



April 2024

**Strategic
development plan
for SAPEA**



This document has been produced by SAPEA (Science Advice for Policy by European Academies), part of the Scientific Advice Mechanism to the European Commission.

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Scientific Advice Mechanism

to the European Commission

Strategic development plan for SAPEA

How to further develop SAPEA to make optimal use of the outstanding expertise of Europe's academies in the European Commission's Scientific Advice Mechanism

April 2024

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Foreword



Welcome, and thank you for your interest in SAPEA's strategic development plan.

SAPEA (Science Advice for Policy by European Academies) is an integral part of the European Scientific Advice Mechanism. SAPEA provides independent, high-quality evidence review reports to inform policy recommendations made by the Group of Chief Scientific Advisors to the European Commission.

This strategic development plan supersedes, but also builds on, SAPEA's first strategic plan, published in June 2020. At that time, the whole world was confronted with a serious pandemic. Now we face new challenges, such as Russia's war against Ukraine and major conflict in the Middle East. The consequences of climate change become ever more evident. Fast-growing technologies like artificial intelligence pose both opportunities, as well as risks, to society. With good reason, the Scientific Advice Mechanism has been examining the scientific evidence and providing policy recommendations in key areas like crisis management, sustainable food systems, energy transitions, integrated approaches to health and the use of AI in research.

While SAPEA has a strong record of achievement since we started in 2016, we are committed to evolving our work and services to meet the needs of European policymaking. With this strategic development plan, we have taken the opportunity to review the previous plan, while also looking firmly towards the future. We have sought the views of our most important stakeholders, as well as consulting with international experts about the changing landscape and important trends in science advice. As a result, we have taken a fresh look at our strategic priorities.

My sincere thanks go to everyone who has contributed to SAPEA and to this final version of the strategic development plan.

Professor Marja Makarow

Chair of the working group on the strategic development of SAPEA

Member of the SAPEA Board

President of Academia Europaea

Approach to the strategic review

In creating this strategic development plan, SAPEA has undertaken a comprehensive review of existing strategy and operations. Input to this comes from two main sources, an internal review and a wider stakeholder consultation. We have also solicited the views of international experts on science advice.

Mission, vision, core competencies

We have re-visited our mission (what we do), our vision (our aim for the future), and our core competencies and capabilities. Although these are still largely fit for purpose, we have made several small adjustments which reflect the outcomes of the strategic review process.

SAPEA's mission

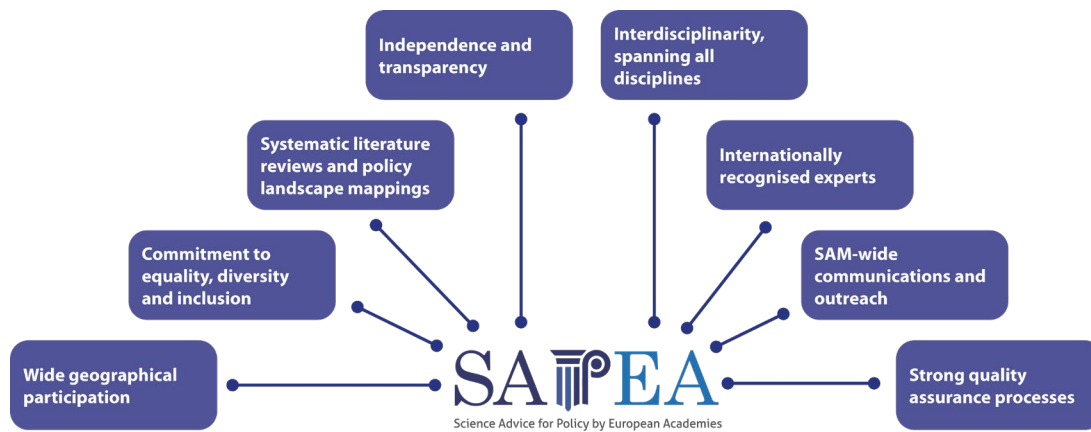
SAPEA brings together outstanding expertise in engineering, humanities, medicine, natural and social sciences from over 110 academies, young academies and learned societies across more than 40 countries in Europe. SAPEA's mission is threefold:

- to provide high-quality, timely and independent scientific evidence, together with evidence-based conclusions and policy options
- to strengthen the landscape of academies in Europe, providing opportunities for Academy Fellows and other leading experts to participate in SAPEA's activities
- to communicate and disseminate effectively the outputs of the Scientific Advice Mechanism and to undertake outreach activities that achieve tangible impact

SAPEA's vision

In a world facing multiple challenges, effective policymaking in Europe is informed by scientific evidence of the highest quality.

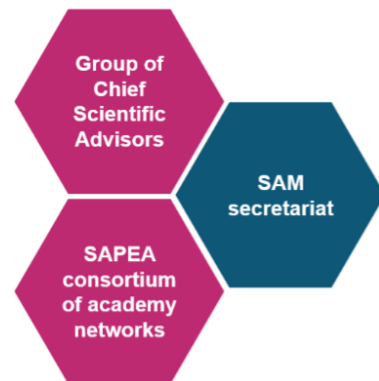
SAPEA's core commitments, competencies and capabilities



Context: the Scientific Advice Mechanism, the role of SAPEA and impact on policy

The Scientific Advice Mechanism (SAM) provides independent scientific evidence and policy recommendations to the European institutions, by request of the College of Commissioners. The SAM consists of three parts:

- the Group of Chief Scientific Advisors, seven eminent scientists whose role is to make policy recommendations
- SAPEA (Science Advice for Policy by European Academies) which brings together Europe's academies and Academy Networks, whose role is to review and synthesise evidence
- the SAM secretariat, a unit within the European Commission whose role is to support the Advisors and liaise between the Scientific Advice Mechanism and the European Commission



The first Group of Chief Scientific Advisors was appointed in 2015¹ by the European Commission, and SAPEA was created in 2016. Since 2023, the Scientific Advice Mechanism has also been able to respond to requests coming via the College of Commissioners from the European Parliament and the Council of the EU.

The outputs of the Scientific Advice Mechanism have a demonstrable impact on policy development and legislation in Europe. At European level, the work of the SAM has been cited in a range of European official publications, such as Directives, Regulations, Council Recommendations, Resolutions and Communications². The SAM is also cited in official publications from national governments and parliamentary bodies; recent examples include Ireland, Finland, Germany, Netherlands and the UK³. The SAM is frequently cited in reports of agencies such as the European Food Safety Authority and the European Environment Agency. Beyond Europe, the SAM's work has been cited in publications by international bodies such as the World Health Organisation (WHO), the OECD, the UN Environment Programme (UNEP) and others⁴.

¹ Initially known as the 'High-Level Group'

² Source: EUR-Lex database

³ Source: Overton database

⁴ Source: Overton database

Key indicators of achievement 2016–2023

1. 12 evidence review reports delivered by SAPEA, along with other evidence outputs such as expert workshop reports, policy landscape mappings and literature reviews
2. 193 leading experts involved in SAPEA working groups, from 26 European countries and 3 beyond; 288 additional experts participating in expert workshops
3. Over 100 citations of SAM's work in EC official legislative and regulatory documents⁵
4. Over 1000 citations of SAM's work in the academic literature⁶
5. 136 outreach events around Europe; 6300 social media followers; 166 000 unique visitors to the SAM/SAPEA websites⁷

⁵ Source: EUR-LEX

⁶ Sources: Scopus and Dimensions

⁷ The standalone SAPEA website was replaced by a consolidated website for the whole SAM in 2023.

SAPEA's new strategic priorities

Strategic priority 1: Service innovation and impact

Enhance further our ability to provide high quality, independent and timely evidence reviews that impact on policymaking

Strategic priority 2: Widening excellence and participation

Strive towards greater equality, diversity and inclusion in all that we do

Strategic priority 3: Communicate for impact

Communicate effectively the work of the Scientific Advice Mechanism to maximise its impact

Strategic priority 4: Share knowledge and best practice

Create a culture that empowers through knowledge sharing, learning and development

SAPEA's new priorities have been informed by the strategic review process, which highlighted the following opportunities, amongst others:

- exploring and adopting innovative methods for evidence review, where these enhance SAPEA's work, including the potential use of novel technologies such as AI-based tools
- considering ways to incorporate elements of foresight analysis into SAPEA's evidence review reports, where appropriate
- nurturing SAPEA's commitment to and furthering our actions towards even greater equality, diversity and inclusion within our work
- helping to evolve the SAM communications strategy, leveraging the SAM-wide branding
- taking a SAM-wide approach to mutual learning and knowledge-sharing, thereby strengthening the SAM's collective institutional memory

See Annexes for further details.

Objectives, actions, outcomes

Strategic priority 1: Service innovation and impact

Enhancing further our ability to provide high-quality, independent and timely evidence reviews that impact on policymaking

Objectives

Our objectives are to:

- continue to deliver evidence reviews that adhere to the highest quality standards, while assessing new methods and formats for conducting such reviews
- explore the potential use of artificial intelligence (AI) as a tool in the evidence review process, as part of a wider strategy on AI in SAPEA
- introduce elements of foresight analysis into SAPEA's evidence review work, where appropriate
- increase our insight and understanding into how SAM's outputs are utilised for policy (see also strategic priority 3)
- be able to respond to requests to the SAM, coming from other European institutions via the College of Commissioners

Actions

We will:

- produce a strategic report on the benefits and risks on the use of AI in the evidence review process, as part of a review of AI across all SAPEA activities; prepare an implementation plan that includes pilots and tests of AI tools
- perform 'living reviews' and revisit our published evidence review reports where appropriate (for example, as new situations and evidence emerge)
- incorporate elements of foresight analysis into evidence review reports, where appropriate. This could mean identifying possible paths for future development, anticipating potential policy needs, highlighting knowledge gaps
- update our quality guidelines to take account of new methods and formats, including the use of AI
- undertake regular analysis of how SAM outputs are utilised by policymakers and other stakeholders (see also strategic priority 3)
- make preparations to be able to respond to requests to the SAM, coming from other European institutions via the College of Commissioners

Outcomes

Outcomes of meeting our objectives include:

- the use of new methods and formats for conducting evidence reviews, as appropriate
- 'living reviews' that take account of new situations and evidence, as appropriate
- the inclusion of foresight analyses and activities in evidence review reports and other SAPEA outputs, as appropriate
- revised SAPEA quality guidelines to take account of new methods and formats that may be developed, including the use of AI in evidence review activities
- increased uptake of SAM outputs by policymaking and other stakeholders
- evidence reviews (including literature reviews) conducted for the Group of Chief Scientific Advisors and for other European institutions

Strategic priority 2: Widening excellence and participation

Striving towards equality, diversity and inclusion in all that we do

Objectives

Our objectives are to:

- progress towards wider equality, diversity and inclusion across all our activities, while maintaining the highest standards of excellence
- provide support and ensure that the voices of underrepresented groups are heard across our activities

Actions

We will:

- develop a more detailed strategy and implementation plan on equality, diversity and inclusion across our activities, as part of a new work package in the next SAPEA grant
- continue to gather, analyse and report data, providing insight into progress on equality, diversity and inclusion within our working groups and other activities
- continue to engage with underrepresented groups and individuals, and support capacity-building and capability to participate in our activities
- consider additional desirable criteria for the selection process of working group members, while adhering to the main criterion of excellence in the field. Examples could include leadership experience (for chairs), outreach and communications expertise, experience working in multidisciplinary groups, and experience of the science-policy interface

Outcomes

Outcomes of meeting our objectives include:

- wider representation and engagement across the spectrum of our activities
- increased positive feedback from key stakeholders (e.g. academies) on the transparency and effectiveness of the selection process, together with favourable comments by academies and individuals from underrepresented groups who participate in our activities

Strategic priority 3: Communicate effectively the work of the Scientific Advice Mechanism

Maximise awareness and impact of the SAM

Objectives

Working with our SAM partners, our objectives are to:

- leverage the power of the new unified branding of the Scientific Advice Mechanism, maximising awareness and impact
- promote general understanding of the SAM and how it operates
- continue to reach out to a wider audience, including policymakers (e.g. at national level) and the general public
- raise the profile of the SAM within the global ecosystem of science advice providers and professionals

Actions

Working with our SAM partners, we will:

- continue to implement and evolve the joint SAM communications strategy, to take account of new requirements, methods and technologies (including AI)
- assess and report on the impact of the SAM's work, both quantitative (e.g. citation data) and qualitative (e.g. case studies that demonstrate impact)
- explain with even greater clarity the work and processes of the SAM, including to our closest stakeholders (e.g. academies and experts) but also the wider public
- engage with the wider science advice ecosystem, building our European and international profile through collaboration on high-profile events and other activities

Outcomes

Outcomes of meeting our objectives include:

- increased communications activities of the SAM through the whole spectrum of channels and services (website, podcasts, social media etc)
- increased relevance, uptake and impact, as measured, for example, through number of citations in the scientific literature, grey literature and policy documents and a qualitative assessment of awareness and uptake of the work of the SAM
- increased positive feedback from stakeholders (particularly academics and experts) on their clarity of understanding of the SAM
- increased level of activity of the SAM within the wider science advice ecosystem e.g. number of collaborative activities with international networks

Strategic priority 4: Collective learning and knowledge sharing

Creating a culture that shares knowledge and enhances learning opportunities

Objectives

Our objectives are to:

- contribute to a joint process within the SAM to develop new induction resources for new members of the SAM (including Advisors, SAPEA Board, SAPEA and SAM secretariat staff)
- encourage the further professional development of SAPEA staff
- capture institutional memory and collective learning of the SAM
- support the ongoing future development of the SAM and our place within it

Actions

We will:

- work with SAM secretariat colleagues to develop shared induction materials, where appropriate
- create more learning and development opportunities for SAPEA staff, for example, through writing and presenting at conferences
- showcase SAM publications that chart the development of our work, including outputs such as event reports, conference papers and impact reports, amongst others.
- collaborate with SAM partners on the future development and strengthening of the SAM, as part of the next SAPEA strategic review

Outcomes

Outcomes of meeting our objectives include:

- a set of shared induction materials that are used by all the SAM partners
- increased learning and development opportunities for SAPEA staff e.g. conferences, papers
- a space on the SAM website that showcases major outputs (beyond Scientific Opinions and evidence review reports)
- increased consultation between the SAM partners on the future development and strengthening of the SAM, as part of the next SAPEA strategic review

Annex 1: Workplan and method

This strategic development plan for SAPEA is guided by the question:

How can we further develop SAPEA to make optimal use of the outstanding expertise of Europe's academies in the European Commission's Scientific Advice Mechanism?

The workplan is divided into three phases:

1. evaluation, via an internal review of the SAPEA sustainability plan (2020) and a wider stakeholder consultation
2. creation of a new strategic development plan for SAPEA (this document)
3. supporting the implementation of the new strategic development plan

The workplan is delivered by a taskforce of SAPEA staff, reporting to a working group (see annex 5 for membership).

Annex 2: Internal review summary

The internal review is based on an assessment of each of the strategic priorities set out in the SAPEA sustainability plan (2020), looking at what works (strengths), what works less well (weaknesses), ideas for future developments (opportunities) and possible barriers (threats).

The following were identified:

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none">• Quality of evidence reviews• New methods and flexibility of reviews• Greater equality, diversity and inclusion• Breadth and diversity of outreach work• Raised profile of science advice	<ul style="list-style-type: none">• Lack of foresight and horizon scanning• Involvement of SAPEA in the scoping process• Insufficient engagement with senior levels of European Commission• Need for a higher international profile• Need for more public and policy engagement	<ul style="list-style-type: none">• Horizon scanning and foresight• Improving scoping process• Novel forms of review• Greater uptake of outputs• More policy engagement• Services to other parts of European Commission• SAM-wide communications• More equality, diversity and inclusion	<ul style="list-style-type: none">• Short-term project funding• Limited resources• Challenges of unified SAM branding

Annex 3: Wider stakeholder consultation summary

The aim of the wider consultation was to gain from stakeholders:

- an external perspective on our strengths and weaknesses
- insight into the changing strategic environment in which we operate
- ideas and challenges for our future development

The wider stakeholder consultation comprised a survey which ran in the first half of 2023, and interviews which were conducted over the summer of 2023. A total of 91 stakeholders from 5 stakeholder groups provided input to the consultation, either via survey or interview. The numerical breakdown of interviewees within the various stakeholder groups was as follows:

- **Academies:** 109 responses were received to a more general online survey, which included 67 responses directly related to SAPEA's strategic development. Based on the answers, 12 academies were then contacted for further information. 7 of these provided responses.
- **Past working group members:** 13 gave interviews, representing 7 different evidence review reports produced by SAPEA. They included chairs, chapter leads and contributors to chapters. Four experts from Widening countries gave interviews.
- **Group of Chief Scientific Advisors:** 4 Advisors were interviewed, both past and present.
- **SAM secretariat:** 3 current members of the SAM secretariat were interviewed.
- **Wider advisers:** 4 experts in global science advice, working outside the SAM but with some familiarity or experience of it, gave interviews.

SAPEA staff conducted and transcribed the interviews. The transcripts were coded and analysed, using NVivo software for qualitative data analysis. A second, manual reading was done to pick up any further themes.

Annex 3: Wider stakeholder consultation summary

The full report provides the key findings, structured around a SWOT analysis, along with an analysis of the wider environment, including recent and future trends in science advice, and views on science advice in Europe. The following strengths, weaknesses, opportunities and threats were identified:

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none">• Visibility and high profile of SAPEA• Access to experts• Quality of evidence review process• Quality of staff support• Commitment to equality, diversity and inclusion	<ul style="list-style-type: none">• Time pressures• Perceived complexity of SAPEA processes• Perceived lack of transparency on selection of experts; need for additional selection criteria• Induction and training across the whole SAM	<ul style="list-style-type: none">• Continuing to improve and streamline processes• Better induction• Speeding up evidence reviews and diversifying outputs, when needed• Cautious use of novel technologies, like AI• More use of foresight• Cooperation with other players in the science advice space	<ul style="list-style-type: none">• Short-term financing of SAPEA• Potential misuse of technology like AI

We made a comparative assessment of similarities and differences between findings from the internal review and wider stakeholder consultation. Based on input from the working group and taskforce, the main areas have each been considered for development, and fleshed out into strategic or operational priorities, along with timelines. These serve as input to the strategic development plan.

Annex 4: Summary of trends in science advice

Four international experts in science advice, not connected directly with the SAM, were asked for their views on the wider science advice landscape, including but not limited to Europe. The following trends in science advice were identified:

Trends	Challenges	Science advice in Europe
<ul style="list-style-type: none">• Growing interest in foresight and new approaches to it• Continuing innovation in methods• Increasing role in technology, including AI (to be defined)	<ul style="list-style-type: none">• Examining the relationship between science and policy, and the types of evidence that contribute to science advice• Defining the role of informal advice at EU level• Further incorporation of the social sciences and humanities, and determining exactly what their role should be• Risks of technology, such as misuse of AI• Developing a culture of learning and retaining institutional memory on the practice of science advice	<ul style="list-style-type: none">• Further professionalising the SAM and expand the science advice ecosystem• Continuing to develop the skillsets of advisers and support staff• Experimentation with technology, such as AI, and the setting of standards for its use• Promoting the SAM to the new incoming Commissioners• Adopting a more forward-thinking approach to policy needs, including foresight• Recognising the needs of the policymaking cycle and adapting accordingly

Annex 5: Working group and taskforce

Members of the working group

- Marja Makarow, chair (Academia Europaea)
- Stefan Constantinescu (FEAM)
- Jacek Kolanowski, replaced by Markus Prutsch (YASAS)
- Antonio Loprieno (ALLEA)
- Patrick Maestro (Euro-CASE)

Also participating: David Coates (chair of the taskforce, Academia Europaea); Louise Edwards (secretary, Academia Europaea); Rudolf Hielscher (SAPEA Coordinator); Toby Wardman (SAPEA Head of Communications)

Members of the taskforce

- David Coates, chair (Academia Europaea)
- Louise Edwards, secretary (Academia Europaea)
- Rafael Carrascosa Marzo (Academia Europaea)
- Rúben Castro (FEAM)
- Marie Franquin, (Euro-CASE)
- Rudolf Hielscher (SAPEA coordinator)
- Stephany Mazon (YASAS)
- Céline Tschirhart (ALLEA)
- Toby Wardman (SAPEA head of communications)

Annex 6: Acknowledgements

We would like to express our gratitude to all stakeholders who gave their time to take part in the survey and interviews. We thank also Alison Weightman of Cardiff University, who coded the interview transcripts and reviewed the draft stakeholder summary.



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