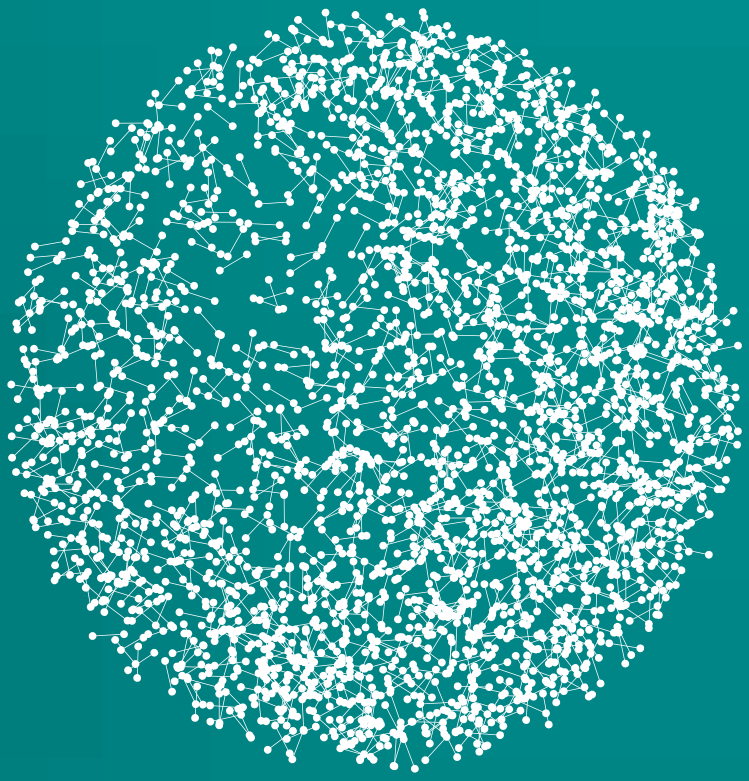
# 2nd Conference on the Ukraine Crisis

## ONE YEAR OF WAR IN UKRAINE: EXPLORING THE IMPACT ON THE SCIENCE SECTOR AND SUPPORTING INITIATIVES



## CONFERENCE REPORT

International Science Council
The global voice for science

allea All European Academies

The conference took place virtually on 20–22 March 2023.

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| **Conference hosts:** | International Science Council (ISC) |
| | All European Academies (ALLEA) |
| **Session organizers:** | ISC and ALLEA |
| | Science Europe |
| | National Research Foundation of Ukraine |
| | Council of Young Scientists |
| | Ministry of Education and Science Ukraine |
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# TABLE OF CONTENTS

# EXECUTIVE SUMMARY

The second conference on the Ukraine crisis, held in March 2023, one year after the start of the full-scale assault on Ukraine and its people, engaged with the insights and recommendations that emerged from the previous conference held in June 2022. It sought to place them in the broader context of how and why the international science system and research community can show solidarity in times of crisis. The speakers told of the appalling and indiscriminate damage inflicted upon Ukraine's civilian infrastructure, its cultural, educational, and research facilities, but also spoke of the resilient response of the Ukrainian scientific and academic community.

The fundamental point to emerge from the conference is that if science[1] is for the global common good and a shared endeavour that transcends borders, then it is incumbent upon the global scientific community to stand in solidarity with our colleagues in times of crisis. This solidarity must be respectful of local agency, and it must be offered in the spirit of partnership and cooperation.

> **"The international science community's role in scientific diplomacy for the post-conflict era is critical to restore relationships and to work together to respond to the world's complex issues."**
>
> **Peter Gluckman**

Another key message was the need for trusted international fora where conversations such as those held at this conference can occur. Convening bodies must enable local voices to be heard, and they must be given a platform to ensure productive and respectful initiatives.

> **"This alliance between ISC and ALLEA is exceptionally inclusive of those impacted by the war. Collaboration is crucial not only to the delivery of aid but to the mitigation of brain drain, which has, of course, been exacerbated by Russia's invasion."**
>
> **Antonio Loprieno**

The value of reviewing the impact that the war and the occupation has had on the research infrastructure and broader community is significant. The review conducted at the March 2023 conference validated the recommendations that emerged from the June 2022 conference. There are, however, crucial changes in emphasis and action that have arisen over the course of the war's escalation. The needs and capacities of the Ukrainian science sector must be reinterpreted as living within an evolving conflict. Protection and support responses in mid-2022, for example, were directed at scholars and scientists seeking refuge in Europe and beyond. Yet, by March 2023, there was little evidence of a mass exodus of researchers and academics; reports indicated that approximately 80% of Ukraine's researchers were still in the country. Therefore, there remains an embattled, but viable research community in Ukraine, which requires ongoing support to survive and reconstruct the local science ecosystem.

> **"Ukraine's research and development sector has suffered unprecedented losses in both human infrastructure and financial resources since the beginning of the war. Coupling these losses with the risk of public research and development budget cuts, the state's ability to support research sharply decreased in early March 2022 due to the increased defence needs of the country. For 2023, only 60% of the financing required is available for selected projects and the projects of new and suspended schools."**
>
> **Olga Polotska**

Science, scholarship, education, and research are not abstract entities; they are rather activities performed by individuals at all career stages. Continuity is therefore key. Medium- to long-term interruptions to career paths are very hard to reverse, and so it is vital that opportunities are kept open for early- and mid-career researchers who may have less visibility than their more established colleagues.

The dynamism of the young academies, both within and outside of Ukraine, has been a strong voice for mobilizing support. The establishment of the 'Ukrainian Science Diaspora', presented by the Young Scientists Council of the Ministry of Education and Science of Ukraine, serves to strengthen the scientific ties between Ukraine and the rest of the world.

Hopeful signs for the future are the developments in the global science system. The move to open science, the reform of research assessment, and the greater emphasis on equity, diversity, and inclusion will strengthen the science sector's response to crises. Open science has the potential to keep researchers connected and up to date when their institutional facilities are destroyed. Reformed research assessment options, such as narrative CVs, allow researchers to explain why they have not been able to publish at the 'normal' pace. The growing emphasis on equity, diversity, and inclusion is enabling minority groups to claim space.

Building financial trust and accountability, particularly when the administrative structures inherited from the past lack the checks and controls that are now expected in administering research funds, is essential. Transforming aspects of the Ukrainian research system to bring it into line with international best practices is urgent. It has been heartening to see the willingness of international and European funders to advise on this.

The war in Ukraine has brought attention to the global issue of how to ensure the survival of higher education and science systems through a crisis. 'Polycrisis' is the new norm, and it is very likely that we will be confronted with more intersecting crises such as wars and human-induced natural disasters in the immediate future. The fracture and loss of a country's science systems during crises deal a devastating blow to domestic scientific investment, teaching and research, long-term economic growth, and sovereignty. It also undermines relationships within global science networks and research infrastructure. The science sector must be proactive in times of crisis to better prepare, protect, respond, and rebuild.

**"The international science community should start planning how best to prepare the country's research infrastructure for the end of the war. Long-term partnerships that focus on capacity-building will be crucial, particularly in the areas of management, monitoring, and policy. These collaborations must try to sustain day-to-day research as much as possible now, so that the research community can hit the ground running and be much more effective as soon as the conflict ends."**

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In conclusion, the primary message is that in this phase of the crisis, the most urgent need is to support the research system within Ukraine itself to avoid losing an entire generation of researchers. Where we are now must be recognized as an opportunity for reform and transformation. External funding bodies, research-performing organizations, and philanthropic foundations need to respond with flexibility and with innovative solutions that are sensitive to local needs. The high quality of Ukrainian research cannot be lost.

**"For a country in crisis, science, higher education, and technological innovation are critical for the country's future but are low priorities of local and world governments in the war response. The initiative of smaller entities such as research agencies, universities, professional associations, and even individuals, are critical to bridge the gap."**

**Gherson Sher**

1. Drawing from the International Science Council (ISC), the following definition of science is referred to: "The ISC has a broad understanding of the sciences, in all their diversity, covering science as a collective institution with a broad range of practices and values, but also scientists as a community[...]The word science is used to refer to the systematic organization of knowledge that can be rationally explained and reliably applied. It is inclusive of the natural (including physical, mathematical and life) and social (including behavioural and economic) science domains. It is recognized that there is no single word or phrase in English (though there are in other languages) that adequately describes this knowledge community. It is hoped that this shorthand will be accepted in the sense intended." (ISC, 2021)

# INTRODUCTION

The International Science Council (ISC) together with the European Federation of Academies of Sciences and Humanities (ALLEA) hosted the *Second Conference on the Ukraine Crisis* in March 2023, following an initial conference in June 2022. This virtual conference brought together over 530 participants from around the world with sessions hosted by Science Europe, the National Research Foundation of Ukraine (NRFU), the Council of Young Scientists, and the Ministry of Education and Science of Ukraine. The three-day event mobilized the scientific community to evaluate the protection and support efforts implemented during the past year, while assessing ways forward for enhanced support and post-conflict reconstruction.

The last year has seen an intensification of the ongoing invasion of Ukraine and has been marked by indiscriminate destruction of civilian infrastructure, including cultural and research institutions. This has caused great damage to the country and its people, as well as to its science, education, and research sectors. The international science community strongly condemns such aggression and stands in solidarity with Ukraine. The focus of this conference centred around the impact of the war in Ukraine, but also looked for lessons from, and applications to, other crises[2] around the world, including violent conflict, instability, climate change, pandemics, and other human-induced disasters.

The United Nations Refugee Agency (UNHCR) reports that there are now more than 100 million people forcibly displaced globally, noting the war in Ukraine as a significant contributor to this drastic increase[3]. It is now more important than ever that the world comes together to develop solutions and systems that protect and support the lives and futures of affected people, as well as work towards rebuilding societies that are more peaceful and sustainable. Institutions in the higher education and research sectors have played a key role in helping keep Ukraine's higher education and research sectors as operational as possible, and preparing the country for the rebuilding of these sectors as soon as it is viable to do so.

This conference aimed to build on the discussions and recommendations of the initial conference held in June 2022 by bringing continued attention and urgency to the situation in Ukraine, specifically its impact relating to academia and scientific research one year into the war. The war in Ukraine has shown the global implications and consequences of wholescale attacks on higher education and science systems – the science sector needs to be better prepared to take a more active role in protecting, supporting, and reconstructing research systems.

The objectives of the conference were:

*1. To understand the impact of the war.*

*2. To review support provided to Ukrainian researchers, science systems, and higher education and research institutions in Ukraine one year into the crisis.*

*3. To bring continued awareness, advocacy, and support for the Ukrainian higher education, research, and science sectors with a medium- to long-term focus on maintaining the higher education and science sectors during the war and post-conflict rebuilding.*

*4. To explore the potential and strategic role of science stakeholders to develop comprehensive and coordinated policy responses regarding the preparation, protection, and rebuilding (2PR) of science systems from crises to be more resilient.*

Key intended outcomes of the conference include:

*1. A conference report that highlights the impact and responses to date, including a review of the recommendations put forward in the June 2022 conference.*

*2. Recordings of the plenary session presentations available online.*

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2. Crisis is defined as any instance of "violent conflict, human-induced natural disaster, or nationwide state-sponsored takeover of higher education and science systems" including wars, climate-induced migration, and significant digital data loss.

3. UNHCR. Refugee Data Finder. May 2022.

# SUMMARY OF THE JUNE 2022 CONFERENCE

The *Conference on the Ukraine Crisis: Responses from the European higher education and research sectors*, held virtually on 15 June 2022, brought together over 150 stakeholders across Europe, with the majority being from Ukraine, to reflect on assistance provided to-date for academics, scientists[4], researchers, and students who are at-risk[5], displaced[6] or refugees[7] as a result of the war in Ukraine, and to put forward recommendations for mid- to long-term support, including the rebuilding of the higher education and research sectors after the conflict.

At the time, it was nearly five months since the attempted large-scale invasion of Ukraine in February 2022, which forcibly displaced millions of Ukrainians, including some 8 million seeking refuge outside the country[8], with another 7.7 million internally displaced[9]. The focus of the response was still on the immediate emergency response phase with hopes that the war would soon be over, which was reflected in both the assistance provided and the discussions about the future. The Ukrainian government was strongly urging support programmes to enable people to return to the country as soon as it was safe to do so, with a look to the reconstruction of the country after the war. The attacks in Ukraine were threatening the lives of scientists, infrastructure, and the overall science and higher education systems in the country. Within Ukraine and across the world, with a heightened engagement from Europe, institutions raced to pull together funds and implement programmes to support displaced individuals and provide aid in a manner that was unprecedented.

The immediate focus was on providing opportunities for scientists, students, researchers, and academics to seek safety both inside and outside the borders of Ukraine. Many individuals, particularly men, were unable to leave the country due to military obligations or other restrictions. An urgent plea was made to find ways to support remote work, such as virtual opportunities for research, teaching, and studying. Research grants were difficult to come by, especially within the country as all funds were redirected to the war effort. Most opportunities for scientists were residential posts in host countries, and entities like Science for Ukraine were putting together databases to more broadly share about such opportunities.

The need for collaboration and partnerships was evident in the conference discussion. Examples included establishing dedicated European fellowship schemes with access to European funding programmes or inter-university partnerships. There was collective agreement around protecting and preserving science during a crisis as it holds important value to society, a country's resilience, and more sustainable futures.

The 2022 conference produced a report that included seven key recommendations and a call to action for stakeholders to work to implement the recommendations – not only in Ukraine but in other countries or regions affected by war and conflict as well.

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4. Unless specifically referred to, the report includes scientists within the more inclusive 'researchers' category.

5. The following are considered categories of risk and include those living in a war zone or situation of protracted crisis; definitions from Scholars at Risk (as noted by Inspireurope, 2020) are included.

- Risk due to the content of a scholar's work, research or teaching being perceived as threatening by authorities or other groups. When the development of ideas, exchange of information, and expression of new opinions are considered threatening, individual scholars/researchers are particularly vulnerable.' (Inspireurope, 2020, p.9).
- 'Risk because of the individual's status as an academic or researcher. Because researchers undertake frequent international travel, and have international contacts, this gives them a certain professional standing or prominence. This can mean that attacks on one such high-profile scholar are an efficient means of sending a message to others, quickly creating a chilling effect.' (Inspireurope, 2020, p.9).
- 'Risk as a result of their peaceful exercise of basic human rights, in particular, the right to freedom of expression or freedom of association.' (Inspireurope, 2020, p.9).
- Risk of discrimination or persecution on grounds of ethnicity, religion, sexual orientation, or gender identity.
- Risk of natural hazards leading to a humanitarian disaster.

6. The term displaced, as defined by the United Nations High Commissioner for Refugees (UN General Assembly, 1946), 'applies to a person who, as a result of the actions of the authorities of the regimes[...] has been deported from, or has been obliged to leave, his country of nationality or of former habitual residence, such as persons who were compelled to undertake forced labour or who were deported for racial, religious, or political reasons.'

7. According to the 1951 Convention on Refugees (UNHCR, 2010), a refugee is 'someone who, owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence, is unable or, owing to such fear, is unwilling to return to it.'

8. UNHCR. Regional Bureau for Europe. Ukraine Situation Flash Update #17. 17 June 2022.

9. UN OHCHR, 2022.

# KEY MESSAGES FROM MARCH 2023 CONFERENCE

The two conferences (June 2022 and March 2023) shared the same vision: to continue to raise attention, better understand, and mobilize support for the science sector affected by the crisis. A great deal of material was presented during both events, sparking thought-provoking discussions and deliberations. Given the timing of both conferences, they also served to document the evolution of thinking about, and responses to, the crisis from its early stages to a protracted emergency as the war has evolved.

## OVERARCHING THEMES

Over the three days of the March 2023 conference, there were seven overarching themes that emerged across the discussions. Key messages from each day are noted in detail later in the document.

### SOLIDARITY

The international scientific community has shown deep and ongoing commitment to supporting research and researchers in Ukraine. There is widespread condemnation of Russia's attacks on the Ukrainian state, its people, and culture. Science, as a shared global enterprise and common good of humanity, requires us to express solidarity with fellow researchers affected by crises.

### RESILIENCE AND AGENCY

The research and science community in Ukraine is working to remain functioning in the midst of vast and escalating devastation. Ukraine's research and development capacity are at risk, both at institutional and individual levels, with most of the budget diverted to the war effort, a largely destroyed research infrastructure, and massive internal and cross-border displacement. Whilst most researchers remain in Ukraine (approximately 80%), many scientists have left their jobs. These sectors have shown tremendous resilience with committed action and creative solutions in partnership with international organizations and national governments that have enabled science and research to continue to persevere fighting for its very existence and future.

## DIALOGUE AND COMMUNICATION

Language, communication, and dynamic participation are important for crisis response, trust, and transparency. This conference provided an inclusive platform for dialogue not dominated by national agendas or particular sectors or disciplines. Spaces for critical reflection, debate, and analysis are needed to convene and facilitate discussions around ways forward in addressing complex issues such as war that are layered with nuance, context, and politics. Crisis responses demand the engagement of diverse stakeholders from different sectors with different work modalities and jargon, and require opportunities for open and clear communication and discussion to work together and respond in an effective manner. In the case of Ukraine, direct communication with the government and local entities is necessary to more directly understand needs and to provide appropriate assistance.

## ACCOUNTABILITY AND MODERNIZATION

Accountability of funds, programmes, and governance mechanisms is important for collaboration, especially during crises, when there is instability; equally, trust is needed for international engagement. Accountability is important to encourage relevant funding models appropriate for the operating conditions and where donors feel safe to invest. This must be accompanied by the reform and modernization of the administrative structures supporting research in Ukraine.

## CONTINUITY

Maintaining continuity of education and research for individuals is essential to keeping the science sector alive. Early- and mid-career scientists are more at risk of leaving research or emigrating when their studies and career are disrupted, whereas those later in their career have more established foundations and networks to draw from. There is a huge risk to the science community of losing embedded capacity and knowledge.

## INTERCONNECTEDNESS

Connections and partnerships are essential for holistic responses to crises across disciplines, sectors (science, higher education, and humanitarian response) and globally. As noted by one of the presenters, “Science is a team sport”, recognizing the value and need of combined experience and expertise in building knowledge, which is even more apparent in conducting science in times of crisis.

## DATA, RESEARCH, AND OPEN SCIENCE

Little research has been done about how and what the science sector should do in times of crisis. While science has long been used to research various factors around crisis, such as predictors of crisis, very little of this work has been inward-looking. The science sector itself is hugely at risk when there is a crisis of any kind, be it war or other human or natural disasters. More studies are needed to better understand how the science community can prepare for and respond during a crisis. Open Science mechanisms are highly beneficial to enabling research to continue and for protecting scientific knowledge in times of crisis.

## POLYCRISIS

Polycrisis is the global context and new norm as crises link and exponentially build on each other. There is an urgent need to learn from both past and current crises in order to act more efficiently in the future with predictable and systemic responses. Emergency funds are required for continuity and long-term perspective of impacts, as well as developing crisis management approaches that include elements around prevention, preparation, response, transformation, and rebuilding. Research for policy is imperative to build the resilience of the science sector.

## FLEXIBILITY AND ADAPTATION

Support programmes should be timely and flexible enough to adapt to the evolving situation of a country during a war or under attack. There is a high demand and urgent need for support to scholars who remain in the country in order to enable them to continue with teaching and research. Other issues that may change course include: focus on brain-circulation (vs brain-drain), mobilization of diaspora scholars, reform of existing science systems, financial support and innovative approaches for international scientific exchange and collaboration, and resources needed to rebuild physical infrastructure.

## DAY 1: CONFERENCE PLENARY AND PANEL SESSIONS

**Hosts:** ISC and ALLEA

- The research and science community in Ukraine is working to remain functioning in the midst of **vast devastation,** the level of which has significantly increased between June 2022 and March 2023. According to official data from the Ministry of Education and Science of Ukraine, at the time of printing, 3,145 education institutions have suffered bombing and shelling, of which 415 have been destroyed completely, with the biggest numbers in Kharkiv, Kyiv and Dnipropetrovsk Regions. More than 50 research institutions have been destroyed or critically damaged. As the war grinds into a second year, destruction continues. The military aggression on the territory of Ukraine has affected every Ukrainian citizen and all spheres of the country's existence. The science and research sectors are no exception. Since the beginning of the war, they have suffered unprecedented losses, including losses in human, infrastructural and financial resources. Science, technology, and innovation are essential to Ukraine's future viability as a sovereign, independent, and successful country.

- Remarkably, the majority of scientists and researchers (approximately 80%)[10] are remaining in Ukraine, which is creating a high demand and **urgent need for support to scholars who remain in the country**. Ukrainian colleagues noted a concern about the future of the country's science sector with many programmes only offering placements outside the country, fearing that few would return after the war. Instead, it was requested that support measures focus on brain circulation (as opposed to brain drain) which may require new innovative approaches to international scientific cooperation as the research system depends on a constant flow of talent through the career pipeline. While brain circulation is a goal, individual scientists should do what is best for their own safety and security; it is the responsibility of the Ukrainian government and organizations to ensure that conditions for favourable return exist.

- **Support programmes/schemes should be flexible enough to reflect the evolving situation** (which is challenging). Institutions must begin moving carefully but deliberately out of their comfort zones to work together to design extraordinary approaches to meet the extraordinary circumstances. Small initiatives were able to be more agile and responsive (e.g., the many individual and institutional support actions mobilized by

10. See Yevheniia Polishchuk's presentation from Day 1 of the conference, summarized on page 33 of this report.

Science for Ukraine in the early days of the invasion), while big international programmes (e.g., MSCA4Ukraine) took up to a year to get off the ground. The war in Ukraine is continuously changing, demanding more adaptable, responsive, and flexible approaches to provide support. It is possible, as several funding agencies (e.g., KNAW, Polish, Swiss, NASEM and ALLEA's EFDS) have shown, to develop programmes that locally deliver resources and funding in crisis situations, while respecting the legal requirements of the contributing agencies.

- **The importance of 'preparedness' for similar crisis situations cannot be understated,** not to invent but rather build on available experience and mechanisms, with a focus on cooperation and synergy (given the Humanitarian-Development-Peace Nexus).

- **Polycrisis** (complexity + urgency) **is the global context** and new norm. Crises link and build on each other, so systemic responses are needed for continuity and long-term perspective of impacts. There is a need to look at, research, and address underlying issues (e.g., history, war, divide, corruption) as they are amplified during a major crisis, becoming much harder to address, and potentially fuelling other crises. The war in Ukraine is now nested into this era of polycrisis.

## SUPPORT REQUESTS FROM THE UKRAINIAN RESEARCH SECTOR INCLUDE:

→ Providing financial support to the Ukrainian research community, including in collaboration with the NRFU.
→ Launching collaboration and partnerships (e.g., bilateral or multilateral calls with the NRFU).
→ Inclusion of Ukrainian researchers into running programmes (hop-on facilities).
→ Involvement in development of a long-term plan for recovery of Ukrainian science, including infrastructure.
→ Support the initiatives of remote research positions for Ukrainian scholars. Researchers need very different levels of positions, from entry-level positions which would include more training and mentorship, to performing tasks independently in a collaboration-like manner.
→ Initiatives should not be confined to the tragic events unfolding in Ukraine now. There should be a longer-term benefit included in programmes of support.

- → Support of the NRFU fundraising campaign.
- → Institutional support (trainings, workshops, etc.).
- → Information and communications support (exchange of information and best practices, popularization of the results of the NRFU grantees, informing about the NRFU activities, etc.).
- → Foreign reviewers for collaboration for objectiveness of project evaluation.

## DAY 2: PROFESSIONAL DEVELOPMENT ON RESEARCH MANAGEMENT & EUROPEAN INTEGRATION

**Hosts:** Science Europe and the National Research Foundation of Ukraine (NRFU)

- **Financial support is essential for the Ukrainian research ecosystem.** The government is financing a large number of projects and is providing special grants for early career researchers. In the current crisis, international funding, joint calls with international partners, and access to private funding will be essential for Ukrainian researchers.

- **Practical guidance for grant management is needed** for both the grantees and grant holders in Ukraine to better understand the limitations and processes for managing programmes aligned to European frameworks. The conference demonstrated that the European and international research community are united in their actions in support of Ukrainian researchers. The primary task for the NRFU, as the main funding Ukrainian agency, is to make support for Ukrainian researchers effective and accessible. Bringing together the perspectives of Ukrainian and European stakeholders and institutions was important to explore ways to support the Ukrainian research system, and to develop best practices and processes for the effective management of national and European funding.

- In order to respond more effectively and efficiently to crises, it is **essential to find ways to bring together synergistic support and build closer international relationships**, which is a shared responsibility and goal of funders and institutions. Current responses took a long time to get off the ground. This can be done through building on and scaling up existing collaborations, but also by creating new ones, such as joint calls and programmes to fund Ukrainian researchers.

- The **institutionalized relationships between Ukraine and Horizon Europe will be an important step towards building deeper relationships** between the European Union (EU) and Ukrainian science ecosystems. Ukraine has been successful in obtaining funding from the Framework Programme. The European Commission has established a Horizon Europe office in Ukraine, which will be operational in mid-2023, in order to support Ukrainian researchers in seeking European funding.

- **Ukraine's scientific community is working to reform the science system** to align more with the European/United States model. The issues of managing national and European funding

programmes, as well as structures to support grant-seeking and project management, have not been without controversy. The science and research communities in Ukraine have been looking for the right ways and means to improve the system and maximize efficiency for a long time. However, the war in Ukraine has affected all spheres and is a disruptive force that is also an opportunity for change. Despite the war, Ukrainian institutions are taking steps to modernize the national system, such as creating grants management offices and participating in international reforms like the Coalition for Advancing Research Assessment. In addition, new world-class structures are being developed, in particular the International Centre for Mathematics in Ukraine, which will support the top level of Ukrainian and global mathematics.

- **There is clear intent from Europe to support Ukraine** with its resources as bold new measures have been implemented (e.g., The Netherlands, Spain, and Switzerland) that are providing funds directly to Ukraine, rather than remaining within the funder's country. Such an approach is unprecedented. Political support for reforms and for the integration of Ukraine in the EU's research policy-making is essential to continue to build on existing relations and further integrate Ukraine in Europe.

- There is a need to reflect on possible ways to expand and **apply lessons learned from funding models for Ukraine to other regions of the world**. Continuing to exchange good practices and experiences will be welcome to support the full development of research management capacity in Ukraine, as well as to support building its capacity as a competitive research system.

## DAY 3: UKRAINIAN SCIENCE DIASPORA: CONNECTING SCHOLARS FOR THE FUTURE

**Hosts:** The Council of Young Scientists, the Ministry of Education and Science of Ukraine

- The **importance of trusted convenors and a space for critical reflection and debate is critical** to enable government, civil society, and scientists (both young and established) to get shared agreement of the need for change, positive transformation, and building mutually constructive relationships.

- The **leadership and involvement of early- and mid-career scientists are essential in responding to, and recovering from, crises**. This new generation of scientists will be the future of the country and they should be involved in every aspect of rebuilding the scientific community through recognized engagement mechanisms.

- **The war in Ukraine has caused the country's scientific community significant losses**, with many scientists leaving their homes and positions. However, the government's recognition of the potential of the diaspora as a resource for scientific cooperation is a positive step towards Ukraine's future prosperity in science and technology.

- **Supporting and investing in the science diaspora, establishing long-term partnerships, and promoting brain circulation** are key for Ukraine's scientific capacity. The rise of young academies, the return of Ukrainian scientists after the war, and competitive funding with independent external evaluation will strengthen Ukraine's scientific capacity.

- **Diaspora communities can contribute to the development of Ukraine**. The success of these initiatives depends on the level of engagement and support from the diaspora community and the Ukrainian government's commitment to providing adequate resources and support programmes to incentivize the return of Ukrainian scientists to their home country.

# RECOMMENDATIONS

## JUNE 2022 CONFERENCE RECOMMENDATIONS

*This section outlines the recommendations still relevant from our first conference and expands on them where appropriate.*

The March 2023 conference discussions affirmed the validity of the recommendations of the conference held in June 2022, but highlighted some implications to consider based on the worsening situation in Ukraine. Taking the evolution of the war into account, adaptations of some of the recommendations are needed to reflect this new phase of the response. In June 2022, the war was in the initial stages of escalation; unfortunately, in the ten months that followed leading up to the second conference, the crisis had evolved from an emergency into a protracted war. Crises evolve and change, requiring interventions to be attuned to these realities – and to adapt – accordingly.

The recommendations below were developed in June 2022 with the specific focus on the war in Ukraine, but have also been designed for global application to other crises. Where applicable, the adaptations and nuances emerging from the March 2023 conference are noted.

1

### RESPONSIBILITY

*Governments, the higher education, scientific, and research community must work together to deliver their national commitments to recognizing and supporting the right to education and science within their country.*

***Rationale***

*National governments have already signed and committed to international instruments and documents, but further action is needed to ensure their implementation within their country. At a minimum, particular attention should be paid by national governments, in consultation with relevant stakeholders, to fulfilling their obligations by:*

→ *Acknowledging the fundamental right to science and education, including the right to access quality higher education, participate in, and enjoy the benefits of, scientific progress and its applications;*

→ *Putting in place management, programmatic and financial mechanisms to protect higher education and scientific personnel, systems and infrastructure during human-induced disasters and war, and to enable recovery and rebuilding efforts. National governments must be capable of rapidly scaling these mechanisms, should there be an emergency situation in their country, with clearly identified contact points and reporting lines to responsible ministries.*

## 2 INTERNATIONAL SOLIDARITY

*Governments, the higher education, scientific, and research community must work together to deliver their national commitments for supporting the participation of at-risk, displaced and refugee scholars and researchers in their home country or a third country, if necessary.*

***Rationale***

*There is an urgent need for national governments to uphold their commitments under Article 27 of the Universal Declaration of Human Rights and Article 15 of the International Covenant on Economic, Social and Cultural Rights, and be held accountable as agreed in these treaties. These high-level commitments specifically outline funding and support across international borders and a global response to support countries affected by crisis or conflict. Measures to fulfil such commitments will need financing and policies that address how to keep existing educational and research systems functioning, and the provision of support mechanisms and protection to scholars and researchers, regardless of their displacement status or location due to a crisis. They will need to include standing structures, budget lines, and policies to support higher education and research systems across borders, on both a temporary and long-term basis.*

## 3 OPENNESS

*The international scientific and research community should empower conflict-affected science systems with the means to rebuild by fully adopting the United Nations Educational, Scientific and Cultural Organization (UNESCO) recommendations on open science.*

***Rationale***

*'Open science' represents the democratization of science and, in an interconnected scientific world, is crucial for enabling fragile or conflict-affected countries to rebuild or develop their higher education and research systems because of the otherwise prohibitive costs of participating in the current 'closed' scientific model. Likewise, open science is essential for enabling displaced scholars and researchers to access educational and research resources and continue their work.*

## 4 INCLUSION

*All stakeholders must ensure that programmes and opportunities are designed inclusively to avoid exclusion of specific groups of at-risk, displaced, and refugee scholars and researchers based on characteristics such as language, family status, gender, disability, cultural background, and psychosocial wellbeing.*

***Rationale***

*There is no 'one-size-fits-all' approach that can provide an adequate response. Instead, programmes and opportunities need to have an inclusion lens that considers the specific needs of different participant groups when planning and designing support measures. This includes the need for more holistic or integrated assistance to address the psychological, social, financial, physical, and professional needs and wellbeing of individuals and their families.*

**2023 Adaptations**

→ Leadership and engagement of early/mid-career scientists are essential to the rebuilding of a nation post-conflict. Early-career individuals lack strong foundations or experience and need more support to avoid disruption of their learning and career development.

→ The international community should better balance advocacy and support responses regarding crises globally, both in the Global North and South.

## 5 MOBILITY

*Stakeholders must work together to develop global mechanisms and coordination structures that facilitate secure academic and scientific mobility – to ensure that the potential of displaced and refugee scholars and researchers is not lost.*

***Rationale***

*Crises are complex in nature and require collaborative solutions across the humanitarian, higher education, research, and scientific communities, as well as partnerships with donors/funders, policy-makers and civil society. Mobility is a critical ingredient to enabling the human drivers of higher education and science systems to survive and thrive during a crisis so that they can drive recovery in its aftermath, but this mobility is often hindered by uncoordinated or insufficient policy responses. Bringing together valuable experience, knowledge, and resources in a coordinated manner will improve efficiency, reduce duplication of efforts, and lay the foundation for structures and mechanisms that can be activated to respond more quickly to future crises.*

**2023 Adaptations**

→ There is a need to provide programmatic support for the scientists and researchers that remain in a country during war or crisis and want to continue their work.

→ While brain circulation should be a goal, the safety and wellbeing of the individual is of uppermost importance. It is the responsibility of governments and organizations to create the conditions necessary for people to be able to return once it is safe to do so.

6

## FLEXIBILITY

*All stakeholders must recognize the evolving needs of academics, researchers, and students by designing more flexible programmatic and funding models that enable changes in location and allow for both remote and in-person participation.*

***Rationale***

*Funding and programmes to offer virtual support to individuals affected by crises is a new request emerging from the Ukraine crisis. It addresses issues such as travel restrictions and continuity of work, but challenges more traditional programme design. Further exploration and advocacy are needed to respond to the request for virtual support. In addition, the need for more holistic or integrated assistance to address the psychological, social, financial, physical, and professional needs and wellbeing of individuals and their families continues to be highlighted.*

**2023 Adaptations**

→ The changing phases of crises, from emergency to a protracted 'crisis' to recovery/ rebuilding, all require different approaches and support mechanisms.
→ Funding models should be flexible in order to be better directed at supporting researchers, scientists, and institutions who remain in the affected country.

7

## PREDICTABILITY

*Stakeholders must work together to develop sustainable frameworks within and between national scientific, higher education, and research systems that enable a more predictable and effective approach to the phases of preparedness, response, and rebuilding in the aftermath of conflict or disaster.*

***Rationale***

*Crises will continue to happen around the world, either through conflict, climate change or other disasters. There is a need to consider how countries, organizations, and international agencies can more effectively prepare for, respond to, and rebuild after such crises. While it is necessary to focus on immediate lifesaving needs at the beginning of an emergency, it is also essential to keep long-term goals in mind and to build on lessons learned. Multilateral science organizations are well-placed to drive this inter-partner lesson learning and framework development.*

**2023 Adaptations**

→ Broader harmonization and systematization of standards, policies, values, and principles around response and preparedness are needed.

→ An international fund and commitment are needed for a more immediate and predictable response.

## ADDITIONAL RECOMMENDATIONS FROM MARCH 2023

While the original recommendations stood strong, there were a few areas that did not quite fit and needed to be further developed as new recommendations.

8

### COORDINATION

*Response efforts to crises require broader coordination, partnership, and collaboration across stakeholders from different sectors, globally. Efforts to harmonize responses will lead to greater efficiency and effectiveness.*

***Rationale***

*The science sector lacks proper mechanisms to coordinate and organize responses to crises. Currently, approaches are ad-hoc, which can create gaps or overlap of programmes. As the world moves to an era of polycrisis, there is a need for broader coordination mechanisms between the science, education, humanitarian, and disaster response sectors.*

9

## DIALOGUE

*Safe places and trusted interlocutors are needed to bring together diverse stakeholders within the international science community around sensitive and complex issues related to crises to facilitate dialogue that promotes solidarity, collaboration, and coordination of responses and solutions.*

***Rationale***

*Crises, particularly war and violent conflict, are complex with various stakeholders, perspectives, and issues at play. Open platforms that can facilitate honest communication allow for reflection and discussion to chart a way forward. Bringing together different entities also encourages a sense of comradery and can naturally facilitate collaboration and partnership.*

10

## AGENCY

*Preparedness and responses to crises is best initiated under local leadership (when possible), in collaboration with foreign initiatives (time and context dependent).*

***Rationale***

*National and local actors know best their crisis-related needs, capacities, and complexities. However, in the midst of a crisis, particularly in the immediate emergency period, foreign engagement and assistance is often required to strengthen lifesaving interventions. When possible, leadership should be deferred to the individuals and institutions from an affected country. The involvement of two groups specifically should be sought after:*

→ *Early- and mid-career researchers and scientists can be highly innovative and forward-looking in developing new responses to meet their needs.*

→ *The science diaspora has deep connections to those that remain inside the country and globally, and can bring together a depth of diverse expertise and perspectives on needs and ways forward.*

## CONCLUSION

The June 2022 conference report ended with a call to action for widespread sharing of the report and to encourage stakeholders to implement the recommendations. There was a commitment to reconvene the ISC-ALLEA-led Ukraine Working Group of Science Stakeholders[11] to keep discussions going around programming and collaboration, and to host a follow up conference in 2023 – both of these promises were kept. The Ukraine Science Stakeholders' Working Group meets once a month, and the constitution and future of the group will be periodically reassessed as the situation evolves.

The March 2023 conference discussions highlighted the need for ongoing solidarity, for the international science sector to be future-oriented, and the need to work towards building a resilient multilateral science system capable of navigating polycrisis and of advancing cutting-edge science. Organizations like ISC and ALLEA, together with partners and members, need to prepare for such contemporary challenges.

Participants in the March 2023 conference urged the hosts to consider a third conference as long as the war in Ukraine continues and/or after the hostilities subside or end. The evolving nature of war requires consistent re-evaluation and adaptations to provide support that is heeded and helpful.

As the war in Ukraine continues, there is still much work to be done and to be learned, and therefore, spaces to promote dialogue in the search for common ground and solutions are essential.

11. This group, co-led by ISC and ALLEA, brings together key stakeholders in the science and research communities to discuss and collaborate on responses to support the Ukrainian science sector and scientists. For more information or to join the group, contact Vivi Stavrou, ISC or Luke Drury, ALLEA.

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# ANNEXES

## AGENDA

### DAY 1: MONDAY, 20 MARCH 2023

| | |
|---|---|
| 9:00 | Welcome |
| 9:15 | Session 1: Impact of the war on Ukraine |
| 10:00 | Break |
| 10:30 | Session 2: Reviewing programmes and responses in 2022 |
| 12:00 | Lunch |
| 1:00 | Session 3: Science in times of crisis – how the scientific community can better understand, prevent, prepare for and respond to crises |
| 2:45 | Closing remarks |

### DAY 2: TUESDAY, 21 MARCH 2023

| | |
|---|---|
| 2:00 | Welcome and opening remarks |
| 2:10 | Keynote speeches |
| 2:40 | Session 1: Managing national and European funding programmes |
| 3:40 | Break |
| 3:50 | Session 2: Structures to support grant-seeking and project management |
| 4:50 | Conclusion |

### DAY 3: WEDNESDAY, 22 MARCH 2023

| | |
|---|---|
| 2:00 | Welcome remarks |
| 2:15 | Science diplomacy: what it is, and how it can be used to develop diaspora strategies? |
| 2:35 | Presentation of Ukrainian Science Diaspora conception |
| 2:45 | Discussion to explore how best to use a science diaspora network |
| 3:25 | Break |
| 3:35 | MIT support for digital platform of the Ukrainian Science Diaspora |
| 3:50 | Discussion: Ideas for improving the digital platform of the Ukrainian Science Diaspora? |
| 4:10 | Ukrainian Science Diaspora and communities in Germany, Luxembourg, Krakow, and Paris |
| 4:40 | Discussion: Ideas for further development of the Ukrainian Science Diaspora's network |
| 4:50 | Closing remarks |

## DAY 1: CONFERENCE PLENARY AND PANEL SESSIONS

**Hosts:** ISC and ALLEA

### 1.1 Opening remarks

**Sir Peter Gluckman**
President, International Science Council

***"The international science community's role in scientific diplomacy for the post-conflict era is critical to restore relationships and to work together to respond to the world's complex issues."***

The International Science Council is essentially the primary interface between the science community and the multilateral system. Ukrainian scientists have worked to sustain their contribution to global knowledge in the face of this horrible conflict, despite immense devastation and destruction. The science community is doing its best to assist.

There is a choice ahead for both Ukraine's leaders and its scientific community, as displaced and disruptive as it is, about the best structure for moving into the future as the current science system is inherited from Soviet times. For the international science community, the issue of what happens in the post-conflict era is critical. One of the key roles of the ISC is science diplomacy, that is using science to help diplomacy; both science and science diplomacy will have a key role in the post-conflict era. Science is arguably the only universal language we have, and we must use that language to build trust between peoples, to restore trust, and to restore relationships, so that we can work together to advance the global interests against climate change, and the many other existential risks the planet faces (e.g., given historical examples of the Cold War, Gulf War, and Antarctic Treaty).

Ukraine is but one example of how science is affected and disrupted by conflict and should not be looked at in isolation. We must learn from this and other conflicts and crises (e.g., climate change) to put resources and structures in place to better prepare and protect scientists, knowledge, and science systems.

**Professor Antonio Loprieno**

President, European Federation of Academies of Sciences and Humanities (ALLEA)

***"This alliance between ISC and ALLEA is exceptionally inclusive of those impacted by the war. Collaboration is crucial not only to the delivery of aid but to the mitigation of brain drain, which has, of course, been exacerbated by Russia's invasion."***

This conference is very much needed for humanitarian and scientific reasons. The number of dead and injured people on the Ukrainian and on the Russian side is enormous. This month the United Nations recorded eight million refugees across Europe (20% of the Ukrainian population) with a further five million internally displaced. Among these millions are scientists and researchers – our colleagues and peers – a sombre reminder of the urgent need for this second conference.

The European academic landscape is now undergoing a profound transformation due to the war in Ukraine. The connections between Ukraine and the rest of Europe are a relatively late development, yet prior to the Russian invasion, the quality and recognition of Ukrainian scientists was progressing at a steady rate. The trend in scientific collaboration and partnership within Europe was already shifting from Russia westward, particularly to Poland, even before the war. This is a trajectory to keep in mind when we think of reconstructing and building a better academic future.

ALLEA has established a programme in partnership with a Breakthrough Prize Foundation, endowed with 1.3 million euro, called the European Fund for Displaced Scientists. ALLEA has participated in developing a 10-point action plan and many other joint initiatives to sustain Europe and the world at large to sustain Ukrainian scientists and scholars in dire straits. May this conference help us all learn about the work needed during the war and beyond, to develop the best instruments to alleviate our Ukrainian colleagues' hardships, and prepare Ukrainian science as a system and its institutions for a better academic future.

### 1.2 Session 1: Impact of the war in Ukraine

Presentations: Impact of the war on the Ukraine higher education and science sector

***Moderator:***

***Anne Husebekk***

*Vice-President, Committee of Freedom and Responsibility in Science, ISC; Professor, The Arctic University of Norway (UiT)*

**Summary of Session 1**

This session focused on the impact of the war on Ukraine, including the impact on research and development, as well as on educational and research facilities and infrastructure. Opportunities to collaborate and provide support were highlighted alongside some of the extreme challenges scientists are facing in this crisis.

**Presentations:**

***Olga Polotska***

*Executive Director, National Research Foundation of Ukraine (NRFU)*

The war has created a new reality for Ukraine. Attacks initially targeting military facilities and airports have now shifted to highly populated areas and civilian infrastructure. The war has impacted the research and development sector and infrastructure in Ukraine, as well as the NRFU, which came under attack last October. Educational institutions, science and research facilities, museums, universities, and laboratories have all been targeted by the Russian Federation in an attempt to destroy key infrastructure.

Key facts:

→ 3,145 education institutions have suffered bombing and shelling
→ 415 of them have been destroyed completely
→ Over 50 research institutions have been damaged or destroyed
→ Estimates show around 40% of the country's research workforce has been affected by the war
→ Many researchers are fighting on the frontline
→ Some have been killed, others are missing
→ A vast majority are displaced, either internally or abroad
→ Official statistics of human losses, including for researchers, are not available

The NRFU was established in 2018 and began operations in 2020. ALLEA and the ISC, have been very supportive, and helpful as a partner of the NFRU. NRFU has supported over 3,000 researchers and is aimed at creating favourable conditions for citizens to realize their intellectual potential in the field of research and development. These activities contribute significantly to the economic growth of the state. Ukraine's research and development sector has suffered unprecedented losses in both human infrastructure and financial resources since the beginning of the war. Coupling these losses with the risk of public research and development budget cuts, the state's ability to support research sharply decreased in early March 2020 due to the increased defence needs of the country. For 2023, only 60% of the financing required is available for selected projects and the projects of new and suspended schools.

Most researchers have stayed in Ukraine. As such, Ukrainian researchers who have stayed are not as flexible as colleagues abroad. Reviewing 169 project implementations (2020–2023) interrupted by the war, 13 are unable to resume research this year. Challenges include connections between relocated team members, ruined infrastructure, and reduced research equipment. The primary need is financial aid to continue research.

Ways to help the Ukrainian research and development sector include, but are not limited to:

→ Provision of financial support to and collaborating with the NFRU to include Ukrainian researchers in running programmes.

→ Funding and support by international institutions of remote research positions from entry-level requiring mentorship to senior collaborative positions for Ukrainian scholars. While financial support of the NRFU is critical, so is training and capacity-strengthening support for both staff and grantees. The NRFU is seeking foreign reviewers for collaboration. The NRFU appeals for the cessation of any scientific cooperation with Russia and Belarus.

***Yevheniia Polishchuk***

*Member, The Council of Young Scientists at the Ministry of Education and Science of Ukraine*

Several universities from the Nikolaev, Kiev, and Kharkiv regions have been attacked since the beginning of the war, and Ukrainian scientists have been significantly affected; this includes their capacity to continue research in their laboratories. Tragically, several

researchers have been killed or abducted since the start of the war. Several studies have been conducted with respect to how Ukrainian researchers have been affected by the war; however, conditions are challenging, and it is difficult to focus on research when essential services are not available. Many researchers have been forced to move into other areas or regions. The most significant impact has been financial, including inflation and salary cuts.

Approximately 20% of researchers have moved out of Ukraine to countries that actively support Ukrainian scholars. The international community has been very helpful in allowing researchers to continue their work, and will hopefully assist in the future with rebuilding efforts in the academic sector. A Polish study indicates that 40% of the researchers who have left Ukraine are in the early stages of their careers, and 30% are female researchers who live with their children and without their husbands. More than 34% of researchers who have moved continue to work for Ukrainian universities. Between 20% and 30% have been able to work for foreign institutions and 17% are currently unemployed. Some reasons for unemployment include taking leave and struggling with a foreign language. Another difficulty is that some foreign institutions are hiring PhD candidates, which does not help Ukrainian researchers who already have PhDs.

The most important types of support include research grants, internships of short-, medium- and long-term positions. The risk of long-term positions is that the successful candidates may not return to Ukraine. UN immigration statistics confirm this risk with respect to immigrants who do not return to the country that they left. The International Science Council and European academies have supported Ukrainian researchers who have left Ukraine. The Young Scientist Council recommends that the most important thing for the researchers who have stayed in Ukraine is to continue the development of existing programmes. For the Ukrainian researchers that have left Ukraine, there should also be continued cooperation between Ukrainian and EU policy-makers and academic authorities.

### 1.3 Session 2: Reviewing programmes and responses in 2022

Roundtable: Review of responses to support the higher education and science sector

**Moderator:**

***Luke Drury***

*Vice-President, ALLEA*

In this session we review the responses of various actors of the academic and research

systems to the ongoing situation in Ukraine over the past year. In addition, we have also asked panellists to analyse their programmes and try to draw lessons for how to be more effective in the future, both in Ukraine and in other crises. As this conference builds on our first conference in June 2022, and we particularly want to focus on the seven recommendations that emerged from that conference: were they useful? Do they need to be updated to reflect the evolving situation? What changes are needed?

**Presentations:**

***Jerzy Duszynski***

*Advisor to the President, Polish Academy of Sciences*

The Polish Academy of Sciences is a learning society with more than 350 scholars and a network of 70 research institutes. The academy supports Ukrainian scholars at risk and has housed over 200 scholars as part of a short-term programme. In addition, 600 people participated in six workshops over 2022. A long-term programme launched in December 2022 provides Ukrainian principal investigators (PIs) with accommodation, salary, and resources to conduct research with a group of up to five people led by a Polish PI with some group members working from Ukraine. The Ukrainian candidates will be affiliated with the Polish Academy of Sciences and a Ukrainian institution. At a time in the future, the group can be transferred to a Ukrainian institution. There are 174 applicants of whom 10–15% will be successful. The US Academy of Sciences is responsible for selecting the winning applicants. Other countries could implement this model in their country to help Ukrainian PIs, leading to a virtual Ukrainian Institute that can return to Ukraine at a future date.

***Oleksandra Ivashchenko***

*Medical Physicist in Nuclear Medicine, University Medical Center Groningen; Coordinator, #Science4Ukraine*

Scientists from Latvia launched Science4Ukraine, an organization that helps Ukrainian students and scientists fleeing the war and looking for opportunities. The organization started engaging originally on Twitter and attracted hundreds of volunteer members worldwide. The purpose of the organization is to collect information about support opportunities, specifically with respect to available paid positions, grants, and other funding in one website for affected Ukrainian researchers to use. Social media outreach has attracted 20,000 followers to-date. Ukrainian researchers have asked for help restoring destroyed

equipment and also for active research partners to collaborate with. Science4Ukraine is not an official NGO and currently has no funding. A mentorship programme has been established in the UK, and a residential fellowship programme has been created that raised more than €200,000 to help economic scientists with their research. Continued international collaboration is producing events where Ukrainian scientists can collaborate across diverse topics including Artificial Intelligence, medical physics, and improving skills such as writing CVs and academic presenting. Science4Ukraine has collaborated with many groups without a lot of their own resources to centralize support opportunities to help Ukrainian researchers.

***Nataliia Yeremenko***
*EFDS Programme Coordinator, ALLEA*

Established in 1994, ALLEA comprises more than 50 academies from more than 40 countries of the Council of Europe region. ALLEA promotes science and shares expertise from European academies with stakeholders, policy-makers, and the public. Beginning in February 2022, ALLEA has released two statements supporting Ukrainian citizens, scientific academic institutions, and suspending memberships of the Russian Academy of Sciences and National Academy of Sciences of Belarus. ALLEA has partnered with the Breakthrough Prize Foundation to support Ukrainian scholars and scientific institutions through the EFDS (European Fund for Displaced Scientists) programme. This programme provides a funding line for European academies to create new positions and maintain existing positions in their institutions. The programme provides a second funding line for Ukrainian institutions to directly support science institutions in Ukraine. ALLEA recognizes there is risk of Ukrainian scholars not returning and a need for post-war rebuilding of the Ukrainian science system in the future. The programmes received more applications that could be funded, similar to other programmes from the Polish Academy of Sciences and MSCA4Ukraine. Seven Ukrainian institutions got funding, which enabled those institutions to support 98 scholars in Ukraine. Forty Ukrainian scholars were funded outside of Ukraine.

Early programme results over the first full year have validated the need for these programmes especially for scholars who have remained in Ukraine. ALLEA has observed that stronger relations and collaboration between institutions are required to rapidly host and integrate scholars from a country impacted by war as in Ukraine. Crisis management skills are critically important to handling the evolving situation in Ukraine and future

conflicts. ALLEA continues to support the Ukrainian science community with assistance and networking opportunities.

***Dominik Kalweit***

*Programme Manager, MSCA4ukraine, Scholars At Risk Europe*

MSCA4Ukraine was created for scholars at risk by the European University Association and the Alexander von Humboldt Foundation in New York. The purpose of this emergency response is to provide Ukrainian researchers with both doctoral and post-doctoral fellowship programmes. Key activities include career development, networking, and reintegration support. As evidenced in other presentations, 80% of people who leave Ukraine may not come back for various reasons. There is an expectation that 120 fellowships will be available across all areas of research. Eligible candidates include Ukrainian nationals with a primary residence in Ukraine as of the start of the war. By the second cut-off date on November 25th, 598 applications had been received. Due to constraints, 403 were evaluated and 124 applications were funded. Unfortunately, 58% of eligible applications of high quality could not be funded at this time. The three top host institutions are the Cattolica University for Leuven in Belgium, Masaryk University in the Czech Republic, and a joint collaboration between universities in France and in Düsseldorf Germany. Currently, 21 countries are hosting. The gender distribution is 65% female and 35% male. The majority of the fellowships were awarded under Life Sciences. At this time there are no plans for another call for proposals as funding has been exhausted.

The situations of some applicants have changed since the first cut-off date of November 11th. The organization is focusing efforts to support male Ukrainian fellows who potentially may be drafted for war service to start fellowships in a host country. The organization is also producing career development activities and helping unfunded applicants who meet the eligibility requirements to find other funding. It is recognized that it may be difficult for some male applicant fellows to leave Ukraine due to war efforts and military service requirements and the programme is designed as a mobility programme. MSCA4Ukraine posts on social media with #MSCA4Ukraine.

***Manal Stulgaitis***

*Education Officer, United Nations High Commissioner for Refugees (UNHCR)*

The High Commissioner from the United Nations Refugee Agency is most concerned with the sustainability of the scientific community in Ukraine after the war with respect to reconstruction efforts. UNHCR is currently focused on frontline situations including child protection, mental health, and psychological support. From a fulsome education perspective, the damage to public infrastructure, including universities, kindergarten, primary/junior/senior high schools, is a major concern. Prior to the war, there was a UNHCR tertiary education scholarship programme (DAFI scholar) in place helping refugees in Ukraine. All of these students have left Ukraine. One of the students had fled two previous conflicts and engaged the DAFI scholar programme in Ukraine, only to be forced to leave again to Germany. This student missed several years of education due to being displaced several times, poor documentation and having to repeat years of study. This case highlights the UNHCR reconstruction of document efforts to help students in these situations. It is important to have academic documentation available online which, in the case of Ukraine, has made student transitions to other host country education institutions easier.

Inside Ukraine, the UNHCR primarily interacts with partner organizations amongst twelve NGOs and over 200 community-based institutions and organizations. Outside of Ukraine, efforts have been focused on efforts for when Ukrainian citizens return to the country post-war. UNHCR is aligned with the Ukrainian government's desire for displaced students in host countries to remain connected to the Ukraine education system by learning in Ukrainian language with regular studying in this system, while at the same time participating in a host country's public education system. There has been a scholarship programme launched in Slovakia for Ukrainian refugees. While UNHCR can launch similar scholarship programmes in other countries, the hope is that host countries can continue to accommodate Ukrainian students in their public education systems.

The key lesson learned in this crisis is that there needs to be a serious and collaborative approach to respond efficiently and effectively to higher education emergencies in future conflicts. The UNHCR is committed to taking the steps necessary to build this repeatable approach.

**Discussion**

***Question:*** *When we design funding programmes, there is a call which gives a few months to receive proposals and then has another few months to review; it's all quite slow moving. This was a problem when we had to respond quickly, as in the case of Ukraine. How do we need to be more flexible and be able to move more rapidly in response to emerging situations?*

***Jerzy Duszynski***

We have to be flexible. This war inflicted a decline of science in Ukraine: finances dropped drastically, and brain drain due to programmes supporting scientists to leave Ukraine. Our programme was easy to adopt, supporting Ukrainian scientists in exile in Poland – building groups of scholars and giving them independence, a connection to the Ukrainian science system, and the chance to be ready to move back. There is a need for stability and finances to run such programmes.

***Dominik Kalweit***

Flexibility is absolutely needed but is challenging, costly, difficult to implement, and often not liked by funders. There are additional questions around flexibility in programmes and responses around accountability, human resources, flexible funding, and staff trained and able to respond in a rapid manner. Many small efforts can be complementary but need opportunities to create connections and synergize efforts.

***Sasha Ivashchenko***

Efforts should focus on integrating scientists into the European community by focusing on the skills to be able to apply for normal positions that provide support for multiple years, instead of shorter stints. Emergency funding is important but should focus on the transition to more sustainable, longer-term programmes.

***Nataliia Yeremenko***

The programmes like the EFDS programme initiated by ALLEA or MSCA4Ukraine are a bit different as the challenge was to find a balance between the humanitarian aspects of supporting scholars and the brain drain issue. Programmes should be flexible enough to respond to evolving situations with changing needs but are dependent on funding.

***Question:*** *So, more flexibility is needed, but what about having structures in place which can be quickly activated in the future (prepared for similar situations)?*

***Manal Stulgaitis***

We absolutely need mechanisms in place as other humanitarian disasters will undoubtedly happen. There must be some sort of predictability in place, including funding mechanisms. It's important that we come together and jointly have a plan, rather than trying to formulate a plan on the fly. The Global Academic Interdisciplinary Network (GAIN), which is an entity formed with the creation of the Global Compact on Refugees, aims to bring together an interdisciplinary academic community to respond to specific questions about what type of research is needed and the role of academia in humanitarian response and the humanitarian development and peace nexus.

***Question:*** *Which of the types of programmes do you see as sustainable long-term, i.e., that can be maintained and available for the future? And are there other less funding-intensive changes, activities which we could keep ongoing for the future?*

***Jerzy Duszynski***

We have to be prepared that this is not a sprint, it is a marathon exercise to support the Ukrainian science system. Solidarity is natural, but Sasha is moving beyond this by speaking about practical interconnectivity between programmes – this is very important. One programme/country won't have the means to support all displaced scholars, but we can create some sort of critical mass for change of Ukrainian science.

***Sasha Ivashchenko***

Yes, interconnectivity is very important. It's important to create resources that can help scholars maintain connections, like initiatives between universities that enable researchers on national and international levels to collaborate and stay in touch, which are relatively low cost. The reality is that the diaspora will probably be a very big fraction of the Ukrainian scientific community. But as long as we can help them stay in touch, they will find their new positions in Europe, and they will help eventually rebuild.

***Luke Drury***

It's important to remember that we now live in a networked digital world and there are opportunities which were not available in the past, for example: a diaspora network, virtual seminars, language tuition online, etc. It's important to recognize a nation's identity is rooted in its culture, and its history and its arts, and the humanities are a key component of that. The war is not just a war on the physical territory of Ukraine, it's a war on Ukrainian

culture. We need to defend not just physical structures, but the culture as well as academics.

***Question:*** *How can migration issues be resolved and rules on temporary protection changed to make it easier for scientists to apply?*

***Manal Stulgaitis***

Overwhelmingly, the roll-out of the temporary protection directive throughout the EU and slightly beyond has been very generous, effective, and timely. While there are hiccups with reliable information in rapid displacement, people have access to public services that they need, including higher education. Region-wide the response to welcoming and including refugees from Ukraine into public services was a fully-fledged policy directive, and very effective, and we should advocate to replicate that model in other crises.

***Question:*** *What changes in the standard research funding programmes (e.g., Horizon2020, Europe or national fundings) could be introduced to make them suitable to such crises and to support scholars at risk? The bulk of research funding in Europe is still at national level and distributed through national funding agencies. They were never set up with the intention of supporting scholars at risk and have had to adapt.*

***Dominik Kalweit***

It is of course a question of how flexible funders are to change. A key component is I think providing training, not only language, but about accessing funding and what kind of key components to apply for funding with different funders, and then connecting scholars at risk with host institutions and potential host institutions that can help guide them through the process. In some cases, it's also looking beyond the technical aspects and looking into additional assistance in terms of psychosocial needs.

***Luke Drury***

It is clear that we have responded pragmatically and quite effectively, but there needs to be better coordination. We were unprepared for what has happened over the past year in Ukraine. We need to have better structures in place for the future and for the long term for reconstruction for preservation. We should not forget the role of the humanities and the social sciences, as they will be needed in the rebuilding phase.

### 1.4 Session 3: Science in times of crisis

Presentations: How can the scientific community better understand, prevent, prepare for, and respond to crises?

***Moderator:***

***Karly Kehoe***

*Professor and Canada Research Chair, Saint Mary's University, Canada*

The focus of this session is on improving the resilience of the scientific community, of scientific infrastructure, and science systems that have been affected by the crisis. The aim is to move towards a better understanding of strategic priorities and challenges in a way that will ensure robust and productive responses from the international community in defence of science. While solutions are being developed, more needs to be done.

**Science in times of Crisis' Desk Review findings**

***Vivi Stavrou***

*Executive Secretary of the ISC Committee for Freedom and Responsibility in Science (CFRS) and Senior Science Officer, ISC*

Crises such as wars and natural disasters impact heavily on scientists, science systems, and scientific infrastructure. The science sector needs to take responsibility for strengthening the resilience of the science sector to prepare for such events, to respond in the midst of crises events, and to play a key role in the recovery and rebuilding process. The ISC commissioned a desk review responding directly to *UNESCO's 2017 Recommendations on Science and Scientific Researchers* to better understand the strategic and policy challenges in science to prevent, respond, and rebuild in the face of crisis.

A matrix based on the three phases of the humanitarian response cycle (pre-crisis, crisis response, and post-crisis) guided the analysis and framed the findings. Through six case studies we looked at relevant and comparable sectors: humanitarian response, disaster risk reduction, and cultural heritage to explore possible synergies and applications to the science sector:

→ Violent conflict: war in Ukraine and ISIS occupation of Mosul University in Iraq.

→ Historical examples of conflict recovery: war in the Balkans and World War II in Japan.

→ Natural disasters: Cape Town University Library fire in South Africa, Natural Science Museum fire in Brazil, and the Fukushima nuclear disaster in Japan.

*Pre-crisis phrase*

Science systems are made more vulnerable to crisis because of a disconnect between the significant expertise, insight, and focus that scientists bring to researching and advising on crisis prevention, and the work of administrators and crisis experts responsible for mitigating the risks facing science systems. Insufficient attention has been paid to developing encompassing risk management strategies within the science sector.

The scientific community is losing research capacity and investment equivalent, as growing numbers of professional scientists are displaced, and science infrastructures are destroyed. Our community must be made more resilient by developing more predictable, systemic responses that draw upon the expertise of the global scientific community, and connects scientists, administrators, and risk professionals. A focus on prevention and preparedness is required to minimize the impact of crisis. Shared principles need to be identified to guide more global and equitable scientific responses to crises that affect science systems. Building the capacity of scientists and leaders in key areas relating to crisis and risk management is as essential as improving resourcing for prevention and developing joint actions frameworks with partner sectors for more consistent and effective responses at each crisis stage. Transdisciplinarity and independence are key characteristics of effective risk management, but sometimes internal historical or structural obstacles within science systems exist and make these obstacles significant. Scientists need to play a prominent role in making the case for public funding for prevention. This is very difficult in a context where the funding for disaster risk management is both very limited and competitive (e.g., UNESCO's Heritage Emergency Fund).

A critical element in planning for crises is widening and deepening the public and the national government's understanding of the value and return on investment of science for national growth and development.

*Response phase*

Predictable advocacy, coordination, and information-sharing mechanisms for connecting local needs to international support is critical in large-scale emergencies. Unfortunately, the response from the science sector tends to be ad-hoc, and a more coordinated approach in partnership with the NGOs and the UN agencies to support at-risk scholars is needed.

In Ukraine, surveys conducted by the Council of Young Scientists and Science for Ukraine have shown the importance of serving the needs of academics and scientists, technicians,

to keep local and international responses relevant and adapting in line with the felt context of people's lives. Collaboration and support at the international level has grown tremendously, and digitization of data enables data sovereignty and greater mobility.

Crises inevitably create gaps in science funding, as public money is diverted to other priorities in instances of conflict, inevitably getting diverted to security and defence efforts as science may be seen as a luxury compared with other humanitarian priorities. Without a globally coordinated funding mechanism or network for supporting and advocating for science during times of crisis, the sector becomes reliant on ad hoc forms of foreign aid. Alternative funding mechanisms are needed to maintain a strained science sector until more sustainable, interim, or post-conflict measures can be installed (e.g., EU's grant funding mechanism was activated soon after Russia invaded Ukraine in 2022).

Creating opportunities for continuing scientific work during prolonged crises and displacement is crucial. Needs change over the crisis and science responses must be coordinated enough to adapt. Brain drain can be mitigated by flexible programmatic and funding models that enable changes in location and allow for both remote and in-person participation. Another strategy is to mobilize the diaspora rather than forcing early return (e.g., International Education Scholar Rescue Fund repurposed its Iraqi scholar rescue project to a distance learning initiative in 2015, following ISIS occupation allowing more than 280 Iraqi academics, with fellowships abroad, to deliver courses remotely, filling curricula and expertise gaps at local universities).

*Rebuilding phase*

Obstacles exist to science participating in post-crisis reconstruction. Incentivizing and enabling stronger collaboration between local and international actors, from both the science and development sectors, creates potential for real transformation and reform, while simultaneously increasing the potential for science to be prioritized for funding and support. International scientific collaboration for reconstruction and development can take many forms: developing scientific research projects, building teaching capacity and knowledge production through joint scientific research, curriculum development, academic programmes, and science management and policy. The nature of incentives for science collaboration gives little motivation for scholars and institutions to become involved in post-crisis collaboration, as such collaborations are seen as developmental and not academic, and are unlikely to be prioritized for funding.

There is a need to better define the role of the science sector and cross-sectoral collaboration with development actors in post-crisis development. Key requirements for successful partnerships post-crisis include building trust, having shared objectives between local and international scientists, and a commitment to key principles (e.g., local ownership and good governance and respect of cultural identity, and diversity). Internal conflicts during crises often intensify in the highly volatile post-crisis phase (e.g., it was essential to address internal conflicts at Mosul University in the aftermath of the liberation through targeted investments into senior stakeholder management, power balance structures, and female academic participation). Intercultural sensitivity, communication, and management skills are needed to build a culture of trust, and key informants from Ukraine cite similar challenges and expectations on science partnerships for post-conflict recovery in Ukraine.

*The information shared in this presentation is currently being developed as a working paper for future development of an action and policy framework for science in times of crisis.*

**Lessons in prevention and recovery from the 2018 National Museum Fire, Brazil**

***Alexander Kellner***

*Director, Museu Nacional*

Major crises can annihilate an institution or be an opportunity for making the institution stronger. On 2 September 2018, the worst fears of Brazil's cultural and scientific community came true: the Museu Nacional, the largest federal university in the country, went up in flames and destroyed about 85% of some 20 million specimens, including natural heritage from several countries. The museum was the first museum established in Brazil and also its first scientific institution (founded in 1818, and in 1892 moved to the Imperial Palace). In the aftermath of the destruction, new projects started, museum staff continued to offer activities to the public in tents in the park, Museu Nacional Lives project was created bringing together national and international organizations to lay the foundations for the reconstruction, and an institution committee was formed. Despite the previous government's problematic relationship with culture, the pandemic, and the economic crisis, the reconstruction of the palace is progressing. We have already started the architectural project for the interior of the palace, and have just completed the master plan for our new exhibitions. Despite these advances, there is still much to be done as only about 60% of the total budget is promised, original objects for all new exhibitions are needed. The

reconstruction of the Museu Nacional is a great opportunity to show what international collaboration in the cultural field can achieve, and without it, the challenges will be more difficult to overcome.

**Lessons in post-conflict recovery following the ISIS occupation of Mosul University, Iraq**

***Heike Wendt***

*Professor for Education Research and Head of Institute for Education Research and Teacher Education, University of Graz, Austria*

This is a small example of when academics from different countries come together in solidarity – a partnership between a German-Austrian University to support Mosul University's academic rehabilitation is one example of support that can be done during and post-crisis.

Mosul University was the second largest university in Iraq and a top leading university In the Middle East with many successful international collaborations. The decline of the higher education system in Iraq started with the Gulf War and declined over the years; many academics left, international partnerships stopped, academics were assassinated and there was an intensification of extremism, including a decline of women's rights. The Islamic State took over the university and ran it. They implemented strict segregation of women and completely destroyed the university library (public burning of books, looting of technology). In 2015, the Ministry of Higher Education revoked all rights of Mosul University and then re-established the university in the northern part of the country. For two years, the university ran programmes in exile for more than 14,000 students, teachers, and lecturers. In 2018, the campus reopened again in Mosul, but there was a complete destruction of the university and little academic activity as a result of displacement and conflict. The ideology of ISIS devalued education and science, with tension and insecurities between people.

In 2015, we established an international partnership when Mosul University was no longer a university. The aim was to bring academics and students together to discuss next steps and how to rebuild the university, while promoting reconciliation, solidarity, freedom, and autonomy within it. We launched the "rethink education and science in Iraq" through conferences, bringing students and academics from different disciplines together to start discussing challenges on reconstructions, reconciliation, and to celebrate the

value of science. At the end of the conference, we discuss the ideas in practice which are student-led (e.g., debates), promoting the freedom of speech and ensuring representation (female and minority students), and sharing the ideas of young people with civil society actors, and the governorate and the university presidency about principles of openness, interdisciplinarity, diversity, representation, and collaboration. Where the value of education and science has been so fundamentally questioned by ideologies, there is a need to make the value of science tangible. Bringing people together in their roles as intellectuals has potential for reconciliation, with dialogue and participation. In our research, we found that people who were involved in these conferences over the last year see potential for healing, reconciliation, empowerment across disciplines, supporting gender equity, and also a change in student-lecturer relationships. This initiative was small-scale and had little financial support, but my message to you is small projects can make a huge difference. And it is for all of us to make a small start and change.

***Understanding the crisis and risk management change priorities most relevant to science at EU-level***

***Tina Comes***

*Chair, SAPEA's Working Group on Crisis Management, and Professor, TU Delft, The Netherlands*

This presentation is on the work conducted with the Science Advice for Policy by European Academies on producing an evidence review report on strategic crisis management in Europe, and its interface with science policy and the role of science in a crisis. This process started with a scoping paper in 2021 about how the EU could improve its strategic crisis management, including looking at how the EU could also prepare better for pandemics. During the course of this evidence review, a lot of things happened and changed from Covid to the invasion in Ukraine, illustrating the point that crisis management is as broad and diverse, from migration and conflict to pandemics and climate change.

At the strategic level, we focused on the scientific evidence based on the peer-reviewed literature from policy recommendations, which are then the further recommendations that are put forward by the Group of Chief Scientific Advisors to the EU. The report is as multidisciplinary as possible as crises can affect any sector. They are very complex problems that normally take a very long time to model and collect data on, but are combined with an incredible urgency.

One of the key messages is there is never just one crisis, but instead overwhelming complexity and linkages. We may just be over the Covid pandemic, but lingering is climate change, which brings both increasing stresses, as well as more extreme events, storms, heat waves, and floods. There is also increasing geopolitical conflict, wars, and migration. We have a tendency in our research and in practice and policy-making to look at these crises separately. These phenomena all amplify and contribute to each other, which require better understanding.

Crises are becoming the norm, not the exception. We will likely be confronted with more of these intersecting crises as these crises are connected and one leads to another. We live in an era of 'perma-crisis' and the way we manage them needs to be aligned with our strategic directions. The way we manage crises shapes society in the long-run, and the management of crises becomes strategic decision-making. We need to see past dependencies despite urgency. Rapid decisions are very often myopic and don't take into account all the many of the feedback loops (e.g., Covid mask shortages). With all the money that was put into Covid, investment in climate adaptation fell in 2020, even as more than 50 million people were affected by record numbers, number of floods, droughts, wildfires, and storms.

Our response to one crisis can create or amplify risks in other sectors. We argue that we have to integrate risk and crisis management because we increasingly see that crises have systemic and cascading effects that go beyond one single sector or one single region. They have long-lasting effects, and they are becoming transboundary.

The need for coordination is uncontested. The question is how do we coordinate better? This is about harmonization and bringing people together in cross-disciplinary and inclusive task forces. Communication is critical for participation and trust. There is a discipline called risk and crisis communication, with an information and communication task force, which could be very well adopted and adjusted to other sectors.

We suggest doing something (i.e., portal) that can also be applied to science and information used for efficient responses when needed. We suggest thinking about how to set up responsible standards for data preparedness and secure data-sharing. It is important in a conflict to protect the information and data about the people, institutions, and locations where people are working. We put forward options to coordinate across countries and sectors, setting standards and protocols that communicate via dedicated capacity, whilst

integrating welfare and distributed effects into risk and crisis management, practice, and training which anticipate systemic risks via new monitoring tools, and the harmonization of data standards and principles.

**Lessons (learned and learning) from Ukraine on the impact of war on science and higher education for the international policy and scientific communities**

***Gerson Sher***

*Volunteer Co-Chair, Ad Hoc Working Group on Science in Ukraine, National Academies of Sciences, Engineering, and Medicine (NASEM)*

Crisis is often an opportunity for change, as it is disruptive by nature, creating urgency for action and requiring new ways of thinking and acting. The war in Ukraine is layered on top of other long-term pre-existing crises in the region, including in the sphere of science. The transition from the Soviet science system toward Western models has been complex, difficult, and conflict-ridden in Ukraine.

There has been significant emigration from 1991 and when the war started, one half of the younger echelon of the Ukrainian scientific workforce went in search of better opportunities outside the country, creating a serious demographic gap in the scientific and educational workforce. The impact of the more recent emigration further highlights the need to support the number of scientists (over 80%) who have remained in Ukraine, as well as strengthening the Ukrainian science system itself.

The second challenge is the institutional structure of Ukrainian science and higher education, an ineffable legacy of the Soviet science system, where the most important scientific research was carried out at enormous academies of sciences very vertically constructed, while universities were reduced to pedagogical institutions. In all the post-Soviet countries, each country dealt with this dysfunctional anomaly in its own way. In Ukraine, the old system remained intact because of entrenched interest and weak government, and became increasingly dysfunctional since the Ukrainian revolution with modest progress to reform the system.

There was a legacy of corruption, with signs of hope that it may be improving. This legacy was a carry-over from the pre-2014 Ukrainian government. Beginning in 1991, I oversaw PhD programmes, through the George Soros International Science Foundation, CRDF Global

and others, that provided literally hundreds of millions of dollars of such support in Ukraine and other post-Soviet countries. All these programmes used a simple system that was completely accountable and effective, which sent money through specially created secure bank accounts of the individual recipients. Equipment was purchased by the funders and then donated as gifts to the research team. Other major funders, including major private foundations, used this channel.

These three major crises (brain drain, unresolved institutional conflict, and the legacy of corruption) were all in place prior to the war, but have become an existential issue for Ukrainian science. In the global knowledge economy of the 21st century, Ukraine simply cannot afford to manage science as it has in the past. The war changed everything. The competition among scientific institutions is now for a mere fraction of the previous level of support. The government, compounded by lack of leadership, became toxic.

Here is a catalogue of lessons learned that may be valuable not only in responding to the war in Ukraine, but also to other crises elsewhere:

→ There has been much good thought, discussion, and elevated pronouncements over the past year, but action has been much slower. There have been impressive efforts from Europe, North America, and elsewhere to address the imminent refugee crisis. But direct action to provide support and hope to the vast majority of scientists remaining in Ukraine has been particularly slow.

→ Listen and learn. Take the time to have deep conversations with those in crisis, with people with different opinions. Develop a deep understanding of the country's history and culture. Do not lose focus on the impact of your actions for the long-term future of the country.

→ Be strategic both inside and outside of the country. There's a vigorous discussion about the enormous cost of repairing the damage caused by the invasion, but the most important damage is to the people. The people, the scientists, the students, the teachers must come before brick-and-mortar physical construction. If you don't take early measures to sustain the people, there will be nobody to use the infrastructure

→ Do not let your immediate response become your permanent response. There are different phases of a crisis, with new realities. Do not confuse the long-term with the short- and medium-term.

→ Despite the war, scientists who remain inside Ukraine try to continue their work as much as possible, through internet connections, with laboratories that remain, and

by participating in scientific seminars, and even individual projects, by zoom.

→ Be prepared to take modest risks. It is possible to get money into Ukraine and to design initiatives together with Ukrainian partners, which will have a better shot at success. When projects do not work, learn and build trust, and then try something different again.

→ The key thing to remember here is that for a country in crisis, science, higher education and technological innovation are critical for the country's future, but are low priorities of local and world governments in the war response. The initiative of smaller entities such as research agencies, universities, professional associations, and even individuals, are critical to bridge the gap.

Science, the advancement of knowledge, while a value in itself, is also one of the most important tools we have to promote the quality of life and to solve increasingly complex problems. Together with its inseparable companions, education, and technological innovation. There is no successful country in the world today that does not have good education and good science. Brain drain is real and robs effective countries. One of the most important things for scientists and one of the most effective ways of helping scientists is through more science. Promote vigorous international scientific cooperation, especially with the scientists who remain. Ukraine before the crisis, even before the Revolution of 1991, had a very high level of science. Please don't underestimate science in Ukraine and treat it with international scientific cooperation according to the highest European and world standards.

**Discussion**

***Question:*** *How can the science sector best use its own capacity to improve its own resilience because there are times when it doesn't actually feel that resilient, and yet all of you have demonstrated that it is?*

***Gerson Sher***

The scientists in Ukraine are in contact and participating virtually in meetings. There are many of us working hard to provide direct support through high-quality collaborative projects with Ukrainian scientists who remained in Ukraine. The National Academies of Sciences, Engineering and Medicine (NASEM) in the United States has a major programme through the Polish Academy of Sciences, where they've found positions in the Polish Academy for Ukrainian scientists, and now they're also linking with Ukrainian scientists

in the country.

***Vivi Stavrou***

There is so much expertise in the science sector. Two words that are themes in this conference are solidarity and resilience. In terms of solidarity, we have phenomenal expertise in research collaboration. Science is a global enterprise, and we need to draw on this to build strategic alliances and strengthen the resilience of the sector in the face of crisis. Science is a key cultural feature of humankind, historically and in the future, and we need to fight to keep it, and create further enabling environments for science, innovation, and creativity to flourish.

***Tina Comes***

The Royal Dutch Academy produced a report called, *The Pandemic Academic*, which looks at how we can make the science and higher education sectors more resilient. Science has become a team sport and it is about how we can strengthen each other and create networks of doing things, understanding the constraints and the capacities. This requires a trust basis, meeting and discussing, and being very transparent about what we need.

***Question:*** *Pre-existing networks of the science community are important to maintaining stability. A problem though is that a lot of these networks don't necessarily include early- and mid-career scholars. How can the science community better integrate and support early- and mid-career researchers and scientists?*

***Gerson Sher***

Ukraine had 30 years of emigration pre-war, depleting that echelon of young and mid-career scientists. There was not the synergy present in modern research universities, between high-quality research in universities, in which students, graduate and undergraduate are directly involved. University-to-university collaborations, collaborations between individual scientists and university scientists, is very important. There are two key elements in the transformation of any post-Soviet science system. One is seriously upgrading research in universities, providing more resources to universities, and an involvement of young students in all aspects of research. The second is competitive research grants, which did not exist in Ukraine until 2019.

***Vivi Stavrou***

We got enormous, sustained, and hugely creative support from young and mid-career scientists, particularly from the Council of Young Scientists, from the Polish Young Academy, and from others in putting this conference together and the one last year, which is hugely uplifting, showing where the strength and energy and dynamism is coming from.

***Heike Wendt***

We got support from the German Arab Young Academy of Science and there's been big support from postdoctoral colleagues and early-career professors. My experience has also been that in establishing university-to-university-based partnerships, it is very important to have diversity criteria negotiated in the MOU [Memorandum of Understanding]. For example, we had a policy that for every professor travelling, there has to be a doctoral student travelling and that there are diversity criteria to be considered.

***Question:*** *How could there be more productive conversations between big organizations such as the ISC or national governments and the universities on the ground (e.g., about competing priorities and on the ground realities)?*

***Heike Wendt***

Opportunities, like this conference, to share the realities of operations on the ground and to present our work are important to help make all of this more visible and understandable, making us feel recognized by colleagues and feel part of a community.

***Vivi Stavrou***

ISC is the biggest membership science organization in the world. We are trying to use our convening power as wisely as possible to highlight these global priority issues. This was a very bottom-up process, from individual researchers and discussions with institutions and other networks, but we also have to think about how to do things in the longer-term, around coordination, crisis management, development policy frameworks, and how the sector can deal with such ongoing crisis situations.

***Gerson Sher***

Science is an essential part of human culture. Science has been a very important element of Ukrainian culture, all of which existed pre-war. They are essential for Ukraine's survival,

as an independent, sovereign, and successful country. If you focus too much on finding permanent places for those who by necessity have gone abroad, you are robbing Ukraine of that potential. I understand, and I'm particularly wed to the importance of promoting high-quality science and technology and innovation in these countries, also as a value in itself.

***Karly Kehoe***

I think that there has to be a suite of support options available to those displaced or who choose to leave for their own safety to continue to do research. Individuals can take meaningful action and can do important work. A united international voice is critical, and conversations like this are important to keep the spotlight on this issue. Finally, international solidarity is important.

### 1.5 Closing Remarks

***Mathieu Denis***

*Senior Director, Head of the Centre for Science Futures, ISC*

The issues discussed go beyond Ukraine and it is important to carry this discussion forward. There has been a lot of learning over the past couple of years as to how we can best develop and respond to the needs of refugees and displaced scientists. A few things that I wanted to highlight:

→ The importance of predictability – we must have in place programmes, policies, action frameworks, and funding that allow us to react with a high level of predictability when a crisis occurs.
→ There is a need to raise awareness about the importance of putting science at the core of response in moments of crisis and our rebuilding efforts – science will be critical when it comes to rebuilding society and a country post-conflict.
→ It's important to take a holistic and a longer-term approach when helping refugees, displaced scientists, and science systems respond to crises. When we take the science system as a whole, we can develop effective responses by being able to understand and see the full picture of needs.
→ There are numerous gaps and areas that need dedicated attention moving forward

in our current responses to crises – research councils and competitive funding, not enough opportunities overall for scientists affected by a war or pandemic or natural disaster, gaps in certain actors/professional associations, need dedicated effort to protect data in times of conflict.

We all have a shared responsibility to think through what we can contribute and what is our role in maintaining scientists active throughout the crisis and helping rebuild societies that are affected by conflict. We need to institutionalize our responses; we need to better coordinate, and we need to develop policy and framework actions that go beyond what we currently have in place. For the ISC and ALLEA, the immediate next steps will be to summarize this conference and publish a report.

There's a strong willingness on the part of ISC to continue thinking through what can be done to coordinate our efforts in this global endeavour.

***Alison Meston***

I started the day by observing how the delicate mosaic that is our society can be shattered by war. I hope that we have shown today that the scientific community is committed to rebuilding that shattered mosaic through the shared knowledge of our combined scientific disciplines and as collaborators from different nations in the interest of peace, and living by Article 27 of the Universal Declaration of Human Rights, where we practice science freely and responsibly, and we share its benefits for all, so our societies can flourish within planetary boundaries.

## DAY 2: PROFESSIONAL DEVELOPMENT ON RESEARCH MANAGEMENT & EUROPEAN INTEGRATION

**Hosts:** Science Europe and the NRFU

### 2.1 Opening remarks

***Lidia Borrell-Damian***

*Secretary General, Science Europe*

This meeting was put together between Science Europe and the National Research Foundation of Ukraine (NRFU) in collaboration with the ISC and ALLEA to deepen professional development on research, management, and European integration of Ukrainian research. Across the two sessions, there are insights from managers, scientists, and professionals in the research sector with the intention to support colleagues in Ukraine.

Science Europe is an organization representing national research-performing and research-funding organizations. We are implementing our strategy plan for 2021 to 2026, and have adapted it to support the National Research Foundation of Ukraine (NRFU) and Ukrainian R&I in the conflict in Ukraine. NRFU became a Member of Science Europe in May 2022. Science Europe's focus on three main areas of research policy: shaping European research area developments, contributing to a positive research culture, and enhancing the role and contribution of science in society. Our interactions with Ukraine are shaping European policy developments as the NFRU has been integrated with the Science Europe members, with the aim to support their integration in Europe. Science Europe has six core values, all important and relevant, but particularly in the context of the war in Ukraine: academic freedom; collaboration; care and collegiality; equality, diversity, and inclusion; integrity and ethics; openness and transparency. Peace is an essential element for any successful R&I system. Members of Science Europe have been supporting Ukrainian R&I through many types of contributions including offering temporary positions in their institutions, providing funding, providing accommodation or shelter for displaced researchers and non-researchers, supporting new calls with the NRFU or other institutions, developing partnerships between individual institutions at national level, and extending projects with Ukrainian researchers. And, as part of the sanctions, terminating or suspending collaborations with Russian or Belarusian institutions. Science Europe has expressed its support and solidarity with Ukraine in several statements and collected all the actions of individual members in support of Ukraine research.

***Olga Polotska***

*Executive Director, NRFU*

The issues of managing national and European funding programmes, as well as structures to support grant-seeking and project management, have never been easy and remain more than relevant for Ukraine, especially under the current conditions. We have been looking for the right ways and means to improve the system and maximize efficiency for quite some time, but the war has affected all spheres, including the research sector. Therefore, the situation in this sphere remains quite uncertain, and is unprecedented, but at the same time, we feel the excellent support we have been rendered from our partners worldwide. The main task of the NRFU is to make support for Ukrainian researchers effective and accessible.

In the second year since the start of its operational activities, the NRFU, as well as the whole research sector of Ukraine, faced a number of systemic challenges related to the insidious and shameful military attack of Russia, which required completely new and quick solutions. However, despite the wartime circumstances, the Foundation strongly believes in Victory of Ukraine and continues to work for Ukrainian science. Science Europe was the first European organization that contacted the NRFU and clearly stated their attitude and position towards the war unfolding in Ukraine in the very first days.

In this meeting, we bring together the perspectives of European and Ukrainian stakeholders and institutions to explore ways to support our research system and develop best practices and processes for the effective management of national and European funding. Professional collaboration with our foreign colleagues is not a matter of the future, it is happening right now. I sincerely believe that with such strong support, we will be able to rebuild everything that has been destroyed and overcome all the challenges we are facing today.

## 2.2 Opening keynote speeches

***Igor Taranov***

*Director General, Directorate of Science and Innovation, Ministry of Education and Science of Ukraine*

Currently, conditions are not very convenient and comfortable to do research in Ukraine. The first and main reason is war. Second is that we have very limited financial resources. In fact, 15% of Ukrainian research infrastructure is damaged currently in Ukraine right now. We have no information about 11% of them because they are still in temporary occupied territory. The Ministry of Education and Sciences of Ukraine tries to support researchers: establish collaborations, launch programmes, calls, fellowships etc. International cooperation is also supportive.

What is going on right now, and what is very successful in Ukraine now, is that we received reimbursement costs from the European Commission, according to the Horizon 2020 programme, and we have already completed our first call. We are also now preparing a new call for young scientists of Ukraine. Of course, the government and parliament will be funding for the state budget, but the final decision will be made by Ukrainian parliament, for example, a Cabinet Minister of Ukraine. We just sent the Minister a proposition for a special committee with all candidates who can be awarded by this premium or by this funding.

Work on Ukraine's recovery plan is underway. It is important to think about how to rebuild the country already.

***Signe Ratso***
*Deputy Director General for Open Innovation and Chief Negotiator for Horizon Europe Association, European Commission*

We are doing our utmost in order to create very concrete opportunities for the Ukrainians and also for Ukraine, in the face of this continuing tragedy. Now as the research and innovation community, we can be proud that Ukraine is fully integrated into the two key flagship programmes of the union in this area that arise in Europe and Euratom research and training and training programmes.

In the true spirit of EU solidarity, we developed targeted support initiatives. We need to derive maximum benefits under existing cooperation opportunities. We need to promote them in a targeted manner at the programme-, but also at Member States- and stakeholders-level. We have to facilitate matchmaking and we need to identify best practices that respond to the needs at hand. As Ukraine is now an EU candidate country, we need to

back Ukraine's efforts towards faster integration into the European research area.

We need to reflect further upon, and also advocate for, the role of research and innovation in Ukraine's recovery, especially as the donor coordination platform is now established. The EU has been acting in efforts to preserve and nurture Ukraine's research capacity, intellectual assets, and innovation talents, and doing that both in and also out of the country. So far, there are 51 grants involving 69 Ukrainian participations with a net EU contribution of almost 13.4 million since the beginning of the programme, which is actually on par with the best years on the Horizon 2020, meaning that this has been possible now during wartime, which is really, really admirable.

In order to maximize cooperation opportunities, plans are on the way to establish the Horizon Europe office in Kiev, which is due to open later this year, and will be hosted by the NRFU. We consider an action to develop an investment roadmap for research infrastructure based on the needs analysis.

### 2.3 Session 1: Managing national and European funding programmes

***Moderator:***
***Sebastiaan Den Bak***
*Interim Director and Head of International Policy, Dutch Research Council*

***Presentations:***
***Angela Liberatore***
*Head of the Scientific Management Department, European Research Council (ERC) Executive Agency*

ERC made a strong focus on supporting young scientists in Ukraine. The largest part of the ERC budget goes to the starting grants and consolidator grants. We have grants also based in Ukraine, well, and we know from our grantee that the situation is very difficult, but they continue working. There is an initiative 'ERC for Ukraine' (jobs for researchers fleeing the war).

There will be a new panel introduced soon in the social sciences and humanities given the quantity of the proposals that we receive. The idea is that those are areas of research,

they are not priorities for research, everybody's welcome with any idea and when there is a submission assigned, this can apply to one panel, but also indicate a secondary panel if it is interdisciplinary. And we provide the full feedback to applicants, meaning, they have a summary of what the panel thinks of their proposal, but they also get the individual reviews. And this is basically one of the very few programmes where this is done.

***Mykhailo Hrebeniuk***

*First Secretary, Mission of Ukraine to the EU*

Even in war conditions, the Ukrainian research community is very active. Funding schemes and competitive grants are, you know, the key priority that we have been witnessing in Ukraine-EU relations over these years, starting from 2016; when the peer review on the research system of Ukraine was presented, it really indicated the need to change the attitude to the funding of scientific activity. And then from that period, especially, we have very strong support from the European side, to help us improve funding schemes.

The decision of the European Union to set up the Horizon Europe office will help to build the bridge between Ukrainian research community and structures of the European Commission and Member States participating in consortium. The more Ukrainian researchers and innovators participate in EU granting schemes in new grants, new programmes, the more experience the Ukrainian community gets at home, and it will further improve our national funding activity.

***Andrea Landolt***

*Head of International Funding, Swiss National Science Foundation (SNSF)*

The SNSF strongly supports the Ukrainian research community, and has current plans together with the NRFU: joint bilateral call where funding is coming from Switzerland alone. The call focuses on researchers that are in Ukraine and those in Switzerland who are eligible to receive funding at the SNSF. Other funding possibilities are always available at the SNSF for international funding open to any country.

## 2.4 Session 2: Structures to support grant-seeking and project management

***Moderator:***

***Marco Pallavicini***

*Vice-President, National Institute for Nuclear Physics, Italy*

***Presentations:***

***Kostyantyn Kyrychenko***

*Head of International Affairs Department, Sumy State University, Ukraine*

European integration is our main priority. The goals of our grant activity and project activity are to confront local trends, regional, and global challenges. In Sumy State University, there are special structures that ensure effective work. There are few departments at the university level that are dealing with international project activity. The main body is the International Office. There are two units in the International Office, among others, that deal with international projects. There is a coordination centre for grant writing, as well as a special unit for contracts maintenance, the international grant programmes unit, which deals with the projects that are already supported. It means, we have the divisions and the units at the university that support project work based on the business processes that take place. There is a system of policies, regulations, and templates that actually accompany project execution. Besides the centre actually searching for grants, we work two ways. So, one way is we are collecting project ideas from our researchers. And then we are looking for any funding opportunities where those ideas could find support. And another way we are actually starting the programmes that are offered and what they can support with what kinds of resources they can offer. We internally do the registration of the proposals, and we track what kinds of proposals are being actually submitted on behalf of the university. We tend to be more and more practical, with analysis of the balance of resources needed from the institution, and the resources they may acquire through the project.

There is a system of incentives in parallel, there is a system of KPIs [key performance indicators]. So, in the system of KPIs the projects into national projects, research projects, they play quite a substantial role. Those who get those KPIs, they've been incentivized in different ways including financial rewards as well. In the International grant programmes unit, we do aid from the moment of proposal approval. So, this is another cycle of functions and other cycles of activities.

And of course, any project is about finances. And we have our two main departments on board with us in the team for project management, unit for contracts, manager, maintenance, and financial and accounting services, event functions, budget planning and supervision, compliance with national regulations, which is necessary, of course, for all financial operations.

We started a few initiatives with our laboratories and some of them remained unfinished. We need to understand how resourceful we have to be with all those blackouts and all that stuff. So, all of this supports solutions for energy efficiency for alternative sources of energy for greening campuses, greening any industry. This is the prioritized area I think for decades ahead. It's important to settle some exchange schemes, really, for young researchers and for PhD students.

***Masha Vlasenko***
*Research Fellow, Institute of Mathematics, Polish Academy of Sciences*

This project is sort of our response to what is happening in our home country. So, we think that it will start as a programme running institution, meaning that there will be programmes of the length from one month to about one semester. And such centres could also run around workshops and conferences, so much shorter events, and they can have long-term visitors and fellows. In the future, we hope to develop also the base for long-term visitors and fellowships, and we hope that this research centre can be a base for ERC, grants and other European funding programmes. In the future, we are going to change the governance of the centre from having this advisory board to having two boards, one of them the board of trustees will be responsible for strategic decisions and also for financial planning. And the other board will be purely scientific.

These are the few steps that were already done. We have registered the nonprofit public organization in Ukraine or nongovernmental organization, we have found a donor, our founding and principal donor this year, XTX Markets, who gave the centre the matching fund of €1 million, which means that they will double contributions and pledges of all other organizations up to this amount. And we are very proud to receive the grant from the Ministry of Higher Education and Research grants, which was announced on the 24th of February 2023.

We are planning to apply for grants from various organizations like Simons Foundation, like European, various European research programmes, within programmes within horizon. And also, we have a strategic partnership with the National Research Foundation of Ukraine. Currently, we are searching for the location for the centre in Ukraine, this is our high priority, because we really wanted to have this building in which the mathematical programmes and events will happen. We also cooperate with the National Academy of Sciences [of Ukraine], especially on the topic of the building and with the public universities, American University Kyiv and Kyiv School of Economics. The mission of our centre is to support the top-level researchers in mathematics, globally, and in particular, in Ukraine.

***Mónica Martin-Lanuza***

*Head, International Partnerships, Spanish National Research Council (CSIC)*

The CSIC is the largest public institution in Spain dedicated to research. We're a high-performing entity, we have more or less 40,000 people working at the CSIC, being one important part, researchers, around 4,000. CSIC, it's all around Spain. We have 126 centres, some of these centres are our own centres, and others, 52 are joint research units, which means that we have these centres in collaboration with universities. We cover all areas of knowledge, and these areas of knowledge are divided into society, life, and matter to our budget, as we are a public research institution. At the Spanish level, we are the first in each entity as to the number of projects awarded funds as well. At the European level, we are the third entity as to the number of actions. And now we are in Horizon Europe.

## DAY 3: UKRAINIAN SCIENCE DIASPORA: CONNECTING SCHOLARS FOR THE FUTURE

**Hosts:** The Council of Young Scientists, the Ministry of Education and Science of Ukraine

### 3.1 Opening Remarks

***Vivi Stavrou***

*Executive Secretary of the ISC Committee for Freedom and Responsibility in Science (CFRS) and Senior Science Officer, ISC*

Considering the risks involved by a brain drain to the future of science in Ukraine, the long-term policy aim, certainly for Europe, should be to support genuine brain circulation and productive long-term scientific partnerships with Ukrainian scientific institutions. This initiative by the Council of Young Scientists recognizes that members of the Ukrainian Science Diaspora are a critical strategic asset, both for their country of origin and their country of destination. I look forward to hearing your plans for mobilizing the power of the scientific diaspora. The ISC is here to be advised by you and to support in ways that will boost your efforts.

***Luke Drury***

*Vice-President, ALLEA*

Speaking as an academician, but also as an Irish person, Ireland actually has one of the largest diaspora populations of any country as a consequence, largely, of the disastrous potato famine in the mid-nineteenth century. And we have actually tried to harness that in recent years. One mechanism we found very effective is the Irish Academy, like most academies, has a system of foreign associates or foreign members. And we have deliberately made an effort to elect as foreign members of the Academy, members with some connection to Ireland, either members of the diaspora or people who have spent time in Ireland, who can contribute to Ireland. And that has been quite effective. And all our universities also draw heavily on the diaspora for assistance, visiting lecturers, visiting examiners etc. A diaspora can be a very effective tool for brain circulation and not brain drain. So, I think this is an important initiative. The other thing, which I think is very interesting and important, is that these are the young scientists who are involved here. One of the more promising developments in the world of academies over the last few

years has been the rise of young academies. There is a global movement towards having not just senior academies, but young academies. The young academies are innovative, much enthusiastic, and bring fresh ideas and initiatives.

***Igor Taranov***

*General Director, Directorate of Science and Innovation, Ministry of Education and Science of Ukraine*

In modern realities, intellectual immigration to scientifically developed countries should not be considered as a loss of scientific potential, but as an asset for the development of scientific cooperation and a powerful resource for international scientific cooperation with other countries. In an analytical report of the European Commission, it was separately highlighted that one of the recommendations for Ukraine for the further development of scientific research is the adopting of a strategy to retain and attract talents in the field of research and innovation, particularly from the diaspora. It will help us to support the careers of researchers, and the main strategic programme document of the Government of Ukraine today is the recovery plan of Ukraine. This plan details the prospects for the future life of the country, the conditions of martial law, and its recovery after its completion. The plan also contains a separate chapter related to the science and innovation direction. One of the activities planned for implementation before direction is the development of cooperation with the scientific diaspora. Such cooperation involves the implementation of joint projects, and the involvement of representatives of the diaspora in the procedures for carrying out scientific expertise, scientific projects, state programmes, etc., etc., is very welcome too. We look for the creation of joint structures in scientific institutions and institutions of higher education. We would be grateful for scientists' leadership, consulting, and participation in conferences, and the involvement of the scientific diaspora to aid the educational process in higher education institutions. Therefore, the strategic goal of this conference today is quite ambitious. The goal is to use the potential of scientists from the Ukrainian diaspora to solve important tasks for the present and future of Ukraine and of the development of the scientific exterior. To implement this idea, the Young Scientists Council of the Ministry prepared a very important project. I hope you will hear a lot today about it. Today's conference is one of the steps that will create opportunities for the participation of Ukrainian scientists in key roles of the scientific sphere, in strengths in other countries and the further European future.

***Olga Budnyk***

*Advisor to the President of Ukraine on the Fund of the President of Ukraine for Support of Education, Science and Sports*

Currently, our state policy is to maximally involve everyone, both in Ukraine and abroad, in responding to the challenges that Ukraine faces. It is important to develop algorithms for the involvement of Ukrainian scientists around the world in interaction. Now is the best time to do all the things we knew we needed to do.

***Yury Gogotsi***

*Professor, A.J. Drexel Nanomaterials Institute*

In spite of all the terrible and destructive consequences of the war, this war also opens an opportunity for the revival and transformation of science and education in Ukraine – we should not waste this opportunity. In the post-war Ukraine, scientists should certainly be able to freely work in the leading scientific centres of the world, but have an incentive to come back. If the anticipated financial support aimed at the restoration of Ukraine is invested into transforming the scientific and educational system, the best scientists from the diaspora inside the country should participate in developing the strategy and also overseeing this investment. Ukraine will need cutting-edge science and R&D, not only in universities, but also in small, high-tech businesses and large companies, to become a leader in science and technology. Let's make this change happen. Let's make it happen together.

***Olesia Vashchuk***

*Head, The Council of Young Scientists, Ministry of Education and Science of Ukraine*

This is a good time to communicate about the future. Representatives of the Ukrainian science diaspora should realize that a lot has been invested in them by themselves and by Ukraine, and it should not be lost. Wherever they are and whoever they work for, they should try to maintain contacts, unite, and cooperate with Ukraine.

### 3.2 Session 1: Science diplomacy: what it is, and how it can be used to develop diaspora strategies

***Peter McGrath***

*Coordinator, The InterAcademy Partnership and The World Academy of Sciences (TWAS) Science Diplomacy Programme*

Science diplomacy has been going on for hundreds of years but has only been defined over the last 10–15 years. The concept of science diplomacy involves the use of science to build relationships between nations. Science diplomacy has three pillars: science in diplomacy, which informs foreign policy objectives with scientific advice, such as the IPCC reports; diplomacy for science, which facilitates international scientific cooperation, such as CERN and the Square Kilometre Array; and science for diplomacy, which involves using science collaboration to improve relationships between countries, such as the scientific exchanges between China and the US in the 1970s and the collaborations between the AAAS [American Association for the Advancement of Science] and the Cuban Academy of Sciences despite US sanctions against Cuba.

Two organizations work towards sustainable prosperity through research, education, policy, and diplomacy: the World Academy of Sciences, which has over 1,000 elected fellows and focuses on sustainable prosperity through research, education, policy, and diplomacy in developing countries; and the InterAcademy Partnership, a global network of academies of science, medicine, and engineering that works in four regional networks across the world and has access to over 30,000 leading scientists, engineers, and health professionals.

There are a lot of examples of diasporas from different countries, which is an opportunity for taking the best practices and adapting them for the Ukrainian situation. Establishing the connection between the Young Scientists Council of Ukraine and the Ministry of Education and Science creates a connection between the scientists and the government, which is in science in diplomacy and deploying diplomacy for science. National and international responses have helped the Ukrainian scientists through their scientific organizations providing diplomacy for science.

### 3.3 Session 2: Presentation of Ukrainian Science Diaspora conception and discussion to explore how best to use a science diaspora network

***Yevheniia Polishchuk***

*Member, The Council of Young Scientists at the Ministry of Education and Science of Ukraine*

The full-scale invasion of Russia on Ukraine's territory forced millions of people to flee their homes, either to safer regions within the country or abroad. According to the Ministry of Education and Science of Ukraine, around 5,000 scientists have migrated abroad. The Young Scientists Council at the Ministry of Education and Science of Ukraine, in collaboration with the Polish Academy of Sciences, the University of Warsaw, and the SGH Warsaw School of Economics, conducted a study which revealed that most scientists migrated to countries such as Poland, Germany, Austria, Switzerland, and Great Britain etc. Some of these scientists do not plan to return to Ukraine soon due to the ongoing war. The foreign institutions have provided valuable support by accepting Ukrainian scientists and allowing them to continue their career in normal conditions.

Furthermore, the wave of Ukrainian scientific emigrants in 2022 was not the first. Those who left after February 24th 2022 are currently adapting to the labour market of their host countries, while those who have been there for a long time are developing and participating in various supporting initiatives. This situation has created the prerequisites for the emergence of the "Ukrainian Science Diaspora" initiative by the Young Scientists Council at the Ministry of Education and Science. The initiative lays in the frame of the Scholar Support Office, and it aims to unite the efforts of different migratory waves of Ukrainian scientists in joint projects for the reconstruction of Ukraine. By fostering connections and collaborations between these scientists and their home countries, scientific diasporas can help to promote the transfer of knowledge, skills, and technologies.

The initiative arouses the interest of scientists 1. from Ukraine who are abroad; 2. scientists from Ukraine; 3. scientists of non-Ukrainian origin, but those who want to help in the promotion of Ukrainian science.

Policy-makers are also interested in the initiative both from Ukraine at the level of the Ministry of Education and Science of Ukraine and the Office of the President, as well as diplomatic missions of various countries around the world. The initiative is also interesting

for foundations that direct their resources to building networks.

The Ukrainian Science Diaspora's actions are the following:

→ Identifying the needs of Ukrainian scientists for further development of a policy for their support.
→ Engaging the Ukrainian scientific diaspora in dialogue and communication among themselves and with scientists who have remained in Ukraine.
→ Consultations on establishing centres of Ukrainian scientific communities in different countries and support for their activities.
→ Creating a mapping of the Ukrainian scientific diaspora and a database of those scientists who could participate in joint initiatives in the future.

At the moment, the 'Ukrainian Science Diaspora' initiative is still in the process of formation and on the path of developing a network of Ukrainian scientists in different countries. The extension of the global networking is made via online/in-person/hybrid meetings with discussions on ways of smooth integration in the host country, science seminars and workshops are conducted. To join this initiative the Ukrainian Scholars are invited to fill the form and to join the telegram chat of Ukrainian Science Diaspora.

The digital instrument for the initiative 'Ukrainian Science Diaspora', which is designed by MIT [Massachusetts Institute of Technology] is discussed and the international authorities support conducting such meetings. This instrument will include the mapping of the Ukrainian science diaspora and will also help to connect scientists and facilitate communication, which is essential for promoting research projects and supporting initiatives.

### 3.4 Session 3: MIT support for digital platform of Ukrainian Science Diaspora and discussion: Ideas for improving the digital platform of Ukrainian Science Diaspora?

***Svitlana Krasynska***
*Massachusetts Institute of Technology*

MIT-Ukraine is a programme that aims to leverage the resources at MIT to support Ukraine in various ways, by bringing together faculty, researchers, students, and staff to create programming for Ukraine and support Ukrainian scientists through research collaboration and internships.

MIT-Ukraine aims to use existing coursework and lab work to direct them towards Ukrainian projects, highlighting the importance of global collaboration and innovation in supporting countries facing challenges.

***Yevheniia Polishchuk***

*Member, The Council of Young Scientists at the Ministry of Education and Science of Ukraine*

The Scholar Support Office at the Young Scientists Council at the Ministry of Education and Science in Ukraine and MIT have started cooperation under the project Digital Humanities Website Design for developing the Ukrainian Science Diaspora initiative.

'Digital platform Ukrainian Science Diaspora' is a collaborative platform for Ukrainian scholars worldwide of the Ukrainian scientific diaspora and it will:

→ Support in administration of the Ukrainian scientific unions/associations in different countries on a single platform
→ Contribute to improving the image of Ukrainian science
→ Support communication between different Ukrainian scientists through mapping
→ Develop a personal brand of a Ukrainian scientist

Through the Digital platform Ukrainian Science Diaspora the Scholar Support Office plans to:

→ Support the systematic exchange of information regarding the scientific activities of representatives of the Ukrainian science diaspora and scientists in Ukraine, create a database of representatives of the Ukrainian scientific diaspora and Ukrainian scientists working abroad, and develop mechanisms for stimulating cooperation between them and scientific institutions and institutions of higher education of Ukraine.
→ To facilitate the exchange of information on the scientific activities of the Ukrainian science diaspora and scientists in Ukraine, create a database of representatives of the diaspora and Ukrainian scientists working abroad, and develop mechanisms to encourage cooperation between them and scientific institutions and higher education institutions in Ukraine.

In addition, the Digital platform Ukrainian Science Diaspora will play an important role in community-building, and offer opportunities for scholars to connect and collaborate with one another through online events, webinars, and virtual conferences, enabling them to share their research across geographical boundaries. The platform is designed to engage

Ukrainian scholars across the world, where they can collaborate, share resources, and communicate with one another.

### 3.5 Session 4: Ukrainian science diasporas and communities in Germany, Luxemburg, Krakow, and Paris

#### Ukrainian Science Diaspora in Germany

***Nataliya Butych***
*Regional Coordinator Eastern Europe, Leibniz University Hannover, Germany; Managing Director, German-Ukrainian Academic Society*

The Ukrainian scientific community in Germany is supported by various institutions and organizations, such as the Ukrainian Scientific Institute (USI), Ukrainian Free University (UFU), Ukrainian Technical and Economical Institute (UTEI), Ukrainian Free Academy of Science (UFAS), and Shevchenko Scientific Society (SSS). The Ukrainian scientific diasporas and communities in Germany are committed to promoting academic exchanges and integration between Ukraine and Germany. They organize various events, such as conferences, seminars, and workshops, that bring together Ukrainian and German scholars to discuss and collaborate on research projects. In addition, these communities provide support and resources for Ukrainian scholars seeking to integrate into the German scientific community, including language training and assistance with finding employment or academic positions.

#### Ukrainian Science Diaspora in Luxemburg

***Inna Ganschow***
*Université du Luxembourg*

The Luxembourg-Ukraine Research Network (LURN) was created with the aim of providing a space where scholars could meet, exchange ideas, and develop a network. This shows that it is important for scholars to have a place where they can connect and collaborate with others beyond their own research units. The success of LURN in connecting Ukrainian scholars in Luxembourg suggests that there may be a need for similar platforms in other

research communities. There are differences in research culture between Western academic practices and those in Ukraine. This has led to a knowledge gap in areas such as funding, science communication, and career advancement. To address this gap, LURN has focused on skill development by organizing events with a variety of speakers from both Luxembourg and Ukraine. This highlights the importance of providing training opportunities to help scholars navigate the differences in research culture and succeed in their research activities.

***Marten Düring***
*Université du Luxembourg, Luxembourg Centre for Contemporary and Digital History (C2DH)*

What we observed in the summer of 2022 was that a lot of fellows arriving in Luxembourg joined the University or the other research centres, but they were very disconnected from each other. So, there was no place for them to meet, to exchange, to get to know each other, or to connect to Luxembourg's research landscape, beyond their own individual units and the research units in which they landed. And that's when we started developing this idea of the Luxembourg-Ukraine Research Network. We wanted to create a place where Ukrainian scholars can meet up, develop a network, pursue their research activities, connect to researchers in Luxembourg, and get to know each other. Transferring the research activities from the Ukrainian context into the Luxembourg European context. And to basically pursue the work that they have been doing before. So, this is the first angle, that platform idea. The second, and this is something that emerged over time for us, was to think of key training activities we can offer, always with the idea in mind of mid- to long-term impact on the future development and reconstruction of the Ukrainian research landscape.

**Ukrainian Science Diaspora in Krakow**

***Svitlana Chugaievska***
*Jagiellonian University, Krakow*

The Ukrainian scientific community in Poland plays a vital role in promoting scientific research and collaboration between Ukraine and Poland. The Ukrainian scientific community in Krakow is an essential part of the Polish scientific landscape and plays a crucial role in promoting academic exchange and collaboration between Ukraine and Poland. In the context of solving common scientific problems in Ukraine after the military recovery,

the creation of the Ukrainian Science Diaspora in Poland is of particular importance. The Jagiellonian University in Krakow made the first steps for the unity of the Ukrainian scientific academic community in Poland, where administration sincerely supported the initiative of solidarity and unity of scientists abroad.

**Ukrainian Science Diaspora in Paris**

***Olena Kovalchuk***
*University of Aix-Marseille, France*

The organization of seminars for scientists by the Ukrainian Science community in Paris serves as a pivotal platform for fostering scientific collaboration and knowledge-sharing among researchers. Through the dissemination of scientific findings and ideas, seminars play a crucial role in advancing scientific knowledge and promoting innovation within various fields of research.

## 3.6 Session 5: Discussion: Ideas for further development of the Ukrainian Science Diaspora's network

During this second conference, individual conversations with representatives of Ukrainian science both in Ukraine and abroad, and their surveys, led to the formulation of the directions for the development of the initiative 'Ukrainian Science Diaspora'. These directions are consistent with the approval of the Government of Ukraine Recovery Plan of Ukraine. The document defines the prospects for the future life of the country under the conditions of martial law and its recovery after its abolition, and also contains a separate section related to the direction of 'Science and Innovation'. One of the activities planned for implementation in the mentioned direction is the development of cooperation with the scientific diaspora.

The directions for the development of the initiative 'Ukrainian Science Diaspora' include:

→ Strengthening Ukrainian scientific unions/centres/associations across the world and encouraging the creation of new ones in other countries. This will be achieved through a series of workshops that focus on effective administration of Ukrainian scientific

unions/centres/associations and sharing experiences of existing practices.

- → Expanding the network of the Ukrainian scientific diaspora by involving new members in joint communication platforms. Relevant letters of inquiry will be sent to partners in different countries, including universities, laboratories, industry scientific associations, university associations, and ministries of education, science, and innovation etc.
- → Promoting the integration of Ukrainian scientists into the global research environment by improving their necessary skills for high-class research. This will be accomplished by holding workshops for Ukrainian scholars (for those who have left Ukraine because of the Russian war in Ukraine and those who are in Ukraine) with involvement of the Ukrainian scientists who have been in non-Ukrainian academic environments for a long time, and foreign colleagues to improve skills for conducting advanced research and knowledge about the academic culture in different countries, which will help quickly establish partnerships between Ukrainian and foreign institutions.
- → Developing scientific diplomacy to address problems caused by the war in Ukraine at the global level as well as building trust and understanding between Ukraine and other countries and cultures. This will involve defining problems and discussing them at different levels with different stakeholders, as well as preparing relevant documents.
- → Increasing the level of awareness of Ukrainian scientists, both abroad and in Ukraine. This will be achieved through the preparation of the work Science in 32 snapshots. Furthermore, the Digital platform Ukrainian Science Diaspora will enable Ukrainian scientists to assert themselves and improve their own brand.
- → Searching for high-tech startups with Ukrainian science diaspora and developing programmes for allocating their labs in Ukraine (after the war).
- → Development of mechanisms for stimulating cooperation of representatives of the Ukrainian scientific diaspora and Ukrainian scientists working in foreign institutions of higher education, scientific institutions, laboratories, etc., with scientific institutions and institutions of higher education of Ukraine.
- → Creating a supportive environment that includes financial incentives, professional networks, and research opportunities can help encourage scientists to return to, in particular, government accreditation programmes, cooperation programmes with Ukrainian institutions, programmes with networks and professional associations help connect scientists with opportunities in their home countries, government programmes for the development of academic entrepreneurship for scientists to start their own businesses and create jobs in Ukraine.

## SPEAKER BIOGRAPHIES

### Day 1

**Alison Meston**

Director of Communications, ISC

Alison is originally from Western Australia and joined the ISC as Senior Communications Officer in February 2019 and was appointed Communications Director in April 2020. Her role includes developing the ISC communications and outreach strategy, supporting membership engagement and working alongside colleagues on a wide range of ISC projects. Alison holds a Master of Arts degree in Public Policy and International Law from the American University of Paris and most recently, a Programme Certificate in Climate Change Management from the University of Edinburgh. Alison has post-graduate qualifications in Journalism and Education.

Prior to joining the ISC, Alison worked in the Communication and Information sector at UNESCO, as Director of Press Freedom for the World Association of Newspapers and News Publishers, and as a Public Affairs officer for the British Red Cross. She also spent twelve years in the labour movement in Australia and the UK, organizing campaigns in sectors such as nursing, care homes, education, and the food and airline industries.

**Sir Peter Gluckman**

President, ISC

Peter Gluckman became President of the ISC in October 2021. His term will continue until the General Assembly of 2024. He is also an ISC Fellow and a member of the Fellowship Council, as well as a member of the Global Commission on Science Missions for Sustainability.

Peter Gluckman is an internationally recognized biomedical scientist, and currently heads Koi Tū: The Centre for Informed Futures at the University of Auckland. From 2009–2018 he was first Chief Science Advisor to the Prime Ministers of New Zealand and from 2012–2018 Science Envoy for the New Zealand Ministry of Foreign Affairs and Trade. He was foundation chair of the International Network of Government Science Advice (INGSA) from 2014–2021.

He trained as a paediatrician and biomedical scientist, publishing over 700 papers and

several academic and popular books in animal science, developmental physiology, growth and development and evolutionary biology and evolutionary medicine. A key theme of his research has been on understanding how a baby's environment between conception and birth determines its childhood development and life-long health – and the impact that this knowledge has for individuals and whole populations. He co-chaired the WHO Commission on Ending Childhood Obesity (2013–2017). He is chief scientific officer of the Singapore Institute for Clinical Sciences.

Peter Gluckman has written and spoken extensively on science-policy, risk assessment, science-diplomacy, and science-society interactions. In 2016, he received the AAAS award in Science Diplomacy. He has received the highest civilian and scientific honours in New Zealand. He is a fellow of the Royal Society of London, of the Royal Society of New Zealand a fellow of the Academy of Medical Sciences (UK) and a member of the National Academy of Medicine (USA). He holds a Distinguished University Professorship in the University of Auckland, New Zealand and honorary chairs at the University College London, University of Southampton and National University of Singapore.

**Antonio Loprieno**
President, ALLEA

Antonio Loprieno is Professor of History of Institutions at the University of Basel, Switzerland. He assumed the Presidency of the European Federation of Academies of Sciences and Humanities, (ALLEA) in May 2018, after having served as Rector of the University of Basel, President of the Swiss Rectors' Conference and President of the Swiss Academy of Science and of the Austrian Science Council. He studied Egyptology, Linguistics and Semitic studies at the University of Turin in Italy, and then taught at various European and American universities, including the University of Göttingen (Germany), the University of Perugia (Italy), and UCLA (USA).

His basic research is in the area of Egyptian and Semitic linguistics, ancient history and cultural studies, particularly the interface of language and culture in ancient Near Eastern civilizations. But as a consequence of his service in academic leadership functions, he has become increasingly involved in higher education studies, science communication, and science advice.

Currently, he also presides over the Science Advice for Policy by European Academies (SAPEA), which is the academic arm of the EU science advice mechanism (SAM).

**Anne Husebekk**

Vice-President, Committee of Freedom and Responsibility in Science, ISC; Professor, The Arctic University of Norway (UiT)

Anne Husebekk was elected Rector (Vice-Chancellor) of The Arctic University of Norway (UiT) in 2013–2021. As Rector, she was also Chair of the Board of Governors of the University. Both research and education are particularly focused on climate and environment and sustainability in the Arctic and globally. Professor Husebekk is a physician by training (MD, specialist in immunology and transfusion medicine), and professor in immunology at the Faculty of Health Sciences. She has been a member of two boards in the Research Council of Norway. She has been a board member at the University of the Arctic since 2018. She is a member of the Norwegian Academy of Science and Letters. Professor Husebekk discusses Arctic questions internationally and is in particular interested in climate and environment, health and geopolitics, freedom and responsibility in science.

**Olga Polotska**

Executive Director, National Research Foundation of Ukraine (NRFU)

Olga Polotska is Executive Director of the National Research Foundation of Ukraine (NRFU) the main task of which is competitive selection of best R&D projects and their grant support in Ukraine. She holds overall responsibility for the NRFU's operational activity, represents the NRFU in governmental organs and in international relations, manages activity of the Directorate, and performs other functions in the capacity of the CEO of the state budgetary institution.

She holds a PhD in Philology (German Languages, Cognitive Linguistics) and a research title of Associate Professor. She has 20+ experience of working in Academia. In 2010–2019, she occupied the position of Head of the English Department at the Faculty of Foreign Languages (at V. N. Karazin Kharkiv National University). From 2019 to 2020 she launched and worked as Head of the Overseas Clients Department for a medical institution. In 2020, she was appointed Executive Director of the NRFU by the Prime Minister of Ukraine.

**Yevheniia Polishchuk**

Member, The Council of Young Scientists at the Ministry of Education and Science of Ukraine

Yevheniia Polishchuk represents the initiative of the Ukrainian Science Diaspora. Together with her colleagues she put a lot of effort into supporting Ukrainian scientists who suffered from the war. Yevheniia is a co-author of the assessment reports on needs of Ukrainian scientists both inside of Ukraine and outside, science donor-mapping for Ukraine documents, etc. She is a co-organizer of training for early career researchers.

Yevheniia is affiliated as a professor in Kyiv National Economic University named after Vadym Hetman and her research interest is related to innovation, science and business cooperation, smart specialization.

**Luke Drury**

Vice-President, ALLEA

Luke Drury is Emeritus Professor of Astrophysics in the Dublin Institute for Advanced Studies and a Vice-President of ALLEA. He has a degree in pure mathematics and experimental physics by the Trinity College Dublin, and a PhD in astrophysics by the Institute of Astronomy, University of Cambridge. He has previously worked in the Max Planck Institut für Kernphysik in Heidelberg before returning to Ireland as Senior Professor in the Cosmic Ray Section. He was President of the Royal Irish Academy from 2011 to 2014. His research interests include plasma physics, particle acceleration, gas dynamics, shock waves, and cosmic ray origin.

**Jerzy Duszynski**

Advisor to the President, Polish Academy of Sciences (PAN)

Prof Jerzy Duszynski was the President of the Polish Academy of Sciences (PAS) in 2015–2022. From 1 January 2023, he has served as the advisor to the President of PAS, mainly delegated to issues of supporting science in Ukraine. He has been a Member of PAS since 2007 and a professor at the Nencki Institute of Experimental Biology, PAS. Duszynski's research interests focus on bioenergetics, the role of mitochondria in cell functioning and neurodegenerative diseases. In 2008–2009, he served as Deputy Minister responsible for science at the Ministry of Science and Higher Education (Poland). He was elected to the Academia Europaea and a Foreign Member of the Chinese Academy of Sciences. He is a

Member of the Board of Trustees at the Barcelona Institute for Research in Biomedicine. His recent activities include chairing the interdisciplinary Covid-19 advisory team at PAS and programmes supporting Ukrainian scholars in Poland.

**Oleksandra Ivashchenko**
Medical Physicist in Nuclear Medicine, University Medical Center Groningen;
Coordinator, Science for Ukraine

Oleksandra (Sasha) Ivashchenko is a medical physicist at the Department of Nuclear Medicine and Molecular Imaging of the University Medical Center Groningen, The Netherlands. She is an active member of multiple nongovernmental associations, including the #Science4Ukraine initiative, a voluntary movement aimed at supporting students and scientists from Ukraine.

**Nataliia Yeremenko**
EFDS Programme Coordinator, ALLEA

Nataliia Yeremenko serves as Coordinator of the European Fund for Displaced Scientists (EFDS) Programme, which was launched in 2022 by ALLEA in response to the ongoing Russian invasion of Ukraine. In this role, she is responsible for providing assistance to the Ukrainian scientific community through the coordination of financial support for Ukrainian scientists and institutions that have been impacted by the war. Originally from Ukraine, Nataliia brings to the EFDS Programme the commitment and experience gained from a career spanning over 20 years in the international development sector.

**Dominik Kalweit**
Programme Manager, MSCA4ukraine, Scholars At Risk Europe

Dominik Kalweit is the Programme Manager of MSCA4Ukraine for Scholars at Risk Europe. Previously, he was the Vice Executive Director and Director for Projects & Initiatives for the Maltese nonprofit NGO Kopin. Dominik holds a Diploma (ISCED 7) from the University of Augsburg, Germany, in Political Science and Communication Sciences and has been active in international development cooperation, education and human rights related fields since 2005. In his career, he focuses on strategic planning, project development and management, networking, training, advocacy, and research. Dominik is actively involved in

a number of social justice and human rights initiatives, including the Destination Unknown Campaign led by Terre des Hommes, the 'Free the El Hibler 3' campaign, the Malta Refugee Council, and in Aid Watch.

**Manal Stulgaitis**
Education Officer, United Nations High Commissioner for Refugees (UNHCR)

Manal Stulgaitis is Education Officer leading on higher education for the United Nations High Commissioner for Refugees (UNHCR) from headquarters in Copenhagen, Denmark. She has over 15 years of experience in refugee protection, with expertise in durable solutions, higher education, urban protection, risk management, coordination, and humanitarian-development planning. Holding a professional degree in Law and a master's degree in international law and Economic Development, she has worked in the Middle East, North Africa, sub-Saharan Africa, Asia, and the Americas. She is currently working on inclusive refugee education issues ranging from education transitions and complementary pathways to higher education in the context of fragility and development.

**Karly Kehoe**
Professor and Canada Research Chair, Saint Mary's University, Canada

S. Karly Kehoe is Professor of History and Canada Research Chair in Atlantic Canada Communities at Saint Mary's University. She is a member of the ISC's Freedom and Responsibility in Science Standing Committee, the InterAcademy Partnership's Policy Advice Development Committee, and the Science in Exile Steering Committee. She is the past president of the Royal Society of Canada's College of New Scholars, Artists and Scientists and is the founder and lead of the RSC's At-Risk and Displaced Academics and Artists (ARDAA) programme. In addition to ARDAA, she also co-founded the At-Risk and Academic Refugee Membership programme (Young Academy of Scotland) and the At-Risk Scholar Initiative (Global Young Academy).

**Vivi Stavrou**
Executive Secretary of the ISC Committee for Freedom and Responsibility in Science (CFRS) and Senior Science Officer, ISC

As Executive Secretary Vivi leads on managing the CFRS portfolio of activities. Vivi is a

Clinical Psychologist and development worker with extensive international experience in humanitarian emergencies and post-conflict situations as a social development consultant, evaluator and researcher. She has worked with UN and development agencies, government ministries and services, and academic institutions in the areas of child protection, mental health and psychosocial support and health systems development, Health and Human Rights, and security sector reform.

**Alexander Kellner**
Director, Museu Nacional/UFRJ, Brazil

Palaeontologist, PhD from Columbia University; since 1997 at the Museu Nacional/UFRJ; Member of TWAS and Brazilian Academy of Sciences.

**Tina Comes**
Chair, SAPEA's Working Group on Crisis Management, and Professor, TU Delft, The Netherlands

Tina Comes is Full Professor on Decision Theory & Information Technology for Resilience at the TU Delft and the University of Maastricht, The Netherlands. Prof. Comes is a member of the Norwegian Academy for Technological Sciences and the Academia Europaea. She serves as the Scientific Director of the 4TU.Centre for Resilience Engineering, as Principal Investigator on Climate Resilience for AMS, as Director of the TPM Resilience Lab, and she leads the Disaster Resilience theme for the Delft Global Initiative. She chaired the SAPEA Working Group on the Future of the EU's Strategic Crisis Management. Prof Comes' research focuses on decision theory and AI for resilience and disaster management.

**Heike Wendt**
Professor For Education Research/Head of Institute For Education Research And Teacher Education, Graz University, Austria

Heike Wendt is Professor for Education Research and Head of the Institute of Education Research and Teacher Education at the Faculty of Environmental, Regional and Educational Sciences of Graz University in Austria. Her research interests are in international comparative research and school development with a focus on questions of equity and transitions of education systems. She served for more than 10 years as national research coordinator for

Germany's participation in international large-scale assessment studies and is involved in numerous international research projects and partnerships in Europe, the Balkans, and the Middle East. She has published more than ten books and 150 articles and book chapters.

**Gerson Sher**

Volunteer Co-Chair, Ad Hoc Working Group on Science in Ukraine, National Academies of Sciences, Engineering, and Medicine (NASEM)

Gerson S. Sher is a retired US civil servant and foundation executive who has devoted his career to the intersection of scientific cooperation, international affairs, and global security, primarily with the countries of the former Soviet Union. He was Programme Coordinator for US-Soviet and East European Programmes at the National Science Foundation, from which he is retired; Chief Operating Officer of George Soros's International Science Foundation (on assignment from NSF); Founding President of the U.S. Civilian Research and Development Foundation for the Independent States of the Former Soviet Union (now CRDF Global); President of the United States Industry Coalition; and a non-resident senior adviser at the Henry L. Stimson Center. He is currently co-chair of an informal working group on science in Ukraine created by the US National Academies of Sciences, Engineering and Medicine (NASEM) and he is a member of the Board of International Counsellors of the National Research Foundation of Ukraine (NRFU) and of the Editorial Board of the Ukrainian scientific journal, Svitolina.

Gerson's publications include From Pugwash to Putin: A Critical History of US-Soviet Scientific Cooperation (Bloomington: Indiana University Press, 2019; Chinese translation 2022 through China Science and Technology Press) and other books and articles on US-Soviet and post-Soviet scientific cooperation, Marxist intellectual history, and nuclear security and safety. He received a B.A. in Russian Studies from Yale University and a PhD in Politics from Princeton University.

## Day 2

**Lidia Borrell-Damian**

Secretary General, Science Europe

**Olga Polotska**

Executive Director, National Research Foundation of Ukraine

**Igor Taranov**

Director General, Directorate of Science and Innovation, Ministry of Education and Science of Ukraine

**Signe Rats**

Deputy Director General for Open Innovation and Chief Negotiator for Horizon Europe Association, European Commission

**Angela Liberatore**

Head of the Scientific Management Department, European Research Council Executive Agency

**Mykhailo Helenium**

First Secretary, Mission of Ukraine to the EU

**Andrea Landuyt**

Head of International Funding, Swiss National Science Foundation

**Sebastian Den Bak**

Interim Director and Head of International Policy, Dutch Research Council

**Kostyantyn Kyrychenko**

Head of International Affairs Department, Sumy State University

**Masha Vlasenko**

Research Fellow, Institute of Mathematics of the Polish Academy of Sciences

**Mónica Martin-Lanuza**

Head, International Partnerships, Spanish National Research Council (CSIC)

**Marco Pallavicini**

Vice-President, National Institute for Nuclear Physics, Italy

## Day 3

**Olga Budnyk**

Advisor to the President of Ukraine on the Fund of the President of Ukraine for Support of Education, Science and Sports

**Igor Taranov**

Director General, Directorate of Science and Innovation, Ministry of Education and Science of Ukraine

**Olesia Vashchuk**

The Head of Council of Young Scientists at the Ministry of Education and Science of Ukraine

**Yury Gogotsi,**

Professor at Drexel University, Director of the A.J. Drexel Nanotechnology Institute

**Peter McGrath**

Coordinator, the InterAcademy Partnership, the World Academy of Sciences,
Peter McGrath has a background in the natural sciences and science communication. He joined TWAS – The World Academy of Sciences – in Trieste, Italy, in 2003. In 2011 he was tasked with developing TWAS's science diplomacy programme, which has since established itself as one of the most renowned activities of its type globally. In 2013 he transferred to the InterAcademy Partnership (IAP) – the global network of academies of science, medicine and engineering – while also retaining his supervision of the TWAS's science diplomacy activities.

**Svitlana Krasynska**

MIT-Ukraine Programme Manager, Research Associate at Harvard University

**Nataliya Butych**

Regional Coordinator Eastern Europe at Leibniz University Hannover, Germany, in charge of the DAAD funded programme "Support for the internationalisation of Ukrainian higher education institutions – continuing education programmes for administrators at Ukrainian HEI (2019–2023)"; and Managing Director, German-Ukrainian Academic Society

**Inna Ganschow**

Research Scientist, Centre for Contemporary and Digital History (C2DH), Université du Luxembourg

**Marten Düring**

Assistant Professor, Developing the Luxembourgish-Ukrainian Research Network

**Svitlana Chugaievska**

PhD in Economics, Associate Professor, Department of Economics and Innovation, Jagiellonian University in Krakow, Poland; Department of Mathematical Analysis, Business Analysis and Statistics, Zhytomyr Ivan Franko State University, Ukraine

**Olena Kovalchuk**

Professor, University of Aix-Marseille


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