



**Guidelines on advising
policymakers and society**
and
**Procedures for quality
assurance of scientific advice**
December 2019

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Science Advice for Policy by European Academies

Guidelines on advising policymakers and society

and

Procedures for quality assurance of scientific advice

December 2019

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Version	Date	Summary of changes
1.0	1 December 2017	First published version
2.0	15 December 2019	Explanatory text moved from the appendix to the main body of the guidelines New procedures added for version control and plagiarism checks Further details added of declarations of interests and peer review process Further minor format changes and updates

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1. Introduction

SAPEA is part of the European Commission's Scientific Advice Mechanism. Together with the Group of Chief Scientific Advisors, we provide independent scientific advice to European Commissioners to support their decision-making.¹

This document sets out the SAPEA guidelines on advising policymakers and society, as well as internal procedures for quality assurance of scientific advice. The aim is to assure the excellence and independence of SAPEA's scientific advice through the provision of clear guidelines. Scientific advice for policy provided by SAPEA will be mainly done in the form of Evidence Review Reports.

¹ Here, 'science' is understood in the sense of the German word 'Wissenschaft', to include all disciplines.

2. Guidelines on advising policymakers and society

The following guidelines apply to SAPEA Board members and staff, members of SAPEA Working Groups, Fellows of academies, other experts and further contributors who are involved in SAPEA Working Groups. They are also published online to inform the scientific community, stakeholders, policymakers and society.

- SAPEA ensures that advice is based on the most up-to-date scientific and technical knowledge publicly available, across all disciplines.
- The Working Group as a whole has the full range of expertise required for the topic. This assures scientific reports are in line with best available evidence and consider all relevant scientific issues and knowledge.
- All those involved in the scientific advice process are required to disclose any interests that could compromise impartiality and independence by filling in a Declaration of Interest form.
- SAPEA ensures that results are presented in a scientifically balanced way.
- A rigorous peer review process is part of the SAPEA Quality Assurance procedures before publication.
- Publications detail the process by which results were obtained, the source of funding for the project, names and institutional ties of all those involved.
- SAPEA is committed to transparency and openness.

2.1. Principles of scientific advice for policy

The ultimate goal of scientific advice for policy is to contribute to policy decisions. In this respect, scientific advice should be **relevant**, **trustworthy** and **timely**.

- **Relevance** can be achieved by shared understanding between policymakers and scientists of the policy issue and precise scientific key questions that need to be answered. The relevance, the policy context and the scientific questions are presented in a scoping paper which forms the basis for the Evidence Review Reports.
- To be **trustworthy**, advice is provided by authoritative scientific experts. Collectively, they cover the range of pertinent disciplines and scientific opinions and take an objective view on the issue at stake.

- To be useful for policymakers, science advice for policy has to be generated in a **timely** fashion using foresight processes such as horizon scanning, visioning and scenario planning consistent with future-oriented policymaking.

2.2. Providing scientific advice for policy

Sound scientific advice for policy provides information about the scientific and technological evidence also indicating controversies, uncertainties and knowledge gaps. Scientific appraisal may lead to multiple evidence-based policy options. A multidisciplinary approach is therefore required. The diversity of SAPEA's scientific expertise enhances the consideration of such scientific questions.

Furthermore, Evidence Review Reports incorporate a critical appraisal of the literature and the input of the scientific experts involved.

The Group of Chief Scientific Advisors will formulate policy recommendations based on the evidence and the evidence-based options provided by SAPEA.

3. Procedures for quality assurance of scientific advice

3.1. Introduction to the SAPEA QA procedures

The quality assurance (QA) procedures presented in this document are designed to ensure the scientific quality of SAPEA scientific reports developed within the European Commission's Scientific Advice Mechanism (SAM). The quality of SAPEA Evidence Review Reports is of utmost importance as they aim to provide independent, objective and impartial advice and aim to inform the Scientific Opinion of the Group of Chief Scientific Advisors. Checks and balances are applied to each step of the scientific advice process to protect the integrity of the reports and to assure public confidence in them.

The QA procedures are binding for all those involved in the production of SAPEA reports: the SAPEA Consortium, the individual academies, Working Group members, including external scientific experts, further contributors and peer reviewers, as well as SAPEA staff.

Peer review is the hallmark of SAPEA quality assurance, but for projects conducted with the Rapid Response Mechanism (RRM), implementing quality assurance measures such as external peer review may be challenging. However, SAPEA will endeavour to maintain QA procedures as detailed in section 4.8 even for short-term projects.

3.2. Principles of QA in scientific advice

The principles of QA in scientific advice are **scientific excellence**, **independence**, and **transparency**.

- The quality of the SAPEA scientific reports is inherently related to the **excellence** of scientific experts, as endorsed by the judgement of their peers. The advisory process actively takes into account all relevant evidence, different interpretations, and minority views on a particular scientific issue. This diversity may result from differences in scientific approach, types of expertise, background, culture, or the fundamental assumptions underlying the issue.

Procedures for quality assurance of scientific advice

- Scientific experts act in an **independent** manner, driven by science. They base their recommendations on objective criteria, rather than on personal bias or prejudice. They act impartially using the same standards consistently. They do not place themselves under any financial or other obligation to outside individuals or organisations that might seek to influence them in their performance. In conclusion, Working Group members demonstrate both scientific and personal integrity.
- The process of preparing advice is **transparent**. This requires a strategy for clear communication of the process and the advice itself to non-specialists. SAPEA commits itself to an optimal degree of transparency, such as disclosure of Working Group members, contributors, and reviewers in the final report, and the publication of their Declaration of Interest forms. In this way, SAPEA aims to achieve a high level of trust from the public.

4. Scientific advice process

The SAPEA scientific advice process has eight steps:

1. Definition of the scope of the topic, questions to be answered and project outline
2. Selection of the Chair(s) and the members of the Working Group
3. Assessment of Declaration of Interests and identification of risk of Conflicts of Interests
4. Information gathering, meetings and iterative process
5. Drafting scientific reports
6. Peer review procedure
7. Endorsement process
8. Publication and dissemination

In most SAPEA projects, a SAM Coordination Group exists to facilitate the interactions between the Group of Chief Scientific Advisors, the Group Unit and SAPEA, and to avoid a mismatch between the roles of each party.

It is important to ensure efficient project management to improve the quality of the scientific reports. For this reason, the following distribution of key responsibilities applies to every SAPEA project:

- The SAPEA Board decides on the membership of experts in SAPEA Working Groups.
- The Chair of a SAPEA working group may choose to invite, in consultation with the Working Group, further experts or contributors in cases where a knowledge gap exists within the Working Group.
- Assessing the risk of Conflicts of Interest of Working Group members and further contributors is the responsibility of SAPEA.
- SAPEA assumes authorship of all scientific reports and their contents produced by its Working Groups.
- The peer review and endorsement processes are the responsibility of SAPEA.

4.1. Definition of the scope of the topic, questions to be answered and project outline

For each topic there is a scoping paper which includes the definition and assessment of the topic and its relevance to policy and policies, scientific questions to be answered and the target delivery date.

Based on the scoping paper, a project outline is prepared as the basis for a decision by the SAPEA Board, which makes an assessment on the feasibility of the project.

4.2. Selection and approval of the chair and the members of the working group

Once the SAPEA Board has agreed on a topic, a Working Group is established.

Members of a Working Group are selected on the basis of their relevant expertise and scientific excellence. The Working Group includes the required range of disciplines and the full range of expertise necessary to support the required scope of the advice, geographical coverage and gender balance.

Depending on the expertise required, it may be necessary to appoint scientists to a Working Group who are not members of academies (external scientific experts). Care is taken in selecting these experts to guarantee the quality and integrity of the Working Group as a whole.

4.2.1. The Chair(s) of the Working Group

The Lead Academy Network for a report, in consultation with the partner academy Networks, proposes the Chair(s) of the Working Group. SAPEA Board approval is needed.

The Chair makes sure that all members of the Working Group contribute and participate actively in meetings. He/she stimulates the iterative process and strives to achieve consensus but ensures that any significant diversity of opinion between members is fully explored and appropriately taken into account.

4.2.2. Nominations, selection, and composition of the Working Group

Working Group members are nominated by individual academies or through the Academy Networks. They are Fellows of an Academy or external scientific experts. Scientific and technical excellence relevant to the topic is the principal criterion for selection of members. The Working Group as a whole will have the full range of expertise required for the topic.

SAPEA forms a Selection Committee composed of the Chair of the Working Group, a second subject expert, one Board Member from the Lead Network and a Board Member from another Network. If the Board member from the second network or alternate cannot attend the meeting, the responsible Network should nominate an Academy Fellow for the Committee.

Scientific advice process

The Selection Committee works with the list of nominees from the Academy Networks and individual academies. It proposes the composition of the Working Group to the Board for approval.

The SAPEA Board should be able to take a well-informed decision. For this reason, the Lead Academy Network informs the Board if and how the selection criteria were met.

Beyond the members of the Working Group, further experts may be consulted to bring significant additional expertise to a certain topic. The scope of their involvement is decided by the Chair, in consultation with the Working Group members.

For some projects, members of the Working Group can also be added at a later stage: such flexibility allows the Working Group to better address a scope that can evolve during a project, and cover for experts who do not eventually commit to the work.

4.3. Declaration of Interests and Conflict of Interests

A Conflict of Interest (CoI) means any situation in which a person has an interest that may compromise or be reasonably perceived to compromise his/her capacity to act independently. SAPEA uses the Declaration of Interests (DoI) form which can be found in Appendix 2 of these Guidelines.

4.3.1. Guidance for filling in the Declaration of Interests form for experts to participate in activities of the SAPEA consortium

Background

SAPEA experts come from a variety of academic and business backgrounds. The external activities they may engage in range from collaborations with the commercial world (e.g. consultancy, research and development or intellectual property licensing) or non-profit organisations, to serving on government, business and community boards, providing expert advice in the media, professional practice, outreach in schools or involvement in international projects. While these activities are considered to be in the public interest and of benefit for the home institution and the individuals concerned, they may, on occasion, also give rise to Conflicts of Interests, whether potential, actual, perceived or alleged.

The SAPEA Consortium wishes to protect the integrity and independence of its work by managing the risk of Conflicts of Interests. It is therefore SAPEA's policy to encourage and foster external activities whilst ensuring that when Conflicts of Interests arise, they are acknowledged and disclosed, and managed appropriately to avoid bias.

Provisions in the Horizon 2020 Grant Agreement of SAPEA require the beneficiary, i.e. SAPEA, "to prevent any situation where the impartial and objective implementation of the action is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest ('Conflict of Interests')".

SAPEA must formally notify the Commission without delay about any situation constituting or likely to lead to a Conflict of Interests and immediately take all the necessary steps to rectify this situation. The Commission may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

Against that background, the SAPEA Consortium opted to use the standard Declaration of Interests form of the European Commission.

What is a DoI and why fill out this form?

A 'Declaration of Interests (DoI)' form is a template that must be completed and submitted by experts in advance of their work as member of, or further contributor to, a SAPEA Working Group.

The purpose of the form is to provide an overview of the interests of members of a SAPEA Working Group and contributors invited to support the Working Groups. It provides a system to identify competing interests to prevent Conflicts of Interests and to ensure that the scientific outputs are fully independent from any particular interest.

When making a Declaration of Interests, a person must state all information about their past (for the most recent 5 years) and current activities and engagements, and any duties that are relevant, as well as any relevant interests that might compete with the SAPEA assignment.

An 'interest' means an activity occurring in a relationship between an individual and/or his/her family members with a company, organisation, entity, product, business or other body (such as having an economic interest, political or national affinity, family or emotional ties or any other shared interest, right or title, a claim, a share, a business engagement, a membership, a paid or unpaid involvement, etc.). Interests must be declared in relation to the topic of work at issue.

A Conflict of Interests is a circumstance which compromises or may be reasonably perceived as compromising a working group member's capacity to act independently and in the public interest in relation to the subject of the scientific advice work performed by SAPEA for the Group of Chief Scientific Advisors.

The DoI form does not require declaring a Conflict of Interests but interests related to the Activity. Therefore, providing such information does not necessarily mean that a Conflict

Scientific advice process

of Interest exists. Experts should fill the DoI forms with their different activities, and then SAPEA will assess if they constitute a CoI.

Interests are assessed by SAPEA and it is considered whether they may compromise the independence of the expert when exercising the task within the Working Group mandate. An early screen is carried out during the selection process on the basis of the nominated experts' CVs and institutional affiliations.

The DoI Form for experts is the same as the one used for assessing the interests of the members of the Group of Chief Scientific Advisors, which is used by the European Commission to identify Conflicts of Interests in advance of any participation in activities organised under the aegis of the Scientific Advice Mechanism (SAM). This allows the use of the same DoI form by SAPEA and the European Commission, in particular if SAPEA experts attend EC-organised events in addition to SAPEA events. That way, SAPEA Dols can be shared with the EC to reduce the administrative burden on the experts.

On the DoI form, the definitions for "Activity/ies" mean both activities organised by the SAPEA Consortium, for instance in its Working Groups, and by the Group of Chief Scientific Advisors.

How to fill out the form

Experts must complete, date and sign a DoI Form and send a copy together with their up-to-date curriculum vitae (CV) to SAPEA before attending their first meeting or contributing to the scientific reports in any way.

As the form requests, experts must answer each of the questions on the DoI form.

If the answer to any of the questions is 'yes', the expert should provide details of the relevant activity. 'Description' includes any additional or useful comment that should be mentioned.

All the relevant information must be added in each section in detail. If the expert is not sure if a project he/she is working on or activity should be added, it should be added anyway. It will be assessed thoroughly. The expert can contact the responsible SAPEA staff member with any questions.

There is a continuing obligation to report changes in the interests for the duration of the project.

4.3.2. Privacy statement: Protection of the experts' personal data

Introduction

The privacy statement attached to the DoI form explains the reason for the processing, the way the SAPEA Consortium collects, handles and ensures protection of all personal data provided, how that information is used and what rights the experts may exercise in relation to their data (the right to access, rectify, block etc.). The SAPEA Consortium is committed to protecting and respecting experts' privacy. SAPEA is GDPR compliant.

Why does SAPEA process data?

Purpose of the processing operation: the SAPEA Consortium collects and uses personal information of experts to ensure transparency on participation and Activities. The processing is necessary for the performance of a task carried out in the public interest.

In particular, with regards to the Declarations of Interests forms filled in by experts, the processing of personal data of these experts serves the public interest of enabling the SAPEA Consortium to verify the experts' independence in contributing to the Activities that may directly or indirectly be used to advise the Commission.

Which data does SAPEA collect and process?

The personal data collected and further processed may be:

- name
- professional title
- professional activities
- nationality
- country of work
- gender
- information included in the Declaration of Interests
- contact information

How long does SAPEA keep the collected data?

The SAPEA Consortium only keeps the data for the time necessary to fulfil the purpose of collection or further processing.

When an individual is no longer participating in Activities in question, the SAPEA Consortium keeps personal information for 5 years after the date where relevant individuals cease to participate in the Activities. This will be kept by Euro-CASE, the SAPEA Network in charge of Quality Assurance.

Scientific advice process

The DoI forms of SAPEA experts will be published online for all projects at the same time as the related scientific report is published, for a duration of 6 months and with the signature obscured.

How does SAPEA protect the data?

Article 39, paragraph 2 of the Grant Agreement mentioned in the previous section states that the Consortium and its members — as grant beneficiaries — must process personal data in compliance with applicable EU and national law on data protection (including authorisations or notification requirements). The beneficiaries may grant their personnel access only to data that is strictly necessary for implementing, managing and monitoring the Agreement.

The data will not be collected and processed by the Commission but by the SAPEA Consortium. However, in some cases, DoI forms may be shared between the Group Unit and SAPEA (see 4.3.1.2).

Who has access to the data and to whom is it disclosed?

The experts are entitled to access and correct their data at any time at request. The SAPEA Consortium will not release or publish any personal data to any third party without the experts' prior approval.

What are the experts' rights and how can they exercise them?

The experts are entitled to access their personal data and rectify and/or block it in case the data is inaccurate or incomplete.

They can exercise their rights by contacting the SAPEA Consortium or in case of conflict the responsible national Data Protection Officer.

4.3.3. Procedure for handling the Declaration of Interests

SAPEA policy on DoI and CoI is guided by three basic principles, namely transparency, proportionality and responsibility:

- **Transparency** implies the systematic registration of the existing relationships and relevant interests of Working Group members and further contributors.
- **Proportionality** implies that prevention of improper influence must be proportionate to the degree of the risk of Conflict of Interest.
- **Responsibility** refers to the situation in which the Chair of the Working Group will be responsible for taking action in the event of a risk of CoI.

SAPEA follows the procedure below on handling the DoI forms:

1. Once the composition (or the list of candidates) of the Working Group is approved by the Board, the SAPEA staff sends the SAPEA DoI form to the candidate Working Group members along with the SAPEA DoI Information on how and why to fill out DoI forms (as explained in paragraph 4.3.1 above).
2. All experts must fill out and sign the DoI form and send it back to the SAPEA staff member in charge of the project before attending their first meeting or contributing to the scientific reports in any way.
3. The Chair of the Working Group is responsible for the assessment of the DoI forms. SAPEA staff will support the Chair with the assessment.
4. The CVs of all Working Group members are shared among the Working Group prior to the first meeting so that all Working Group members know who else will be involved in the Working Group. The Chair will announce at the first meeting if any risks of Col were detected and which measures were undertaken so that the WG members can comment on it.
5. The Chair of the Working Group proposes any potential action according to the principle of proportionality as described in section 4.3.4.
6. The Board will be informed without delay of any risk of Col and any measure proposed by the Chair. Measures will be approved by the Board.
7. SAPEA formally notifies the legal officer of the Group Unit in the Commission without delay of any situation constituting or likely to constitute a Col and the measures undertaken.
8. The DoIs of the Working Group members will be published once the scientific report is published with the signature obscured on the SAPEA website for a duration of six months. The original version with the signatures will be kept on record by Euro-CASE (the SAPEA Network in charge of QA) for a duration of 5 years.
9. If further experts contribute substantially to the scientific reports (contributors), they will also have to fill out a DoI form.

4.3.4. Conflicts of Interests versus points of view

A point of view is not necessarily a Col and thus does not constitute a ground for disqualification from the Working Group. Working Group members are asked to consider respectfully the viewpoints of other members, to reflect their own views rather than the views of any organisation, and to base their scientific findings and conclusions on evidence. Each Working Group member has the right to issue a dissenting opinion to the report if he/she disagrees with the consensus of other members.

4.3.5. *Partial or total exclusion of working group members*

There are four possible scenarios based on the assessment of the Dols:

- There are no circumstances precluding membership of the SAPEA working group.
- Membership of the SAPEA Working Group will be allowed under the condition that the member is not involved in the discussion and drafting of conclusions in the specific sub-area where a Col has been identified.
- He/she can become a further contributor for a specific sub-area rather than a Working Group member.
- Exclusion from all activities.

4.4. Information-gathering and meetings

Gathering of information (for example scientific knowledge, evidence, context, etc.) is done in conjunction with Working Group members via:

- Review of the scientific literature, performed by scientific experts, information scientists and SAPEA staff.
- Experts and individuals who have specific knowledge of the problem under consideration.
- Expert Workshops (or hearings), to which relevant experts are invited.

The information gathered is maintained in a repository that is available for examination on request after publication of the report.

The Working Group holds its meetings closed to the public in order to work and to attempt to reach a consensus free from outside influence. Interim draft reports or chapters are not published. SAPEA staff ensures that the proceedings of the Working Group are well documented so that there is a clear audit trail showing how the group reached its decisions. These include agendas, minutes, background information, literature sources, and interim papers.

Members of the Group of Chief Scientific Advisors or staff from the Group Unit may attend Working Group meetings as observers in agreement with the Chair and the Working Group.

4.5. Drafting Evidence Review Reports

4.5.1. Drafting principles

Evidence Review Reports are guided by the scoping paper. They describe, summarise, evaluate and document the evidence in a systematic way and indicate the uncertainties associated with findings. This principle applies as a general rule where judgements about scientific evidence are being made. Depending on the topic and the questions posed, the methods as well as the scale will vary.

All sources used in the report are cited and referenced correctly. The report also sets out the methodological approach taken by the Working Group towards the questions posed. When a report reaches the final draft, it is the responsibility of the Working Group Chair to ensure that all cited references have been checked, to the best of his/her knowledge.

4.5.2. Dissenting views, reporting controversies and uncertainties

Whenever possible, Working Groups will achieve consensus. Where this is not achievable, it is important that diversity of opinions is recognised in the final report and the report mentions uncertainties and scientific controversies (see section 2.2). Differences of opinion between working group members are impartially mentioned without the name of their author(s) within the text.

4.6. Peer review procedure

All SAPEA scientific reports are subject to peer review, unless the SAPEA Board exceptionally decides otherwise.

As a general rule, the peer review covers:

- Review of the scientific/technical quality of the work.
- Review of the completeness of the analysis (does it cover the full range of information and opinions?).
- Whether the report is impartial and objective.
- When appropriate, whether the report addresses the questions of the scoping paper.

The review is conducted by experts not involved in drafting the report.

SAPEA follows a double-blind peer review process, which means that both the peer reviewer and author identities are concealed from each other throughout the review process but the names and affiliations of the reviewers are included in the final report.

Scientific advice process

4.6.1. Peer reviewers' nomination and selection

Members of the Working Group do not select reviewers. The names of potential reviewers are proposed by the Academy Networks or individual academies. Based on this, the Lead Network submits names of suitable reviewers to the SAPEA Board for approval, independently of the Working Group.

The number of peer reviewers is set at a minimum of three, unless the Board decides otherwise. Peer reviewers have to declare any risk of Conflict of Interest. If a nominated reviewer indicates a risk of Conflict of Interest, SAPEA assesses the risk of Col and, as a consequence, this person may be disqualified from taking part in the review procedure.

4.6.2. Peer reviewers' comments and revision of documents

A list of questions for peer reviewers is provided in Appendix 3 to guide their review of the scientific report. Peer reviewers' comments are collected and assessed first by the Lead Academy, then anonymised and discussed with the Chair of the Working Group.

Comments which need to be discussed by the Working Group are handed over to the Working Group members, who are asked to take into account the feedback of the reviewers and to revise the report if needed. The Working Group responds to, but need not agree with, the reviewers' comments, outlining how the remarks made by the reviewers have been accommodated.

After Working Group members have agreed to the final (revised) report, it is submitted together with the reviewers' comments, the Working Group's response and the changes made in the report for final approval to the SAPEA Board.

4.6.3. Endorsement of reports

Endorsement and approval of the SAPEA Report is sequential:

1. The SAPEA Board validates that the quality procedures and review criteria have been met.
2. The SAPEA Board decides to proceed to endorsement.
3. Each SAPEA Board member endorses the report on behalf of his/her Network (according to its own endorsement procedure).

In the exceptional case where a Network does not endorse the final report, a disclaimer is included in the report outlining the reasons for this decision.

4.7. Publication and dissemination

4.7.1. Publication

SAPEA reports are published under a Creative Commons licence using the green open access model, which allows the content to be reused as long as SAPEA is acknowledged. SAPEA has full responsibility for the dissemination and publicising of SAPEA reports, according to a SAPEA communications plan tailored to the content of each report.

Unless agreed otherwise with the Group of Chief Scientific Advisors, SAPEA publishes its report independently from, but not prior to, the associated Scientific Opinion.

The final report includes the names and affiliations of the Working Group members, further contributors and peer reviewers.

4.7.2. Version control

Once published either electronically or in print, each report is assigned a version number which is included at the beginning of the report. Any future revision of the report (whether substantive or simply correcting an error) is given a new version number and all subsequent versions include a version history table describing the changes.

The first published version, and where necessary any substantive revised versions, are deposited at an online document repository and also made available to download from the SAPEA website.

4.8. Rapid response mechanism

The Rapid response mechanism (RRM) provides fast access to knowledge existing within the Academy Networks. In general, the RRM follows the same QA procedures as outlined above but, depending on the timeline, this may be done in a more condensed way.

The SAPEA Board assesses the feasibility of addressing the topic using the RRM. The Board supervises the RRM process. In the absence of a selection committee, the Board itself can take responsibility for selecting scientific experts. It will ensure and make explicit the quality assurance procedures adopted in each case of use of the RRM.

5. Quality assurance checklist

The Chair, members of the Working Group, further contributors and SAPEA staff are responsible for adhering to the procedures set out in this document. A Quality Assurance Checklist (Appendix 4) can be used to aid the SAPEA project team. It is filled in by the SAPEA staff member acting as project quality manager and submitted to the SAPEA Board on completion of the project. Euro-CASE, as SAPEA Lead Network for Quality Assurance, stores all the checklists and monitors compliance with the Guidelines based on these for all projects.

6. Ethical issues

6.1. Code of conduct

Working Group members and the Chair are encouraged to adopt and promote a number of broad principles as follows:

- Integrity:
 - ▶ Act with skill and care in all scientific work.
 - ▶ Take steps to prevent corrupt practices and professional misconduct.
 - ▶ Fill out the DoI form.
 - ▶ Be alert to the ways in which research derives from and affects the work of other people, and respect the rights and reputation of others.
- Respect for life, the law, and the public good:
 - ▶ Ensure that your work is lawful.
 - ▶ Minimise and justify any adverse effect your work may have on people, animals, and the natural environment.
- Responsible communication: listening and informing:
 - ▶ Seek to discuss the issues that science raises for society.
 - ▶ Listen to the aspirations and concerns of others.
 - ▶ Do not knowingly mislead, or allow others to be misled, about scientific matters. Present and review scientific evidence, theory, or interpretation honestly and accurately.

6.2. Plagiarism check

All SAPEA scientific reports undergo a digital plagiarism check before being published.

6.3. Ad-hoc ethics committee on scientific integrity

The SAPEA Board may establish an ad-hoc ethics committee in response to concerns regarding scientific integrity in a SAPEA Working Group. The committee will be composed of up to four relevant independent experts. The committee will be asked to recommend appropriate follow-up actions.

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Appendix 2: SAPEA declaration of interests

STANDARD DECLARATION OF INTERESTS (DOI) FORM

Definitions:

“Activity” or “Activities” (capitalised ‘A’) means an activity or activities of or under the Group of Chief Scientific Advisors for instance in its formation as Coordination Group or in sub-groups, or that or those in relation thereto, for example, SAPEA Working Groups.

"Conflict of interest" means any situation where an individual has an interest that may compromise or be reasonably perceived to compromise the individual's capacity to act independently and in the public interest when providing advice to the Commission in relation to Activities performed.

"Immediate family member" means the individual's spouse, children and parents. "Spouse" includes a partner with whom the individual has a registered non marital regime. "Children" means the child(ren) the individual and the spouse have in common, the own child(ren) of the individual and the own child(ren) of the spouse.

"Legal entity" means any commercial business, industry association, consultancy, research institution or other enterprise whose funding is significantly derived from commercial sources. It also includes independent own commercial businesses, law offices, consultancies or similar.

"Body" means a governmental, international or non-profit organisation.

"Meeting" includes a series or cycle of meetings.

Please answer each of the questions below. If the answer to any of the questions is "yes", please briefly describe relevant interests and circumstances, as appropriate.

If you do not describe relevant interests and your DoI form is considered to be incomplete, or if declared interests are considered to constitute a Conflict of Interest, you may be excluded from all or part of the Activities.

First name:
Family name:
Date:
Description of the Activity: [.....]

1 EMPLOYMENT CONSULTANCY AND LEGAL REPRESENTATION

Within the past 5 years, were you employed or have you had any other professional relationship with a natural or legal entity, or held any non-remunerated post in a legal entity or other body with an interest in the field of the Activity in question?	yes	no
---	------------	-----------

<i>1a</i>	<i>Employment</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>1b</i>	<i>Consultancy, including services as an advisor</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>1c</i>	<i>Non-remunerated post</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>1d</i>	<i>Legal representation</i>	<input type="checkbox"/>	<input type="checkbox"/>

<i>activity</i>	<i>time period (from... until month/year)</i>	<i>name of entity or body</i>	<i>description</i>

2 MEMBERSHIP OF MANAGING BODY, SCIENTIFIC ADVISORY BODY OR EQUIVALENT STRUCTURE

Within the past 5 years, have you participated in the internal decision-making of a legal entity or other body with an interest in the field of Activities in question or have you participated in the works of a Scientific Advisory Body with voting rights on the outputs of that entity?	yes	no
---	------------	-----------

<i>2a</i>	<i>Participation in a decision-making process</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>2b</i>	<i>Participation in the work of a Scientific Advisory Body</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Activity</i>	<i>Time period (from... until month/year)</i>	<i>Name of legal entity or body</i>	<i>Description</i>

SAPEA declaration of interests

3 RESEARCH SUPPORT

	Within the past 5 years, have you, or the research entity (institute or department) to which you belong, received any support from a legal entity or other body with an interest in the field of Activities in question?	yes	no
--	--	-----	----

3a	Research support, including grants, rents, sponsorships, fellowships, non-monetary support	<input type="checkbox"/>	<input type="checkbox"/>
----	--	--------------------------	--------------------------

Activity	Time period (from... until month/year)	Name of legal entity or body	Description

4 FINANCIAL INTERESTS

	Do you have current investments in a legal entity with an interest in the field of Activities in question, including holding of stocks and shares, and which amounts to more than 10,000 EUR per legal entity or entitling you to a voting right of 5% or more in such legal entity?	yes	no
--	--	-----	----

4a	Shares	<input type="checkbox"/>	<input type="checkbox"/>
4b	Other stock	<input type="checkbox"/>	<input type="checkbox"/>

Investment	Name of legal entity	Description

5 INTELLECTUAL PROPERTY

	Do you have any intellectual property rights that might be affected by the outcome of the Activities in question?	yes	no
--	--	------------	-----------

<i>5a</i>	<i>Patent, trademarks, or copyrights</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>5b</i>	<i>Others</i>	<input type="checkbox"/>	<input type="checkbox"/>

<i>Intellectual property</i>	<i>Description</i>

6 PUBLIC STATEMENTS AND POSITIONS

	<i>Within the past 5 years, have you provided any expert opinion or testimony in the field of Activities in question, for a legal entity or other body as part of a regulatory, legislative or judicial process? Within the past 5 years have you held an office or other position, paid or unpaid, where you represented interests or defended a public statement or position in the field of Activities in question?</i>	yes	no
--	--	------------	-----------

6a	For a legal entity or other body as part of a regulatory, legislative or judicial process	<input type="checkbox"/>	<input type="checkbox"/>
6b	Represented interests or defended an opinion	<input type="checkbox"/>	<input type="checkbox"/>

Activity	Time period (from... until month/year)	Name of legal entity or body	Description

SAPEA declaration of interests

7	INTERESTS OF IMMEDIATE FAMILY MEMBERS	yes	no								
7a	To your knowledge, are there any interests of your immediate family members which could be seen as undermining your independence when providing advice to the Commission in the field of the Activities in question?	<input type="checkbox"/>	<input type="checkbox"/>								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"><i>Interests</i></th> <th style="width: 20%;"><i>Time period (from... until month/year)</i></th> <th style="width: 20%;"><i>Name of legal entity or body</i></th> <th style="width: 30%;"><i>Description</i></th> </tr> </thead> <tbody> <tr> <td style="height: 50px;"></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				<i>Interests</i>	<i>Time period (from... until month/year)</i>	<i>Name of legal entity or body</i>	<i>Description</i>				
<i>Interests</i>	<i>Time period (from... until month/year)</i>	<i>Name of legal entity or body</i>	<i>Description</i>								
7b	<i>If interests of your immediate family members are declared, it is your responsibility to inform them about the collection and publication of information on their interests included in the DoI and to provide them with the privacy statement attached to the guidance for filling in this DoI, and this at the latest when you file the DoI form with the Commission.</i>										
8	OTHER RELEVANT INFORMATION	yes	no								
8a	Are there any other elements that could be seen as undermining your independence when providing advice to the Commission in the field of the Activities in question?	<input type="checkbox"/>	<input type="checkbox"/>								

Description:

I hereby declare on my honour that I have read the guidance for completing this form. I also declare on my honour that the information disclosed in this form is true and complete to the best of my knowledge.

Should there be any change to the above information, including as regards upcoming activities, I will promptly notify the competent department or entity and complete a new DoI form describing the changes in question.

I am informed that my personal data are stored, processed and published in accordance with the applicable data protection legislation.

I have been informed that this form may be shared with the European Commission and will be publicly available once the SAPEA report is published.

Date: _____

Signature: _____

Appendix 3: Template questions for peer reviewers



Appendix 3: Questions for peer reviewers

Project:

Name of reviewer:

Date of review:

By accepting the role of peer reviewer for this report, I confirm that I have no conflict of interest that would affect my impartial assessment of the quality of the report and I consent that my name, affiliation and my role as peer reviewer will appear in the report.

Peer-reviewers should argument their answers and one-line or yes/no reply won't be accepted

Question	Yes/no/partially	Comments
<p>1. Does the report address satisfactorily the requirements as contained in the scoping paper?</p> <p>Please note that the SAPEA report contains the evidence, a critical appraisal of the evidence only and may include policy options. The Group of Chief Scientific Advisors will formulate policy recommendations in their Scientific Opinion based on the SAPEA report. Both reports together are the answer of the Scientific Advice Mechanism to the Scoping paper.</p>		
2. Does the report cite and rely on relevant and up-to-date literature?		
3. Does the executive summary concisely and accurately describe the key findings and conclusions? Is it consistent with other sections of the report? Is it sufficiently effective as a standalone summation of the report?		
4. Do the arguments advanced in the report show the requisite degree of analytical rigour? Are the conclusions well-supported by the scientific evidence and argument?		
5. Are any gaps, uncertainties or omissions in the evidence base acknowledged and addressed explicitly?		
6. Do the authors identify conclusions and options based on opinion as such, and give satisfactory explanations for this?		
7. Does the report deal competently with data (as applicable) and analyses?		
8. Has the working group produced an objective, autonomous report?		
9. Are the bibliography and appendices relevant, given the purpose of the report?		
10. If you believe the report can be improved significantly, what improvements do you suggest?		
11. Are there signs of biases or undue influence from interest groups?		

Signature:

Appendix 4: Quality assurance checklist



Appendix 4: Quality Assurance Checklist

Project name: **Name of SAPEA Project Lead:** **Date:**

Quality item	Response	Date of completion	Comments
1. Are all SAPEA staff/representatives involved in this project aware of the SAPEA quality assurance system?			
2. Were all Working Group members and Chair(s) informed about the SAPEA quality assurance system?			
3. Was a scoping paper prepared?			
4. Was a Selection Committee appointed with a composition as outlined in the Guidelines (Lead Academy, WG Chair(s), another topic expert)?			
5. Did all the Working Group members, and further contributors if any, sign a DOI?			
6. Were all Working Group meeting minutes recorded and approved?			
7. Has the SAPEA staff team established a repository for all quality documentation?			
8. Has the report been peer-reviewed by at least 3 reviewers?			
9. Did you follow the double-blind procedure?			
10. Have all steps (set out in Chapter 4 of the Guidelines) concerning the delivery of the final report been followed by the SAPEA staff team?			
11. Please indicate any deviation from the SAPEA quality assurance procedures which occurred in the process of producing the report, if any.			

Appendix 5: List of abbreviations

- **CoI:** Conflict of Interests
- **DoI:** Declaration of Interests
- **EC:** European Commission
- **QA:** Quality Assurance
- **RRM:** Rapid Response Mechanism
- **SAM:** Scientific Advice Mechanism of the European Commission
- **SAPEA:** Science Advice for Policy by European Academies

Appendix 6:

Acknowledgements

Working Group members

- Yves Bamberger, Chair, Euro-CASE
- Ole Petersen, Academia Europaea
- Göran Hermeren, ALLEA
- Jos van der Meer, EASAC
- André Aurengo/George Griffin, FEAM¹
- Nicole Grobert, Young Academy of Europe

SAPEA staff members

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- Hamed Mobasser, FEAM
- Hannah Whittle, FEAM
- Rudolf Hielscher, acatech
- Thomas Stehnken, acatech
- Jacqueline Whyte, SAPEA

Observer

- Yves Caristan, Euro-CASE

¹ George Griffin replaced André Aurengo as FEAM working group member

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