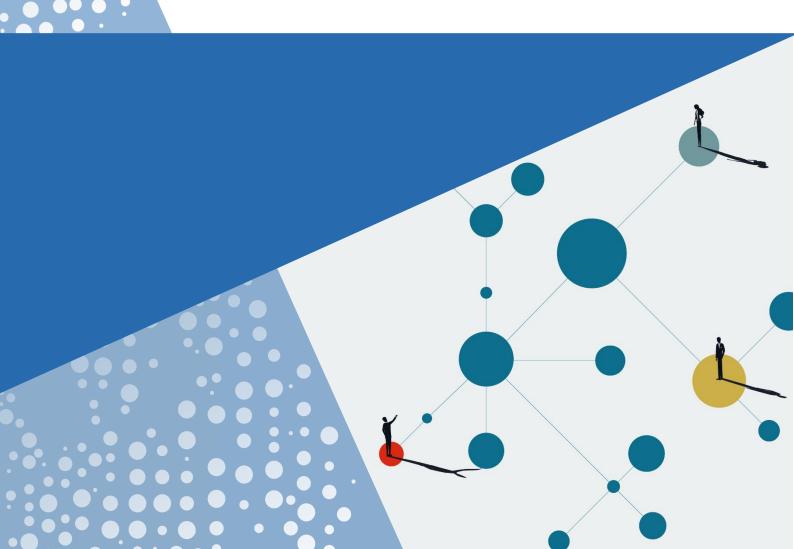


Activities Report May 2022 – May 2023



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1. FOREWORD

Dear reader,

It gives me great pleasure to deliver our activities report ahead of our upcoming 2023 General Assembly in London, hosted by the British Academy, the Learned Society of Wales, the Royal Society, and the Royal Society of Edinburgh. For us at ALLEA, this is an opportunity to reflect on our work over the past year, and share the highlights and milestones with our member academies, our partners, and stakeholders. Our commitment to our strategic priorities continues to be among our guiding principles, as you will read in this year-inreview.



As our world continues to change at an

exponential pace, new and unprecedented crises arise and evolve. In response, we must adapt the theories, principles, and practices linked to crisis management such that we are better able to engage in prevention, preparedness, and recovery. Accordingly, ALLEA coordinated the most recent Evidence Review Report on behalf of Science Advice Policy by European Academies (SAPEA). In November 2022, the SAPEA consortium published the report, which looks at the European Union's (EU) role in strategic crisis management in such transboundary crises as the Covid-19 pandemic, the war in Ukraine, and the globally looming threat of climate catastrophe. As Chair of the SAPEA Board, I would like to issue heartfelt congratulations to Tina Comes, Chair of SAPEA's Working Group on Crisis Management and speaker at the symposium of our 2023 General Assembly, 'Crises and the Importance of Research'.

The past year was marred by tragedy, as Russia has continued the expansion of its occupation of Ukraine through military aggression. ALLEA reiterated its support for Ukraine's science and research community through a variety of activities, including a special newsletter marking the sombre anniversary of the invasion. We commended our fellow researchers' resilience, and renewed our commitment to providing aid to the scholars of Ukraine through the European Fund for Displaced Scientists. Generously funded by The Breakthrough Prize Foundation, the programme is now supporting a total of 138 researchers across Ukraine and 12 different European countries. You can read more about ALLEA's sustained support for Ukraine in Section 3, as well as achievements we have made in the spheres of our core activities, including the conclusion of PERITIA, a remarkable project situated at the intersection of policy, expertise, and trust.

Furthermore, ALLEA's working groups and task forces have continued to engage in a wide spectrum of activities that embody ALLEA's values and serve the network's diverse goals. To name but a few, our Working Group on Science Education held a conference, titled, 'International Reflections on STEM Education – Effective teaching and learning to address future challenges' in Dublin, and our Permanent Working Group on Intellectual Property Rights prepared an influential Statement on the negative impacts of Big Deals (i.e., large read-and-write publishing agreements) and the future of academic publishing. We also launched a new Task Force to investigate the Intellectual Property system for New Genomic Techniques, such as genome editing.

I extend my gratitude to the Chairs and members of these expert groups and commend them for their many achievements, which benefit not only our academies, but the research community and our society as a whole.

Finally, our 2023 General Assembly marks the launch of the revised edition of the European Code of Conduct for Research Integrity. The response to stakeholder consultation behind the revisions to the Code was exceptional, reflecting the extent to which the research community has both a sense of ownership and engagement with the Code of Conduct. The revised European Code of Conduct takes account of evolving concerns and emerging areas such that it continues to be fit for purpose in guiding the research community towards good research practice over the coming years.

I look forward to seeing you in London, whether in person or virtually. In the meantime, please enjoy this report highlighting ALLEA's activities in the past year.

Kind regards,

Aquen

Antonio Loprieno ALLEA President

2. STRATEGY AND GOVERNANCE

2.1 ALLEA GENERAL ASSEMBLY 2022

Several members of the ALLEA Board were re-elected during the business meeting held as part of the ALLEA General Assembly on 11 May 2022 in Brussels. In addition, three new members – Lara Keuck (Die Junge Akademie/German Young Academy), Ēriks Jēkabsons (Latvian Academy of Sciences), and Camilla Serck-Hanssen (Norwegian Academy of Science and Letters) – were elected to the Board. The ALLEA Board, who will serve until 2024, now includes:

- Antonio Loprieno (President of ALLEA/Swiss Academies of Arts and Sciences)
- Luke Drury (Vice President of ALLEA/Royal Irish Academy)
- Annette Grüters-Kieslich (Vice President of ALLEA/Leopoldina and Union of German Academies of Sciences and Humanities)
- Ylva Engström (Royal Swedish Academy of Sciences)
- Eriks Jekabsons (Latvian Academy of Sciences)
- Lara Keuck (German Young Academy)
- Maarten Prak (Royal Netherlands Academy of Arts and Sciences)
- **Pere Puigdomenech** (Royal Academy of Sciences and Arts of Barcelona/Institute of Catalan Studies, Spain)
- Paweł Rowiński (Polish Academy of Sciences)
- Neri Salvadori (National Academy of Sciences of the Lincei, Italy)
- Camilla Serck-Hanssen (Norwegian Academy of Science and Letters)



Furthermore, in a historical first, the business meeting included a joint session between ALLEA and the European National Young Academies (ENYA), thus bringing together the continent's young and established academies, and reaffirming ALLEA's commitment to nurturing and strengthening ties with early career researchers for a more robust academic system. ALLEA President Antonio Loprieno reinforced this commitment by highlighting the election of Lara Keuck, a member of the German Young Academy, to the ALLEA Board less than two years from the academy joining ALLEA; he then invited more young academies to join the network.

The joint session included a presentation by ENYA representatives on the geographic spread of national young academies, as well as the scope and priorities of these academies, such as academic freedom, sustainability, ethics, and research integrity, among others, and a brief overview of their select projects, highlighting the common ground between ALLEA member academies and ENYA.

This was followed by a series of breakout sessions centred on topics of international and intergenerational interest, including: *Climate Sustainability in the Academic System, Research Careers and Assessment, Open Science – From Intention to Action, Equity, Diversity, and Inclusion in Science Advice, Trust in Science through Engaging with Society.*

In addition to the business meeting, the General Assembly hosted a public symposium, entitled, '*Transforming Science: Pathways Towards Sustainability and Trustworthiness*', which brought together leading scientists, policymakers, and research managers to discuss how scientific institutions can transform research cultures, develop trust-building strategies, and establish science advice mechanisms to tackle current and future crises and transitions.

The symposium featured an illustrious line-up of keynote speakers, including Mariya Gabriel, the European Commissioner for Innovation, Research, Culture, Education, and Youth. The two-day event was organised around four themes – *Transforming Science for the Future, Science-Policy Relations in an Age of Complexity, Transforming Research Cultures, Towards Climate Sustainability in the Academic System* – and attended by more than 400 online and in-person participants.

A news feature of the symposium can be found here. All videos and photos of the event are available in the Media Room.

2.2 THE ALLEA BOARD AND PRESIDENCY

The ALLEA Board, including the President and Vice Presidents, plays an integral role in developing and directing ALLEA's overall strategy, while simultaneously steering its operations, including the activities of the working groups, task forces, projects, and partnerships. Since its (re)appointment in May 2022, the Board held five meetings, both online and in-person, to discuss ALLEA's many ongoing activities in service of its strategic priorities, its financial plans, and the future of the network. This included its transition into more climate-sustainable modes of operation, as well as the consolidation of its legal status.

In addition to guiding ALLEA's internal workings, the ALLEA Board also engages with diverse and highlevel stakeholders to contribute to the evolution of Europe's academic and research ecosystem. Notable examples of such activities include President Loprieno's participation as a speaker at the *'STOA Roundtable on Academic Freedom'*, which took place in April 2023 at the European Parliament. This was part of the platform *'EP Forum for Academic Freedom'* established by the European Parliament's STOA Panel for the Future of Science and Technology, which enables various stakeholders in the research community to discuss issues relevant to the freedom of scientific research. Prof Loprieno contributed to the vigorous debate, which is expected to inform the ongoing legislative report of the European Parliament Committee on Industry, Research and Energy (ITRE) on the freedom of scientific research. The report will ultimately form the basis for a legal framework intended to prevent infringements on scientific research. Such endeavours serve to not only increase ALLEA's visibility as a key player in the science-policy arena, but are also an operationalisation of its strategic priorities at the European level.

2.3 THE STRATEGIC PRIORITIES

ALLEA's seven Strategic Priorities (2019 – 2024) underpin the diverse breadth of activities undertaken by the network. A non-exhaustive list of ALLEA's activities in the past year categorised by the seven priorities are shown below, with sections 3 to 6 elaborating their details. However, it should be noted that several of ALLEA's activities often serve to implement multiple priorities in parallel.

1 Serving Academies and Facilitating Cooperation

- Report published, titled, 'Towards Climate Sustainability of the Academic System in Europe and beyond'
- European Fund for Displaced Scientists

2 Improving Framework Conditions for Science & Research

- ALLEA Statement for an Era of Freedom and Excellence
- ALLEA Statement on Open Access Publication under "Big Deals" and the New Copyright Rules

3 Providing Independent Scientific Advice to Policymakers and Society

- Published Evidence Review Report on 'Strategic Crisis Management in the EU'
- ALLEA responds to the European Commission's consultation on New Genomic Techniques (NGTs) and establishes New Task Force exploring the Intellectual Property (IP) system for NGTs

4 Facilitating Good Research Practice

- European Code of Conduct for Research Integrity Revised Edition 202
- ALLEA Statement on Reforming Research Assessment within the European Academies
- ALLEA's continued participation in TechEthos, which published several key reports in the past year including four policy briefs on enhancing EU legal frameworks in the selected technology families

5 Defending Academic Freedom and Trustworthy Science

- PERITIA Research Culminates in Closing Event in Brussels
- ALLEA engagement in the European Parliament's forum on Academic Freedom

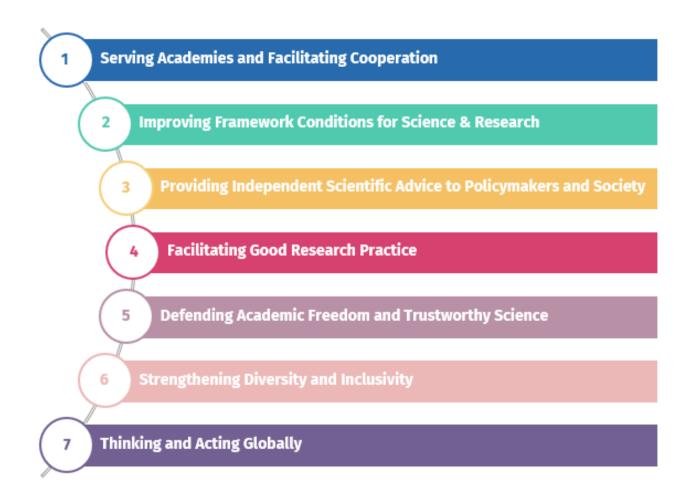
6 Strengthening Diversity and Inclusivity

- Interview series on "Women in Science" as part of the ALLEA Digital Salon
- Webinar on 'Inclusion, Diversity, Equity and Accessibility (IDEA) in Scholarly Peer Review', which produced an event report

7 Thinking and Acting Globally

- Developing the Action Steps for Rebuilding Ukraine's Science, Research, and Innovation
- Co-Chairing the ALLEA-ISC Ukraine Science Stakeholder Group

ALLEA'S STRATEGIC PRIORITIES (2019-2024)



In Sections 3 to 7, the numbered strategic priorities shown above are included in the description of the relevant ALLEA activities that serve them.

3. SUPPORTING UKRAINIAN SCIENCE AND SCHOLARSHIP

The European academic community has rallied together in different ways to support Ukrainian researchers and scholarship in Ukraine over the past year, following Russia's unlawful and egregious invasion of the country in February 2022.

In line with our values and mission, including defending academic freedom and promoting science as a global public good, ALLEA aims to vigorously and consistently support both those displaced from Ukraine, as well as those individuals and institutions resolutely continuing their work within the country as the war rages on around them. To this end, we have collaborated with several like-minded organisations to develop initiatives that enable the continuity of Ukraine's research activities and bolster its academic ecosystem both within and beyond its borders. Some of these projects are highlighted below.

3.1 EUROPEAN FUND FOR DISPLACED SCIENTISTS

In March 2022, less than a month after the war in Ukraine began, ALLEA partnered with the Breakthrough Prize Foundation to set up the European Fund for Displaced Scientists (EFDS), endowed with USD 1.5 million, in order to promote the resilience of individuals and institutions affected by the war in Ukraine. The EFDS was one of the very first support initiatives launched by the academic and research community, and embodies several of the recommendations in the 10-point action plan described in Section 3.2 below.

The EFDS operated through two distinct funding lines:



Funding Line 1 provides grants to academic institutions within the Council of Europe region to host displaced scholars from Ukraine. It received over 244 applications from 23 European countries, out of which 40 scholars were selected. The selected scholars are being hosted in 28 institutions across 12 European countries (Austria, Germany, Hungary, Italy, Latvia, the Netherlands, Poland, Portugal, Spain, Chechia, Bulgaria and Sweden).

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Displaced scholars are supported with up to €25,000 for a period of up to one year.



Funding Line 2 provides grants to Ukrainian academic institutions for the continuation of their scientific operations and research collaborations, as well as to support initiatives that facilitate the reintegration of researchers upon their return to Ukraine. It received 105 applications from 89 institutions in Ukraine, seven of whom were selected, enabling 98 scholars to continue their work.

Funding Line 2 supports research-performing organisations in Ukraine with up to €75,000 for a period of up to one year.

Strategic Impact

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As one of the first programmes to be launched to support the continuation of science in Ukraine, and because of the specialised nature of Funding Line 2 which directly supports research-performing institutions in Ukraine, insights from the EFDS have been shared with the global research community. To cite one example, ALLEA was invited to a workshop organised by the National Academies of Science Engineering, and Medicine (United States) in June 2023 to discuss the challenges and needs of the Ukrainian research community, the lessons learned from one year of administering the EFDS, and the type of support required in the long-term.

3.2 10-POINT PLAN TO REBUILD UKRAINE'S SCIENCE, RESEARCH, AND INNOVATION

On 2 June 2022, ALLEA President Antonio Loprieno met with the leaders of a number of national academies of sciences, including the Polish Academy of Sciences, the National Academy of Sciences of Ukraine, the US Academy of Sciences, the German National Academy of Sciences Leopoldina, the Royal Danish Academy of Sciences

and Letters, and the Royal Society of the United Kingdom in Warsaw (Poland) to discuss and develop a strategy that would be implemented in concert by the European and international science community to facilitate the continuing operation of Ukraine's academic system during the war, while putting in place steps to ensure its recovery in post-war Ukraine. The outcome of this meeting was a 10-point action plan that was signed by the academy leadership present. Some of the concrete steps that scientific communities can take to support the rebuilding of science and research in Ukraine include the following:

- Develop specific funding programs directed at early-career researchers from Ukraine and their teams, including through the use of remote working agreements.
- Donate useable laboratory and research equipment to Ukrainian institutions to replace capabilities destroyed during the war.
- Provide remote, free access to scholarly journals to Ukrainian research institutions.

This 10-point action plan was published in *Science* to be shared with the wider scientific community.

3.3 CO-CHAIRING THE UKRAINE SCIENCE STAKEHOLDER GROUP

Since September 2022, ALLEA has co-chaired the 'Ukraine Science Stakeholder Group', alongside the International Science Council (ISC). This group is the second, and formalised, iteration of the 'Science in Exile Ukraine Crisis Group', set up earlier that year, as a joint initiative of ALLEA, ISC, Science for Ukraine, and Kristiania University College. The group aims to create an international platform for diverse international stakeholders who are involved in

the long-term efforts to strengthen and rebuild Ukrainian science to come together and forge networks with their counterparts in Ukraine.

As part of the group, ALLEA partnered with Science for Ukraine, Kristiania University College, and ISC to jointly organise the online conference the 'The Ukraine Crisis: Responses from the European Higher Education and Research Sectors' online conference on 15 June 2022. It brought together over 150 stakeholders to discuss best practices, plan for medium- to long-term actions to support/restore Ukraine's higher education, research, and development sectors, and to strengthen relations between Ukraine's research community and that of the wider European area, among other objectives. The discussions and experiences shared at the conference led to the publication of a report summarising the many lessons learned from the science community's response to the war. It also highlights seven key recommendations for national governments, multilateral organisations, and the global science sector to consider in their efforts to support Ukrainian science.

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You can read a news feature on the event highlights, as well as the full programme here.

In March 2023, ALLEA and ISC co-hosted the 'Second

Conference on the Ukraine crisis: One Year of War in Ukraine, Exploring the Impact on the Science Sector and Supporting Initiatives' to advocate for the continuing need for support to Ukraine's higher education and science sectors. The online conference sought to evaluate existing support initiatives, highlight the lessons learned and areas/strategies for improvement, and examine the opportunities to build on/adapt the recommendations from the first conference.

You can find more information on the second conference and a detailed programme here. A report detailing the discussions and recommendations from this conference is expected to be released in the second half of 2023.



4. RESEARCH POLICY

4.1 RESEARCH INTEGRITY AND ETHICS

Research integrity is necessary for scientists to carry out their work within accepted ethical frameworks, and to ensure good scientific practice that results in quality output. ALLEA has been a long-standing voice in the fields of research ethics and integrity, primarily via its Permanent Working on Group Science and Ethics (PWGSE), which covers a wide-range of issues related to ethics and integrity.

European Code of Conduct for Research Integrity – Revised Edition 2023

Since its initial publication in 2010, the European Code of Conduct for Research Integrity is increasingly used as a reference document for research integrity and serves as a framework for the development of local, national, and discipline-specific guidelines.



Global and European standards for research integrity and

good research practices continuously evolve and the Code of Conduct is expected to reflect these latest advances. Led by the Chair, Prof Krista Varantola (Council of Finnish Academies), a Drafting Group consisting of members of the ALLEA PWGSE has thoroughly revised the Code of Conduct to echo these developments, through an extensive consultation process with diverse stakeholder groups across Europe, including representative associations and organisations for academia, publishers, industry, policymaking, and broader societal engagement. The response to this stakeholder consultation was exceptional, both in quantity and quality, reflecting a high sense of ownership and engagement with the Code of Conduct amongst the research community.

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The 'European Code of Conduct for Research Integrity – Revised Edition 2023' will be released at the ALLEA General Assembly on 23 June 2023 in London. Later this year, the revised Code of Conduct will be formally presented to the European Commission's Directorate-General for Research and Innovation (DG RTD) in conjunction with a public event in Brussels.

<u>Key take-aways</u>

The 2023 edition contains revisions to ensure that the Code of Conduct remains fit for purpose and relevant to all disciplines and emerging areas of research or research practices. It takes account of new technological developments, changes in data management practices, the General Data Protection Regulation (GDPR), and recent developments in Open Science and research assessment.

The new edition places a stronger emphasis on the responsibilities of research institutions, funders, and publishers, and acknowledges the importance of research culture in enabling research integrity and implementing good research practices. The changes also reflect greater awareness of mechanisms of discrimination and exclusion in the research community, and the responsibility of all actors to promote equity, diversity, and inclusion.

The Code of Conduct is conceived as a living document that will be reviewed and revised as necessary to take account of evolving concerns and emerging areas so that it can continue to serve the research community as a framework for good research practices.

Strategic impact

The previous iterations of the Code of Conduct have been translated into all official EU languages, as well as Arabic, Chinese, Japanese, and Turkish, and has served as a framework for the development of local and national codes and guidelines, discipline-specific supplements, and training

programmes to promote research integrity at all levels. Following its publication in 2017, the Revised European Code of Conduct for Research Integrity has been used as the reference document for all Horizon Europe projects and has been frequently cited in European research policy documents. It is expected that the next 2023 edition will be similarly impactful.

For more information on 'The European Code of Conduct for Research Integrity – Revised Edition 2023', visit our dedicated Code of Conduct webpage.

4.2 EUROPEAN RESEARCH AREA

The European Research Area (ERA) envisions a single, borderless market for research, innovation, and technology across the European Union (EU). While efforts to establish the ERA date as far back as 2000, there has been a recent revitalisation of this agenda beginning in 2018. Through the introduction of a new Pact for Research and Innovation and an ERA Policy Agenda, the aim is for Member States to reaffirm their commitment to the ERA, define areas for joint action, improve access



to excellence, and coordinate policy actions on prioritising investments and reforms in research and innovation, strengthening the free movement of researchers, knowledge, and technology.

ALLEA contributes to this ambition to create a more integrated research ecosystem across Europe through its Working Group on the ERA.

Building an ERA that Fosters Freedom and Excellence

In September 2022, the ALLEA Working Group on the ERA prepared and published a Statement, titled, *ALLEA Statement for an ERA of Freedom and Excellence*. The Statement was a response to the 20 ERA Policy Agenda Action Points developed in the consultations of the ERA Transition Forum, in which ALLEA participated as a stakeholder organisation representing the European Academies of Sciences and Humanities.

The Statement emphasised the importance of promoting scientific cooperation, particularly during crises, within a strong institutional framework and guided by good research practices. It highlighted that a strong ERA should be founded on the principles of academic freedom, integrity, excellence, inclusiveness, sustainability, collaboration, mobility, equality, diversity, equity, and a global perspective. Some excerpts from the Statement include:

- Protect the autonomy of individual funding decisions by research councils and funding bodies.
- ALLEA supports the commitment to strengthen Open Science, including through increased use of the European Open Science Cloud (EOSC).
- Transparent science advice, and the communication of scientific processes and results to citizens demonstrating how science can contribute to societal challenges, will be of crucial and increasing importance in establishing and maintaining public trust in science and in evidence-based policies.
- The ERA should improve the accessibility to existing research infrastructure and intensify the building of research capacity at scientific institutions in the EU-13 countries.
- ALLEA agrees with the urgent need for reforming the systems for research evaluation and career progression to recognise the full range of research outputs and to appropriately reward open science practices.

The Statement was published in a news article, thereby allowing for greater circulation among the wider research community

Arben Merkoçi Assumes Role as Working Group Chair



In June 2023, Arben Merkoçi, ICREA Professor and Director of the Nanobioelectronics & Biosensors Group at <u>Institut Català de Nanociencia i</u> <u>Nanotecnologia (ICN2)</u>, will assume office as the new Chair of the Working Group on the ERA. Prof Merkoçi (Academy of Sciences of Albania) follows Kerstin Sahlin (Royal Swedish Academy of Sciences) in this role, to whom ALLEA extends its heartfelt thanks for a productive term of steady and capable leadership.

4.3 REFORMING RESEARCH ASSESSMENT

Carefully designed research assessment practices are key to making fair decisions on the quality and potential impact of funding applications and informed decisions on the hiring and promotion of individual researchers. Current approaches tend to rely heavily on journal-based metrics, such as the Journal Impact Factor (JIF), Article Influence Score (AIS), and h-index. This has fuelled an unhealthy 'publish or perish' culture that has demonstrable negative effects on the quality of scholarly outputs, the diversity of our research communities, and the trustworthiness of our research system.



ALLEA strongly supports the transition to research assessment practices that are based on qualitative peer review, supported by the responsible use of quantitative indicators where appropriate. It will be vital to further stimulate the development and exchange of new criteria, procedures, and tools for recognising and rewarding scientific excellence based on principles of quality, integrity, diversity, and openness. There are many reasons to reform, and ALLEA has therefore signed the European Agreement on Reforming Research Assessment and joined the associated coalition (CoARA). You can read the full ALLEA Statement on reforming research assessment published in October 2022 here.

Election to the fellowship of an Academy is considered an important career step for both early career and established researchers. A recent survey among the ALLEA membership found that academies are following widely varied criteria for evaluating scientific excellence, which are sometimes complemented with additional requirements and criteria intended to promote diversity within the fellowship. During the 2023 General Assembly in London, academy delegates will engage in a first exchange of views to explore how Academies can contribute to a more equitable, diverse, and inclusive research community.

ALLEA approaches its activities on research assessment via various working groups and task forces, including the PWGSE, the Working Group on the ERA, and the Open Science Task Force, as well as through collaborations with partners such as the Global Young Academy (GYA). Together, the resulting publications and events seek to directly impact ongoing EU policy debates and support the broader research community with reforming their assessment practices. Examples of such activities include ALLEA's response to the conclusions of the Council of the EU in June 2022 and a webinar on 'Inclusion, Diversity, Equity and Accessibility in Scholarly Peer Review' held in November 2022 (see page 17).

ALLEA's work on research assessment is coordinated by Board Members, Luke Drury (Royal Irish Academy), Annette Grüters-Kieslich (Leopoldina and Union of German Academies of Sciences and Humanities), and Lara Keuck (German Young Academy).

For a full overview of ALLEA's activities on Research Assessment, see the dedicated webpage.

Digital Salon Interview with Lara Keuck – 'Reforming Research Assessment Key to Greater Gender Equity in Academia?'

On International Women's Day 2023, the ALLEA Digital Salon shared an interview with Lara Keuck, ALLEA's youngest Board Member and Professor of the History and Philosophy of Medicine at Bielefeld University. Prof Keuck discussed her thoughts on academia's culture of 'publish or perish', the need to reform research assessment to improve diversity, equity, and inclusion in science, and how academic and research-performing organisations can support women and improve gender parity by supporting new forms of research assessment.



You can watch the full interview here.

4.4 TECHETHOS

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Technology has the power to shape our world in a variety of spheres, from communication to education, work, health, transportation, climate, politics, and security. New and innovative technologies with such gross potential for wide sociocultural and economic impact (often referred to as 'emerging technologies") are thus often fraught with ethical questions – which range from concerns about privacy breaches to manipulation, fairness, and the exacerbation of power gaps and

exploitation. Because they could affect every aspect of our lives, it is important to acknowledge and address these ethical questions right at the outset.



The Horizon 2020-funded TechEthos project addresses these questions, and ALLEA is a partner in the consortium of this project through its PWGSE, chaired by Maura Hiney (Royal Irish Academy). ALLEA contributes to enhancing existing legal and ethical frameworks, horizontal

coordination with related projects, and ensuring that TechEthos outputs complement and inform the revised edition of the European Code of Conduct for Research Integrity (*see page 13*).

Publication of Key Reports

In June 2022, TechEthos published a report on the ethical issues that need to be considered for the three technology families under study, namely 'Digital Extended Reality', 'Neurotechnologies' and 'Climate Engineering'. The report identifies core ethical dilemmas, describes key applications and case studies, and identifies ethical values and principles in line with the 'ethics by design' methodology, provides operational checks and balances for each value/principle in the form of questions, and outlines mitigation strategies for the same.

In July 2022, a second report delved into the international and EU laws and policies for their relevance and applicability to the three technology families. The report reviews the legal domains and related obligations at international and EU levels, identifies the potential implications for fundamental rights and principles of democracy and rule of law, and reflects on issues and challenges of existing legal frameworks to address current and future implications of the technologies. A summary of the two reports can be found in this ALLEA news feature.

In February 2023, TechEthos also released four policy briefs targeted at enhancing EU legal frameworks in the selected technology families.

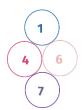
Digital Salon Interview with Laurynas Adomaitis – 'Questions, Not Answers, Are Better Suited to Start a Reflection on Ethical Issues'

In a Digital Salon interview, ALLEA spoke with the lead author of the report that analyses the key ethical issues, Dr Laurynas Adomaitis, Tech Ethics Researcher at Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA). The interview covers the ethical dilemmas inherent to emerging technologies, how researchers can effectively use the tools in the report, and the role for policymakers and funding organisations in promoting the integration of ethics into every stage of technology research.

The full interview can be found here.

4.5 OPEN SCIENCE

Since its foundation in June 2020, the ALLEA Open Science Task Force, chaired by ALLEA Vice President Luke Drury (Royal Irish Academy), has aimed to contribute to the development, coordination, and implementation of Open Science policies and initiatives within the greater European area by actively producing insightful statements, organising wide-reaching events, and engaging with multiple stakeholders across disciplines and domains.



Webinar on Inclusion, Diversity, Equity and Accessibility in Scholarly Peer Review

The scholarly peer review system currently does not accurately represent the research community as a whole; women, researchers from the Global South, early career researchers, and non-native English speakers are among those who are routinely under-represented. In addition, researchers not affiliated with well-established institutions often experience a disadvantage when their work is submitted for peer review. Together, these biases directly affect individuals' career progression and are likely to impact the quality of research outputs and diversification of the research system in general.

On 17 November 2022, a moderated panel discussion with four distinguished panellists from the global research and publishing communities addressed such challenges around 'Inclusion, Diversity, Equity and Accessibility (IDEA) in Scholarly Peer Review'. The event was organised by the ALLEA Open Science Task Force, under the chairmanship of Prof Luke Drury (ALLEA Vice President/Royal Irish



Academy), in partnership with the GYA, and the International Association of Scientific, Technical and Medical Publishers (STM). The aim of this webinar was to create more awareness of the important issue of improving IDEA in peer review, discuss existing barriers, and gather input for possible solutions to overcome the challenges. To set the scene for an informed discussion, the moderator introduced the topic, followed by short opening statements in which each panellist outlined the barriers and possible solutions from

their viewpoint. The audience had the opportunity to actively contribute to the discussion by sharing their views via different polls and asking questions to the panellists. The panel discussion, moderated by Jessica Polka, Executive Director and Co-Founder of ASAPbio (Accelerating Science and Publication in biology), included the following panellists:

- Michael Barber, Emeritus Professor, Flinders University Australia & steering group member of the International Science Council's Future of Scientific Publishing project
- Haseeb Irfanullah, consultant & part-time Visiting Fellow at University of Liberal Arts in Bangladesh

- Pradeep Kumar, Personal Professor at University of the Witwatersrand (South Africa) & member of the GYA
- Nicola Nugent, Publishing Manager of Quality and Ethics at Royal Society of Chemistry (UK) & STM member

The three organisations subsequently published an event report, which summarises the main themes that emerged during the discussions and identifies areas that can represent a path forward. The full programme, detailed information on the speakers, and the complete recording of the webinar can be found here.

Digital Salon Interview with Jessica Polka – 'The Path to Inclusive Science Paved with Preprints?'

In the run-up to the event, a Digital Salon interview was published with the moderator of the webinar, Dr Jessica Polka, Executive Director and Co-Founder of ASAPbio. The interview focused on the productive use of preprints, as well as the critical role for transparent and open peer review in making research more accessible, diverse, inclusive, and equitable.



4.6 INTELLECTUAL PROPERTY RIGHTS



The ALLEA Permanent Working Group Intellectual Property Rights (PWG IPR), chaired by Prof Alain Strowel from UCLouvain, Saint-Louis University (Brussels/Belgium), has been active since the 1990s and has prepared and issued reflections, declarations, and recommendations on the most challenging topics of Intellectual Property Rights (IPRs) related to academic activities.

ALLEA Statement on Open Access Publication under 'Big Deals' and the New Copyright Rules

With the number of scholarly publications shared via the Gold Open Access model on the rise, access to the results of (often publicly funded) research is at an all-time high. However, breaking down these barriers for readers has come at the expense of increased barriers for authors, who often face substantial article processing charges (APCs) to publish their work immediately as Open Access.

So-called 'Big Deals' – 'read and publish agreements' between (consortia of) research libraries, institutions, and universities on the one hand, and scientific publishers on the other – have not lowered the exorbitant costs to the academic community incurred in the process of research publication. In fact, in many cases, they have actually further exacerbated inequities in academic publishing and have contributed to the consolidation of the already dominant market position of the major commercial publishers. (see also the 2021 ALLEA Statement on 'Equity in Open Access').

In December 2022, ALLEA published a Statement to express its concerns that the conditions of the 'Big Deals' fail to adequately reflect the new rules on copyright law in the EU, and do not fairly value the creative and research endeavours of academics and their institutions, as well as their investment and efforts to generate research results to the benefit of the public. While EU and national copyright laws provide for a variety of rules intended to facilitate the free use and sharing of research publications, the current 'Big Deals' do not generally factor in these statutory free uses.

<u>Key take-aways</u>

To arrive at a more equitable and affordable system that takes into account the new EU copyright rules, ALLEA recommends:

- Researchers and libraries to better consider their rights under the new EU copyright rules when negotiating the next generation of deals
- Researchers and libraries to depart from the rights assignment model that still prevails today
- Harmonisation of EU national copyright legislation and introduction of EU-wide Secondary Publication Rights without embargo
- Further development of a community-driven non-profit publishing ecosystem

The Statement was prepared by the PWG IPR with P. Bernt Hugenholz (Royal Netherlands Academy of Arts and Sciences) as principal author. It has since been published in the Journal of Intellectual Property, Information Technology and E-Commerce Law.

4.7 E-HUMANITIES

The Working Group E-Humanities (WG E-Humanities), chaired by Dr Maciej Maryl from the Polish Academy of Sciences, identifies and raises awareness for the priorities and concerns of the digital humanities, contributes to the Open Science and Open Access agenda from a humanities and social sciences perspective and builds consensus on common standards and best practices in e-humanities scholarship and digitisation.

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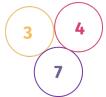
ALLEA Launches Open Consultation on Innovative Outputs in the Humanities

In May 2023, the ALLEA WG E-Humanities launched an open consultation concerning draft recommendations on recognising digital scholarly outputs in the humanities. The goal was to gather broad feedback from active humanities researchers and institutions in order to tailor the recommendations to the community's needs. The consultation was open to all researchers and practitioners working in disciplines within the humanities, as well as policymakers, and representatives of all public and private organisations active in the field.

More information on the draft recommendations can be found here.

4.8 CLIMATE SUSTAINABILITY IN THE ACADEMIC SYSTEM

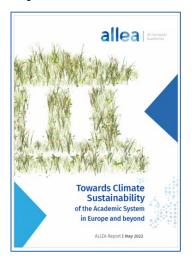
Climate change is undoubtedly an existential crisis, and the scientific ecosystem plays a significant role in researching solutions to mitigate its effects. At the same time, the research community needs to acknowledge its own contribution to the problem of carbon emissions and rising global temperatures, and take appropriate steps to lower its carbon footprint and transition to a more sustainable operation.



In light of this urgent need to change the status quo, ALLEA launched a project

dedicated to examining how the academic system can transform itself to become more climate sustainable as part of an initiative led by its member, Die Junge Akademie (German Young Academy). The interdisciplinary Working Group, chaired by Prof Astrid Eichhorn (University of Southern Denmark), seeks to review the existing knowledge, experiences, and data on the climate impact of academia, and to document and develop best practices to facilitate the transition to greater sustainability by studying relevant stakeholders such as universities, research institutes, individual researchers and students, funding agencies and learned societies and academies.

The Report 'Towards Climate Sustainability of the Academic System in Europe and Beyond' Published



In May 2022, the ALLEA Working Group that focuses on climate sustainability in academia published a report, titled, '*Towards Climate Sustainability of the Academic System in Europe and beyond*'. The 117page report is an in-depth look at the roles of various stakeholders in the research ecosystem, both in contributing to and solving the problem of climate change. It provides several examples of best practices in climate-sustainable operations, as well as concrete recommendations to enable a significant reduction in the levels of carbon and greenhouse gas emissions produced by the academic system. The report aims to kick-start a scientific and public conversation on the subject, and inspire the multiple stakeholders involved to design and adapt their own sustainability strategies based on the specific recommendations in the report.

The full report can be found here.

Hosting a Panel on Climate Sustainability at Berlin Science Week

Aligned with the 2022 theme of Berlin Science Week, '*Paradigm Shift: Co-Creating a Sustainable Now*', ALLEA partnered with the Swiss Embassy in Berlin and the German Young Academy to organise a live panel discussion, titled, '*Towards Climate Sustainability – Taking the Academic System from Evidence to Action*'. The event, held in November 2022 in a hybrid format, included a presentation of the major findings of the ALLEA report and a panel discussion, moderated by Prof Astrid Eichhorn, Chair of the ALLEA Working Group on Climate Sustainability in Academia. Panellists included:

- Dr Jeroen Dobbelaere, Senior Scientist and Founder of the Climate Initiative at the Max Perutz Labs
- Martin Farley, Manager of UCL's LEAF Programme & Director of Green Lab Associates
- Omar Kassab, Lecturer and Deputy Head of ETH Sustainability
- Lina Seitzl, Member of the German Parliament



From L to R: Astrid Eichhorn, Jeroen Dobbelaere, Martin Farley, Omar Kassab, Lina Seitzl

A news feature of the event is available here, and you can also watch the full livestream of the panel discussion.

Digital Salon Interview with Martin Farley – 'Fighting for Sustainable Science – One Lab at a Time'

In the lead up to the panel discussion at Berlin Science Week, the ALLEA Digital Salon interviewed Martin Farley, creator and manager of the Laboratory Efficiency Assessment Framework (LEAF) at University College London (UCL) on how scientific labs can reduce their climate impact, the challenges and opportunities in the quest for sustainability in academia, and the short- and long-term strategies to enable the transition to net-zero.

You can find the Digital Salon interview here.



5. SCIENCE ADVICE FOR POLICY

5.1 SCIENCE ADVICE FOR POLICY BY EUROPEAN ACADEMIES (SAPEA)

Science Advice for Policy by European Academies (SAPEA) is part of the European Commission's Scientific Advice Mechanism (SAM). Together with the Group of Chief Scientific Advisors (GCSA), it provides independent scientific advice to European Commissioners to support their decision-making. SAPEA also works to raise awareness of scientific advice and evidence in policymaking, and to stimulate debate in Europe about these issues. SAPEA comprises five European Academy Networks:

- Academia Europaea (AE)
- ALLEA
- The European Council of Academies of Applied Sciences, Technologies and Engineering (Euro-CASE)
- Federation of European Academies of Medicine (FEAM)
- Young Academies Science Advice Structure (YASAS)



It brings together outstanding expertise in the natural sciences, engineering and technology, medical, health, agricultural and social sciences, as well as the humanities from over a hundred academies, young academies and learned societies in more than 40 countries

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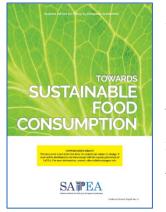
across Europe. As one of five networks of academies taking part in the SAPEA Consortium, ALLEA provides scientific advice by involving experts nominated by its Member Academies, coordinating the production of evidence review reports, and lending support in any other science advice activity in which the consortium is involved. ALLEA also leads SAPEA's work package on communications, dissemination, and public engagement.

The SAPEA project began in 2016 with funding from the EU's Horizon 2020 framework programme, and has since continued its activities with funding from the Horizon Europe framework programme. In May 2023, the Commission decision on the setting up of the High-Level Group of Scientific Advisors was renewed and approved by the European Commission. A significant update was made to the original decision, with the SAM now able to respond to requests from the European Parliament and the Council, in addition to the European Commission.

Upcoming Scientific Advice on 'Towards Sustainable Food Consumption'

With the approval of the EU Green Deal in 2020, the European Union (EU) set itself an objective to respond to the climate and environmental emergencies of our time, while leaving no one behind. Making our food system more sustainable, healthy, and just is a key lever in this overall transition, which is why the Farm-to-Fork Strategy lies at the heart of the Green Deal. To inform the development of the Strategy, the SAM already delivered scientific advice on a sustainable food system in 2020. Building on this advice, and to inform the 2023 revision of the Farm-to-Fork Strategy, the Commissioners for Health and Food Safety and for Innovation, Research, Culture, Education and Youth asked the GCSA to deliver science policy advice on a more specific area of the food system: food consumption and the food environment.

They asked:



"What tools could be used at EU level, in addition to those mentioned in the 2020 Farm-to-Fork Strategy, to overcome the barriers preventing consumers [from adopting] sustainable and healthy diets, fostering the necessary change towards sustainability in the food environment? The Group's advice should be based on an analysis that identifies the elements refraining consumers from making healthy and sustainable choices".¹

The SAM advice on this subject, comprising the SAPEA Evidence Review Report and the GCSA's Scientific Opinion, will be published in summer 2023.

ALLEA is the lead network for the topic. For more information, visit the dedicated webpage.

Published Scientific Advice on 'Strategic Crisis Management in the EU'

The EU is confronted with an increasing number of crises with growing complexity, leading to suffering and other devastating consequences. Improving crisis management has thus become an essential issue for protecting and enhancing present and future well-being in the EU and globally.

In response to this challenge, the SAM and the European Group on Ethics in Science and New Technologies (EGE) developed policy recommendations to improve crisis management frameworks.

In November 2022, this advice was handed in person to Commissioner Mariya Gabriel (Commissioner for Innovation, Research, Culture, Education and Youth) and Commissioner Janez Lenarčič (Commissioner for Crisis Management) at the European Parliament in Strasbourg, during a live-streamed 30-minute discussion with SAPEA Working Group Chair Tina Comes, Advisor Maarja Kruusmaa, and Chair of the EGE Barbara Prainsack (see picture below).

The report informed a Communication from the European Commission on 'European Union Disaster Resilience Goals: Acting together to deal with future emergencies'. The reports were promoted widely through



events, publications, and social media, including an event co-organised with the Royal Irish Academy on '*Trust in Times of Crisis*', which was part of the PERITIA final academic conference 'Rethinking Policy, Expertise and Trust'.



A social media campaign was active on Twitter, LinkedIn, Mastodon, and YouTube, with more than 100 posts and more than 100,000 impressions.

ALLEA is the lead network for this topic. For more information, visit the dedicated webpage

¹https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/scientificsupport-eu-policies/group-chief-scientific-advisors/towards-sustainable-food-consumption_en

Strategic Impact

ALLEA leads all SAPEA communications activities, and also led the rollout of a new communications strategy in the last quarter of 2022.

By organising or speaking at 12 events to-date, SAPEA promoted several aspects of the advice on Crisis Management, from public trust to pandemics, or governance to ethics, in cooperation with various partners. These digital and in-person conferences organised in different parts of Europe gathered diverse audiences: policymakers of different levels, academics, non-governmental organisations (NGOs), and business representatives. To promote this topic, SAPEA cooperated very closely with the European Commission on the production of a series of videos featuring experts from SAPEA, the GCSA, and the EGE.

SAPEA also promoted the advice on Cancer Screening, published in March 2022, through a range of high-profile activities, including a conference hosted by a Member of Parliament in the European Parliament, the EU Research and Innovation Days, and scientific conferences in partnership with Academies. The advice informed the European Commission's 2022 proposal to update cancer screening guidelines for EU Member States. It also had a strong bearing on the Council of the EU's amendments to this proposal.

SAPEA continues to lead communications on the topic of evidence-informed policy, more generally, with its popular Science for Policy podcast, which attracts many renowned guests, while simultaneously providing opportunities for early-career researchers to talk about their work to an audience of more than 1,000 regular listeners. More than 30 episodes have been published in the past year.

SAPEA is currently co-organising a major European Commission conference scheduled for October 2023 on science-for-policy governance in Europe, during which one out of four sessions will be hosted by SAPEA.

SAPEA's online communications activities continue to increase the reach of its work, with nearly 9,000 unique visitors to the website since May 2022, and more than 3,500 followers on Twitter. A Mastodon account now runs in parallel to the existing Twitter and LinkedIn profiles.

Upcoming Interaction with Academies

In Autumn 2023, a training workshop for Academies' communications professionals will be hosted by the Polish Academy of Sciences. Before the end of 2024, ALLEA will also lead a workshop on the theme of cooperation between Academies in scientific advice. This workshop aims to exchange examples of best practices on how Academies collaborate bilaterally, across Europe or internationally, to provide scientific advice.

5.2 NEW GENOMIC TECHNIQUES AND SUSTAINABLE AGRICULTURE

New Genomic Techniques (NGTs), such as genome editing using CRISPR-Cas, continue to be among the most ground-breaking, as well as the most hotly contested, innovations of the recent past. NGTs have the potential to contribute to Europe's sustainability and biodiversity objectives, but both legislative uncertainty and intellectual property (IP) issues remain key obstacles to their adoption. ALLEA is committed to providing science advice on these issues using the latest evidence and taking into account societally and ethically accepted frameworks.



ALLEA Responds to the European Commission's Consultation on NGTs

In June 2022, ALLEA gave detailed input to the European Commission's public consultation on plants produced by certain NGTs. In its response, ALLEA stressed that "The length and cost of the current authorisation process for NGTs is disproportional to the potential risks and makes it, except for major industrial players, de facto impossible to bring NGT seeds to our farmers."

"We must take into account the unique challenges farmers are faced with in different regions and different sectors, as well as how our food systems continue to be affected by societal and geopolitical developments. Ultimately, farmers are best positioned to respond to these challenges, and they should be provided with broadest possible spectrum of technologies and seeds to support them."

The response also acknowledges the importance of providing clarity on when seeds and products are created using NGTs. "[...] farmers, producers and consumers should have a free choice to decide if they use or buy seeds and products created using NGTs. Transparent documentation will be important to guarantee autonomy and trust throughout our food systems."

The response to the European Commission's consultation reiterates key elements from the 2020 ALLEA report '*Genome Editing for Crop Improvement*', which is based on expert discussions during the joint ALLEA and Royal Flemish Academy of Belgium for Science and the Arts (KVAB) symposium on the topic. ALLEA's full contribution is available via the consultation website and a summary is provided in this news feature. A legislative proposal from the European Commission is expected in the July 2023 and ALLEA will continue to closely follow the debates.

New Task Force Explores the IP system for NGTs

When considering the potential of NGTs for crop improvement, balancing IP rights protection and broad access for different stakeholders is a critical challenge. A newly formed ALLEA Task Force explores how to ensure that European researchers, breeders, and farmers are able to fully benefit from NGTs and their products, while continuing to stimulate innovation through IP protection.

The Task Force consists of some of Europe's leading experts on the topic, and is jointly chaired by ALLEA Board Member Pere Puigdomènech (Institute of Catalan Studies & Royal Academy of Sciences and Arts of Barcelona) and Heinz Müller (Swiss Academies of Arts and Sciences). For a full description of the group's scope and members, see here.

Various potential solutions will be explored, ranging from promoting increased transparency, awareness, and skills to navigate existing patents and licences, to possible recommendations for reforming and harmonising the European patent system. The Task Force is consulting with a diverse range of stakeholders, including patent holders, small- and medium-sized breeders, farmers, and non-governmental organisations (NGOs), and is expected to present its recommendations in the second half of 2023.

Continued Partnership with Re-Imagine Europa

After a successful initial project phase, Brussels-based think-tank Re-Imagine Europa and ALLEA have agreed to continue their collaboration on 'Sustainable Agriculture and Innovation'. The work is supported by the Bill & Melinda Gates Foundation and guided by an expert committee composed of more than 70 prominent experts representing a multitude of perspectives from academia, politics, and key stakeholder groups.

The project aims to develop regulatory proposals and a shared vision for how to responsibly move forward on the 'Green and Digital Transitions', paying particular attention to European policy priorities to ensure they are grounded in science, and contribute to increasing trust between different stakeholders. Highlights of the past year include the online expert meeting 'Genome Editing Beyond the EU: A Global Conversation' in October 2022 and the 'Global Conference on Sustainability in Agriculture and Food Systems' in Brussels in May 2023.

ALLEA contributes to the project by working with the network of European academies, thereby ensuring the engagement of relevant academic experts and the availability of independent and up-to-date scientific advice on sustainable agriculture, NGTs, and trust in science.

6. SCIENCE AND SOCIETY

6.1 POLICY, EXPERTISE AND TRUST (PERITIA)



After more than three years of research activities, **PERITIA** has come to an end. On 31 May 2023, the PERITIA project, a collaborative initiative aimed at examining trust in expertise, reached its conclusion, providing significant insights into the complex dynamics that underpin the public's confidence in experts. Funded by the European Commission within the



Horizon 2020 framework, the project has produced valuable research and recommendations that have the potential to shape the future of trust in various domains, including science, policymaking, and public discourse.

Over the past 40 months, the PERITIA consortium, consisting of 11 partner organisations across Europe (including ALLEA), has carried out research to understand the factors influencing public trust in experts and expertise. Led by an interdisciplinary team of experts from renowned academic institutions, the project has delved into the fields of philosophy, psychology, sociology, and communication, employing a multifaceted approach to tackle this intricate issue.

One of the project's core achievements has been the development of a comprehensive understanding of the manifold dimensions of trust in expertise. The broad range of research conducted in the project recognises the interplay of cognitive, social, and institutional factors that shape how individuals perceive and evaluate expert opinions. By taking a multidisciplinary perspective, PERITIA has paved the way for a nuanced understanding of the complexities involved in trust dynamics.

One of the standout achievements of PERITIA has been the establishment of an international network of experts, policymakers, and stakeholders. The project has facilitated dialogues, workshops, and conferences where researchers and practitioners from diverse fields have come together to share knowledge and exchange best practices. This collaborative effort has fostered a deeper understanding of the challenges faced and the innovative solutions required to restore trust in experts.

Moreover, the project has conducted empirical studies to investigate the challenges and potential solutions for fostering trust in expertise. These studies examined, for instance, the impact of misinformation, political polarisation, and the influence of social media on public trust. Researchers involved in the project have also analysed the role of science communication, ethical considerations, and public engagement in rebuilding trust. Key components of the project's final phase were activities engaging both European citizens through '*Deliberative Mini-Publics*' (i.e., Citizens' Fora) as well as young people through the essay competition, the 'Youth on Trust Awards'.

Under the leadership of philosopher Maria Baghramian (Royal Irish Academy, University College Dublin, Ireland) and the invaluable guidance of the advisory board, team members and work package leaders produced output that comprises around 23 scientific publications, two podcast series (The Trust Race and [Un]Truths: Trust in an Age of Disinformation), white papers, policy reports, and 12 newsletters. Additionally, the team, often in conjunction with local partners, held numerous events over the years – even during the pandemic, when lockdowns necessitated a transition into a digital format.

PERITIA Research Culminates in Closing Event in Brussels

All these activities culminated in the project's closing event, 'Research Insights for European Policymaking,' held from 4–5 May at the European Parliament in Brussels, organised by ALLEA and cohosted by the European Parliament's Panel for the Future of Science and Technology (STOA) and the European Science-Media Hub. "PERITIA has provided us with invaluable insights into the challenges surrounding trust in expertise. We hope that our findings and recommendations will serve as a catalyst for change, fostering a more informed and engaged society," said Prof Maria Baghramian, Project Leader and Coordinator of PERITIA. Over the course of two inspiring days, PERITIA researchers and team members discussed their research results with an engaged audience, including policymakers from the European Parliament and European Commission.

STOA Chair and Member of the European Parliament (MEP) Christian Ehler delivered a virtual message that spoke to the importance of expertise in policymaking, stating that *"Evidence-informed policy is crucial for our trust-based democracy."*

President of the International Science Council (ISC), Sir Peter Gluckman, took the floor next, beginning his keynote speech with an emphasis on the deterioration of the conditions of societal trust. "Democracy only works if you have trust. Trust between citizens. Trust from citizens to institutions. Both are at risk. Social cohesion is at risk [...] Science is a crucial part of our society but why is the trust in science at risk?" he asked the audience of diverse stakeholders.



Watch the introductory remarks and the two keynotes here.

Research insights for European policymaking

At the core of this event was the Policy Roundtable, moderated by Toby Wardman of SAPEA, and featuring input from four of PERITIA's principal investigators in dialogue with two policymakers of the European Commission's Joint Research Centre (JRC) and the Directorate-General for Research and Innovation (DG RTD).

Prof Bobby Duffy, Director of the Policy Institute at King's College London (UK), kicked off the discussion with an overview of the effectiveness and limitations of social surveys in measuring trust. The basis of his analysis is a PERITIA survey of more than 12,000 people across seven European countries designed by the Policy Institute. This study was developed to assess public attitudes toward governments and institutions as well as their handling of the pandemic and climate change. The results are now fully accessible via PERITIA's Trust Hub, an interactive space for journalists, researchers, and interested citizens. In his concluding statement, Prof Duffy reminded us that the data indicates that there is no new generalised crisis of trust across institutions or countries, but rather that the level of public trust varies across contexts. "Trust is going in different directions for different institutions in different countries," he explained. Rather, the polarisation we are witnessing is as much about tribal identities as it is about crises of trust.

Prof Liam Delaney, Head of the Department of Psychological and Behavioural Science at the UK's London School of Economics and Political Science (LSE), presented his policy brief on key lessons from policy responses to Covid-19, particularly the recognition that the role of behavioural and social sciences in the policy process needs to be clarified and developed further. This was followed by Cathrine Holst, Professor at the Department of Philosophy, Classics, History of Art and Ideas, University of Oslo (Norway), who summarised her policy brief 'How can governments build trust in science?' She outlined a 10-point plan that included steps from developing science advice mechanisms to committing to transparent communication.

José van Dijck, Professor of Media and Digital Society at Utrecht University (The Netherlands) and former president of the Royal Netherlands Academy of Arts and Sciences (KNAW), then expounded on an interdisciplinary approach to the complex problem of governing public trust in platform societies, as she lays out in her <u>article</u> in the *European Journal of Communication*, which is part of one of several Special Issues produced over the course of the project.

Watch the roundtable discussion here.

Public engagement and outreach

The second day focused on PERITIA's public engagement and outreach activities. It included a presentation on the project's series of Deliberative Mini-Publics. Organised by Sense About Science and the Policy Institute at King's College London, in collaboration with ALLEA and other local partners, the series provided unique opportunities for citizens and experts to meet, deliberate, and dialogue on one of the most pressing and controversial topics confronting society today: climate change. Designed to provide participants with the opportunity to learn, discuss, and make policy recommendations, and therefore help to ensure that public opinion is taken into consideration when making policy decisions, the workshops focused on the mitigation of the climate crisis through local urban transport policies, and were held in five capital cities: London (UK), Berlin (Germany), Dublin (Ireland), Warsaw (Poland), and Yerevan (Armenia).

Trustworthiness toolkit

Maria Baghramian and Carlo Martini (Professor in Logic and Philosophy of Science at Vita-Salute San Raffaele University, Milan (Italy)) presented a trustworthiness toolkit that provides simple tests and guidance to train people to be better able to gauge the trustworthiness of experts. It has been designed to be accessible to everyone, regardless of their technical expertise, including secondary school students.

The Trust Race

The host of the PERITIA podcast '*The Trust Race*', Shane Bergin, shared excerpts from this six-part series on pivotal moments in the last 60 years that have shaped trust in science. "*We talk about science being more open to other knowledge systems toward the cultivation of a climate of trust*," explained Dr Bergin. In the podcast series, Shane navigates various well-known media headlines through conversations with journalists, scientists, philosophers, lawyers, and activists, which all serve to peel back the layers of the complex nature of trust.

The podcast is based in part on the PERITIA lecture series, '[Un]Truths: Trust in an Age of Disinformation'.

Read more and listen to the podcasts here.

Youth on Trust Awards

The event – and project – concluded with a passing of the baton to the experts of the future: the 12 winners of the Youth on Trust Awards, nine of whom had travelled to Brussels to take part in the awards ceremony.

In conjunction with the Irish and International Young Philosopher Awards at the UCD Centre for Ethics in Public Life, PERITIA invited students between the ages of 13 and 18 from across Europe to share their views in a forum where their voices could be heard on the topic of trust in our social and political life. These remarkable students explained how political trust in their elected representatives is still lacking for them and their peers. They look forward to the day that they might be 'allowed' to enter that sphere and lead in such a way that honours the trust of their constituents. One could safely say that everyone in the room felt not only proud of these extraordinary young people but hopeful for the future as well.



For a more detailed summary of the final event, read PERITIA's final newsletter here.

ALLEA Digital Salon Interview with Carlo Martini and T.Y. Branch



ALLEA Digital Salon interviewed two members of PERITIA, Prof Carlo Martini (Vita-Salute San Raffaele University, Italy), who led the project's work on Behavioural Tools for Building Trust and Prof T.Y. Branch (University of Cologne, Germany), part of the research team behind 'Social Indicators of Trust'.

In the article, titled, 'We Need Scientific Journalism Back', Prof Martini described how scientific disinformation is becoming more sophisticated and harder to detect, and explained that this necessitates equally vigorous counter-measures by professional science journalists.

Prof Branch, in the piece, titled, 'How Do We Decide Which Experts to Trust?', explained how publics use both epistemic and non-epistemic values in their decisions to trust or distrust experts and expertise. She shared her insights into this complex decision-making process, which often involves reading social and cultural cues and described why scientists, science communicators, and policymakers should pay close attention to these social indicators of trust to be more effective and persuasive in their messaging.



Looking Ahead

The conclusion of the PERITIA project marks an important milestone in the pursuit of trust in expertise. By offering an evidence-based framework, high level scientific research, international collaboration, public engagement, and practical recommendations, this project has laid the groundwork for a more resilient and trustworthy relationship between experts and the public. As societies navigate complex challenges, such as climate change, public health crises, and technological advancements, the lessons from PERITIA will undoubtedly play a vital role in shaping the future of trust in expertise.

Despite the fact that funding from the European Commission has concluded, the partners involved in the project have vowed to continue working together, build upon its achievements, and deepen its impact on trust in expertise and policymaking. ALLEA looks forward to being part of this process and to continuing its engagement in the field of Truth, Trust, and Expertise.

For more information about the PERITIA project and its activities, please visit the official website.

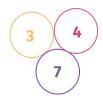
6.2 MADAME DE STAËL PRIZE

During the 2022 ALLEA General Assembly, renowned American historian Timothy Snyder was announced as the laureate of the 2022 Madame de Staël Prize. Timothy Snyder is the Richard C. Levin Professor of History at Yale University and a permanent fellow at the Institute for Human Sciences in Vienna (Austria). The Jury lauded his abundant and impactful work on Central and Eastern European history and his insightful academic work on Europe from outside the continent. The Madame de Staël Prize Lecture by Prof Snyder will take place in the second half of 2023.



6.3 SCIENCE COMMUNICATION

In light of the pandemic and ongoing crises such as climate change, it has become increasingly evident that improved science communication is essential to more effectively transfer scientific evidence to citizens and policymakers, and, vice versa, to include the public in meaningful dialogues on science and policies. ALLEA is involved in building networks and creating platforms to facilitate the sharing of best practices in the evolving domain of science communication.



Policy Recommendations on Science Communication Published

Following the virtual Future of Science Communication Conference that ALLEA co-organised in 2021 with Wissenschaft im Dialog, the two organisations came together once again to hold the Future of Science Communication Conference 2.0 (FSCC 2.0) as an in-person event in Brussels (Belgium) on 26 April 2022.



The sharing sessions and insights gleaned at FSCC 2.0 led to the publication of a set of policy recommendations on effective science communication in a report, titled, 'Strengthening Networks and Evidence-Based Practices for Science Communication in Europe'. The recommendations are organised into four sections that reflect the discussions in the interactive workshops of the conference: Communicating Global Challenges, Fake News & Disinformation, Evidence-based Practice of Science Communication, and Networks and Institutional Structures. The report, drafted in collaboration with Philipp Schrögel, member of the FSCC advisory council (Heidelberg University), was shared with policymakers across the EU, as well as with the public through an event held on Twitter Spaces.

ALLEA Digital Salon Interview Roger Pielke – 'It Is Really Important for Experts to Know When They Are Helping and When They Are Making Things Worse'

In August 2022, ALLEA Digital Salon spoke with Roger Pielke, Professor of Environmental Studies at the University of Colorado Boulder, on the appropriate role for scientists in the science-policy nexus and the ethics and effectiveness of science advice in such contested domains as climate change.

You can read the full Digital Salon interview here.



6.4 SCIENCE EDUCATION

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Symposium on the 'International Reflections on STEM Education – Effective Teaching and Learning to Address Future Challenges'

6 On 25 October 2022, ALLEA and the Royal Irish Academy (Acadamh Ríoga na hÉireann) jointly organised the symposium 'International Reflections on STEM Education – Effective teaching and learning to address future challenges'. The event was organised by the ALLEA Working Group on Science Education (WG Science Education), chaired by Cliona Murphy (Royal Irish Academy), and took place in the context of the group's in-person meeting.



The symposium was held at the Royal Irish Academy in Dublin and brought together local and European experts in the fields of Science, Technology, Engineering, and Mathematics (STEM) education to discuss current challenges and opportunities in the field.

The discussions highlighted the need for a holistic approach to STEM education to provide future generations with the requisite knowledge, skills, attitudes, and values to enable them to address

complex real-world problems. Other themes that emerged related to the need for a breadth of thoroughly validated teaching materials, the key roles of Initial Teacher Education (ITE) and Teachers' Professional Learning (TPL), as well as the importance of continuous interactions between educators, researchers, and policymakers to improve STEM teaching and learning.

The symposium was moderated by Cliona Murphy, Chair of the ALLEA WG Science Education, and included the following keynote speakers and panellists:

Keynotes:

- Prof Hamsa Venkat, Dublin City University (Ireland)
- Prof Justin Dillon, University College London (UK)

Panellists:

- Prof Lucy Avraamidou, University of Groningen (The Netherlands)/Member ALLEA WG Science Education
- Dr Shane Bergin, University College Dublin (Ireland)
- Prof Timo Leuders, University of Education, Freiburg (Germany)/Member ALLEA WG Science Education
- Dr John McCullagh, Stranmillis University College, Belfast (Northern Ireland)
- Dr Eilish McLoughlin, Dublin City University (Ireland)

An event report is available here for those interested in learning more about the symposium and its findings. The programme for the symposium and detailed information on the speakers can be found here.

ALLEA Statement on Digital Education and Digital Skills

In September 2022, ALLEA responded to the European Commission's Call for evidence on digital education and digital skills as part of the European Union's Digital Education Action Plan (2021-2027). The full Statement can be found here.

The Statement contends that a systemic approach that addresses teaching and learning at different levels – policy, research, curriculum design, teacher education, and practice – is necessary for the proposed actions to be implemented efficiently and effectively. It also calls for greater emphasis to be placed on interdisciplinarity, the integrated nature of digital technologies within STEM education, and the critical roles of empirical educational research, initial teacher education (ITE) and teachers' professional learning (TPL).

Key recommendations are highlighted below:

- Interdisciplinarity Closing the digital gap requires interdisciplinary expert groups who reflect on the technical, educational, social, and ethical issues in relation to digital education, and advise on political, administrative, and curricular decisions in a coherent manner.
- **Evidence-based reforms** Every decision about a technical or structural innovation in digital education must be tested against the latest scientific evidence on teaching and learning, including curricula, pedagogies, ITE, and TPL.
- Initial teacher education and teachers' professional learning Too little emphasis is currently being placed on the roles of ITE and TPL. A coherent picture of digitalisation-related teacher professionalism is critical to all efforts of systematic development in educational institutions. Teachers need to be supported so they develop the requisite Technological Pedagogical Content Knowledge (TPACK) and skills needed to critically evaluate and implement technology-based innovations.

The ALLEA Statement encourages the European Commission to support national governments and individual teachers by identifying best practices in digital education across Europe so that they have access to an evidence-based roadmap towards a technology-driven educational landscape.

Strategic impact

The ALLEA Statement helped inform the preparation of two European Commission proposals for Council Recommendations on the enabling factors for successful digital education and on improving the provision of digital skills in education and training. The Statement was prepared by the ALLEA WG Science Education with Prof Timo Leuders (Pädagogische Hochschule Freiburg, Germany) as principal author.

7. COMMUNICATIONS

ALLEA's communications team worked in close partnership with the working groups, project leads, scientific policy officers, and partner organisations to develop and disseminate key messages important to ALLEA's work in the arenas of Research Policy, Science Advice, and Science & Society. ALLEA continues to distribute its outputs to a variety of stakeholders, including researchers, policymakers, practitioners, and the public, by harnessing the unique advantages of multiple platforms, such as in-person events and conferences, social media (Twitter, LinkedIN, and YouTube), and publications, among others. In the past year, we expanded our social media presence by joining Mastodon.

Check out the visual summary of ALLEA's communications activities on the following page.









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