCAR is often seen as a barrier as well. If expectations about the actual work and outcomes of SCAR and / or national return on investment is unclear from the onset, newcomers may become less motivated to (keep on) invest(ing) in SCAR. In this light encouragement of *active* participation is an issue as well. Even when people are coming to meetings, this does not guarantee actual contributions.

Unfamiliarity with SCAR may also result in difficulties **getting the right people involved**. In working groups, the right mixture of people and their roles may be more dependent on the groups' mandate. Almost all interviewees though agree that the country delegates in the Steering Group and the Plenary should have at least a clear mandate from a national Ministry and preferably be policy delegate from such Ministry. The importance of getting the right people involved is stressed many times.

If staff attending SCAR meetings are not able to convince their higher-ranking officials of the value of SCAR, resources to enable participation are very difficult to obtain. In this respect, the already mentioned language barrier does not help. Not having any information available in the local language may limit the communication about SCAR and its relevance at the national level.

6.1.3 Suggestions for improvement of country participation

It is important to realise that the sets of limiting factors are connected with each other and one usually has bearing on the other. Lack of resources is a limiting factor in terms of funding, human resources and time. Even though it may bear on EU-13 and AC countries hardest, this is true for all countries participating in SCAR. One aspect though is *not* the same for all countries. With Brussels being the prime location for meetings, the (mostly underrepresented) Eastern- and Southern-European countries have to make larger efforts in terms of time and money to join meetings, compared to their Western-European counterparts. This may be especially an issue for Steering Group meetings where there is no EC refund for travel and sustenance. This analysis indicates that EU-13 and AC countries have a higher share of SCAR delegates that do not work for a national Ministry. Its implication is that such delegates either have to find their own travelling funds because they are not always supported by the national Ministry, or that it is much harder for these delegates to get permission (and refund) to join meetings. Some interviewees as well as participants in the discussion sessions of Bonn and Tallinn, raised this issue.

The biggest challenge still may be getting the value and importance of European cooperation for the national levels acknowledged by the people influencing research and innovation policy at a high level. Also in countries that have long-term involvement in SCAR, this is a constant effort, though it is clear that for EU-13 and AC countries this is a long-term process that means significant investment first. Interesting in this light is the impact of EU membership on scientific transnational cooperation. This analysis suggests return on investment when regarding country revenues on H2020. Makkonen et al., come to the conclusion that joining the EU has had positive effect on co-publication intensity between the EU-15 and EU-13 member states and in particular, within the EU-13 states themselves (Makkonen & Mitze, 2016). The H2020 mid-term review indicates a better performance of EU-13 countries in H2020, compared to FP7, suggesting specific programmes to foster inclusion like H2020's Spreading Excellence and Widening Participation has effect. They are signs that participation can and will increase, but that it takes time and effort from all involved. Indeed, several EU-13 and AC countries are becoming more and more involved in the landscape of European cooperation and act as frontrunners in this group.

Since the publication of the reflection paper on the role of SCAR, suggestions for modes to consider lowering these barriers have been discussed and tried. The working groups have been

experimenting with ways to improve participation. The SCAR CASA Coordination and Support Action was designed to enable SCAR with some support for the working groups and the Foresight Group, to investigate more on major issues, as well as support modalities to increase both familiarity with SCAR and enhance visibility at the national levels. Aggregation of the data analyses, interviews, discussion sessions at the Bonn Task Force meeting and at the Tallinn Conference, together with results from the working groups lead to suggestions for improvement of country participation. Lessons learned from the analyses of the PLATFORM project that supports ERA-NETs in the Bioeconomy (Turk, 2016) that analysed participation of High Potential Countries in ERA-NETs are largely similar to the suggestions that can be made in the SCAR context.

- Possible **compensation mechanisms for travel and sustenance costs**. Suggestions include compensation from the European Commission but vary in amount and duration. They include each participant to meetings to pay a fixed amount and additional costs covered by the EC; funding T&S in a start-up phase, where newcomers can become familiar with SCAR to the EC funding all T&S costs. Though this certainly would enable some countries to become more active, possible risks include people attending for the wrong reasons, not getting the right people, and the questions was raised if such mechanisms would have an effect on the independence of SCAR from the EC. If countries see SCAR as a priority, there should be resources made available;
- The use of **telecommunication tools for interactive meetings** was brought up but both practical limitations (too many people for a teleconference) and the added value of real meetings between people where trust is build and additional exchange happens outside of the meetings, raise questions marks. However, allowing the use of these sometimes, could support involvement;
- **Organise more meetings outside of Brussels** is a format several working groups have gained experience with over recent years. It is seen as an option that will both attract newcomers more easily, allows for country participants to showcase the work of SCAR at their national level and could improve interest in SCAR and relations with the European project in countries. The interviewees that have had experience with this, all agree to an extend it enhances participation of newcomers and sparks enthusiasm in current members. A complication may be this affects EC staff participation. Having meetings in Brussels enables them to participate quite easily.
- Organise **less meetings** (in particular SG meetings), and perhaps reformat some meetings to allow more room for discussion was also suggested by several interviewees;
- Another mode of operation would be to **organise more meetings back-to-back**, thus saving on T&S and more efficiently use time.

The relative unfamiliarity that newcomers may still have with the European Union and its governance mechanisms is seen as a second set of barriers for representation. The relative unfamiliarity with SCAR, its benefits and impact are seen as a third set of major barriers. Though there are no clear-cut ways to reduce such barriers easily, especially when it involves prioritising and organisation at the national levels, still improvements may be made:

- **Return on investment in European cooperation** is something that will only become tangible after long-term investment. It takes a lot of time to build networks in both policy and research domains. This requires a national strategic view on what the benefits can be,

in both policy influence as well as cash return on investment from large European funding programmes such as the Framework Programmes. Examples from EU-13 countries that have managed to become more active players, confirm this long-term investment is needed, but also indicate there indeed is benefit at the national level. This may be key to including more countries in European coordination. It also requires a European environment in which newcomers succeed in getting their national priorities being taken into account as it is mentioned by several interviewees as a possible barrier;

- Effective operating at the European level requires a **national structure that is well-equipped to coordinate** between the different national policy players, as well as between policy, science and stakeholders. The ability to involve a wide range of national players may also leverage influence with policy makers;
- Create more **awareness and visibility of (the impact) of SCAR** to foster enthusiasm and thus support participation. This includes more visibility for the Foresight and working groups and more visibility of the effect and impact of SCAR advice on European policies and strategies. Acknowledgement of SCAR as important advisory Committee to the EC could leverage such visibility. Translation of key documents into the national languages may also be considered. Create more awareness and visibility for SCAR at the highest possible political level. If the added value of SCAR to the national priorities is clear there, this could leverage additional resources for participation. Making use of high-level policy events (e.g. European Presidency) to highlight the role of SCAR has leveraged more active involvement in the past. Awareness and visibility of SCAR at the national level could be raised by organising national events. Additional support on communication and dissemination activities is necessary;
- **Timing of products of SCAR** (e.g. policy advices) could be improved to enlarge impact and capitalise on national consultations and developments. This requires a good awareness of the national and European policy agenda's and timing of work;
- Create a **learning environment for newcomers in SCAR** to guide them by more experienced participants, thus supporting more quick and effective participation, and reduces disappointments due to unrealistic expectations of what SCAR is. Given its reputation, its long history and long-term connections between several participants, novel entrance may be quite daunting for newcomers and could restrain them from active participation. There is a role for the chairs of the meetings (and groups) here as well to involve all participants in discussions and contributions;
- Make the **value of cooperation for the (sub-)national level clear and explicit**, as well as the investments. Stress that the European interest is that share of national interests that all have in common;
- **Identify and invite the right people to SCAR**. Working groups benefit from knowledgeable participants that have clear links with national policy-makers, and that are enthusiastic in joining a group; Plenary and Steering Group participants need to either be policy-makers or have clear mandates that allow them to bring forward national priorities and enable them to discuss topics with a national perspective in mind;
- **Strengthen the working groups and enabling them to valorise on the knowledge** that was generated. Create added value from the combined work of the working groups.

Box 3: From recommendations to concrete options

During the Tallinn Conference, a working session was dedicated to Representation and Inclusion. In this sessions, participants were asked to develop two concrete suggestions for improving representation and inclusion that can be implemented easily and are realistic in the short term:

Improving coordination at the national level by organising high-level inter-Ministerial meetings is regarded as a very good way to elevate not only the knowledge and awareness about SCAR at the national level, but also serves to enhance possible coordination or cooperation between relevant national Ministries. Raising awareness at the national level might also serve to leverage national funding for SCAR delegates. Some of the national meetings that are currently held or prepared with support of SCAR CASA serve this purpose.

Find ways to either reduce T&S costs or find compensation. Any compensation scheme should only be for a 'trial time', and have a clear reporting-back mechanism. However, creating compensation schemes is neither easily implemented nor set-up over a short period of time, given the large range of views on this matter. Notwithstanding this, there are concrete options for *reducing* T&S costs:

- Costs are often high because of last-minute planning and approval. Working with an meeting calendar well in advance (one year) reduces costs of reservations significantly;
- Combine activities as much as possible and couple dedicated T&S funds to meetings that are not funded.

6.2 Organisational representation, participants roles and remit representation

6.2.1 Organisational and role challenges

Most policy participants in SCAR are **linked to the national Ministry that oversees agriculture**. This is given its origin, not surprising and if there is an efficient flow of information on the national level between the involved Ministries and organisations, not problematic. It is clear that the actual policy domains covered within a Ministry of Agriculture usually varies quite widely, covering a much broader range than primary production only. However, concern can still be raised given the broadened remit of SCAR. The bioeconomy also touches upon policy areas that are handled by different Ministries and requires integration at some level. There is little or no involvement in SCAR from Ministries that oversee science, health, environmental or energy topics. The same applies to participation of EC staff in the different working groups of SCAR. Not surprisingly, DG RTD and AGRI are well-represented, as is DG MARE in SWG FISH. There is some representation of DG ENV, HEALTH and DEVCO, but missing completely is DG GROWTH and other DGs that connects to the bioeconomy. Increasing participation may increase ownership across different Ministries / DG's and become an aligning factor of its own.

With regard to the **roles of participants in SCAR bodies**, there is a need to distinguish between SCAR Plenary and Steering Group, and the working groups. All interviewees underline the importance of having policy makers or at least delegates with a clear mandate participating in the Plenary and Steering Group. When looking at the composition of the working groups there are different opinions about the constitution of the groups. On average about 30% of the participants have a role as expert, but the boundaries between roles is not always clear-cut. Many participating funders and policy-makers are experts in their own areas and in some groups, the experts are delegated from national Ministries or funding organisations. The

quantitative data on roles should be interpreted with caution as it is based on individuals on the distribution lists and roles were assigned accordingly but not confirmed by participants themselves. Furthermore it is not always clear whether people act as back-up for others.

Overall, the expertise as well as the amount of experts in the working groups is regarded as satisfactory. All interviewees acknowledge the added value of experts to meetings, but differ as to how experts should contribute (e.g. as 'experts' or with a clear mandate from the national policy domain). In some groups general low participation numbers or clear lack of expertise is regarded as a problem. When specific expertise is lacking, groups either try to attract additional members, or external expertise. A mandate usually refers to explicit delegation of a person from a policy domain (e.g. Ministry) and incorporates at least the ability to bring in national priorities.

Some groups have been discussing involving (more) people from different sectors (e.g. include more stakeholders), but the general impression is that it is important that participants have some sort of mandate or at least bring in national priorities without having conflicting interests. For this reason, some groups clearly choose not to bring in stakeholders, or grant only observer status to such participants. The view that working groups should mainly consist of policy-makers or, at least, participants with a clear mandate from a Ministry, is not undisputed. There is concern that limiting participation to policy makers could close off other views from different stakeholders and decrease the out-of-the-box thinking capacity of the groups, which is seen as one of SCARs major strengths.

6.2.2 Remit representation: coverage of the Bioeconomy

There is a tendency for working groups to interlink more with each other on cross-cutting issues, thus enabling different expertise to come together. Most Strategic Working Group have established such interlinkages, and organise meetings together or (plan to) produce papers together. The two Collaborative Working Groups AHW and SAP also have interactions with each other. Linkages between the Collaborative and Strategic Working Groups appear a bit more limited. Though many of the interviewees find interlinking an important development, it is also clear such meetings put additional strains on already tight working groups and chairs. For the same reason, there is general consent that the amount of working groups should not be increased, though it is mentioned that a discussion on the current groups mandates and coverage could be useful.

Almost all interviewees assess the current working groups in general are sufficiently covering the bioeconomy thematically. This is reflected in the groups' mandates. Clearly defining boundaries between groups is not always easy when the topics are cross-cutting while an advantage could be that it also offers anchoring points for collaborations between groups. More in general there is both some concern whether cross-cutting issues get the attention they need, and whether there is sufficient attention for specialised topics. Cross-cutting issues include the technological dimension of agro-cultural research, consumer-product relations, transformation, socio-economic aspects, markets intelligence, local food systems and nature & ecosystem services.

6.2.3 Suggestions for discussion

This section will not so much include suggestions for improvement as it will list topics for further discussion. There are different opinions on how SCAR is operating in these terms and whether improvement is possible within the practical limitations of the working groups and indeed needed.

- A discussion on **widening participation towards other Ministry and European Commission directorates' representatives** is warranted given the widened mandate of SCAR. Since it is not limited anymore to agricultural research, but broadened to oversee the whole bioeconomy, this also implies incorporating participants from other areas than the agricultural domain. National developments such as drafting a national Bioeconomy strategy also provide opportunities to increase interest from other Ministries for SCAR. Its brings people from different Ministries together and allows to showcase SCARs work in a natural way;
- Bringing different Ministries together could be organised in different ways at the national level, the most common seem to be **'mirror groups' or inter-Ministerial platforms**.
- Since a couple of years, participation to working groups is adjusted to fit with the policy connection participants have. In practical terms this means that any participant at least is delegated via a national Ministry, thus assuring that national priorities are being brought to the table. However, there remains discussion on **inclusion of other stakeholders** than policy ones. This not necessarily needs to be in a participants role but could also be as observers;
- The questions whether the **working groups sufficiently cover the Bioeconomy** remit of SCAR, can be answered positively. The tendency of working groups to collaborate more or cross-cutting topics strengthens their work. However, it remains clear SCAR is operating under scarce resources, thus limiting its reach in both cross-cutting issues as well as on specialised topics that could benefit from more specific attention as they are of great importance at the national level. It is likely and logical that the choice of topics for SCAR working groups shall remain a constant discussion. In order to have effective discussions on this, the specific operations of working groups need to be transparent. Bringing in regular updates from the working groups into the Steering group meetings has facilitated this. The European landscape has fostered many initiatives and several P2P cooperation that need to be taken into account as well. SCAR might choose to restrict its actions to those areas that are not covered sufficiently by other initiatives or seek closer cooperation with them.

7. ANNEXES

7.1 Annex 1: countries in SCAR

COUNTRY CODE	FULL NAME	YEAR OF EU MEMBERSHIP	POLITICAL ASSOCIATION	R&I PERFORMANCE ¹	GEOGRAPHICAL DISTRIBUTION ²
AL	Albania		Candidate country	Low	Southern Europe
AT	Austria	1995	EU-15	High	Western Europe
BE	Belgium	1958	EU-15	High	Western Europe
BG	Bulgaria	2007	EU-13	Low	Eastern Europe
CH	Switzerland		Associated Country	High	Western Europe
CY	Cyprus	2008	EU-13	Low	Non-European
CZ	Czech Republic	2004	EU-13	Low	Eastern Europe
DE	Germany	1958	EU-15	High	Western Europe
DK	Denmark	1973	EU-15	High	Northern Europe
EE	Estonia	2004	EU-13	Low	Northern Europe
EL	Greece	1981	EU-15	High	Southern Europe
ES	Spain	1986	EU-15	High	Southern Europe
FI	Finland	1995	EU-15	High	Northern Europe
FR	France	1958	EU-15	High	Western Europe
HR	Croatia	2013	EU-13	Low	Southern Europe
HU	Hungary	2004	EU-13	Low	Eastern Europe
IE	Ireland	1973	EU-15	High	Northern Europe
IL	Israel		Associated Country	High	Non-European
IS	Iceland		Associated Country	High	Northern Europe
IT	Italy	1958	EU-15	High	Southern Europe
LT	Lithuania	2004	EU-13	Low	Northern Europe
LU	Luxembourg	1958	EU-15	Low	Western Europe
LV	Latvia	2004	EU-13	Low	Northern Europe
ME	Montenegro		Candidate country	Low	Southern Europe
MK	Macedonia		Candidate country	Low	Southern Europe
MT	Malta	2004	EU-13	Low	Southern Europe
NL	The	1958	EU-15	High	Western Europe
NO	Norway		Associated Country	High	Northern Europe
PL	Poland	2004	EU-13	Low	Eastern Europe
PT	Portugal	1986	EU-15	Low	Southern Europe
RO	Romania	2007	EU-13	Low	Eastern Europe
RS	Serbia		Candidate country	Low	Southern Europe
SE	Sweden	1995	EU-15	High	Northern Europe
SI	Slovenia	2004	EU-13	Low	Southern Europe
SK	Slovakia	2004	EU-13	Low	Eastern Europe
TR	Turkey		Candidate country	Low	Non-European
UK	The United	1973	EU-15	High	Northern Europe

¹High and Low refers to the distinction made in the H2020 Spreading Excellence and Widening Participation WP, based on R&I performance indicator values of a country compared to the European average. As this is a relative to the average, we use HPC as higher performing countries and LPC as lower performing countries throughout this report.

²Based on United Nations Statistical Division data: <https://unstats.un.org/unsd/methodology/m49/>

7.2 Annex 2: Interviewees

NAME		COUNTRY	AFFILIATION	
Monique	Axelos	France	SWG FS chair	
Marina	Bagni	Italy	CWG AHW chair	Written input
Laurence	Bastin	European Commission	SCAR Secretary	
Iva	Blažková	Czech Republic	Plenary delegate	Written input
Jean-Michel	Carnus	France	SWG Forestry chair	Written input
Josiane	Entringer	Luxembourg	Plenary delegate	
Jesús	Escudero	Spain	SG member	
Canan	Göksu Sürücü	Turkey	SG member	
Adrien	Guichaoua	France	SWG AKIS chair	
Ioan	Jelev	Romania	Plenary delegate	
Anikó	Juhasz	Hungary	SG member	
Kulli	Kaare	Estonia	Plenary delegate	
Raymond	Kelly	Ireland	SG member	
Gudrun	Langthaler	Norway	SG member	
Rocío	Lansac	Spain	SG member	
Annamaria	Marzetti	Italy	SG member	
Lino	Paula	European Commission	DG RTD	
Dana	Pescovicova	Slovakia	Plenary delegate	
Philippe	Petithuegenin	France	SWG ARCH co-chair	
Sanja	Radonjic	Montenegro	Plenary delegate	Written input
Stefan	Rauschen	Germany	SWG BE co-chair	
Eric	Regouin	The Netherlands	SG member	
Liisa	Saarenmaa	Finland	SG member	
Elke	Saggau	Germany	SG member	
Hermann	Schobesberger	Austria	CWG AHW co-chair	Written input
Anita	Silmbrod	Austria	SG member	
Matthew	Tabone	Malta	SG member	Written input
Anne	Vehilainen	Finland	SG member	
Anne	Vuylsteke	Belgium	SG member	
Patricia	Wagenmakers	The Netherlands	SWG ARCH co-chair	

Useful suggestions, input and comments were further received:

From Cătălin Dragomir; *National Institute for Research and Development in Animal Biology and Nutrition – RO*, Jan van Esch; *Bioeconomy co-chair*, Valeriu Tabără; *Academy of Agricultural and Forestry Sciences - RO*, Astrid Wilener; *CH Steering Group member*;

At the **Task Force Workshop in Bonn 2017**, with a special session on representation. Participants were (other than in interviewee list): Stefano Bisoffi; *IT Steering Group member / Foresight*, Sylvia Burssens; *SGW AKIS*, Simona Cristiano; *SWG AKIS*, Valérie Dehaut; *SWG AKIS*, Martin Greimel; *SWG Forestry*, Siegfried Harrer; *SWG ARCH*, José Matos; *PT Steering Group member*, Vivi Nielsen; *CWG SAP*, Serenella Puliga; *IT Plenary member / SWG ARCH*, Romano Zilli; *CWG AHW / SAP*;

At the **Tallinn SCAR Conference 2017 'Research and innovation policy, state-of-play and the role of the SCAR in the European Bioeconomy'**, with a dedicated session on representation and inclusion. Participants were (other than in interviewee list): Martin Greimel; *AT SWG Forestry*, Illar Lemetti; *EE Ministry of Rural Affairs*, Annika Suu; *EE Ministry of Rural Affairs*, Kalliopi Radouglou; *EL SWG Forestry vice-chair*, Loukia Ekateriniadou; *EL CWG SAP / CWG AHW*, Stefano Grando; *IT CASA*, Laura Liepina; *LV SWG Bioeconomy*, Eugeniusz Chytek; *PL Plenary member*, Anne Zangerle; *LU Plenary member*, Jana Erjavec; *SI Plenary member / CWG SAP*, Jose Matos; *PT Steering Group member*.

The methodological approach, questionnaires, data handling and statistics in this study and resulting report received valuable input from the SCAR CASA coordination and support action (CSA) colleagues, in particular Christine Bunthof; *NL WR*, Sylvia Burssens; Annemarie Groot; *NL WR*, *BE Agrolink Flanders*; Vivi Nielsen; *DK Aarhus University*, Stefan Rauschen; *DE Forschungszentrum Julich* and Vera Steinberg; *DE BLE*. Acknowledgements for support on the statistical analyses to Wieger Wamelink; *NL WR*.

7.3 Annex 3: Interview Templates

7.3.1 Annex 3A: Template for working group chairs

What WG are you chairing?

Why are you the current chair; is there a historical context?

What is the groups' mandate (what are the results or products)?

A1 Most WGs have a mix of policy representatives, experts, funders and stakeholders. Do you find the mix of your WG balanced with regard to the topic and the goals of the WG?

A2 Are the policy makers that participate in your working group from the national Ministries that deal with the topic? Are there Ministries missing in your opinion?

A3 Is the composition of your WG balanced with regard to the expertise that you wish to have?

A4 What do you do when specific expertise is missing?

A5 Are the same people coming to meetings or is there a high variety? Does it matter?

B1 Are the participants in your WG acting on personal title or representing their country?

B2 Are WG participants aware - *if they officially do* - that they are representing their country?

B3 Are all countries that are involved in your WG present in most meetings?

B4 Are all regions* in Europe well represented in your WG?

**Regions according to UN Statistics Division: Northern, Western, Southern and Eastern Europe.*

B5 What are reasons for countries to participate in your WG?

B6 Are there countries that would like to participate (or that you would like to) in your WG but are unable to do so? If yes, which countries?

B7 Why are these countries unable to participate and what would support future participation?

Reasons can include but are not limited to: little knowledge of SCAR at the national level, limited HRM capacity, SCAR being seen as not the most effective or important agenda-setting body in Europe, a WG topic is not a national priority, no budget available to support representatives, limited return on investment (in terms of EU funding for science in Framework Programmes of Structural Funds).

C1 What DGs from the EC are relevant for your WG? Are these well represented in the WG?

C2 Does your WG have links with other stakeholder- or international organisations**; which ones and how are they linked? **JPI's, lobby organisations, FAO, OECD, ...

C3 Are there links between the other WGs of SCAR? If yes, which group and what links?

D1 How do people contribute to products of the group?

e.g.: present at WG meetings or workshops, written additions or remarks to meeting notes, writing parts of a report,

...

D2 Do products include or represent national priorities of the countries in the WG?

D3 Would a product of this WG be recognised at the national level as including the national priorities?

D4 Do countries in the WG formally state agreement with a product?

D5 Where do products of the WG go?

D6 Is this also the targeted users of the products?

D7 Do products of the WG include advice on topics or financial instruments in either the Framework Programmes (RIA, CSA, ERA-NET COFUND,...) or other mechanisms (Structural Funds: EFRD/ESFRI/..., EIP, ...)?

D8 Do you have suggestions to increase the use and / or impact of (results of) your WG at the national levels?

E1 Do you think that the different WGs of SCAR cover the different areas of the bioeconomy sufficiently? If not, what areas are missing and should there be a separate WG on it?

7.3.2 Annex 3B: Template for Steering Group members

- H1** Do you have a good view on how the different Working Groups (WGs) function? Why (not?)
- H2** How do you get this information?
- H3** How should - in your opinion - the WGs ideally function?
- H4** There is a variety of opinions on the role of the WGs. Some view themselves as 'think-tanks', while others bring together national priorities. What is in your opinion the role of the Strategic Working Groups and the Collaborate Working Groups?
- H5** Should groups link more with each other?
-
- I1** Do you think the SCAR countries are well represented in the different WGs?
- I2** Is your country well-represented in the different WGs?
- I3** Are SCAR countries overall well represented in the Steering Group?
- I4** Are all regions* in Europe well represented in the WGs and in the SG?
**Regions according to UN Statistics Division: Northern, Western, Southern and Eastern Europe.*
- I5** What are reasons for your country to (not) participate in a WG or the SG?
- I6** Are there countries that would like to participate (or that you would like to) but are unable to do so? If yes, which countries?
- I7** Why are countries unable to participate and what would support future participation?
Reasons can include but are not limited to: little knowledge of SCAR at the national level, limited HRM capacity, SCAR being seen as not the most effective or important agenda-setting body in Europe, a WG topic is not a national priority, no budget available to support representatives, limited return on investment (in terms of EU funding for science in Framework Programmes of Structural Funds).
-
- J1** Most WGs have a mix of policy representatives, experts, funders and stakeholders. Is it important to have such a mix and is there an ideal mix?
- J2** Participants in a WG can act on personal title or representing their institute or country. How get participants appointed to WGs?
- J3** Do you think that participants are aware - if they officially do - that they are delegates of an organisation or a country?
-
- K1** How do you think results from WGs are disseminated in the SCAR countries at the national level?
- K2** Is this the preferred situation?
- K3** Why (not?) and what could be done to improve dissemination at national levels?
- K4** How would you estimate the impact of the SCAR WG products at the European (Commission) level?
- K5** Is there need for improvement and how (if needed) should that be established?
-
- L1** What is your vision for SCAR in the future?
- L2** How does SCAR relate to the PC for SC2?
- L3** Does SCAR cover the different areas in the bioeconomy sufficiently or should there be another WG?

7.3.3 Annex 3C: Template for Plenary members of countries with a limited representation in SCAR working groups

- M1** Do you have a good view on what the purpose of SCAR is? Why (not)?
- M2** Do you have a good view on how SCAR operates? Why (not)?
- M3** How do you get this information?
- M4** How should SCAR function in your opinion?
- M5** What would create added value to the work and results of SCAR at your national level?

N1 Some countries are not well represented in SCAR Working Groups and Steering Group. Do you think representation is important?

N2 Your country participation is -in comparison- limited. What are reasons for this?

Reasons can include but are not limited to: little knowledge of SCAR at the national level, limited HRM capacity, SCAR being seen as not the most effective or important agenda-setting body in Europe, a WG topic is not a national priority, no budget available to support representatives, limited return on investment (in terms of EU funding for science in Framework Programmes of Structural Funds).

N3 What would enable your country to participate more in SCAR?

N4 How important is it in your opinion that the regions* in Europe are well represented in the WGs and in the SG?

*Regions according to UN Statistics Division: Northern, Western, Southern and Eastern Europe.

O1 Do you have a vision for SCAR in the future?

O2 How does SCAR relate to the Programme Committee for SC2?

O3 Does SCAR cover the different areas in the bioeconomy sufficiently or are there topics missing?

7.3.4 Annex 3D: Template for Plenary members of countries with average or above representation in SCAR working groups

Mm1 Do you have a good view on what the purpose of SCAR is? Why (not)?

Mm2 Do you have a good view on how SCAR operates? Why (not)?

Mm3 How do you get this information?

Mm4 How should SCAR function in your opinion?

Mm5 What would create added value to the work and results of SCAR at your national level?

Nn1 Some countries are not well represented in SCAR Working Groups and Steering Group. Do you think representation is important?

Nn2 Your country participation is average or above. Why do you participate in SCAR WGs or SG?

Nn3 Could you guess why some countries are underrepresented?

Reasons can include but are not limited to: little knowledge of SCAR at the national level, limited HR capacity, SCAR being seen as not the most effective or important agenda-setting body in Europe, a WG topic is not a national priority, no budget available to support representatives, limited return on investment (in terms of EU funding for science in Framework Programmes of Structural Funds).

Nn4 What would enable your country to participate more in SCAR?

Nn5 What would enable other countries to participate more in SCAR?

Nn6 How important is it in your opinion that the regions* in Europe are well represented in the WGs and in the SG?

*Regions according to UN Statistics Division: Northern, Western, Southern and Eastern Europe.

Oo1 Do you have a vision for SCAR in the future?

Oo2 How does SCAR relate to the Programme Committee for SC2?

Oo3 Does SCAR cover the different areas in the bioeconomy sufficiently or are there topics missing?

7.3.5 Annex 3E: Template for European Commission staff

P1 What is your opinion on how your Working Group operates?

P2 There is a variety of opinions on the role of the WGs. Some view themselves as ‘think-tanks’, while others bring together national priorities. What is in your opinion the role of the Strategic Working Groups and the Collaborate Working Groups?

P3 Should groups link more with each other?

P4 How are linkages between your WG and Foresight?

Q1 Most WGs have a mix of policy representatives, experts, funders and stakeholders. Is it important to have such a mix and is there an ideal mix?

Q2 Participants in a WG can act on personal title or representing their institute or country. How get participants appointed to WGs?

Q3 Do you think that participants are aware - if they officially do - that they are delegates of an organisation or a country?

R1 Do you think the SCAR countries are well represented in the different WGs?

R2 Are SCAR countries overall well represented in the Steering Group?

R3 Are all regions* in Europe well represented in the WGs and in the SG?

**Regions according to UN Statistics Division: Northern, Western, Southern and Eastern Europe.*

R4 Do you have a view as to why countries participate in SCAR WGs or SG?

R5 Do you have a view as to why countries do not participate in SCAR WGs or SG?

R6 What would support future participation?

Reasons can include but are not limited to: little knowledge of SCAR at the national level, limited HR capacity, SCAR being seen as not the most effective or important agenda-setting body in Europe, a WG topic is not a national priority, no budget available to support representatives, limited return on investment (in terms of EU funding for science in Framework Programmes of Structural Funds).

S1 What are results of your Working Group?

S2 How do results of your Working Groups feed into national and EC policy?

S3 Is this in line with the goals, mandate and ambition of your WG?

S4 What is in your (or your DGs) opinion the role of SCAR? What should SCAR do; what is its mandate?

S5 Do you have a view or opinion about the functioning of SCAR as a whole?

S6 How would you estimate the impact of the SCAR WG products at the European (Commission) level?

S7 Is there need for improvement and how (if needed) should that be established?

S8 Is there coordination within the EC between EC participants in WGs?

S9 How does SCAR relate to the Programme Committee for SC2?

S10 Does SCAR cover the different areas in the bioeconomy sufficiently or should there be another WG?

S11 What is your vision for SCAR in the future?

7.4 Annex 4: Key figures per Working Group

7.4.1 Annex 4A: Collaborative Working Group AHW

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group in 2016 across political association. SCAR distribution is added for reference. NS = non-SCAR.

	SCAR		2016	
EU-15	15	41%	13	65%
EU-13	13	35%	2	10%
AC	9	24%	4	20%
NS			1	5%
	37		20	

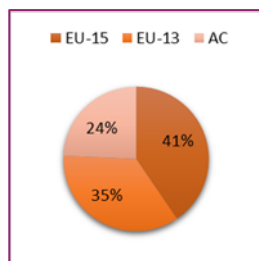


Figure 1a: Division of SCAR countries (in %)

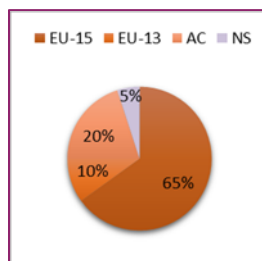


Figure 1b: Division of SCAR countries in AHW in 2016 (in %). NS = non-SCAR

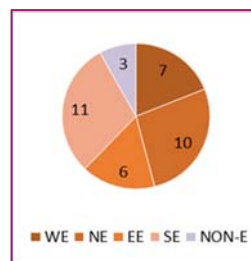


Figure 2a: participation in SCAR per region.

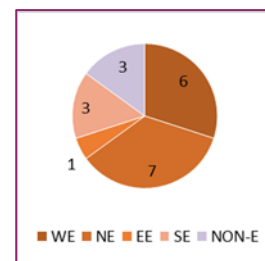


Figure 1b: Division of SCAR countries in AHW per region in 2016.

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

Table 2: Attendance of participants (country) at WG meetings in %. Count is per country. Only one data point (one meeting) for 2016 available.

Political association	Geographical distribution		
EU-15	77%	Western Europe	83%
EU-13	50%	Northern Europe	57%
AC	38%	Eastern Europe	50%
NON-SCAR	100%	Southern Europe	83%
		Non-European	50%

III. ROLES IN THE WORKING GROUP

'Roles' refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

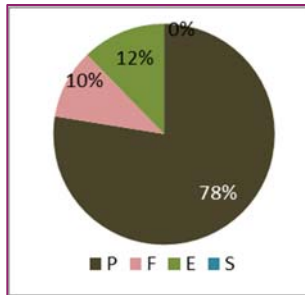


Figure 3a: Roles of country participants in the WG in 2016 and 2017.

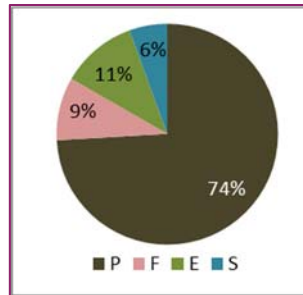


Figure 3b: Roles of the country participants and the observers in the WG in 2016 and 2017.

7.4.2 Annex 4B: Collaborative Working Group SAP

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group in 2016 across political association. SCAR distribution is added for reference.

	SCAR		2016	
EU-15	15	41%	15	63%
EU-13	13	35%	7	29%
AC	9	24%	2	8%
	37		24	

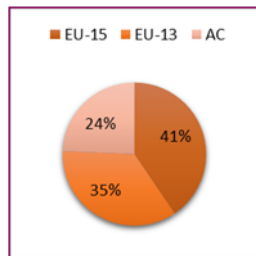


Figure 1a: Division of SCAR countries (in %)

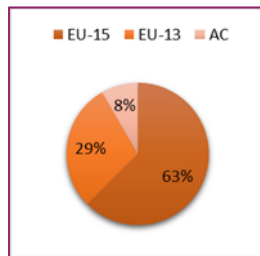


Figure 1b: Division of SCAR countries in SAP in 2016 (in %).

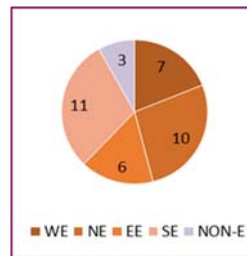


Figure 2a: participation in SCAR per region.

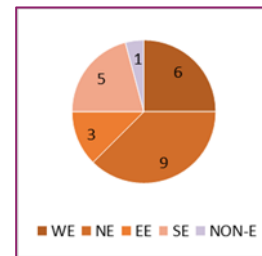


Figure 1b: Division of SCAR countries in SAP per region in 2016.

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

No data available.

III. ROLES IN THE WORKING GROUP

'Roles' refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

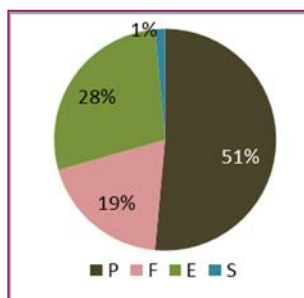


Figure 3a: Roles of country participants in the WG in 2016.

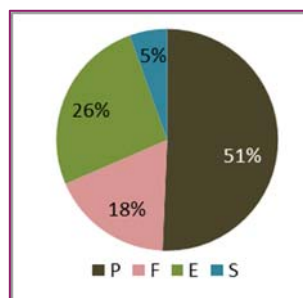


Figure 3b: Roles of the country participants and the observers in the WG in 2016.

7.4.3 Annex 4C: Strategic Working Group AKIS

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group per year across political association. SCAR distribution is added for reference.

	SCAR		2014/15		2016		2017	
EU-15	15	41%	14	78%	13	62%	13	57%
EU-13	13	35%	2	11%	7	33%	8	35%
AC	9	24%	2	11%	1	5%	2	9%
	37		18		21		23	

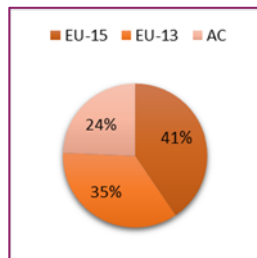


Figure 1a: Division of SCAR countries (in %)

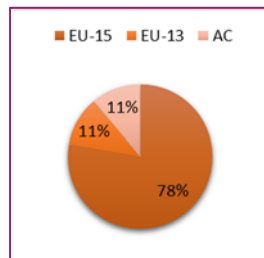


Figure 1b: Division of SCAR countries in AKIS in 2014-2015 (in %)

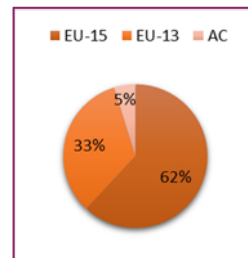


Figure 1c: Division of SCAR countries in AKIS in 2016 (in %)

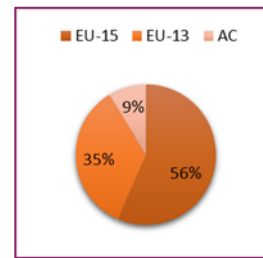


Figure 1d: Division of SCAR countries in AKIS in 2017 (in %)

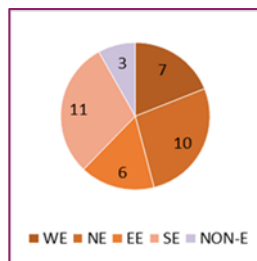


Figure 2a: participation in SCAR per region.

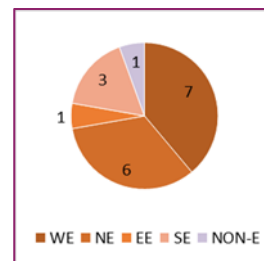


Figure 2b: Participation of SCAR countries in AKIS per region in 2014-2015.

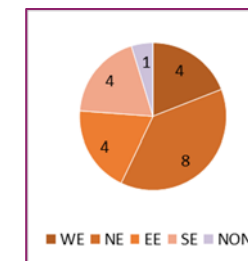


Figure 2c: Participation of SCAR countries in AKIS per region in 2016.

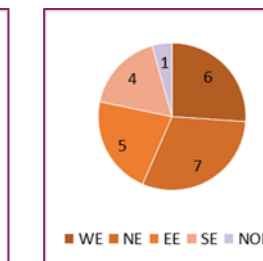


Figure 2d: Participation of SCAR countries in AKIS per region in 2017.

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

Table 2: Attendance of participants (country) at WG meetings in %. Count is per country. Only data for 2016 available.

Political association	Geographical distribution		
EU-15	67%	Western Europe	92%
EU-13	43%	Northern Europe	42%
AC	0%	Eastern Europe	42%
		Southern Europe	75%
		Non-European	0%

III. ROLES IN THE WORKING GROUP

'Roles' refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

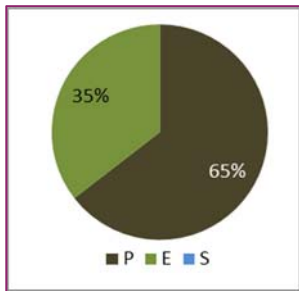


Figure 3a: Roles of country participants in the WG in 2014-2015.

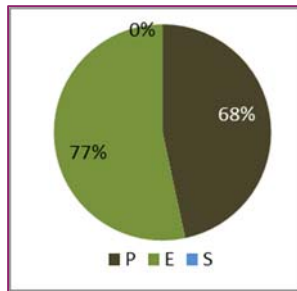


Figure 3b: Roles of country participants in the WG in 2016.

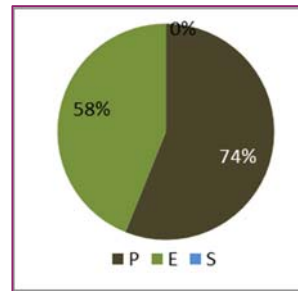


Figure 3c: Roles of country participants in the WG in 2017.

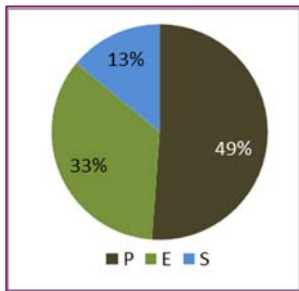


Figure 3d: Roles of the country participants and the observers in the WG in 2014-2015

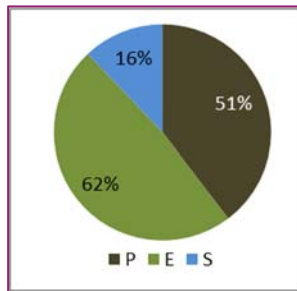


Figure 3e: Roles of the country participants and the observers in the WG in 2016.

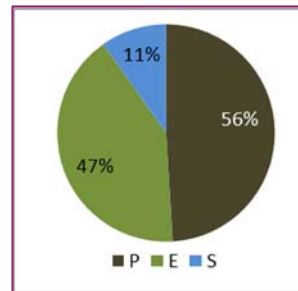


Figure 3f: Roles of the country participants and the observers in the WG in 2017.

IV. TRENDS

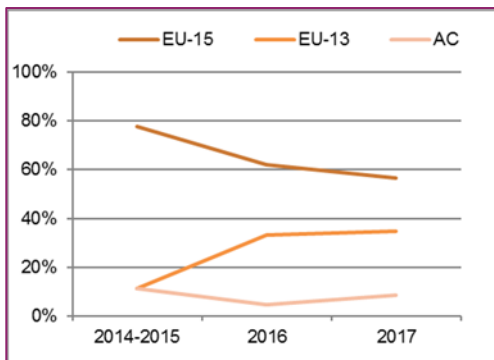


Figure 4a: Development of country participation along political association from 2014/15 to 2017.

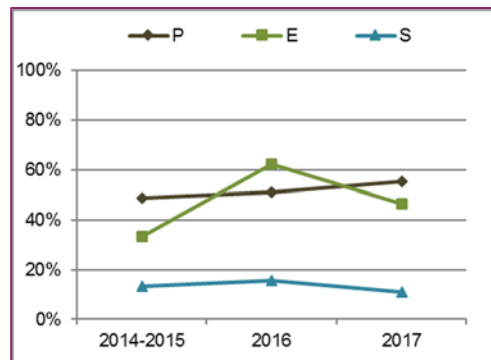


Figure 4b: Development of role participation of country participants and observers from 2014/15 to 2017.

7.4.4 Annex 4D: Strategic Working Group FISH

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group per year across political association. SCAR distribution is added for reference. NS = non-SCAR

	SCAR		2014		2015		2016		2017	
EU-15	15	41%	12	57%	10	59%	10	59%	10	56%
EU-13	13	35%	4	19%	4	24%	4	24%	5	28%
AC	9	24%	4	19%	3	18%	3	18%	3	17%
NS			1	5%						
	37		21		17		17		18	

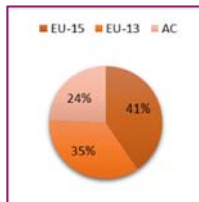


Figure 1a: Division of SCAR countries (in %)

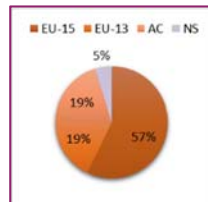


Figure 1b: Division of SCAR countries in FISH in 2014 (in %)

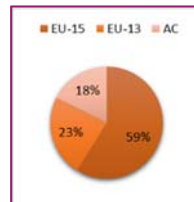


Figure 1c: Division of SCAR countries in FISH in 2015 (in %)

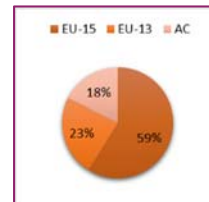


Figure 1d: Division of SCAR countries in FISH in 2016 (in %)

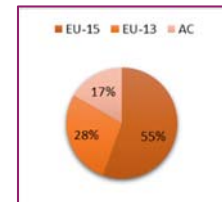


Figure 1e: Division of SCAR countries in FISH in 2017 (in %)

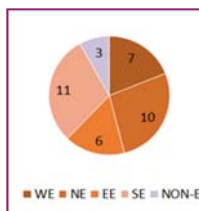


Figure 2a: participation in SCAR per region.



Figure 2b: Participation of SCAR countries in FISH per region in 2014.



Figure 2c: Participation of SCAR countries in FISH per region in 2015.

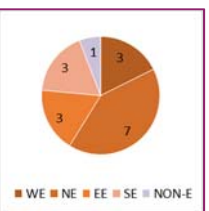


Figure 2d: Participation of SCAR countries in FISH per region in 2016.

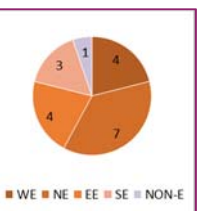


Figure 2e: Participation of SCAR countries in FISH per region in 2017.

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

Table 2a: Attendance of participants (country) at WG meetings in % along political association. Count is per country. NS =non-SCAR country, na =not applicable.

Political association	2014	2015	2016	2017
EU-15	67%	80%	70%	59%
EU-13	50%	33%	75%	60%
AC	25%	67%	44%	50%
NS	0%	na	na	na

Table 2b: Attendance of participants (country) at WG meetings in % along geographical distribution. Count is per country.

.Geographical distribution	2014	2015	2016	2017
Western Europe	63%	100%	100%	88%
Northern Europe	56%	71%	62%	88%
Eastern Europe	75%	22%	67%	50%
Southern Europe	50%	56%	67%	83%
Non-European	0%	100%	0%	0%

III. ROLES IN THE WORKING GROUP

'Roles' refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

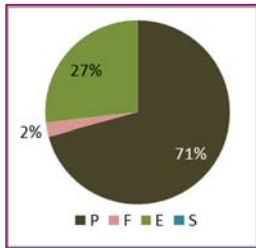


Figure 3a: Roles of country participants in the WG in 2014.

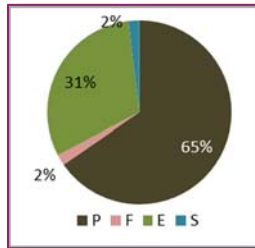


Figure 3b: Roles of country participants in the WG in 2015.

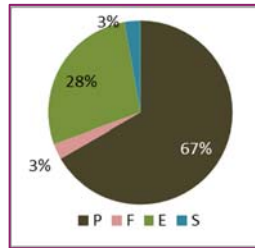


Figure 3c: Roles of country participants in the WG in 2016.

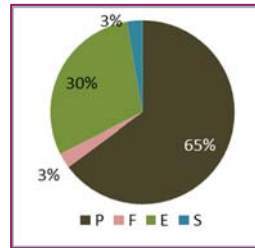


Figure 3d: Roles of country participants in the WG in 2017.

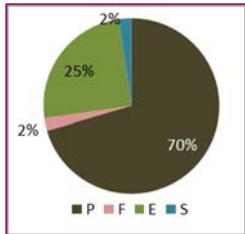


Figure 3e: Roles of the country participant and the observers in the WG in 2014.

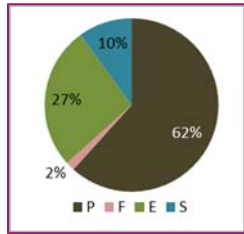


Figure 3f: Roles of the country participant and the observers in the WG in 2015.

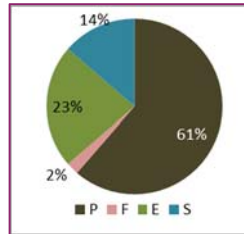


Figure 3g: Roles of the country participant and the observers in the WG in 2016.

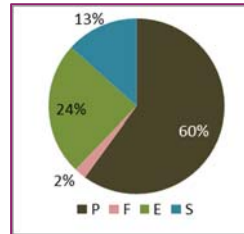


Figure 3h: Roles of the country participant and the observers in the WG in 2017.

IV. TRENDS

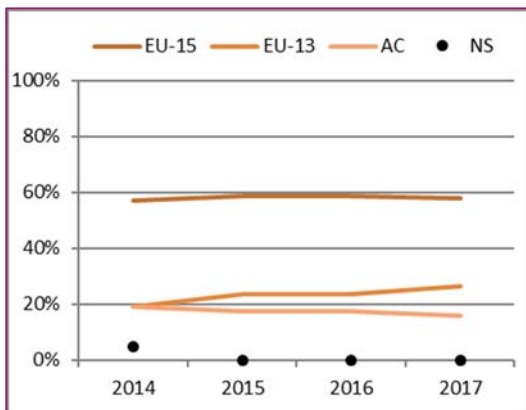


Figure 4a: Development of country participation along political association from 2014 to 2017. NS = Non-SCAR country.

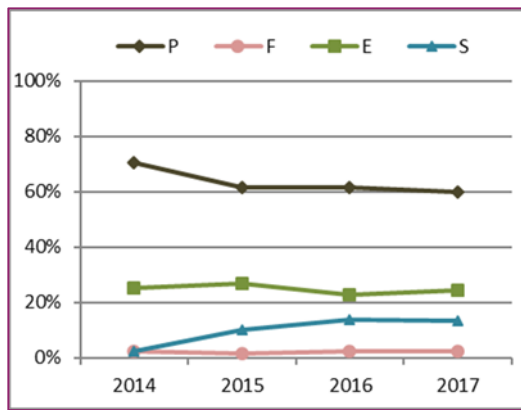


Figure 4b: Development of role participation of country participants and observers from 2014 to 2017.

7.4.5 Annex 4E: Strategic Working Group Bioeconomy

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group per year across political association. SCAR distribution is added for reference.

	SCAR		2012		2013		2014		2015		2016		2017	
EU-15	15	41%	11	79%	11	73%	11	73%	11	73%	12	63%	13	65%
EU-13	13	35%	1	7%	2	13%	2	13%	2	13%	5	26%	5	25%
AC	9	24%	2	14%	2	13%	2	13%	2	13%	2	11%	2	10%
	37		14		15		15		15		19		20	

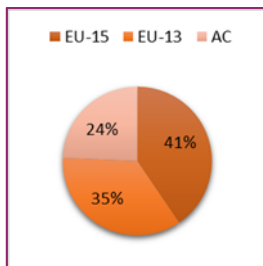


Figure 1a: Division of SCAR countries (in %)

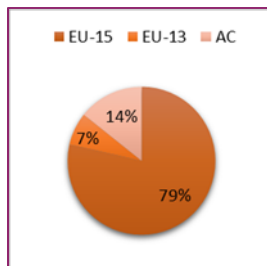


Figure 1b: Division of SCAR countries in BE in 2012 (in %)

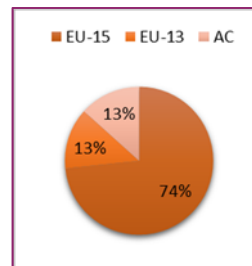


Figure 1c: Division of SCAR countries in BE in 2013 (in %)

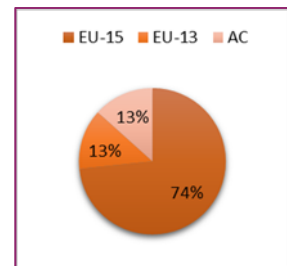


Figure 1d: Division of SCAR countries in BE in 2014 (in %)

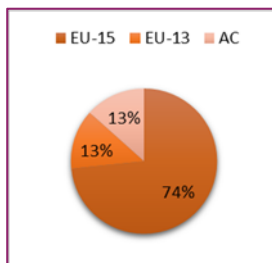


Figure 1e: Division of SCAR countries in BE in 2015 (in %)

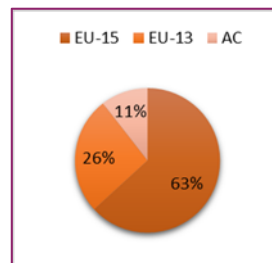


Figure 1f: Division of SCAR countries in BE in 2016 (in %)

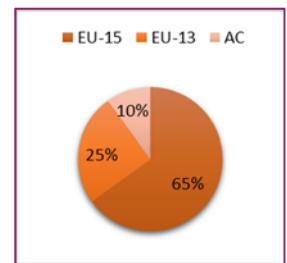


Figure 1g: Division of SCAR countries in BE in 2017 (in %)

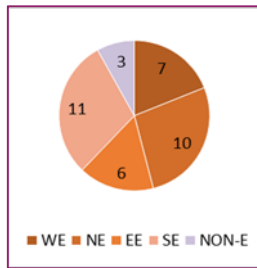


Figure 2a: participation in SCAR per region.

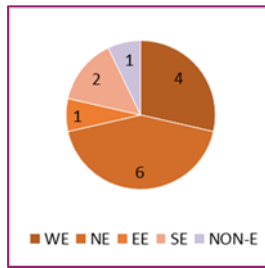


Figure 2b: Participation of SCAR countries in BE per region in 2012.

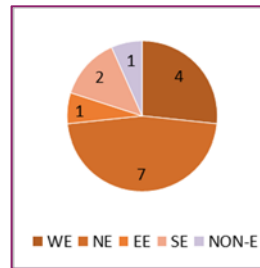


Figure 2c: Division of SCAR countries in BE per region in 2013.

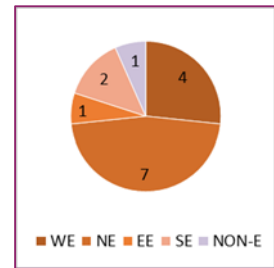


Figure 2d: Division of SCAR countries in BE per region in 2014.

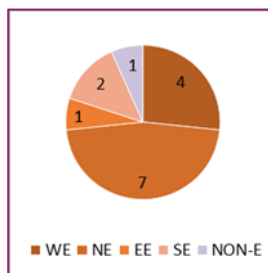


Figure 2e: Division of SCAR countries in BE per region in 2015.

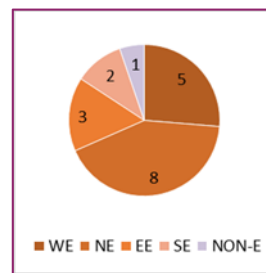


Figure 2f: Division of SCAR countries in BE per region in 2016.

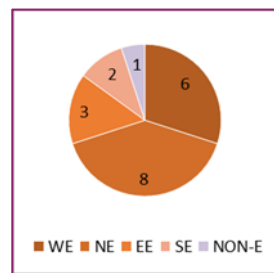


Figure 2g: Division of SCAR countries in BE per region in 2017.

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

Table 2a: Attendance of participants (country) at WG meetings in % along political association. Count is per country. 2016 only one data point.

Political association					
	2012	2013	2014	2015	2016
EU-15	82%	70%	70%	73%	58%
EU-13	100%	33%	17%	0%	0%
AC	75%	17%	50%	50%	0%

Table 2b: Attendance of participants (country) at WG meetings in % along geographical distribution. Count is per country. 2016 only one data point.

Geographical distribution					
	2012	2013	2014	2015	2016
Western Europe	100%	75%	100%	88%	75%
Northern Europe	60%	44%	33%	42%	29%
Eastern Europe	100%	33%	0%	0%	0%
Southern Europe	75%	83%	67%	75%	50%
Non-European	100%	33%	100%	50%	0%

III. ROLES IN THE WORKING GROUP

'Roles' refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

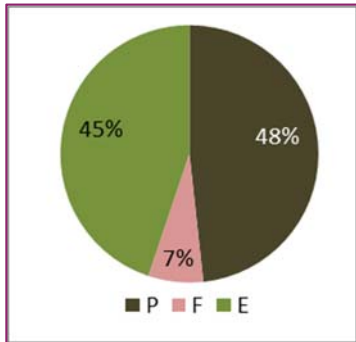


Figure 3a: Roles of country participants in the WG in 2012.

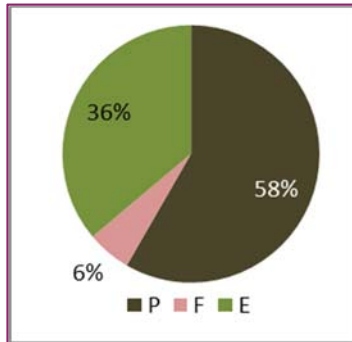


Figure 3b: Roles of country participants in the WG in 2013.

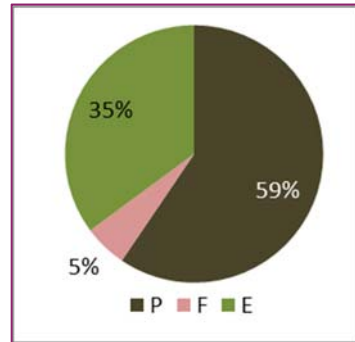


Figure 3c: Roles of country participants in the WG in 2014.

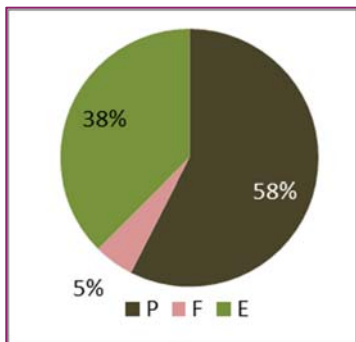


Figure 3d: Roles of country participants in the WG in 2015.

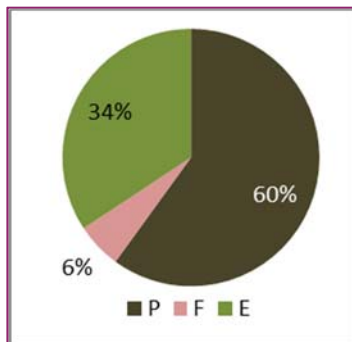


Figure 3e: Roles of country participants in the WG in 2016.

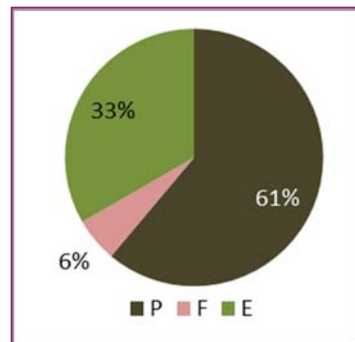


Figure 3f: Roles of country participants in the WG in 2017.

IV. TRENDS

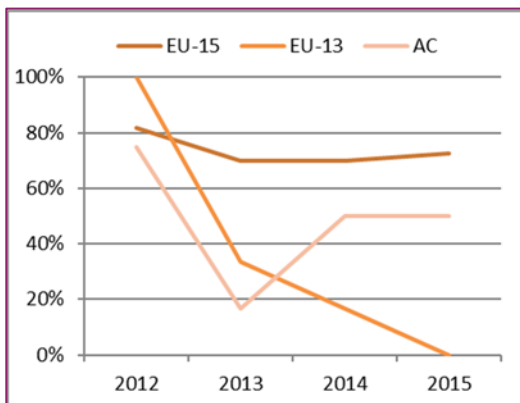


Figure 4a: Development of country participation along political association from 2012 to 2015.

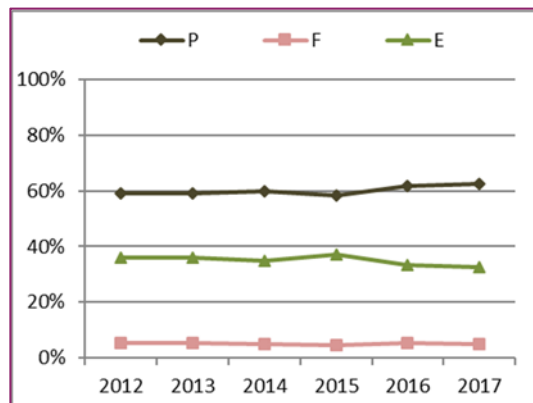


Figure 4b: Development of role participation of country participants and observers from 2012 to 2017.

7.4.6 Annex 4F: Strategic Working Group ARCH

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group per year across political association. SCAR distribution is added for reference.

	SCAR		2013		2014		2015		2016		2017	
EU-15	15	41%	10	84%	10	76%	9	69%	9	69%	9	69%
EU-13	13	35%	1	8%	1	8%	2	16%	2	16%	2	16%
AC	9	24%	1	8%	2	16%	2	15%	2	15%	2	15%
	37		12		13		13		13		13	

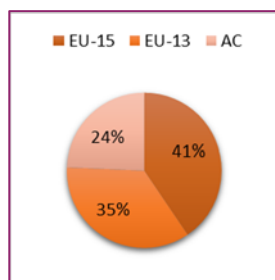


Figure 1a: Division of SCAR countries (in %)

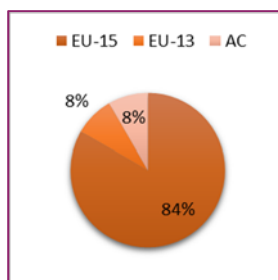


Figure 1b: Division of SCAR countries in ARCH in 2013 (in %)

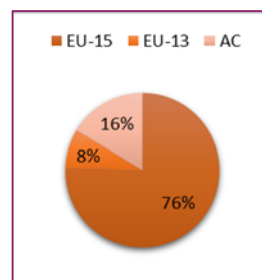


Figure 1c: Division of SCAR countries in ARCH in 2014 (in %)

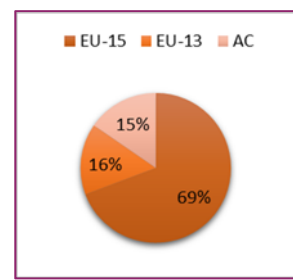


Figure 1d: Division of SCAR countries in ARCH in 2015 (in %). *Data for 2016 and 2017 is same as 2015.*

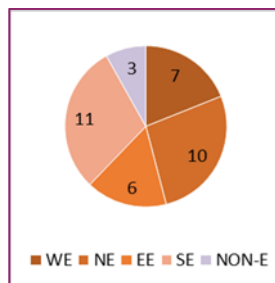


Figure 2a: participation in SCAR per region.

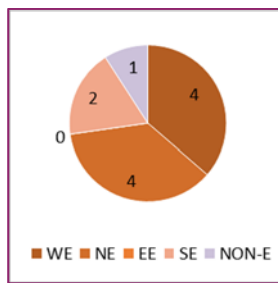


Figure 2b: Participation of SCAR countries in ARCH per region in 2013.

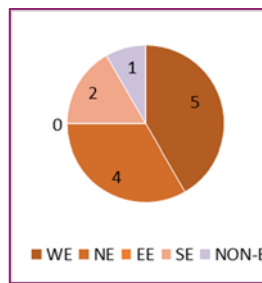


Figure 2c: Division of SCAR countries in ARCH per region in 2014.

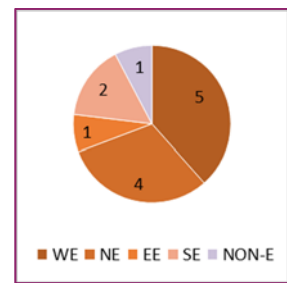


Figure 2d: Division of SCAR countries in ARCH per region in 2015. *Data for 2016 and 2017 is same as 2015.*

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

Table 2a: Attendance of participants (country) at WG meetings in % along political association. Count is per country. 2016 no attendance data available.

Political association	2013	2014	2015
EU-15	90%	50%	39%
EU-13	50%	0%	0%
AC	50%	25%	25%

Table 2b: Attendance of participants (country) at WG meetings in % along geographical distribution. Count is per country. Na =not applicable. 2016 no attendance data available..

Geographical distribution	2013	2014	2015
Western Europe	100%	63%	75%
Northern Europe	75%	25%	0%
Eastern Europe	na	na	0%
Southern Europe	75%	38%	13%
Non-European	50%	0%	0%

III. ROLES IN THE WORKING GROUP

‘Roles’ refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

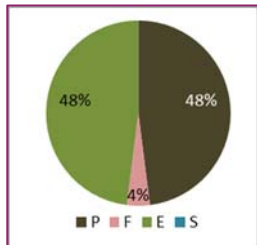


Figure 3a: Roles of country participants in the WG in 2013.

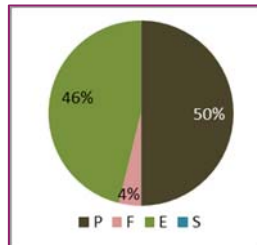


Figure 3b: Roles of country participants in the WG in 2014.

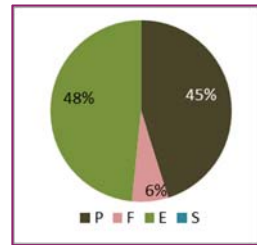


Figure 3c: Roles of country participants in the WG in 2015.

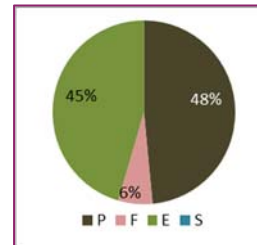


Figure 3d: Roles of country participants in the WG in 2016 and 2017.

IV. TRENDS

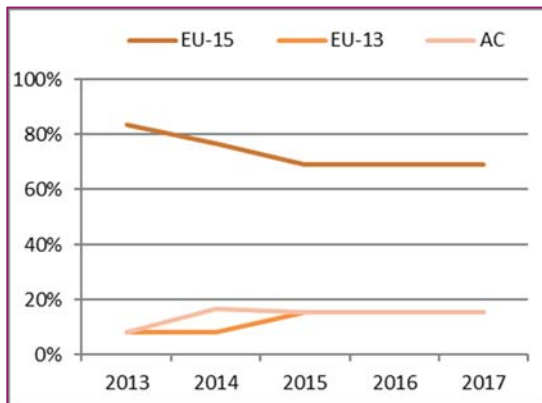


Figure 4a: Development of country participation along political association from 2013 to 2017.

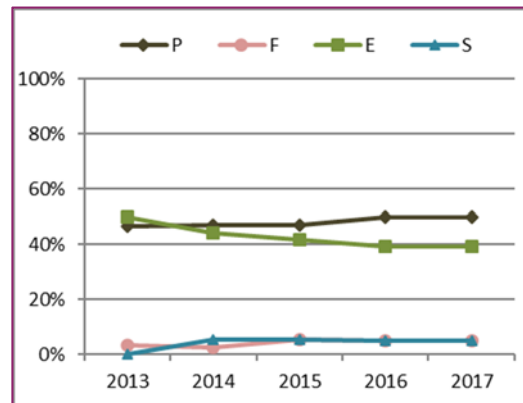


Figure 4b: Development of role participation of country participants and observers from 2013 to 2017.

7.4.7 Annex 4G: Strategic Working Group Forestry

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group per year across political association. SCAR distribution is added for reference.

	SCAR		2016		2017	
EU-15	15	41%	11	79%	11	73%
EU-13	13	35%	2	14%	3	20%
AC	9	24%	1	7%	1	7%
	37		14		15	

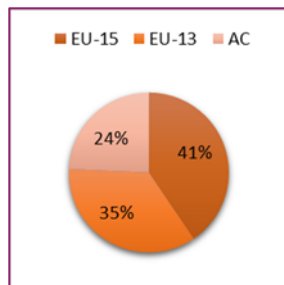


Figure 1a: Division of SCAR countries (in %)

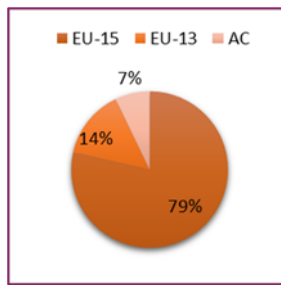


Figure 1b: Division of SCAR countries in FOREST in 2016 (in %)

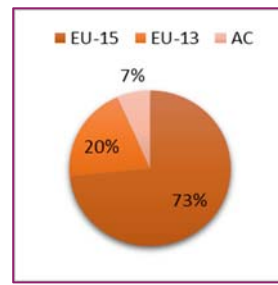


Figure 1c: Division of SCAR countries in FOREST in 2017 (in %)

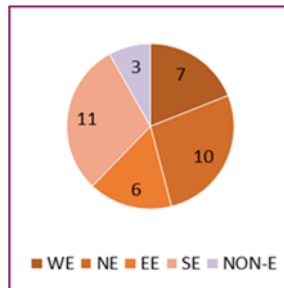


Figure 2a: participation in SCAR per region.



Figure 1b: Division of SCAR countries in FOREST per region in 2016 (in %).

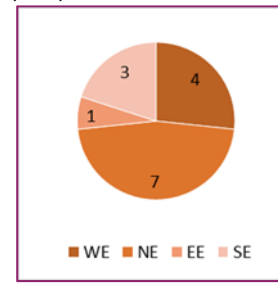


Figure 1c: Division of SCAR countries in FOREST per region in 2017 (in %).

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

Table 2: Attendance of participants (country) at WG meetings in %. Count is per country. Only one data point for 2016 available.

Political association	Geographical distribution
EU-15	73% Western Europe 75%
EU-13	50% Northern Europe 83%
AC	100% Eastern Europe 0%
	Southern Europe 67%
	Non-European na

III. ROLES IN THE WORKING GROUP

'Roles' refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

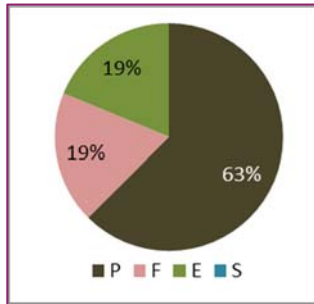


Figure 3a: Roles of country participants in the WG in 2016.

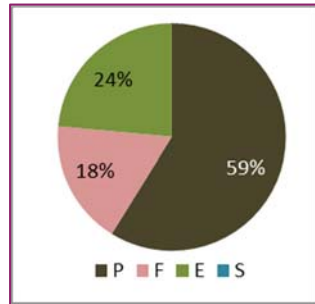


Figure 3b: Roles of country participants in the WG in 2017.

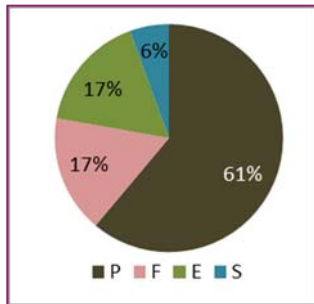


Figure 3d: Roles of the country participants and the observers in the WG in 2016

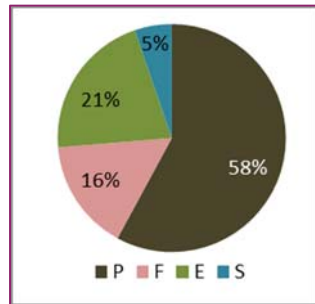


Figure 3e: Roles of the country participants and the observers in the WG in 2017.

7.4.8 Annex 4H: Strategic Working Group Food Systems

I. COUNTRY INVOLVEMENT

Table 1: Countries participating in the working group per year across political association. SCAR distribution is added for reference.

	SCAR		2016		2017	
EU-15	15	41%	13	65%	13	65%
EU-13	13	35%	4	20%	4	20%
AC	9	24%	3	15%	3	15%
	37		20		20	

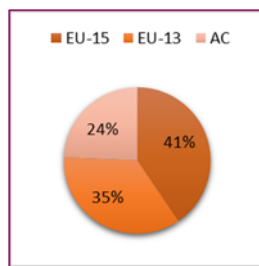


Figure 1a: Division of SCAR countries (in %)

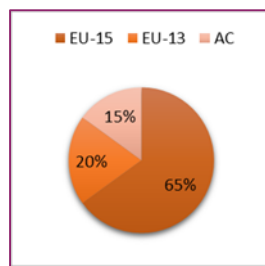


Figure 1b: Division of SCAR countries in FOOD in 2016 and 2017 (in %)

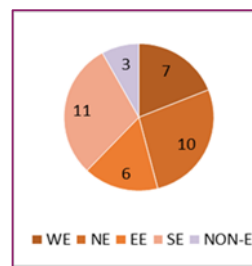


Figure 2a: participation in SCAR per region.

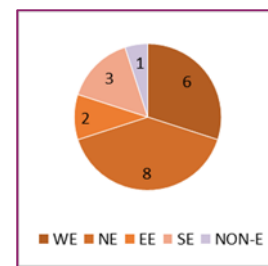


Figure 1b: Division of SCAR countries in FOOD per region in 2016 and 2017 (in %)

II. COUNTRY COVERAGE AT MEETINGS (ATTENDANCE)

Table 2: Attendance of participants (country) at WG meetings in %. Count is per country. Only one data point for 2016 available.

Political association	Geographical distribution		
EU-15	85%	Western Europe	67%
EU-13	75%	Northern Europe	100%
AC	33%	Eastern Europe	50%
		Southern Europe	67%
		Non-European	0%

III. ROLES IN THE WORKING GROUP

'Roles' refers to the main role a person has in the group. People can have a combination of different roles. P=Policy representative, E=Expert, S=Stakeholder representative, F=Funder, or a combination of two roles. Combinations are aggregated to either P, F, E or S.

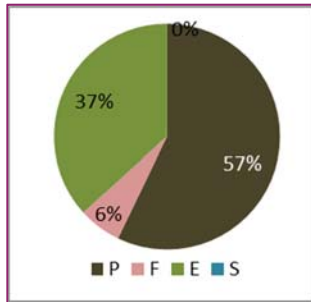


Figure 3a: Roles of country participants in the WG in 2016 and 2017.

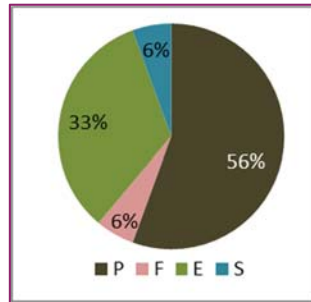


Figure 3b: Roles of the country participants and the observers in the WG in 2016 and 2017.

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