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# Support Mechanisms for Researchers at Risk: Historical Development, Survey Evidence, and Policy Lessons from Wartime Ukraine

White Paper

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# TABLE OF CONTENTS

# Executive Summary

Academic support systems for researchers at risk have never been tested at the scale, speed, or geographic concentration that Russia's full-scale invasion of Ukraine created after February 2022. Understanding whether those systems worked — and for whom — is both practically urgent and analytically important for designing better architectures before the next crisis. This white paper examines how support mechanisms for researchers at risk have developed over time and how effectively they function in practice, with a particular focus on Ukrainian researchers during the full-scale Russian - Ukrainian war (2022-2026). This report was commissioned against the backdrop of Russia's full-scale invasion of Ukraine — the largest crisis-driven displacement of a national research community in post-Cold War Europe — and responds to a gap in evidence-based evaluation of whether existing support architectures are fit for purpose at scale. It combines historical and policy analysis with original survey data collected from 291 researchers in 2026, bringing together quantitative assessments and qualitative accounts of lived experience.

Researchers at risk are understood here as academics whose ability to carry out research is disrupted by conflict, political instability, or systemic threats. Over the past century, support for this group has gradually shifted from ad hoc emergency responses toward more structured and transnational systems. These now include emergency relocation programmes, fellowships, financial assistance options, hybrid and remote models, and a range of legal and administrative support instruments. Taken together, these mechanisms form a fairly complex global ecosystem, but their effectiveness is not uniform. Depending on the lens of evaluation, whether safety, research continuity, career progression, equity of access, family circumstances, or long-term system resilience, the same instruments can produce very different outcomes.

Survey findings from Ukrainian researchers suggest a consistent pattern: international support instruments are perceived as significantly more effective than national programmes across all categories. Research grants, access to infrastructure, and in-person fellowships receive the strongest evaluations, while advocacy and legal support mechanisms are consistently rated the weakest. At the same time, the results highlight important structural limitations. Emergency relocation programmes are highly effective in providing immediate safety and enabling short-term continuation of research, but they are typically limited in duration. This often leaves researchers moving through a series of temporary positions without a clear path toward stable academic integration, which in turn fragments research trajectories and reduces long-term planning capacity. Remote and hybrid models are becoming increasingly important, particularly for researchers who remain in Ukraine or maintain links with Ukrainian institutions while working

abroad. These approaches help preserve continuity of research and institutional connections, but their effectiveness is still constrained by uneven infrastructure, disciplinary limitations, and weaker integration into international academic networks compared to in-person models.

Beyond programme design, the survey points to several cross-cutting structural issues. Financial stability emerges as the single most important condition underlying perceptions of effectiveness across all instruments. At the same time, limited awareness of available programmes significantly restricts access, suggesting that information gaps are as consequential as funding gaps. A clear divide also emerges between researchers who relocated abroad and those who remained in Ukraine, with each group facing different but equally persistent barriers that current instruments do not fully address. Finally, family and caregiving responsibilities, especially among researchers with children, play a significant role in limiting participation in mobility-based options, yet remain largely under-integrated into programme design.

Overall, the evidence suggests that while current support systems are highly effective in moments of immediate crisis, they are less successful in supporting long-term academic sustainability. The Ukrainian case highlights both the strengths and the structural limits of the global system for supporting researchers at risk, particularly when it comes to scaling, coordination, and maintaining career continuity beyond the emergency phase. The findings point toward a single overarching diagnosis: existing support architectures are engineered for emergency rescue, not for career sustainability. Addressing this requires not primarily new funding, but redesigned instruments — with longer time horizons, coordinated information infrastructure, and provisions for family co-mobility built in from the outset.

When asked to define what effective support means to them, researchers described not single interventions but systemic conditions: “effectiveness means not a one-off payment but the creation of conditions for long-term professional stability — financial predictability, safety, access to resources, and the ability to plan research for at least one to two years ahead” (Q9 respondent). This understanding of effectiveness as a durable condition rather than an emergency measure runs through the survey data and shapes the analysis throughout this paper.

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# Introduction

Academic freedom and the conditions necessary for scholarly work are among the first casualties of armed conflict, political repression, and systemic crisis. When researchers are displaced, silenced, or cut off from laboratories, data, and colleagues, the consequences extend far beyond individual careers: they ripple through national knowledge systems, erode the foundations of evidence-based policymaking, and sever intergenerational links in scientific communities that may take decades to rebuild. Understanding how the international community responds to these threats — and how effectively — is therefore not only an academic question. It is a practical and urgent one.

This white paper examines that question through two interconnected lenses. The first is historical: tracing how support mechanisms for researchers at risk have evolved over the past century, from fragmented, philanthropy-driven emergency responses in the 1930s to the more structured, transnational systems of today. The second is empirical: drawing on original survey data from 291 Ukrainian researchers collected January–March 2026. The choice to centre the Ukrainian case is deliberate: Russia's full-scale invasion on 24 February 2022 did not produce the targeted, case-by-case persecution around which many scholars-at-risk programmes had historically been designed. Instead, it generated broad, system-wide disruption affecting an entire national research community simultaneously — making Ukraine a stress test for the existing global support architecture at a scale and speed it had not been built to meet.

This paper asks which support instruments Ukrainian researchers perceived as most effective, who accessed them, and what prevented access — and how these patterns compare with international versus national provision and with earlier crisis responses. Five findings emerge. International instruments substantially outperform national equivalents across all twelve instrument categories, yet neither system consistently crosses a meaningful effectiveness threshold: no Ukrainian national instrument reaches the neutral midpoint of a five-point scale. Information failure — not ineligibility — is the primary access barrier, with the largest group of non-users (49 of 165 respondents) reporting simply that they were unaware programmes existed. A structural asymmetry is built into the architecture of existing instruments: national programmes exclude researchers located abroad while international programmes calibrate their mobility requirements to conditions that in-country researchers cannot satisfy. Researchers define support effectiveness not as a single intervention but as a systemic condition — financial predictability enabling research continuity, thus enabling career stability — with 30 percent of substantive donor recommendations calling explicitly for multi-year instruments over emergency grants. Finally, gender and family constraints function as a structural barrier to programme participation that existing evaluation frameworks systematically fail to capture.

The paper is organised into four sections: historical evolution of support mechanisms (Section 1), a typology of contemporary instruments and the Ukrainian stress-test case (Section 2), evaluation of effectiveness across six analytical dimensions (Section 3), and policy recommendations (Section 4). Three analytical supplements accompany the main text: a full quantitative and computational text analysis of the survey data (Supplement 1), the survey questionnaire in its original form (Supplement 2), and a PRISMA-compliant systematic literature review (Supplement 3).

# Section 1: The Evolution of Support Mechanisms for Scientists at Risk from the Early Twentieth Century to the Present

Throughout the twentieth and twenty-first centuries, scholars across the globe have repeatedly faced constraints on their work due to political repression, armed conflict, and widespread human rights violations (Scholars at Risk, 2021). During periods of crisis, experiences of persecution, forced displacement, and loss of access to laboratories, data, and funding were not isolated incidents, but recurring challenges leaving long-term consequences for national research systems and societies. In this context, the term "scholars at risk" is used to describe researchers, academics, and other knowledge producers whose ability to work and live safely is under threat. These risks may arise directly from their research, teaching, or public engagement, particularly when their work challenges political authorities, dominant ideologies, or social norms, but they are also often shaped by broader circumstances such as armed conflict, political instability, or systemic repression. In many cases, scholars face a combination of pressures, including surveillance, censorship, loss of institutional affiliation, and restricted access to funding and infrastructure, as well as, in more severe situations, harassment, detention, or forced displacement. As a result, being "at risk" does not refer to a single, clearly defined condition, but rather to a spectrum of vulnerabilities that can affect both personal safety and the continuity of academic work.

These circumstances laid the foundation for the emergence of various mechanisms to support at-risk researchers. Such mechanisms ranged from ad hoc emergency assistance and short-term fellowships to more structured programmes developed by universities, governments, or international organizations (New School Archives, 2018). The evolution of these mechanisms informed current policies and approaches to supporting at-risk scholars. Understanding the effectiveness of existing mechanisms is crucial for designing policies equipped to address the challenges faced by contemporary academics.

## 1.1 Early Twentieth Century: The Origins of Systematic Support Mechanisms

The first systematic international mechanisms for supporting scholars at risk emerged in direct response to a specific political event: the Law for the Restoration of the Professional Civil Service, enacted in Germany on April 7, 1933, which mandated the dismissal of Jewish academics and those deemed politically unreliable from German universities. These measures went far beyond the loss of academic and teaching positions and often posed direct threats to scholars' lives. This legislation did not emerge from nowhere. World War I had already severely disrupted research funding and institutional networks across Central and Eastern Europe, weakening the university autonomy that had previously afforded scholars some protection from state interference (Ash & Söllner, 1996). Together, the political violence of the Nazi regime and the pre-existing fragility of Central European

academic institutions left thousands of scholars vulnerable to sudden dismissal, persecution, and forced displacement. As a result, a large wave of forced academic migration followed — with destinations including, in the first instance, Turkey, and subsequently the United Kingdom and the United States.

## The Central European Response: Displaced Scholars Organizing Their Own Rescue

The earliest organized response to the Nazi dismissal laws came not from a state institution or a philanthropic foundation, but from displaced scholars themselves. Philipp Schwartz, a Hungarian-born pathologist who had held a chair at the University of Frankfurt, fled Germany following the April 1933 dismissals and established the *Notgemeinschaft deutscher Wissenschaftler im Ausland* (Emergency Association of German Scientists Abroad) in Zurich in May 1933 (Widmann, 1973). The organization functioned as a placement network, identifying displaced German-speaking academics and matching them with positions at universities willing to receive them. Its most significant early partner was not a European or North American institution but the Turkish government, which under Atatürk's modernization program was actively reforming its university system and sought European expertise to staff newly reorganized faculties (Neumark, 1980). Schwartz himself accepted a position at the University of Istanbul, where he worked until 1953, and dozens of German academics followed similar routes into Turkish institutions across medicine, law, economics, and the natural sciences (Widmann, 1973). This episode established two principles that recur across every subsequent generation of support mechanisms: first, that displaced scholars can act as agents of their own protection rather than passive recipients of receiving-country hospitality; and second, that the geography of academic refuge is shaped as much by the political interests of receiving states as by the humanitarian commitments of universities. The *Notgemeinschaft* is also the direct historical antecedent of the Philipp Schwartz Initiative, launched in 2015 by the Alexander von Humboldt Foundation and named after its founder — a continuity between the 1930s émigré response and the contemporary German support architecture that the subsequent literature rarely makes explicit.

***The United Kingdom: Academic Assistance Council*** A parallel initiative took shape in London in the same month — May 1933 — representing the British strand of what was rapidly becoming a transnational European response to the Nazi crisis. The Academic Assistance Council — later renamed the Council for At-Risk Academics (CARA) — was founded in London in May 1933, with Lord Rutherford as its first president and William Beveridge as a central organizing figure (CARA, n.d.). CARA assisted displaced scholars in securing academic positions, fellowships, and opportunities for professional integration within British universities (CARA, n.d.). This support was vital not only for safeguarding individual academic careers, but also for preserving international research networks during periods of severe political repression.

At the same time, the program had clear limitations. Assistance was mainly directed toward senior and well-known scholars, while early-career researchers and those without established professional connections encountered significant obstacles (Mitchell G. Ash & Alfons Söllner, 1996). Most forms of support were temporary, and displaced scholars were rarely offered realistic pathways toward long-term integration into the British academic system — a limitation, as the following section shows, shared by the American initiatives that developed in parallel.

## The United States: Philanthropically Funded Emergency Response

In the United States, the principal coordinating body was the Emergency Committee in Aid of Displaced Foreign Scholars, established in 1933 under the leadership of Stephen Duggan

of the Institute of International Education and active until 1945 (Duggan & Drury, 1948). The Committee arranged temporary academic positions and fellowships in cooperation with approximately 145 academic and cultural institutions. Although around 6,000 scholars applied for assistance, only 335 ultimately received direct support. These figures illustrate both the overwhelming demand for help and the limited resources available to the Committee. Funding came from 18 private and philanthropic foundations, underscoring the fact that state institutions did not play a direct role in supporting scholars at risk at that time.
The University in Exile, established in 1933 at The New School for Social Research, represents another initiative that significantly expanded support opportunities for displaced researchers. Active throughout the 1930s and 1940s, particularly during the period of intensified academic persecution under the Nazi regime (1933–1945), the program enabled more than 180 displaced scholars to continue their academic work in the United States. Supported by the Rockefeller Foundation and the Emergency Committee, it led to the creation of the Faculty of Political and Social Science at the New School, which for many years served as an important center of scholarship in exile ("University in Exile," 2018). Harvard University's National Research Associates program, active primarily in the mid-1930s through the early 1940s (1935–1943), provided scholars with access to libraries, laboratories, and intellectual communities, even in the absence of formal academic appointments (Emergency Committee in Aid of Displaced Foreign Scholars, 1933–1945). This allowed some researchers to continue their work even when academic activity was not their primary source of income (Institute of International Education, 2014).

The American initiatives provided meaningful immediate protection and enabled a limited number of scholars to continue their work. However, they shared the same structural limitation as the British and Central European responses: the absence of clear pathways for long-term academic career development for those who could not safely return home (Ash & Söllner, 1996). Some researchers who received support did eventually secure permanent academic positions, typically those with the strongest prior reputations, language skills, and disciplinary fit with American research priorities. Across all three national contexts, the most competitive and resource-intensive opportunities were captured disproportionately by senior scholars with established international profiles, reinforcing inequalities within an already vulnerable population rather than addressing them systematically.

**Asia, Africa, and the Middle East: Absence of Formal Mechanisms**

In contrast to Europe and North America, the absence of formal support mechanisms for scholars in Asia, Africa, and the Middle East in the early twentieth century was not simply a lag in institutional development — it reflected a structurally different political economy of knowledge production. Under colonial and semi-colonial administrations, universities in Africa, Asia, and the Middle East existed primarily to serve administrative and ideological functions defined in metropolitan capitals, not to support independent scholarly inquiry (Said, 1978; Cooper, 2002). In Africa, the later stages of colonial expansion and the aftermath of conflicts such as the Second Boer War reshaped institutional life under increasingly centralized colonial rule. In Asia, anti-colonial uprisings and broader imperial transformations, including the decline of the Qing dynasty and the Xinhai Revolution, disrupted educational systems and intellectual networks (Spence, 1990). In the Middle East, World War I and the collapse of the Ottoman Empire led to major geopolitical changes, including the Arab Revolt and the introduction of the Mandate system, which significantly affected the governance of universities and scholarly institutions (Fromkin, 1989). As a result, the preconditions for scholars-at-risk programmes — institutionally autonomous

universities, civil society organizations capable of advocacy, and states with capacity for academic hospitality — were structurally absent across most of these regions, a deficit whose consequences for global equity in academic protection are still visible in the contemporary landscape documented in Section 1.2. The 1930s thus produced three parallel and largely independent support architectures — a Central European émigré network operating through Turkey and Switzerland, a British university-based council, and a philanthropically funded American system — each effective in providing immediate protection to a small and self-selected group of scholars, each structured by the same fundamental limitations: temporary placements, inequitable access, and no pathway to long-term stability. Addressing these limitations became the organizing challenge for the more institutionalized support systems that emerged in the second half of the twentieth century.

It was not until the latter part of the century that systematic international programmes began to emerge, highlighting the long-standing gap in protection for scholars in these regions and the uneven global development of academic support networks.

## 1.2. Late 20th Century-Present: Integrated Support Systems and Policies

The second half of the twentieth century produced a succession of political crises — military dictatorships across Latin America and Southeast Asia, Soviet repression in Eastern Europe, decolonization conflicts across Africa and the Middle East — that collectively demonstrated the inadequacy of the ad hoc, philanthropy-driven responses established in the 1930s. The scale and geographic spread of these crises pushed universities, governments, and international organizations to move toward more structured and coordinated systems for supporting scholars at risk (Scholars at Risk, 2020).

### 1.2.1 The United States: From Fragmented Fellowships to Networked Systems

In the United States, from the 1950s through the 1970s, programmes gradually began to emerge in response to political crises across multiple regions. These crises included the persecution of intellectuals under Soviet-aligned regimes in Eastern Europe, and from the early 1970s, the wave of military dictatorships across Latin America — particularly Argentina, Chile, and Brazil — which displaced large numbers of academics who had been active in left-leaning intellectual communities. These early efforts operated without central coordination, functioning primarily through individual university decisions to host displaced scholars rather than through systematic placement mechanisms, but they gradually formalized into fellowship and visiting appointment opportunities as the volume of displacement increased. This longer trajectory eventually contributed to the creation of the Scholars at Risk Network, founded in 1999 at the University of Chicago by Robert Quinn and colleagues, which subsequently developed into the largest international network of universities dedicated to protecting threatened scholars, operating across more than 500 member institutions in over 40 countries by the mid-2020s (Scholars at Risk, 2024).

The IIE Scholar Rescue Fund, established in 2002 by the Institute of International Education in partnership with universities including Harvard and Cornell, further expanded the American support architecture by creating a dedicated fellowship mechanism specifically for scholars facing persecution,

providing both financial support and institutional hosting arrangements (Institute of International Education, n.d.). These initiatives typically combined short-term fellowships with mentorship, access to resources, and ways to reconnect with international academic networks. By the early 2020s, the IIE Scholar Rescue Fund had supported over 800 fellows from more than 60 countries across all regions, with scholars from the Middle East and Africa representing a significant and growing proportion of placements as crisis contexts in these regions intensified (Institute of International Education, n.d.). The American support architecture thus evolved from ad hoc university hospitality in the 1950s and 1960s toward a networked system anchored by two principal organizations — Scholars at Risk and the IIE Scholar Rescue Fund — though it retained the philanthropic funding model and short-term fellowship framework established by the Emergency Committee in the 1930s.

### 1.2.2 Western Europe: National Schemes and Transnational Coordination

In Western Europe, the development of support systems for scholars at risk followed a distinct trajectory rooted in the institutional continuity of organizations established in the 1930s, supplemented from the 2010s onward by new nationally funded schemes and, increasingly, coordinated EU-level instruments. The Council for At-Risk Academics (CARA) in the United Kingdom — the direct institutional successor to the Academic Assistance Council founded in 1933 — maintained its placement and fellowship functions through successive crisis contexts: Hungarian scholars after 1956, Czechoslovak scholars after 1968, Chilean and Argentine scholars after the 1970s coups, and scholars from Iran, Iraq, and Afghanistan from the 1980s onward, progressively expanding its geographic reach while retaining the UK university network as its primary hosting mechanism (CARA, n.d.). Germany's Philipp Schwartz Initiative, launched in 2015 by the Alexander von Humboldt Foundation and named after the founder of the 1933 *Notgemeinschaft* discussed in Section 1.1, represents the most explicit institutional bridge between the early-twentieth-century émigré response and contemporary German academic humanitarianism, providing two-year fellowships at German research institutions with a structured risk assessment process (Alexander von Humboldt Foundation, 2015). France's PAUSE Programme, established in 2017 and administered through Campus France, similarly institutionalized the hosting of at-risk scholars at French universities, with the Syrian crisis serving as its primary initial impetus and the Ukrainian crisis subsequently driving a significant expansion of its intake (Campus France, n.d.; Yarar, 2025). At the transnational European level, the response to the Ukrainian crisis from 2022 onward accelerated the development of dedicated EU-level instruments, most notably the MSCA4Ukraine programme under the Marie Skłodowska-Curie Actions umbrella organisation, which provided fellowships for Ukrainian researchers at European institutions, and the InspireEurope initiative, which sought to coordinate national schemes across member states (MSCA4Ukraine, 2023). Taken together, CARA, the Philipp Schwartz Initiative, PAUSE, and the EU-level instruments constitute what Yarar (2023) has termed a regime of 'academic humanitarianism' — a historically evolved and increasingly professionalized system that has moved from individual rescue efforts toward institutionalized selection, risk assessment, and hosting procedures, though access and long-term career outcomes remain unevenly distributed across disciplines and career stages.

### 1.2.3 Eastern Europe: From Marginal Capacity to Emergency Host Region

Eastern European countries played a limited role in the international support architecture for scholars at risk through most of the twentieth century, functioning primarily as contexts of risk — generating displaced scholars under Soviet-aligned regimes — rather than as host institutions. The capacity of universities in

Poland, Czechoslovakia, Hungary, and Romania to support international scholars was severely constrained by state control over academic appointments and by resource limitations that persisted well beyond the communist period. This changed dramatically after February 2022, when Poland in particular emerged as the primary European host country for displaced Ukrainian researchers. Polish universities absorbed a disproportionate share of the approximately 18.5% of Ukrainian scientists who had left the country by autumn 2022 (de Rassenfosse et al., 2023), driven by geographic proximity, linguistic accessibility, and the rapid mobilization of Polish academic networks — both formal and informal — to create positions and hosting arrangements (Jaroszewicz et al., 2025; Kiselyova & Ivashchenko, 2024). This transformation of Eastern Europe from a region producing scholars at risk to one hosting them represents one of the most significant structural shifts in the global support architecture of the post-Cold War period, and it is a shift that existing typologies of support mechanisms had not anticipated.

### 1.2.4 Turkey and the Middle East: Crisis Contexts and Institutional Responses

Turkey presents a dual role in the contemporary support landscape. From the 1990s onward, Turkish universities had participated in hosting displaced scholars, particularly from Iran and later from Syria following the 2011 civil war. The July 2016 coup attempt and subsequent emergency decrees abruptly reversed this dynamic: more than 6,000 academics were dismissed from Turkish universities under emergency powers, generating a new wave of displaced scholars who required external support from the same networks — particularly SAR and CARA — that had previously relied on Turkey as a stable host country (Scholars at Risk Network, 2019; Yarar, 2023). These placements usually included temporary hosting, access to research facilities, and financial support for living costs. While this allowed many scholars to continue their work, longer-term academic integration remained limited.

The Syrian civil war, which began in 2011, was the crisis that most directly accelerated the professionalization of European academic-humanitarian infrastructure in the decade before Ukraine. The displacement of Syrian academics drove the creation of the PAUSE Programme in France in 2017 and significantly expanded intake for CARA and the Philipp Schwartz Initiative, transforming these from relatively low-volume operations into higher-capacity systems with more formalized risk assessment and hosting protocols (Yarar, 2023, 2025). Through competitive selection and placement at French universities, PAUSE enabled displaced Syrian and Lebanese scholars to continue research activity, though its intake remained modest relative to the scale of displacement — a constraint that the Ukrainian crisis would subsequently expose when demand for placements surged dramatically in 2022.

### 1.2.5 Sub-Saharan Africa: Persistent Gaps and Emerging Local Options

As Section 1.1 established, the absence of scholars-at-risk support mechanisms in Sub-Saharan Africa during the early twentieth century reflected the structural constraints of colonial academic governance rather than a simple developmental lag. These structural conditions continued to shape the landscape through the postcolonial period: universities in Nigeria, Kenya, and Ethiopia experienced severe disruption through military coups, structural adjustment pressures on higher education budgets, and chronic underfunding, yet they received minimal attention from the international support architecture focused primarily on European and Middle Eastern crises (UNESCO, 2021). Contemporary support in the region consists primarily of small grants, remote collaboration opportunities, and capacity-building arrangements such as those operated by J-PAL Africa and the Consortium for Advanced Research Training in Africa (CARTA, 2008), but these initiatives are not specifically designed for scholars at risk and depend heavily on individual institutional partnerships rather than coordinated placement networks.

South Africa represents a partial exception to the pattern of fragmentation that characterizes Sub-Saharan African support mechanisms: universities including the University of Cape Town and the University of the Witwatersrand have developed short-term fellowship opportunities since the early 2010s that serve as a regional hub for scholars displaced by conflict and political instability in neighbouring countries including Zimbabwe, DRC, and Burundi. They offer temporary access to academic environments and research infrastructure, along with limited financial support, and are particularly relevant for early-career and at-risk researchers from the region (Scholars at Risk Network, 2020). Nevertheless, even South Africa's initiatives are modest in scale and duration, and the absence of a coordinated regional mechanism for Sub-Saharan Africa — comparable to SAR in North America or PAUSE in Europe — remains one of the most significant geographic gaps in the global support architecture.

### 1.2.6 South and Southeast Asia: Remote Models and Informal Networks

In South and Southeast Asia, including India, Pakistan, and Myanmar, the primary support model has been remote rather than based upon relocation of the scientists. The Scholars at Risk Network has focused on scholars who face ongoing political or institutional restrictions but cannot or do not wish to leave their home countries; SAR provides remote mentoring, short-term research grants, and access to international conference networks (Scholars at Risk Network, 2020). Myanmar represents an additional case where the 2021 military coup severely disrupted university operations and accelerated efforts by international partners to maintain digital connectivity and remote research engagement with affected scholars, though formal placement mechanisms remained limited (Scholars at Risk, 2024). These South and Southeast Asian cases are analytically important because they demonstrate that effective support for scholars at risk does not necessarily require physical relocation — a lesson that became central to the design of hybrid support instruments for Ukraine after 2022.

### 1.2.7 Digital and Remote Initiatives: A Cross-Cutting Development

The COVID-19 pandemic significantly accelerated the development of remote work opportunities across many disciplines. Building on these pandemic experiences, responses to the events in Afghanistan in 2021 and Russia's full-scale invasion of Ukraine in 2022 heavily relied on implementing remote support for researchers at risk. Together, these experiences established remote and hybrid support as a recognized instrument family — no longer an emergency improvisation but a designed component of the support architecture — with implications for how future crises in regions with lower relocation capacity might be addressed.

Remote mentoring programmes, virtual laboratory access, and digital conference participation have become standard components of contemporary support packages, enabling scholars in conflict zones to maintain research output and international visibility without requiring physical relocation (Yarar, 2025; Scholars at Risk Network, 2020). Beyond enabling remote collaboration, there is also an emerging concern around 'humanitarian connectivity,' referring to the need to ensure reliable internet access and digital infrastructure in crisis-affected and conflict zones, which is essential for maintaining scientific engagement and access to research resources (Gallo, 2025). Virtual research networks, in particular, enable scholars from Africa, Asia, and the Middle East to maintain regular communication, exchange methodological approaches, and coordinate collaborative projects across borders. In doing so, they help preserve professional standards, ensure continued visibility within international academic circles, and foster new forms of scholarly community that may later facilitate reintegration into institutional settings or evolve into long-term collaborations (Gallo, 2025).

Taken together, these developments show a clear shift from ad hoc, often reactive forms of assistance toward more structured and coordinated systems of support for scholars at risk. Alongside financial assistance, these programs increasingly include mentorship, professional development, and integration into academic communities. At the same time, many fellowships remain short-term, usually lasting one or two years, and do not always offer clear pathways to long-term employment. As a result, some scholars move from one temporary position to another, trying to maintain their academic careers under ongoing uncertainty. This can make it difficult to rebuild stable trajectories and, in some cases, this leads to a sense of being somewhat peripheral within host institutions, where long-term career integration is still limited (Scholars at Risk Network, 2020; Institute of International Education, n. d.).

Overall, the development of support mechanisms for researchers at risk shows a gradual but clear shift from small-scale, ad hoc, and largely philanthropy-driven responses in the early twentieth century to more structured, multi-layered, and internationally coordinated systems today. The foundational initiatives of the 1930s — in Central Europe, the United Kingdom, and the United States — established the basic models of emergency relocation and temporary academic hosting that remain recognizable in contemporary programmes, but they were limited in reach and systematically favored senior, internationally connected scholars over those with greater vulnerability and fewer resources.

From the late twentieth century onward, support systems became more formalized and institutionally interconnected, with the growth of international networks, national funding models, and structured fellowship programmes. These developments extended the geographic reach of support and increased its scalability, though highly unevenly: Western European and North American institutions remained the primary destinations for displaced scholars, Eastern Europe emerged as a major host region only after 2022, and Sub-Saharan Africa and South Asia continued to operate with minimal coordinated support infrastructure. Digital and remote mechanisms have helped maintain research continuity without physical relocation, but as Section 3 documents, they have not resolved the fundamental challenges of career sustainability, equity of access, or family integration — challenges that the Ukrainian case has brought into sharper relief than any prior crisis in the history of this support architecture.

A cross-cutting limitation that the regional evidence consistently reveals is the neglect of family integration in programme design. Support in most national and international initiatives focuses on the individual scholar, with family provisions — co-mobility for spouses, school access for children, and social integration support. These provisions depend on visa restrictions and host-institution capacity rather than being formally designed into programme architecture (UNESCO, 2023; Scholars at Risk Network, 2020). As Section 3.5 and the survey evidence in Part 7 document, this omission has tangible consequences for programme uptake, particularly among researchers with caregiving responsibilities.

Section 1.3 turns to the specific trajectory of support for researchers on Ukrainian lands, a history that runs parallel to but largely outside the international support networks traced in this section, and that constitutes the necessary background for understanding how Ukrainian researchers have engaged with the global system since 2022.

# 1.3. Support Instruments for Researchers on Ukrainian Lands in the 20th – Early 21st Century

The fact that Ukrainian lands were parts of different states in the 20th century led to a diversity of approaches to supporting Ukrainian scientists. This was determined both by the legislation and the relevant traditions of these states: the Russian Empire, the Austro-Hungarian Empire, the Soviet Union, Poland, Czechoslovakia, and Romania. At the same time, the forms of support that scientists from Ukrainian lands had the opportunity to use in these states did not fall under the category of support for scientists at risk. Instead, there were both various forms of support for all scientists and/or targeted support for scientists who found themselves in difficulty (primarily due to illness or other life circumstances). For example, in the Ukrainian lands of the Russian Empire, the practice of paying lump-sum cash benefits ("one-time cash benefits") was widespread, not only for long service (mostly until a certain anniversary of teaching or research activity), but also as support in case of illness. Assistance in the form of housing provision (payment for housing rent) was also practiced.

In the 20th century, the most systematic support for researchers at risk in the Ukrainian lands was associated with the activities of the All-Ukrainian Committee for the Assistance of Scientists (AUCAS). The corresponding institutions in Soviet Ukraine and Russia were created almost simultaneously. For the material support of research specialists, the Central Commission for the Improvement of the Living Conditions of Scientists was established in Moscow by the Resolution of the Council of People's Commissars of the Russian Soviet Federative Socialist Republic of November 10, 1921. Also in November 1921, a similar body was created in the Ukrainian SSR — the All-Ukrainian Committee for the Assistance of Scientists. In fact, the creation of these institutions in Soviet Russia and Ukraine was the next step after the introduction of measures for material support, such as providing housing for the most outstanding scientists. These measures were envisaged by the decree of the Council of People's Commissars of the Russian Soviet Federative Socialist Republic, titled, "On improving the situation of scientists" adopted in December 1919, and the decree of the Council of People's Commissars of the Ukrainian SSR, titled, "On improving the situation of scientists, specialists and honored workers of literature and art" adopted in August 1920 (Sokyrska & Yakovenko, 2025). These decrees were the result of several years of upheaval during the First World War, during which the struggle for power on the ruins of the Russian Empire and national liberation struggles in Ukraine put scientists on the verge of survival.

With mass unemployment, hyperinflation, deficit and property requisitions, as well as the liquidation by the Soviet government's system of social guarantees and pensions, scientists were left without funds and conditions for a decent existence (Kolyastruk, 2015; Sokyrska & Yakovenko, 2025). In conditions when active opponents of the new government were forced to emigrate, the Soviet government sought to enlist support of at least part of the scientific intelligentsia, so they implemented measures aimed at gaining loyalty from the most important people. Another motivating factor for the introduction of support for scientists to the look to the "West," where information about the poor condition of Soviet scientists was actively spread through the émigré intelligentsia, and this was perceived as a challenge to authority to the Soviet government (Kolyastruk, 2015). The key task of the AUCAS was to maintain the minimum standard of living for scientists in conditions of acute shortage of material resources, which was exacerbated by the famine of 1921–1923 (Brega, 2003). The specifics of the activities and forms of

assistance to scientists can be judged to a certain extent from the organizational structure of the AUCAS. Its structural divisions were: affairs management, expert qualification commission, commissions on resort and sanatorium treatment and recreation, pension provision and social assistance, tariffs and economics, housing and communal services, incentives and bonuses, relations with branches and local authorities, and relations with foreign research institutions and societies (Sokyrska & Yakovenko, 2025).

The key types of assistance provided to scientists through AUCAS were:

- Food provision (rations) for scientists and family members, the amount of which depended on the scientist's affiliation to one of the 3 categories: academicians, professors and doctors of science, and other scientists
- Academic pensions: payments to families of deceased scientists (personal pensioners).
- Promoting the improvement of housing conditions: finding and allocating housing for scientists through local authorities; providing dormitories or temporary housing; petitioning state institutions for the repair and arrangement of housing for scientists
- Publishing research works at the expense of the state, exemption from duties and taxes, etc., of some prominent scientists
- Providing firewood, kerosene, clothing, and footwear
- Organization of medical care and sanatorium-resort treatment
- Foreign aid in the form of food, money, medicine, used clothing, scientific literature, and laboratory equipment

Regarding foreign aid, in the first half of the 1920s through the mediation of AUCAS, such support was provided by the Committee for Aid to the Starving in Soviet Ukraine (located in Winnipeg, Canada) through the Prague Foreign Office for Aid to the Starving. This programme was helped by the Ukrainian Free University and Ukrainian students of Czechoslovakia, which created the Committee for Aid to the Cultural Forces of Ukraine. The international organization "European Student Aid" (ESA) and its subsidiary organization "American Section of ESA" deployed a network of canteens for professors and students in the main university cities of Kyiv, Katerynoslav (Dnipro), Kharkiv, and Odesa (Sokyrska & Yakovenko, 2025; Lugovsky, 2021; Vodotyka, 2006; Didenko, 2021; Kolyastruk, 2018; Trygub, 2025).

The sources from which AUCAS received resources to support scientists were funds provided by the state, various loans, and donations from both institutions and private individuals (Sheiko, 2020).

It is important to note that this entire system of providing support had a number of shortcomings. Not all eligible researchers received support, leaving many without assistance, even some prominent scientists. The reasons for this failure to fulfill the declared intentions were the lack of funds and resources, bureaucracy, and the hostile attitude of certain representatives of local authorities towards the research intelligentsia as "bourgeois." The Soviet authorities refused to allow duty-free passage of humanitarian aid and scientific literature from abroad (Vodotyka, 2006).

In 1937, the USSR Council of People's Commissars liquidated the Commission for the Assistance of Scientists (into which the AUCAS was reorganized in 1931), arguing that they had already "created all the necessary conditions for scientists for their research work." They claimed that the tasks of the Commission had been fulfilled, so the need to continue its activities had disappeared (Lugovsky, 2021).

After the termination of the activities of the Commission for the Assistance of Scientists, there were a couple of notable systemic cases of assistance to Soviet Ukrainian scientists at risk. The first was the reservation (temporary deferment) of some of these scientists from mobilization and the organization of their

evacuation together with educational and research institutions in 1941, after the start of the Soviet-German war (Zabolotna, (2022). Both during World War II and for some time after its end, assistance was provided in the form of bread and other food cards, rations, and coupons for industrial goods. The second notable case of assistance involved measures to support scientists who liquidated the consequences of the Chernobyl disaster in 1986.

Barring these exceptions, from the time the Commission for the Assistance of Scientists was closed in 1937 until the collapse of the Soviet Union, no special measures were introduced to support Soviet Ukrainian scientists at risk. Of course, the category itself – scientists at risk – was not recorded in Soviet documents.

At the same time, mechanisms were in place to provide scientists with housing, including both separate so-called service apartments and places in the dormitories (Lysenko, 2019). For decades, the function of one-time financial support for those scientists who found themselves in a difficult situation (illness, death of relatives, etc.) was performed by trade union organizations of the institutions in which these scientists worked.

During the first decades after the restoration of Ukraine's independence in 1991, the approaches to supporting scientists of the "late socialism" era were largely preserved. This fluctuated during this time period based upon changes in the general state of the economy and the emergence of private universities and other institutions, where forms of support for full-time scholars largely depended on the owners of these institutions and the internal corporate culture. Ukraine's independence was accompanied by its being opento the international community, which expanded access to international support, including grants for scientists. But this international support, in the absolute majority, cannot be attributed to the category of "support for scientists at risk."

To some extent, such an exception can be considered the Science and Technology Center in Ukraine (STCU), an intergovernmental organization dedicated to the non-proliferation of nuclear, biological, and chemical weaponry and related technologies, which was established in 1993. STCU helped scholars involved in the research, development, and production of nuclear, biological, and chemical assets in the post-Soviet era to transition from military to civilian, market-oriented careers in their fields of expertise (STCU, 2024).

The situation with state support for scholars at risk somewhat changed only after 2014, with the beginning of the Russian-Ukrainian war, when some very limited measures to support displaced universities and their employees were introduced. Before the start of the Russian full-scale invasion in February 2022, support was focused on internally displaced persons who, until 2014, worked in the territory of Crimea and parts of the Donetsk and Luhansk regions that were beyond the control of the Ukrainian authorities.

This historical trajectory — from Soviet-era material assistance to the near-total absence of dedicated scholars-at-risk mechanisms before 2014 — is the necessary backdrop for understanding why Ukrainian researchers were disproportionately dependent on international rather than national support instruments after February 2022, a pattern confirmed with unusual clarity in the survey evidence presented in Section 3.

# Section 2. Contemporary Support Tools for Researchers at Risk: Typology and Mechanisms

## 2.1. Conceptual Baseline on “Academic Humanitarianism” and Ukraine as a System-level Stress Test

The historical trajectory traced in Section 1 — from fragmented philanthropy-driven rescue in the 1930s to today’s institutionalized, transnational support programmes — provides the necessary backdrop for assessing how contemporary instruments performed when confronted with Ukraine’s full-scale war. The strongest conceptual framework for that assessment is Yarar’s analysis of ‘academic humanitarianism,’ which describes the European support infrastructure for at-risk scholars as a historically evolved and increasingly professionalized programmes situated at the intersection of humanitarianism, migration governance, and science policy (Yarar, 2023, 2025). In this baseline account, organizations such as CARA, the Philipp Schwartz Initiative, PAUSE, and SAR Europe do not simply offer ad hoc rescue; rather, they institutionalized selection, hosting, and support through organizational strategies that became more hybridized, transnational, and formalized after earlier crises such as the Syrian war (Yarar, 2023, 2025). This literature is crucial because it provides the pre-Ukraine architecture against which the response to Ukrainian scholars can be interpreted.

Against that baseline, Ukraine can indeed be read as a system-level stress test because it confronted this infrastructure with a form of risk that differed from the individualized persecution cases around which many scholars-at-risk systems had been built. Instead of a smaller number of case-by-case exiles, the war generated broad, location-based, and system-wide danger affecting a large research community all at once, while also creating a need to support both those who left and those who stayed (de Rassenfosse et al., 2023; Ganguli & Waldinger, 2023). The concept of “scientists without borders” is especially important here because it explicitly generalizes the effort to broader conflict and disaster settings, suggesting that the Ukraine war exposed strengths and weaknesses in existing support architectures and forced a clearer classification of instrument types and design principles (Wolfsberger et al., 2022). In that sense, Ukraine was not just another beneficiary case; it was an event that tested the scalability, speed, and adaptability of the support programmes itself.

The stress-test interpretation becomes even stronger when the conceptual and empirical strands are read together. If academic humanitarianism had already become professionalized before 2022, the Ukraine war revealed the limits of that professionalization

under conditions of mass demand, temporary protection, serial precarity, and the need to balance individual rescue with system preservation (Yarar, 2023, 2025; de Rassenfosse et al., 2023). The literature also points toward normative tensions within this programmes: whose crisis receives rapid mobilization, whether support should privilege relocation over in-country continuity, and how host institutions can avoid turning emergency support into short-term "safe parking" detached from long-term research careers (Rose et al., 2026; Jaroszewicz et al., 2025). Based on the literature provided, the most defensible conclusion is that Ukraine exposed both the indispensability of existing academic-humanitarian instruments and their structural blind spots, especially around duration, coordination, and the relationship between protecting scholars and sustaining the research systems from which they come (Wolfsberger et al., 2022; Yarar, 2023; Ganguli & Waldinger, 2023).

## 2.2. A Typology of Contemporary Support Instruments for Researchers at Risk

A typology of contemporary support instruments for researchers at risk can be organized around five instrument families: emergency relocation programmes; remote and hybrid fellowships; financial assistance without relocation; institutional and consortia-based mechanisms; and legal, visa, and administrative support tools. Within this corpus, the clearest typological anchor is, "Scientists without borders: lessons from Ukraine," which explicitly classifies mechanisms for supporting scientists in conflict and disaster settings and treats Ukraine as a central case for extracting general design lessons (Wolfsberger et al., 2022). Complementing this, Maryl et al.'s (2022) intervention on Ukrainian scholars at risk appears to frame needs in terms of concrete support pathways rather than generic solidarity, while the host-focused survey by Rose et al. (2026) suggests that the Ukraine response can be analyzed through the actual forms of support institutions deployed in practice (Maryl et al., 2022; Rose et al., 2026). This typology is further summarized in Table 1 for analytical clarity.

***Table 1. Typology of contemporary support instruments for researchers at risk***

| Instrument family | Definition | Typical mechanisms |
|---|---|---|
| Emergency relocation programmes | Temporary safe mobility for displaced scholars | Visiting positions, fellowships, host-institution placements |
| Remote and hybrid fellowships | Support for continued work across borders or in-country | Remote affiliation, dual appointments, hybrid hosting |
| Financial assistance without relocation | Monetary support without requiring mobility | Emergency grants, stipends, equipment/living support |
| Institutional and consortia-based mechanisms | Structured multi-actor support systems | SAR, PAUSE, Philipp Schwartz, CARA, university networks |
| Legal, visa, and administrative support tools | Enabling infrastructure for mobility and work | Visas, work permits, recognition of status, bureaucracy support |

***Source:*** Author's own elaboration based on policy documents and program descriptions from Scholars at Risk, PAUSE Program, Philipp Schwartz Initiative, and Council for At-Risk Academics (Wolfsberger et al. (2022)

The first two categories are best understood as instruments for continuity of scholarly work under conditions of displacement or danger. Emergency relocation programmes typically involve temporary hosting at a foreign university or a research institute through visiting positions, fellowships, or other fixed-term appointments; these are central to both the Ukraine-focused and broader scholars-at-risk literature (Rose et al., 2026; Wolfsberger et al., 2022; Yarar, 2023, 2025). Remote and hybrid fellowships, by contrast, are designed for scholars who remain in-country, move only temporarily, or maintain dual affiliations across home and host institutions. Although this category is less fully formalized in the corpus than relocation, it is strongly implied by work showing that many displaced Ukrainian scholars continued to work remotely for Ukrainian institutions while also seeking opportunities abroad, making hybrid support a necessary instrument rather than a marginal one (Jaroszewicz et al., 2025; Ganguli & Waldinger, 2023).

The remaining three categories address the fact that risk is not reducible to physical movement alone. Financial assistance without relocation includes emergency grants, stipends, equipment replacement, and living-cost support that can sustain research continuity for scholars who remain in conflict zones or are only partially mobile; this category is explicitly visible in the typological literature, even if it is empirically thinner in the Ukraine-specific studies (Wolfsberger et al., 2022). Institutional and consortia-based mechanisms include block funding for host institutions, transnational matching platforms, and networked strategies, such as those analyzed in the European "academic humanitarianism" literature, especially around CARA, the Philipp Schwartz Initiative, PAUSE, and SAR Europe (Yarar, 2023, 2025). Finally, legal, visa, and administrative support tools operate as enabling instruments that make relocation or hosting usable in practice—covering residence status, work authorization, recognition of academic status, and bureaucratic navigation—even though this corpus treats them more as a necessary operational layer than as a deeply theorized category in their own right (Maryl et al., 2022; Yarar, 2023; Kiselyova & Ivashchenko, 2024).

Against this typological backdrop, Russia's full-scale invasion of Ukraine in February 2022 subjected each of these instrument families to simultaneous, large-scale demand of a kind they had not been designed to meet.

# 2.3. Full-Scale War in Ukraine as a Stress Test for the Global Support System

The full-scale invasion by the Russian Federation on 24 February 2022 marked the beginning of a new page in the history of Ukraine as a whole, as well as in the history of the Ukrainian research ecosystem and support for Ukrainian scientists at risk. The war had an effect, without exaggeration, on every researcher in Ukraine, so all of them since then can be classified as "scientists at risk," although the specifics and degree of this risk for different categories of scientists vary significantly. On the other hand, this full-scale war in Europe has become a real stress test for the global support system, and particularly in terms of support for scientists at risk.

Among the main dangers/risks faced by Ukrainian scientists due to the full-scale war are:

- physical death and injury of scientists,
- temporary cessation of research due to service in the Armed Forces of Ukraine,
- restrictions on the departure of male scientists outside the country,
- inability to continue research due to forced change of residence (internally displaced person, travel abroad), inability to be present at the workplace, as required by the specifics of their work,
- destabilization of the system of training and education as a means of reproducing human capital in science,
- significant reduction in the opportunities for conducting research and, accordingly, obtaining results due to destruction and damage to research infrastructure, loss of data, lack of electricity and heating, prolonged air raids, etc.,
- reduction in funding for research and development (Chala, N. et al., 2024),
- kidnapping, torture, and illegal imprisonment in temporarily occupied territories,
- feelings of insecurity, inability to fully concentrate on research, apathy or lack of interest as a reaction to stress and trauma (Ukrainian scientists and educators in wartime, 2023).
- Based on location, Ukrainian scientists who are at risk can be classified into one of the following groups, each of which has specific key risks:
- abroad;
- under Russian occupation;
- in the rear or near the frontline on controlled territories;
- internally relocated;
- in areas away from direct conflict.
- Losses of scholars caused by the Russian aggression:
- physical losses of people, severe injuries;
- migration of scholars, relocation of educational and research institutions;
- recruitment of scholars in Armed Forces of Ukraine;
- taking a pause in research or leaving the research field.

At the same time, the abandonment of Ukrainian institutions by scholars and the continuation of their activities in foreign educational and research institutions are not losses of scientists as such, but a certain loss of Ukrainian science as a system (Chala, N. et al., 2024).

# Section 3. Evaluating the Effectiveness of Support Instruments for Researchers at Risk

## 3.1. Evaluation Framework and Criteria

Assessing how effective support instruments are for researchers at risk requires a clear analytical framework that brings together concepts from the literature with real-world evidence from researchers who have experienced these conditions firsthand. To conduct a systematic assessment of the effectiveness of support instruments for researchers at risk, we applied a multi-dimensional analytical framework based on both the academic literature and empirical evidence from Ukrainian researchers during the full-scale Russian-Ukrainian war (de Rassenfosse et al., 2023; Ganguli & Waldinger, 2023; Maryl et al., 2022). This "multi-dimensional analytical framework" operationalizes effectiveness as a composite construct assessed across six key dimensions (Wolfsberger et al., 2022):

- Risk mitigation and safety — does the instrument remove researchers from physical danger?
- Research continuity — does it enable ongoing scholarly work, including access to data, labs, and networks?
- Career sustainability — does it provide pathways to stable, long-term academic positions?
- Equity of access — are instruments accessible across career stages, disciplines, genders, and locations?
- Family and social integration — does it account for dependents, housing, and social embeddedness?
- Impact on the country-of-origin research system — does it support or undermine national research capacity?

While effectiveness is conceptualized across six key dimensions, these are not treated as discrete categories in the analysis that follows. Instead, they function as an integrated analytical lens through which different support instruments are evaluated comparatively, with individual dimensions emerging to varying degrees across instrument types. Accordingly, the analysis does not proceed dimension by dimension; rather, it assesses how different support mechanisms perform across multiple dimensions simultaneously.

Methodologically, each dimension functions as an analytical lens for systematically mapping and comparing different support instruments, while structured survey data are used to assess patterns across dimensions, and qualitative responses are analysed to capture researchers' own interpretations of effectiveness. The framework is then applied to evaluate the main categories of support mechanisms identified in Section 2, including emergency relocation programmes, remote and hybrid fellowships, financial assistance without relocation, institutional and consortia-based mechanisms, and legal and administrative support tools. The analysis is further grounded in original survey data collected from 291 Ukrainian researchers between January and

March 2026 (Supplement 1, Part 1). This dataset provides both quantitative evaluations of support instruments (Supplement 1, Part 5) and qualitative insights into how effectiveness is understood and experienced by scholars themselves (Supplement 1, Section 7.2). Perceived effectiveness — researchers' ratings of how well instruments satisfied their needs — differs from objective outcomes such as publication rates, career placement, or institutional retention, and the two can diverge in both directions: a researcher may rate an instrument highly despite remaining on a precarious contract, or poorly for failing to meet expectations no short-term instrument could meet. In the absence of longitudinal placement data, perceived effectiveness is nonetheless the most comprehensive evidence available on instrument performance at scale, and we treat it as a necessary if not sufficient indicator — noting that the gap between perceived and objective effectiveness is likely widest for relocation programmes, where immediate safety gains may mask medium-term career instability. The findings suggest that researchers conceptualize effectiveness as a systemic condition rather than a single intervention, a pattern consistently observed across topic modelling results and cross-question thematic synthesis (Supplement 1, Sections 7.2 and 7.8). Open-ended responses emphasize financial stability, research continuity, and access to resources as the core components of meaningful support (Supplement 1, Section 7.2). In particular, qualitative responses highlight financial predictability and the ability to plan research over a one- to two-year horizon as critical conditions for effectiveness.

For researchers at risk, ensuring safety is the primary objective of most support programmes, particularly emergency relocation schemes. These initiatives are designed to remove scholars from environments of direct threat. However, safety alone does not guarantee the continuation of research work, making it a necessary but insufficient condition of effectiveness (Yarar & Karakaşoğlu, 2022). The criterion of research continuity refers to the ability of scholars to maintain research activity with research freedom. Empirical studies show that Ukrainian researchers have experienced significant limitations in access to these resources (de Rassenfosse et al., 2023). Career sustainability reflects the extent to which support programmes enable long-term academic development. At present, most programmes provide only short-term support, resulting in prolonged instability for displaced scholars. The criterion of equity of access captures the extent to which researchers at different career stages can benefit from support mechanisms. Evidence suggests that access is often uneven and depends on factors such as international integration, institutional affiliation, language proficiency, and academic status (Yarar, 2024). Family and social integration is a critical, though often under-institutionalized dimension of effectiveness. The inability to relocate family members or establish social networks beyond the workplace significantly reduces researchers' productivity and well-being. Finally, the impact on the research system of the country of origin allows for assessing the balance between protecting individual researchers and preserving national research capacity (Ganguli & Waldinger, 2023). Overall, effectiveness should be understood as a balance between short-term protection, medium-term career stability, and long-term sustainability of research systems.

The empirical literature shows that these instruments operated in a context of massive, rapid disruption to the Ukrainian research system, which immediately put pressure on hosting and fellowship mechanisms. Evidence indicates that by fall 2022, about 18.5% of Ukrainian scientists had fled the country, and that these emigrants were disproportionately among the most research-active scholars; at the same time, many who remained in Ukraine experienced severe reductions in research time, loss of access to critical inputs, or inability to access their institutions physically (de Rassenfosse et al., 2023). Bibliometric and institutional evidence likewise points to

a measurable decline in Ukrainian research output, a rise in foreign affiliations among prolific scientists, and substantial damage to university infrastructure, all of which imply that support instruments were being asked not merely to protect individuals but to preserve a functioning research workforce under wartime conditions (Ganguli & Waldinger, 2023).

Within that disrupted environment, emergency relocation programmes and host-linked fellowships appear to have been the most visible and most extensively used instruments, but also the ones most associated with precarity. The survey of hosts for displaced Ukrainian scientists is especially important here because it appears to capture how universities and institutes worldwide actually provided "shelter in scholarship," likely including temporary academic appointments, funding mixes, and institutional constraints from the host side (Rose et al., 2026). On the scholar side, de Rassenfosse et al. report that migrant scientists were often on precarious contracts, and they explicitly conclude that more and longer scholarships were a major policy need, suggesting that many existing instruments achieved short-term protection without securing medium-term career continuity (de Rassenfosse et al., 2023). Qualitative studies reinforce this picture by showing that Ukrainian scholars often moved through serial temporary arrangements and navigated support through both formal schemes and informal academic networks, especially in host countries such as Poland (Jaroszewicz et al., 2025; Kiselyova & Ivashchenko, 2024).

The empirical evidence also suggests that the Ukraine case made remote/hybrid and system-preserving instruments unusually important. Many displaced scholars adopted a dual strategy: they maintained active ties with Ukrainian institutions while simultaneously seeking employment or fellowship opportunities abroad, which indicates that remote and hybrid fellowships were not merely supplementary but structurally important to wartime continuity (Jaroszewicz et al., 2025). At the same time, the evidence that human capital losses may be more damaging than physical capital destruction implies that instruments had to do more than evacuate individuals; they had to keep scholars connected to research and, ideally, connected to Ukraine's future research reconstruction (Ganguli & Waldinger, 2023). What is less well documented in this corpus is the detailed operation of financial assistance without relocation and legal-administrative tools: they are clearly relevant and likely indispensable, but they remain under-measured compared with relocation, hosting, and scholarship instruments (Wolfsberger et al., 2022; Yarar, 2023).

## 3.2 Effectiveness of Emergency Relocation Programs

Emergency relocation programs have been among the most visible and widely implemented support instruments during crises, including the war in Ukraine (Wolfsberger et al., 2022). In the short term, these programs have proven highly effective: they provide immediate physical safety, access to research infrastructure, and opportunities to integrate into international scholarly networks, allowing researchers to continue research activity despite the disruption of their home environment (de Rassenfosse et al., 2023).
However, Ukrainian scholars report only moderate effectiveness of these programmes, primarily due to concerns regarding their limited sustainability. A recurring problem is the short duration of contracts, which generates persistent instability and uncertainty for

scholars (Rose et al., 2026). Many displaced researchers move through a sequence of temporary positions, often without a clear path to permanent appointments or strategic career development. This phenomenon, sometimes called "serial temporary mobility," reflects the difficulty of maintaining academic momentum when long-term integration is absent. Around 30% of respondents reported having used relocation programmes and 48% used in-person fellowship opportunities (Part 5; Figure 8) — uptake rates that are notably lower than the 69% who accessed equipment or database support, and that are low relative to the prevalence of displacement in the sample (31% of respondents were based abroad at the time of the survey). This relatively limited uptake, despite high levels of displacement in the sample (Part 2; Figure 3), suggests structural barriers in access and eligibility, as well as mismatches between programme design and researchers' personal or professional constraints.

Integration into host-country academic systems also remains a major challenge. Researchers frequently occupy peripheral roles within host institutions, lacking access to permanent positions, internal funding, or mentorship networks that could facilitate long-term development (Yarar & Karakaşoğlu, 2022). At a systemic level, emergency relocation programs can unintentionally contribute to brain drain, although in some cases they may foster "brain circulation" when scholars eventually return to their home countries or establish collaborative links (Ganguli & Waldinger, 2023). Qualitative responses from Ukrainian researchers further support this duality (Part 7). Many describe repeated transitions between short-term positions across institutions and countries, often without clear long-term prospects. This pattern of "serial temporary mobility" is associated with difficulties in maintaining research continuity, securing publications, and building stable academic trajectories. The divide between researchers who relocated and those who remained is one of the most persistent structural patterns in the qualitative data. Among those who did not access relocation programmes, the largest identifiable barrier is not ineligibility but programme design: national programmes systematically exclude researchers abroad, while international programmes often require physical presence that researchers in Ukraine cannot achieve. One respondent captures the resulting paradox directly: *"Since I am abroad, I have no right to apply for any of the national programmes: participation is only permitted for those physically in Ukraine. Frankly, this is rather frustrating — support is not provided to those who most need a stable academic position"* (Q12 respondent). Symmetrically, researchers who remained in Ukraine report that internationally oriented programmes are calibrated for mobility they cannot exercise. This structural asymmetry — what the cross-question synthesis in Supplement 1 terms the "in-country vs. abroad divide" — is not an incidental feature of programme design but a built-in consequence of instrument architecture that assumes displacement as the standard condition of risk (Supplement 1, Section 7.8).

It is also worth noting that while emergency relocation ensures personal safety, it cannot fully substitute for access to discipline-specific resources, local laboratory networks, or regionally relevant research contexts. For example, experimental scientists often struggle to reproduce or continue their research under new conditions, limiting the ability of relocation alone to sustain productive research work.

## 3.3 Effectiveness of Remote and Hybrid Models

Remote and hybrid support models have emerged as crucial complements to relocation programs, particularly under the conditions of the Ukrainian war. A key advantage of these models is that they allow researchers to maintain connections with their home institutions, which not only preserves their own research careers but also supports the resilience of national research systems (Ganguli & Waldinger, 2023). In disciplines where research can be conducted remotely, such as computational modeling, data analysis, or literature-based studies, these models have enabled continuity of research output even amidst conflict. Hybrid programs, which combine temporary relocation with remote engagement in the home institution, have also contributed to preventing brain drain by allowing researchers to stay involved in local research networks while benefiting from safety and resources abroad (Wolfsberger et al., 2022).

Nevertheless, limitations remain. Surveyed Ukrainian scholars evaluate the effectiveness of remote fellowships at relatively low levels. Remote and hybrid models cannot fully substitute for access to laboratories, experimental equipment, or in-person mentorship in many research disciplines (de Rassenfosse et al., 2023). Scholars also experience professional isolation, reduced visibility in the international academic community, and limited opportunities for career advancement. Furthermore, inconsistent infrastructure, such as unreliable internet connections, can exacerbate these challenges, particularly in conflict-affected areas. Survey uptake data (Part 6; Figure 8) show that remote fellowships were used by only 28% of respondents, despite their theoretical relevance for in-country researchers. This gap between potential usefulness and actual uptake is not primarily explained by researcher reluctance or infrastructural constraints alone. Computational analysis of 165 open-ended responses to the question, “Why did you not use support programmes?” (Q12) reveals that the largest single cluster of non-users — 49 respondents — reported not knowing that programmes existed, not that they were ineligible or personally constrained (Supplement 1, Section 7.3). As one respondent explains: *“I was not sufficiently informed about their existence, and the topics of the available grants did not match my research area. Many programmes are oriented toward departure abroad — a concern for those of us who cannot or do not wish to leave”* (Q12 respondent). This is an analytically significant finding: it implies that a portion of the remote and hybrid model’s under-utilisation is attributable not to programme quality or infrastructure but to communications failure — a gap that is, in principle, addressable without new funding.

## 3.4 Comparative Analysis: Ukraine and Other Crises

Three cases are selected for structured comparison: Syria (civil war from 2011), Turkey (mass academic dismissals following the 2016 coup attempt), and Afghanistan (regime collapse, August 2021). These cases are chosen not because they are the only relevant comparators, but because they are the three crises most extensively documented in the literature on academic humanitarianism that this paper draws upon, and because each placed significant demand on the same institutional architecture that subsequently

responded to Ukraine — Scholars at Risk, CARA, PAUSE, and the IIE Scholar Rescue Fund(Yarar, 2023, 2025; Scholars at Risk Network, 2019). The comparison is structured around two dimensions derived from the literature: (1) the type of risk generating displacement — targeted political persecution in the Turkey and Syria cases versus broad territorial conflict in the Ukraine case — a distinction central to Wolfsberger et al. (2022) and Yarar (2023); and (2) the scale and speed of international response, where available evidence suggests Ukraine received a substantially faster mobilization than any prior case (de Rassenfosse et al., 2023). Ukraine differs from all three comparison cases on both dimensions, making the comparison analytically productive rather than merely illustrative.

Comparing Ukraine with other crisis contexts, including Syria and Afghanistan — particularly in the context of intensified political repression following the 2009 Green Movement protests and more recent crackdowns since 2022 — highlights both important similarities and notable differences (Yarar & Karakaşoğlu, 2022; Wolfsberger et al., 2022). To structure this comparison more systematically, we assess these cases across three analytical dimensions derived from the literature: (1) the speed and scale of international response, (2) access to support mechanisms, and (3) the sustainability of academic careers following displacement. This approach allows for a structured qualitative comparison rather than a purely descriptive account. Across all these cases, emergency relocation programs consistently emerge as the dominant form of support, providing immediate safety to researchers under threat. However, while relocation ensures physical security, it rarely guarantees medium- or long-term career stability. Scholars often find themselves in temporary positions that interrupt career trajectories and limit the ability to develop strategic research agendas.

In Ukraine, researchers had comparatively better access to international support programs. Many Ukrainian scientists were already integrated into global scientific networks before the outbreak of the war, participating in international conferences, collaborative projects, and dual-affiliation programs. This pre-existing connectivity allowed them to quickly identify and access relocation opportunities offered by universities in Europe and North America, as well as fellowships and short-term grants provided by international foundations (de Rassenfosse et al., 2023). For instance, Ukrainian early-career researchers in physics and computational biology were able to continue their projects in partner institutions in Germany and the United States with minimal disruption, thanks to established research collaborations and existing co-authorship ties. Similar patterns were observed in initiatives coordinated by institutions such as the Polish Academy of Sciences and the United States National Academy of Sciences, which helped facilitate placements, collaboration opportunities, and continuity of research for displaced Ukrainian scholars (Scholars at Risk Network, 2022).

Another clear distinction is the speed and scale of the international response. In Syria or Afghanistan, relocation programs often took months or even years to fully mobilize, leaving many researchers in precarious situations for extended periods (Ganguli & Waldinger, 2023). In contrast, the Ukrainian war prompted an unusually rapid mobilization. Within weeks, universities, national governments, and international organizations launched coordinated efforts to provide temporary positions, housing, and research infrastructure. Programs such as the Scholar Rescue Fund and the Scholars at Risk network were able to expand their Ukrainian intake swiftly, while national initiatives, like the German Research Foundation's emergency fellowships, offered immediate placements for displaced scholars. These comparative patterns are further reflected in survey data from Ukrainian researchers (Part 6). While Ukrainian researchers benefited from rapid international mobilisation, many still reported confusion

regarding programme eligibility, overlapping deadlines, and fragmented information channels. This suggests that speed of response alone does not guarantee accessibility or effectiveness without coordinated communication mechanisms.

Despite these differences, several structural challenges appear consistently across all crisis contexts. Short-term funding, uneven access to opportunities, and fragmented coordination among support programs are recurrent features observed in Ukraine as well as in earlier cases such as Syria and Afghanistan (de Rassenfosse et al., 2023; Yarar, 2022).

In Ukraine, although the international response was notably rapid, similar patterns could still be observed, including uncertainty related to short-term contracts and difficulties navigating multiple, partially overlapping support programmes. It remains an open question whether Ukraine represents a "one-off" case or whether it has generated transferable lessons for future crisis responses. In particular, it is unclear to what extent the international academic community has developed sufficiently coordinated mechanisms that could be rapidly deployed in future crises affecting regions such as Sub-Saharan Africa, South-East Asia, or the Middle East (Wolfsberger et al., 2023). These parallels suggest that, while the scale and speed of response may differ, the underlying structural limitations of support mechanisms remain largely consistent across contexts.

## 3.5 Structural Gaps and Systemic Limitations

Our analysis reveals that, despite the critical importance of contemporary support mechanisms, there remain significant structural gaps and systemic limitations in how researchers at risk are assisted. These gaps are not merely administrative inconveniences, they have real consequences for career trajectories, research productivity, and the long-term resilience of research systems.

**1. Mismatch between short-term funding and long-term career needs.** A recurring problem across most support programs is the short-term nature of funding and fellowships. Many grants last only six to twelve months, which may suffice to provide immediate safety or temporary housing, but they rarely allow researchers to plan a coherent, sustainable academic career (de Rassenfosse et al., 2023). For example, Ukrainian early-career scientists who relocated to universities in Poland or Germany often had to reapply for new fellowships on an annual basis, disrupting long-term research projects and delaying publication output. Such instability also generates psychological stress, forcing scholars to prioritize survival over intellectual innovation or mentoring of students, ultimately reducing the cumulative research impact of these programs.

Survey findings (Part 5; 7.6–7.7) provide strong empirical support for this pattern. Across all support instruments, researchers consistently identified short funding horizons as the primary structural limitation of existing programmes. Open-ended responses further emphasized that longer-term funding predictability is essential for enabling meaningful research planning and career stability. This picture is reinforced by the richest body of qualitative evidence in the survey. Question 15 — recommendations to international donors — generated 223 substantive responses, with the highest mean response length of any open-ended question (269 characters), suggesting that researchers regard international funders as the actors most capable of responding to their concerns (Supplement 1, Section 7.6). The dominant cluster (n=68 of 223 responses)

calls explicitly for long-term funding over emergency grants. One representative voice states: *"Donors should focus on long-term support instruments, not just short emergency grants, to ensure stability of research activity; combine financial support with professional integration — inclusion of Ukrainian scholars in consortia, joint projects, and programmes; flexible funding conditions — remote work, budget redistribution, project extension; support institutions as well as individuals, to preserve research schools and teams in Ukraine"* (Q15 respondent). The consistency of this demand across the qualitative corpus — surfacing in every open-ended question from infrastructure priorities to recommendations to the Ukrainian government — suggests it is not a minority position but the central diagnosis of the research community.

Apart from that, the uptake data might appear to suggest that researchers gravitate toward short-term instruments: research grants and emergency stipends show higher uptake and effectiveness ratings than relocation programs and other forms of longer-term support. This reading, however, conflates accessibility with preference. Relocation programs had low uptake (30%), and qualitative responses indicate that participation was often constrained by practical and structural barriers, including family responsibilities, employment considerations, and uncertainty associated with relocation (Section 3.2 and Part 7.3). Among users, effectiveness ratings for relocation programs remain moderate at best (2.60 internationally). More importantly, the qualitative evidence is unambiguous: the largest single cluster in donor recommendations calls explicitly for long-term funding over emergency grants (n=68, Part 7.6), and effectiveness is consistently defined by respondents in terms of financial predictability and one- to two-year planning horizons (Part 7.2). The quantitative and qualitative data therefore tell a consistent story: researchers frequently rely on short-term instruments because these are the most readily accessible forms of support, while simultaneously expressing a strong preference for longer-term and more predictable funding mechanisms that would provide greater stability for research and career planning.

**2. Insufficient coordination among programs.** A further structural limitation is the lack of coordination among support initiatives, which often operate in a fragmented institutional landscape. Different organizations, foundations, and universities may implement parallel programmes independently, leading to duplication of efforts in some contexts while leaving other regions or disciplines underserved (Wolfsberger et al., 2023). In the case of Ukrainian researchers, this fragmentation was frequently reflected in uncertainty regarding eligibility criteria, disciplinary fit, and career-stage requirements, which in turn delayed access to appropriate placements and funding. Similar patterns have been documented in previous crises, including Syria (Scholars at Risk, n.d.) and Afghanistan (University of Pittsburgh, 2021), where overlapping application procedures and uncoordinated selection mechanisms created inefficiencies and increased administrative burden for applicants, demonstrating that rapid mobilisation alone does not ensure system effectiveness. Survey evidence (Part 7.3) highlights that lack of coordination is closely linked to information failures. Among respondents who did not access support programmes, the largest group reported lack of awareness rather than ineligibility. This indicates that communication gaps are as significant as structural or financial constraints in limiting programme reach.[1]

[1] A distinct but related access failure involves applicants who engaged with programmes but were rejected. The survey data identify a non-trivial group of researchers who applied to support instruments and were denied — a category analytically separate from those who were unaware programmes existed. Unlike the information-failure group, rejected applicants had successfully navigated the awareness barrier; their exclusion therefore points to eligibility design rather than communications as the operative constraint. This distinction matters for policy: outreach investments will not help this group, but eligibility criterion reform may help them, particularly when centered upon career stage, disciplinary fit, and location-based exclusions.

Qualitative evidence sharpens this picture. Q12 analysis identifies five distinct barrier types, and "information gaps and low awareness" — respondents who simply did not know programmes existed — forms the largest single cluster (n=49), outpacing mobility restrictions (n=31) and personal constraints (n=28) as stated barriers (Supplement 1, Section 7.3). This finding has direct policy implications: since awareness, not eligibility, is the primary stated barrier, expanding programme reach does not require new funding; it requires investment in communications and outreach infrastructure.

**3. Legal and administrative barriers.** Legal and bureaucratic obstacles remain a persistent barrier to the practical effectiveness of support instruments. Visa restrictions, work permits, and the recognition of foreign academic qualifications (UNESCO, 2026) significantly constrain both relocation and integration into host-country research systems (Yarar & Karakaşoğlu, 2022). For instance, some scholars who secured placements in European laboratories were unable to legally conduct experiments for months due to pending paperwork, limiting their ability to maintain research momentum. These administrative hurdles can also discourage host institutions from taking on new scholars, especially when resources to navigate bureaucracy are scarce.

**4. Neglect of family and social needs.** Many programs focus exclusively on the researcher, without adequately considering the relocation or integration of families. The ability to bring a spouse and/or children, find schooling, or establish social networks is closely linked to professional productivity and retention (Kiselyova & Ivashchenko, 2024). During the Ukrainian war, several early-career researchers declined relocation offers because their families could not move safely or because accompanying spouses could not find employment. Programs that fail to account for family and social integration risk losing talented scholars who might otherwise have continued contributing to research work in host institutions. Qualitative survey responses (Part 7) indicate that family-related constraints are an important factor limiting mobility for some researchers, particularly those with caregiving responsibilities. These constraints include childcare obligations, school attachment, and limited co-mobility options, which can restrict participation in mobility-based support programmes.

Among the qualitative responses, gender and family constraints surface as an "under-institutionalised dimension" — present persistently across multiple questions yet absent from the structured survey items (Supplement 1, Section 7.8). The clearest statement of this gap comes from a Q15 respondent: *"Women researchers who left Ukraine with minor children and bear full responsibility for their safety, education, and integration almost entirely fall outside the field of vision of support policies. School attachment limits mobility and effectively excludes them from programmes requiring physical movement"* (Q15 respondent). This is not an isolated voice: similar observations appear in Q9 (effectiveness) and Q25 (war's impact on science), where researchers describe temporary protection status as an eligibility barrier and school attachment as a mobility constraint that existing programme designs do not accommodate.

**5. Lack of systemic integration with national research recovery.** Finally, support mechanisms for individual scholars are often disconnected from broader strategies aimed at sustaining or rebuilding national research systems. While emergency relocation programs successfully protect lives and careers in the short term, they may inadvertently contribute to "brain drain" if scholars are unable to maintain links with their home-country institutions or return post-crisis (Ganguli & Waldinger, 2023). After the 2022 invasion, several initiatives, including hybrid and remote programmes, were rapidly established to enable displaced researchers to remain professionally active and connected to Ukranian institutions; but these mechanisms

remained fragmented.. However, some emerging good practices can be identified, particularly programmes that combine institutional affiliation with flexible remote participation, structured mentoring, and access to research infrastructure in host institutions. As a result, the absence of coordinated and sustained integration between individual support instruments and national research recovery policies has limited their overall contribution to post-war scientific reconstruction. Survey responses (Part 7.5) further reveal strong awareness among researchers of these systemic risks. Many explicitly emphasize the importance of "brain circulation" models that allow scholars to maintain institutional and collaborative ties with Ukraine while working abroad, underscoring the need to better integrate individual-level support instruments with long-term national recovery strategies.

At the same time, it is important to recognise that addressing these gaps is not straightforward and comes with real-world constraints. Expanding long-term career support, for instance, inevitably raises questions about how limited funding is distributed, since extending support for some researchers may mean fewer opportunities for others. In a similar way, improving visa opportunities and mobility pathways depends heavily on state-level diplomatic processes that are largely outside the control of academic support organisations. Even practical steps like eligibility assessment or relocation vetting require significant administrative capacity and specialised expertise, which smaller initiatives may struggle to maintain over time. Taken together, these constraints suggest that strengthening support systems is not only about identifying what should be improved, but also about finding a realistic balance between ambition and what institutions can actually deliver.

In summary, while current support infrastructures are invaluable in saving lives, preserving careers, and maintaining some continuity of scientific work, they are still incomplete. Addressing these gaps requires a more holistic approach: integrating long-term career planning into funding schemes, improving coordination between programmes, reducing unnecessary duplication, easing legal and bureaucratic barriers where possible, taking into account family and social needs, and better linking support initiatives to broader efforts of national and international research recovery. Only by doing so can the global academic community build more sustainable resilience for researchers at risk and help preserve scientific capacity in countries affected by conflict or political repression.

Taken together, the evidence across six dimensions — safety, research continuity, career sustainability, equity of access, family integration, and systemic impact — reveals a consistent pattern: existing instruments perform well on the first dimension and poorly on the remaining five. Emergency protection is achievable at scale; the conditions for long-term scientific recovery are not. The policy recommendations that follow are organised around this diagnosis.

## 3.6. Limitations

Several limitations bound these conclusions. The survey sample of 291 researchers, while substantive, was recruited through institutional networks and academic communities, which likely oversample researchers who maintained formal affiliation and underrepresent those who left the field entirely, were mobilized into the armed forces, or work in occupied territories. Perceived effectiveness, the primary outcome measure, differs from objective measures such

as publication rates or long-term placement; the two can diverge, particularly for relocation programmes where immediate safety gains may mask medium-term career instability. The historical sections rely on secondary sources for pre-Soviet and early Soviet periods, where primary documentation in Ukrainian archives remains partially inaccessible. Finally, cross-case comparisons with Syria, Turkey, and Afghanistan are structured around available secondary literature rather than primary survey data, limiting their analytical precision.

# Section 4. Policy Recommendations

## 4.1 Cross-cutting Approach: Evidence, Coordination, and Feasibility

Survey evidence grounds these recommendations directly. Among the 223 responses to Q15 (recommendations to international donors and organisations), long-term funding emerged as the dominant theme (n=68, 30% of substantive responses). This was the single most common recommendation in the entire open-ended dataset (Supplement 1, Section 7.6). The second-largest cluster (n=43) called specifically for support targeting researchers remaining in Ukraine, reflecting a widely held perception that international instruments disproportionately reach those who have left, leaving the majority who stayed underserved. Programme visibility and outreach formed a distinct fourth cluster, consistent with the Q12 finding that the largest share of non-users (n=49) was unaware that programmes existed.

The recommendations presented in this section are based on the analysis of survey responses (Supplement 1) and reflect recurring patterns across different groups of respondents. They should not be understood as a uniform set of priorities, but rather as a spectrum of needs that vary depending on institutional capacity, geographic context, and the stage of displacement.

A key issue that emerges from the data is fragmentation. While a range of initiatives already exists, they often operate in parallel rather than in coordination with one another. This makes it harder for researchers to navigate available support and can lead to duplication of efforts. Improving coordination and information sharing across programmes is therefore a necessary starting point for any more systemic response.

At the same time, it is important to recognise that not all measures are equally feasible. Some can be implemented relatively quickly within existing structures, while others require longer-term institutional or policy change. Distinguishing between these levels is useful when considering how recommendations can realistically be taken forward.

## 4.2 Recommendations for International Organizations

International organisations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Science Council (ISC), the World Academy of Sciences (TWAS), and the InterAcademy Partnership (IAP) occupy a central position in the global ecosystem of support for researchers at risk. Their role extends beyond emergency

response and includes shaping standards, facilitating cooperation, and influencing how scientific mobility is governed internationally.

One of the most immediate areas where these organisations can make a difference is coordination. At present, support mechanisms are distributed across multiple programmes, including initiatives such as CARA, PAUSE, and various EU-level schemes. While these programmes are valuable, they often operate with different eligibility rules, application systems, and levels of visibility. Greater alignment between them, particularly through shared information platforms and more interoperable systems, would significantly improve accessibility for researchers.

At a broader level, international organisations are also in a position to shape how responsibility for displaced researchers is understood within the global science system. Many of these organisations already frame their missions around open science, equity, and the idea of science as a global public good. From this perspective, sustained support for at-risk researchers is not an additional activity, but part of the logic of these commitments. In other words, long-term inclusion becomes not only a practical concern but also a question of institutional consistency.

## 4.3 Recommendations for National Governments

National governments play a decisive role in determining whether displaced researchers are able to re-establish their careers. While emergency protection mechanisms are important, the longer-term integration of researchers depends largely on administrative and policy frameworks.

One of the most immediate barriers identified in the survey data (Part 7, Section 7.5) is bureaucracy. Lengthy visa procedures, delays in work authorisation, and inconsistent recognition of qualifications significantly slow down the process of returning to research activity. Streamlining these procedures would have a direct and immediate impact on integration outcomes.

In addition, more flexible approaches to funding could help maintain continuity in research careers. Allowing researchers to access national funding opportunities even when temporarily based abroad, or designing grants that are not strictly tied to physical presence, would support what is often described as “brain circulation” rather than permanent loss of talent.

There is also a broader strategic dimension to these policies. Countries that facilitate the integration of displaced scientists are not only addressing a humanitarian issue, but also strengthening their own research systems and international scientific visibility. In this sense, support for at-risk researchers can also be understood as part of broader science diplomacy and soft power strategies.

Beyond coordination, and given their role in shaping global norms and enabling scientific mobility across jurisdictions, there is also a clear need for more sustained forms of integration. Survey responses (Part 7, Section 7.2) consistently highlight that continuity is a major concern. Short-term relocation or emergency fellowships are important, but they are often insufficient on their own. More stable arrangements, such as longer-term fellowships, joint appointments, or structured mentoring relationships would allow researchers to maintain their scientific trajectories over time, rather than restarting them repeatedly in different contexts.

## 4.4 Recommendations for Universities and Research Institutions

Universities and research institutions are often the first environment in which displaced researchers attempt to rebuild their professional lives. Their role therefore extends beyond formal employment and includes broader forms of academic and social integration.

While access to laboratories, funding, and research infrastructure is essential, equally important is inclusion in the academic community. Mentorship, participation in departmental activities, and opportunities for collaboration all contribute to whether researchers are able to continue their work in a meaningful way. Survey data (Part 7, Section 7.4) suggest that these informal dimensions of integration are closely linked to how effective support programmes are perceived to be.

Practical aspects of relocation also matter. Housing support, access to schooling for children, childcare, and assistance with administrative procedures can significantly reduce the non-academic burden on researchers and allow them to focus on their work.

More broadly, universities can also play a role in maintaining continuity between host and home-country institutions. Joint projects, co-supervision arrangements, and sustained research collaborations help ensure that academic networks are not fully disrupted by displacement.

## 4.5 Recommendations for Donors and Foundations

Donor organisations and philanthropic foundations often provide the flexibility that is difficult to achieve within governmental systems. Their role is particularly important in bridging gaps between emergency support and longer-term academic reintegration. In many cases, they also play a crucial enabling role in supporting the initiatives of international organisations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Science Council (ISC), the World Academy of Sciences (TWAS), and the InterAcademy Partnership (IAP). Without these international organisations, large-scale coordination and sustained programmes for researchers at risk would be difficult to implement.

A key need identified in the data is for more flexible and longer-term funding mechanisms. Short-term grants can be effective in the initial phase of displacement, but they rarely provide the stability needed for sustained research activity. Multi-year funding opportunities and hybrid support models would better reflect the realities of disrupted academic careers.

Equity is another important consideration. Access to opportunities is not evenly distributed among displaced researchers. Early-career scientists, women, and individuals without strong international networks often face additional barriers. Targeted funding mechanisms can help address these inequalities and ensure that support systems are more inclusive.

# CONCLUSIONS

This paper asks which support instruments Ukrainian researchers perceive as most effective during the full-scale war, who accesses them, what prevents access, and how these patterns compare with earlier crises and with international versus national provision. Drawing on a 2026 mixed-methods survey of 291 Ukrainian researchers and a systematic review of the historical and policy literature, we find five principal results. **First, international instruments substantially outperform their Ukrainian national equivalents across every instrument category, but neither system consistently crosses the threshold of meaningful effectiveness.** Mean effectiveness scores for international instruments range from 1.63 (advocacy programmes) to 3.78 (equipment and database access) on a 5-point scale; national equivalents range from 1.32 to 2.85, falling below 3.0 — the neutral midpoint — in every category without exception. The gap is largest for research grants (+2.04), in-person fellowships (+1.87), and emergency stipends (+1.69), indicating that resource capacity, rather than instrument design alone, is the primary driver of the international-national performance differential. This performance gap is driven primarily by resource capacity, not instrument design — a distinction that matters because instrument design is the more tractable policy lever. **Second, access failures are as consequential as funding gaps.** Among 165 respondents who did not use any support programme, the largest identifiable group (n = 49) reported being unaware that programmes existed — not that they were ineligible or personally constrained. A further group had applied and been rejected — present across multiple instruments and analytically distinct from non-users, pointing to eligibility design as a separate barrier layer. This information-failure finding has direct policy implications: expanding programme reach in this group requires investment in outreach and communications infrastructure, not new funding allocations. **Third, a structural asymmetry between in-country and abroad researchers is built into existing instrument architecture and is experienced as a specific injustice by both groups.** National programmes systematically exclude researchers currently located abroad; international programmes are typically calibrated for physical mobility that in-country researchers cannot exercise. Both groups report frustration with support systems designed for the other group's situation — a design failure that no existing instrument typology fully addresses. **Fourth, researchers**

**define support effectiveness as a systemic condition, not a single intervention.** Computational text analysis of 1,154 open-ended responses across seven questions consistently surfaces the same hierarchy: financial predictability enables research continuity, which enables career stability. Respondents rated long-term funding as the single most important improvement in both their recommendations to Ukrainian policymakers and to international donors — with 68 of 223 donor-recommendation responses (30%) calling explicitly for multi-year instruments over emergency grants. **Fifth, gender and family constraints function as a structural barrier to programme participation but remain largely unaddressed in instrument design.** Researchers with minor children — disproportionately women — face compounded barriers: school attachment limits mobility, single-parent caregiving constrains working hours, and temporary protection status creates eligibility gaps that existing programme architectures do not address. These concerns surface unprompted in responses to five of the seven open-ended questions, suggesting that quantitative evaluation frameworks systematically underestimate the equity dimension of programme effectiveness.[2]

Taken together, these findings point toward a clear architectural diagnosis: the global system for supporting researchers at risk performs well on the first dimension of effectiveness — immediate safety — and systematically underperforms on the remaining five: research continuity, career sustainability, equity of access, family integration, and systemic impact on national research capacity. Ukraine has made these limitations visible at unusual scale and speed, but they are not unique to the Ukrainian case — all were present, if less acute, in Syria, Turkey, and Afghanistan. The primary implication for future crisis responses is therefore architectural rather than financial: the system needs longer time horizons, coordinated communications, and family co-mobility provisions built into programme design as requirements, not optional enhancements.

[2] A full discussion of limitations is provided in Section 3.6. Limitations.

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# SURVEY DATA ANALYSIS & NLP REPORT

**Ukrainian Researchers at Risk**
*Quantitative Survey Analysis & Computational Text Analysis of Open-Ended Responses*

This report presents the full quantitative and textual analysis of survey data collected from 291 Ukrainian researchers in 2026. It combines structured question analysis (Parts 1–6) with NLP-based computational text analysis of seven open-ended survey responses (Part 7), including TF-IDF keyword extraction, Latent Dirichlet Allocation (LDA) topic modelling, and K-Means cluster analysis — all performed offline using scikit-learn. Quotations from open-ended responses are translated from Ukrainian.

**Survey period:** January–March 2026
**Respondents:** n = 291 Ukrainian scientists
**Open-ended responses analysed:** n = 1,154 substantive responses across 7 questions
**NLP methods:** TF-IDF, LDA topic modelling, K-Means clustering, stopword removal
**Figures:** 13 data visualizations across 7 analytical Parts

# Part Data Collection & Processing Methodology

## 1 Survey Design

The survey was administered digitally via Google Forms and distributed to Ukrainian researchers through institutional networks, academic communities, and targeted outreach to scholars affiliated with Ukrainian universities and research institutes. The questionnaire was structured into five thematic modules: (1) current professional affiliation and career status; (2) infrastructure access and disruption; (3) current and post-war needs; (4) effectiveness of international support instruments; and (5) effectiveness of Ukrainian national support instruments. Seven open-ended questions captured qualitative perspectives on infrastructure priorities, support effectiveness, programme access barriers, solidarity strategies, and policy recommendations.

## 2 Quantitative Data Processing

**Cleaning & Recoding**

Raw data were extracted in XLSX format and processed with Python (pandas, openpyxl). The 48-column dataset was manually mapped to survey questions. Multi-select responses (Q4, Q8, Q24) used comma-separated strings; because response categories themselves contain commas, a substring-matching approach was applied, matching each category by a unique Ukrainian-language anchor phrase. Likert ratings (Q10, Q11) appeared in mixed formats — integer, full-string, or “Did not use” — and were parsed to numeric values with “Did not use” treated as missing (excluded from effectiveness means, not coded as zero). Three response types were treated as missing for means calculation: blank responses (n=2 per column), “Did not use” responses, and “My application was rejected” responses. The latter category — present in up to 10 responses per instrument — is analytically distinct from non-users and is reported separately in uptake figures.

**Descriptive Statistics**

Frequency counts and percentage distributions were computed per question. For multi-select items, counts represent selections (percentages exceed 100%); for Likert items, means were computed among users only. The core comparative analysis contrasts international vs. Ukrainian national effectiveness (Q10 vs. Q11) and computes gap scores (International minus National) per instrument.

# 3 NLP Text Analysis Pipeline

**Pre-processing**
All seven open-ended question columns were extracted. Non-substantive responses were removed using a two-stage filter: (1) length threshold (< 20 characters); (2) pattern matching against a curated list of non-informative openings in Ukrainian (e.g., "hard to say," "I don't know," "no recommendations," "thank you"). After filtering, 1,154 substantive responses remained across the seven questions (range: 78–251 per question).

Each response was lower-cased and stripped of non-Cyrillic characters using a regular expression ([^а-яіїєґ\s]). A custom Ukrainian stopword list of 120+ function words was applied, including prepositions, conjunctions, pronouns, auxiliary verbs, and common discourse markers.

**TF-IDF Keyword Extraction**
Term Frequency–Inverse Document Frequency (TF-IDF) was computed per question using scikit-learn's TfidfVectorizer with unigrams and bigrams (ngram_range = (1, 2)), minimum document frequency = 2, and maximum document frequency = 90%. This yields a measure of term salience within each question's corpus that down-weights generic terms appearing across all responses and up-weights terms distinctive to that question. The top 18 terms per question were extracted and translated from Ukrainian for reporting.

**LDA Topic Modelling**
Latent Dirichlet Allocation (LDA) was applied per question using scikit-learn's LatentDirichletAllocation with batch learning and 40 iterations. The number of topics was set to 5 for questions with > 100 clean responses, 4 for 50–100 responses, and 3 for < 50 responses. Topic coherence was assessed qualitatively by reviewing top terms and representative quotes. Each response was assigned a dominant topic based on its highest posterior topic probability. Representative quotes for each topic were selected as the responses with the highest cosine similarity to the topic's centroid in the document-topic space. All quotes were translated from Ukrainian for inclusion in this report.

**K-Means Cluster Analysis**
K-Means clustering (k = 2–4, determined by response volume) was applied to TF-IDF-normalised document vectors to identify structural groupings within each question's responses. Clusters were characterised by their centroid's top terms. This analysis complements LDA by providing a hard-assignment perspective on response groupings. Results inform the thematic synthesis presented in Part 7.

# 4 Limitations of the NLP Analysis

Ukrainian language: All standard NLP toolkits are trained primarily on English. Without a Ukrainian-language model, pre-processing relies on manual stopword lists and character-pattern tokenisation. Morphologically complex Ukrainian word forms (e.g., case inflections) are not lemmatised, so semantically related forms (e.g., "financial" as adjective, genitive, instrumental) appear as separate tokens.

No lemmatisation: scikit-learn does not include Ukrainian lemmatisers. This limits term consolidation and may slightly inflate

vocabulary size, though n-gram matching partially compensates.

LDA topic interpretability: LDA is a probabilistic model whose topics require human interpretation. Topic labels in this report are assigned by the authors based on the top terms and representative quotes; they reflect the dominant themes rather than exhaustive category definitions.

- Translation: All Ukrainian quotes are translated by the authors. Translations aim for accuracy over stylistic polish and may not fully convey colloquial or idiomatic expressions.
- Small samples: Q25 (Other comments) contains only 78 clean responses, limiting the robustness of topic modelling for that question.

# Part 1 Respondent Profile

The 291 respondents represent a cross-section of the Ukrainian research community across disciplines, career stages, and locations. Female researchers constitute 62% (n = 182), male 35% (n = 101), and the remaining 8 respondents opted for not specifying their gender. The largest credential group holds a PhD (64%, n = 186), followed by Doctors of Sciences (27%, n = 78). Mid-career researchers (10–20 yrs post-defence) form the largest career-stage group (n = 116), followed by experienced (20+ yrs, n = 101) and early-career (0–10 yrs, n = 62). The 35–49 age cohort dominates (56%, n = 163). Natural sciences (n = 89) and humanities & arts (n = 84) are the two largest fields.

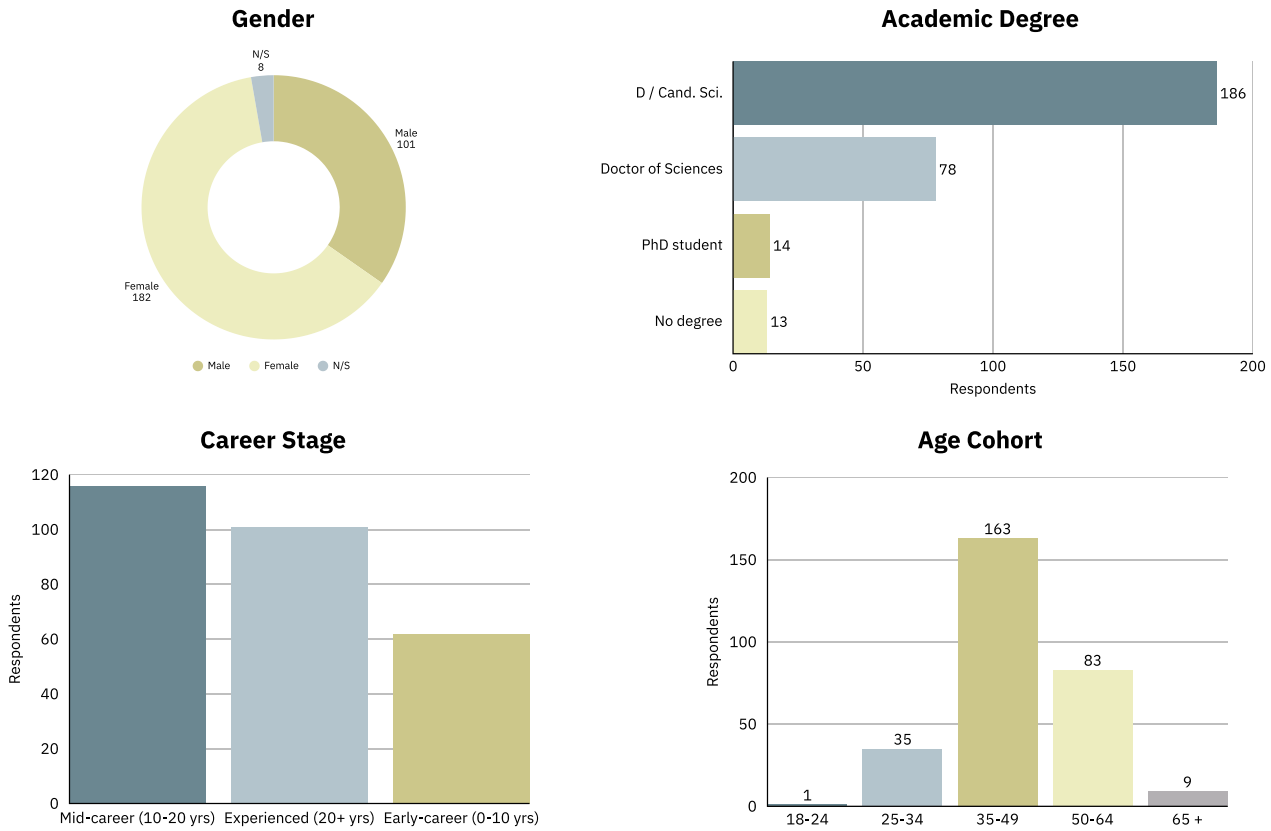
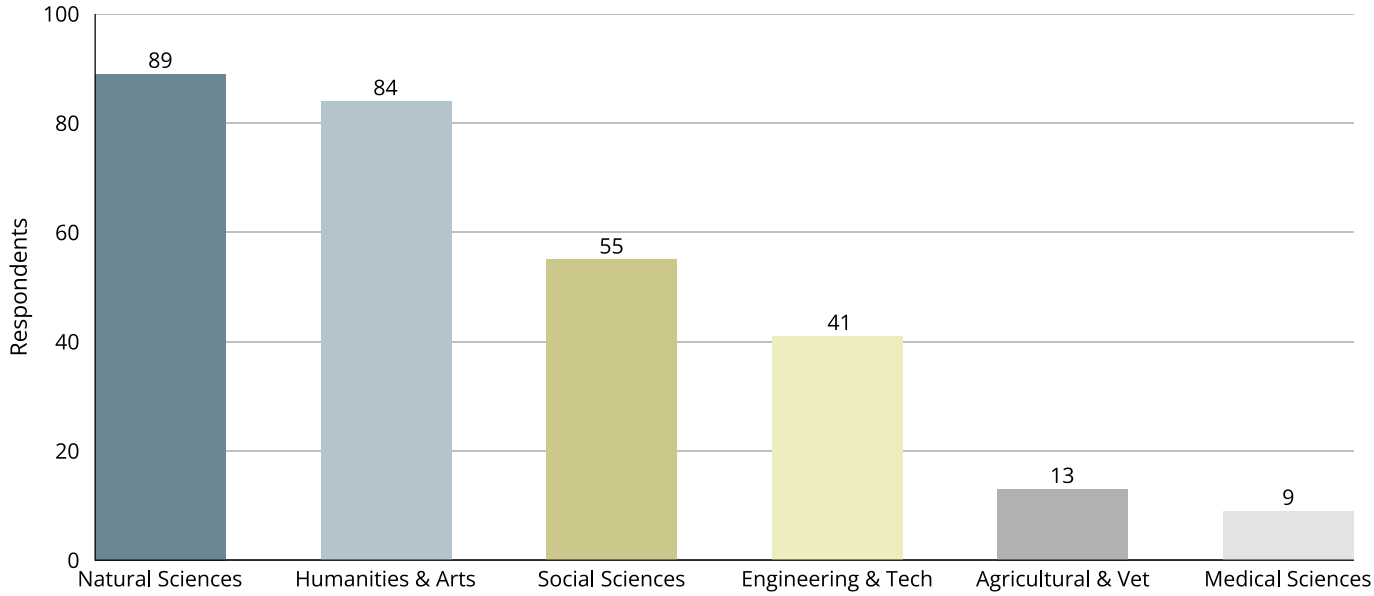



***Figure 1. Respondent demographic profile: gender, degree, career stage, and age distribution (n = 291)***

***Figure 2. Distribution of respondents by research field (n = 291)***




# Part 2 Current Affiliation & Location

The majority remain affiliated with universities (39%, n = 114) or NAS/research institutes (21%, n = 62) in Ukraine — 60% of respondents in total. A further 12% report dual affiliation (UA + abroad). Only 8% are fully based abroad, with 6% on temporary fellowships. By residence, 39% live in central/eastern Ukraine, 31% abroad, 17% in eastern/southern Ukraine, and 13% in western Ukraine. Kharkiv and Zaporizhzhia — frontline or near-frontline regions — account for 30% of pre-invasion residence locations.

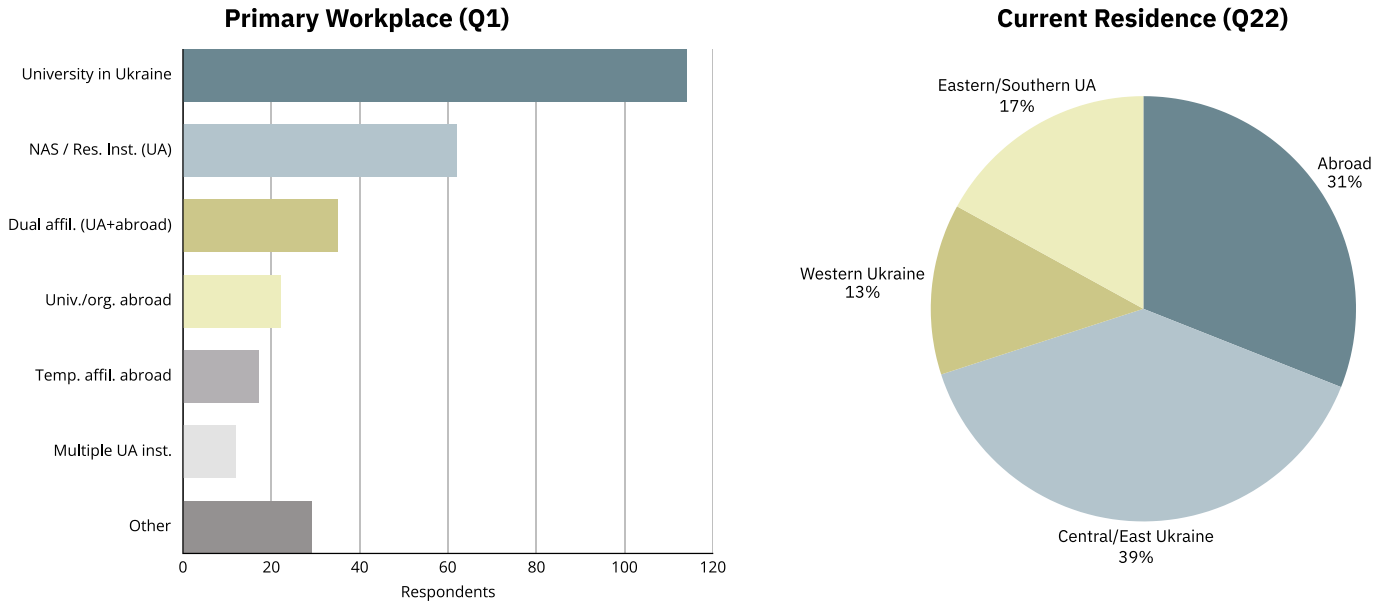



***Figure 3. Current workplace affiliation (left) and place of residence (right)***

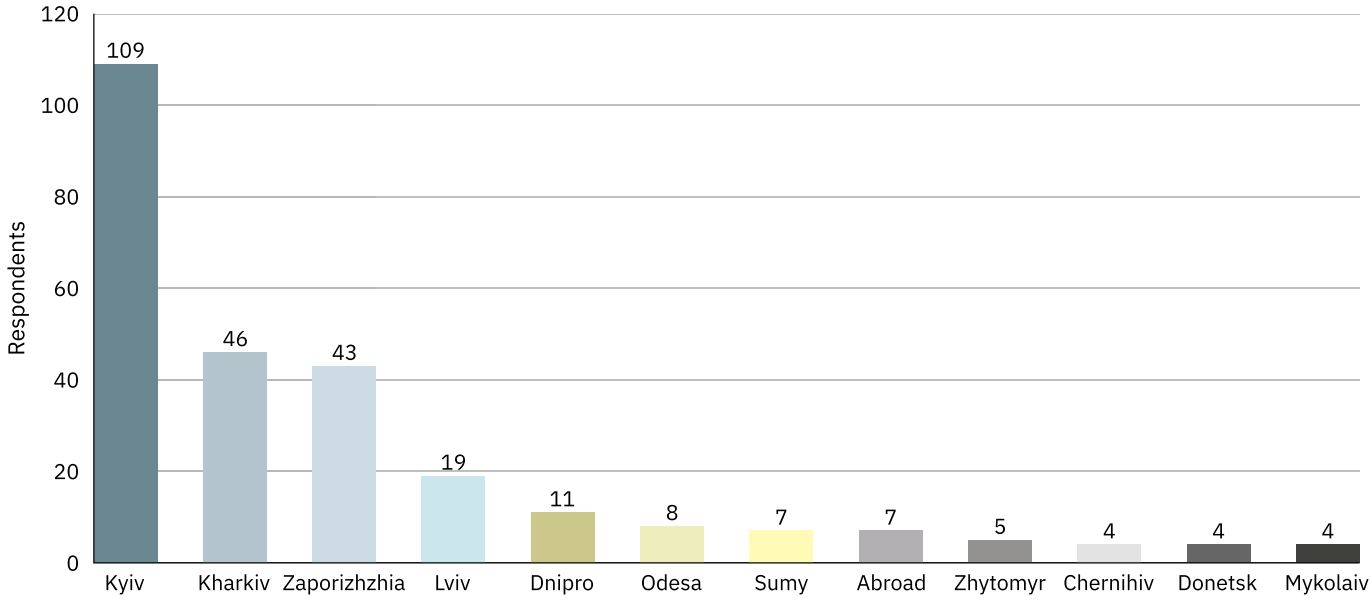



***Figure 4. Region of residence on 24 February 2022 (Q23)***

# Part 3 Career Disruption Since February 2022

Fifty percent of respondents report unchanged career status. Among those affected: 24% report promotion (likely due to institutional restructuring as colleagues left); 11% lost affiliation through displacement; 6% were downgraded; and 2% changed professions. Infrastructure access was significantly or completely disrupted for 46% of respondents; only 17% report minimal impact.

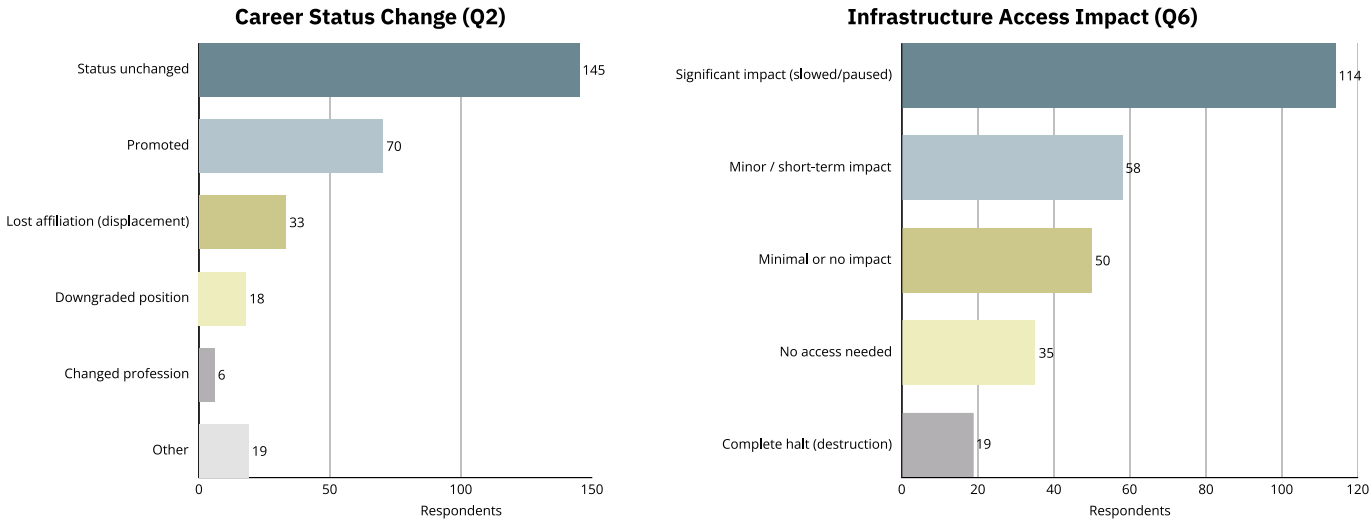



***Figure 5. Career status change (left, Q2) and infrastructure access impact (right, Q6)***

# Part 4 Current & Post-War Needs

Financial support (86%, n = 251), personal/family safety (72%, n = 210), and basic needs including housing and electricity (59%, n = 172) dominate current priorities. Post-war needs shift toward financial support (89%), youth engagement in science (54%), and researcher return and reintegration (44%), reflecting concern about a generational gap in Ukraine's research workforce.

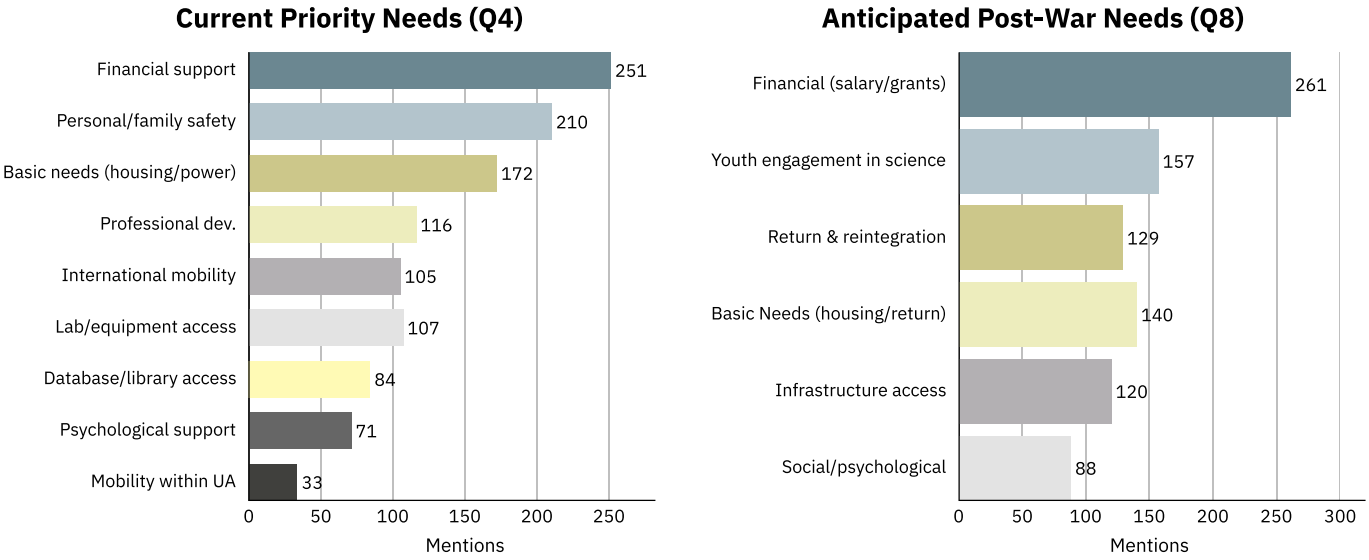



***Figure 6. Current priority needs (left, Q4) and post-war anticipated needs (right, Q8). Multi-select***

# Part 5 Effectiveness of Support Instruments

International instruments consistently outperform Ukrainian national equivalents across all 12 categories. Equipment/database access scores highest internationally (3.78), followed by research grants (3.71) and in-person fellowships (3.59). Advocacy programmes score lowest (1.63 international; 1.32 national). National support scores are uniformly below 3.0 on all instruments, with relocation (1.47) and advocacy (1.32) at the floor.

| Support Instrument | Intl. | National | Gap |
|---|---|---|---|
| Emergency stipends | 3.56 | 1.87 | +1.69 |
| Relocation programs | 2.60 | 1.47 | +1.13 |
| Fellowship (in-person) | 3.59 | 1.72 | +1.87 |
| Fellowship (remote) | 2.41 | 1.99 | +0.42 |
| Research grants (at-risk) | 3.71 | 1.67 | +2.04 |
| Equipment/databases/libraries | 3.78 | 2.85 | +0.93 |
| Publication funding | 2.89 | 1.56 | +1.33 |
| Wage/salary funding | 3.16 | 2.38 | +0.78 |

| Support Instrument | Intl. | National | Gap |
|---|---|---|---|
| Professional development | 3.45 | 2.60 | +0.85 |
| Psychological support | 2.55 | 2.10 | +0.45 |
| Legal/immigration services | 2.08 | 1.43 | +0.65 |
| Advocacy programmes | 1.63 | 1.32 | +0.31 |

*Note: Mean scores among users only (non-users excluded). Scale: 1 = not effective, 5 = very effective. Gap = International minus Ukrainian national score.*

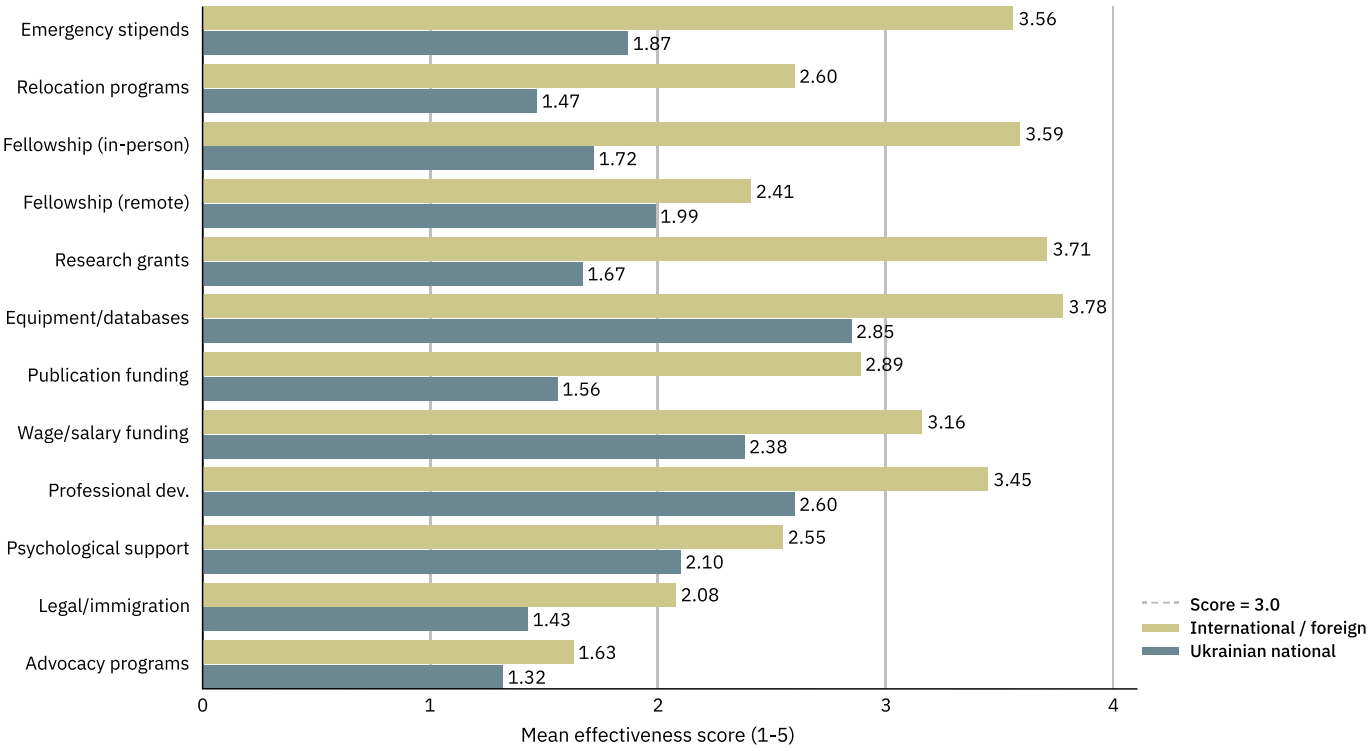



***Figure 7. Effectiveness of Support Instruments: International vs. National Sources***

# Part 6 Support Tool Uptake & Structural Gaps

Equipment/database access was used by 69% of respondents (n = 201). Research grants and professional development were each accessed by 55% (n = 161). In stark contrast, legal/immigration services were used by only 25% (n = 73) and advocacy programmes by just 20% (n = 60) — these low usage numbers suggest both access failures and quality shortcomings. Psychological support was accessed by only 33% despite 24% of respondents naming it as a current need. Relocation and remote fellowships show notably low uptake (30% and 28%) relative to the prevalence of displacement in the sample.

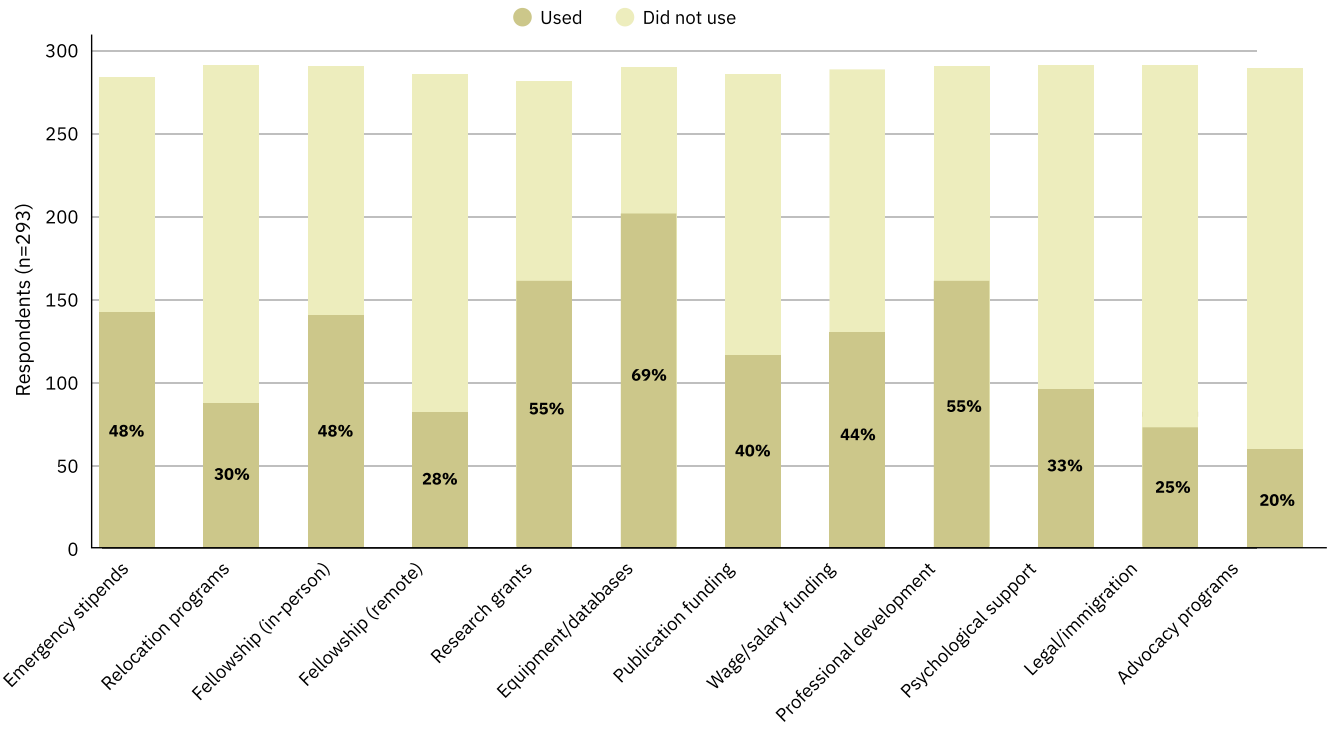



***Figure 8. Support tool uptake: used (dark) vs. not used (light). Percentages = share who accessed each instrument***

# Part 7 Computational Text Analysis of Open-Ended Responses

This Part presents the findings of a computational analysis of seven open-ended survey questions, comprising 1,154 substantive responses. The analysis combines TF-IDF keyword extraction, LDA topic modelling, and K-Means clustering to surface the major themes, lexical patterns, and structural groupings within each question's response corpus. All quotations are translated from Ukrainian.

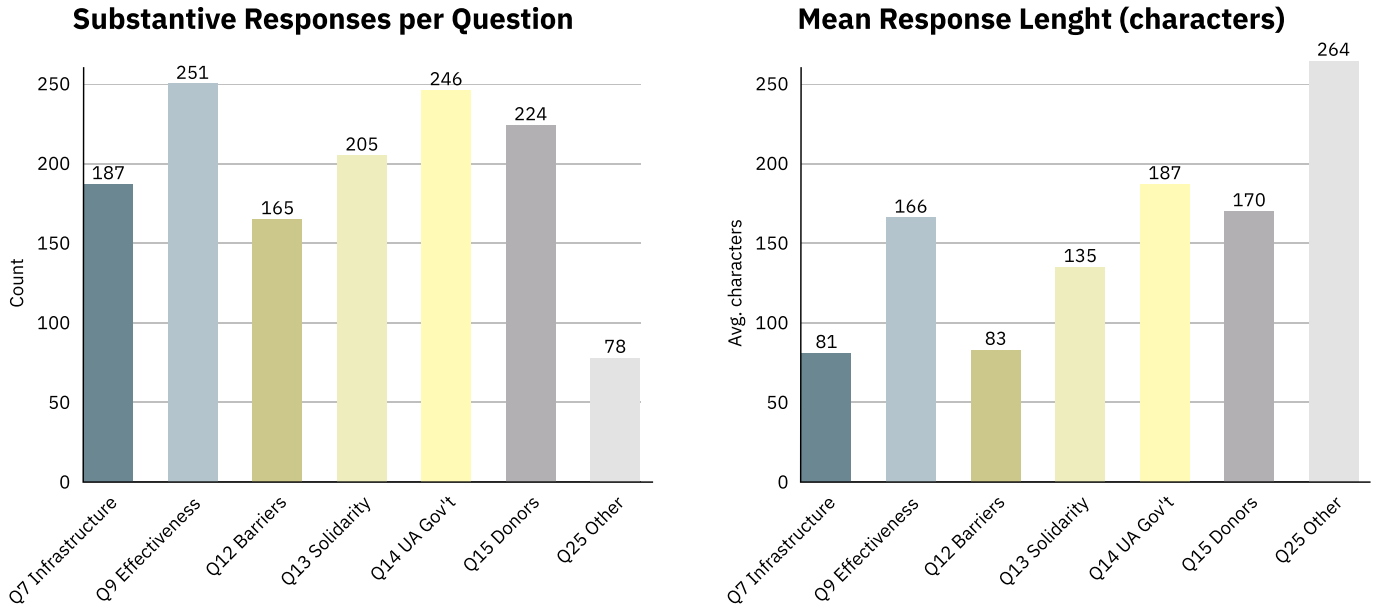



***Figure 9. Open-ended response volume (left) and mean response depth in characters (right). Q14 and Q15 generated the richest responses, consistent with their policy-recommendation framing***

# 7.1 Infrastructure Restoration Priorities (Q7)

186 substantive responses (of 247 total) addressed the question of which infrastructure elements are most critical to restore. Response depth was comparatively short (median 42 characters), reflecting the concise, list-like nature of the question.

***Key Terms***

TF-IDF analysis identifies restoration, access, heating, equipment, laboratories, power supply, and infrastructure as the dominant terms. The frequent co-occurrence of terms related to physical building fabric (heating, windows, buildings) alongside digital infrastructure (databases, online, libraries) reflects the dual nature of infrastructure destruction: physical damage from shelling alongside energy system collapse, which reduces digital access.

***LDA Topics***

Five topics were identified:

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 1 | Lab & Power Restoration | access · laboratories · power supply · infrastructure · university | 43 |
| 2 | Physical Buildings & Heating | buildings · heating · power supply · heat supply · premises | 42 |
| 3 | Digital Infrastructure & Database Access | databases · online · electricity · libraries · digital | 31 |
| 4 | Research Facilities & Equipment Funding | labs funding · research facilities · premises · academic | 36 |
| 5 | Basic Utilities & Connectivity | heating · internet · equipment · utilities | 34 |

The near-equal distribution across topics suggests that no single dimension of infrastructure dominates researcher concerns: physical building restoration, energy supply, digital access, and laboratory equipment represent distinct and co-present priority clusters.

## 7.2 Conceptualising Support Effectiveness (Q9)

251 substantive responses addressed the question of what programme effectiveness means to individual researchers. This question generated one of the two highest response volumes and significant lexical richness (mean 203 characters), reflecting researchers' desire to articulate nuanced, contextualised definitions of effectiveness.

***Key Terms***

The dominant TF-IDF terms are opportunity (*mozhlyvist*), support, programmes, researchers, financial, funding, and research. The repeated pairing of the words "financial" and "support" reflects that for most respondents, effective support begins with financial predictability, but does not end there. The co-occurrence of the words "continue" and "research" in bigrams signals the centrality of research continuity as a success criterion.

***LDA Topics & Representative Voices***

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 1 | Programme Continuity & Capacity Preservation | support · programmes · researchers · research · working | 56 |
| 2 | Access to Opportunities & Resources | opportunity · access · support · researchers · funding | 55 |
| 3 | Research Continuation as Core Criterion | opportunity · continue · research · effectiveness | 57 |
| 4 | Financial Stability & Publication Support | financial support · publications · opportunity · funding | 45 |
| 5 | Programme Accountability & Measurable Outcomes | research · accountability · programme · results | 38 |

> *Effectiveness means creating real conditions for continuing full-scale scientific activity in Ukraine — not just formally preserving researcher status. Effective support allows a scientist to maintain their research direction, their laboratory, their team, and secure conditions for scientific productivity.*
>
> **Respondent — Topic 1 (Research Continuation)**

> *For me, effectiveness means not a one-off payment but the creation of conditions for long-term professional stability: financial predictability, safety, access to resources, and the ability to plan research for at least one to two years ahead.*
>
> **Respondent — Topic 2 (Research Continuity)**

> *A researcher must receive a salary that allows a dignified life. Financial support is the primary criterion. Equally important is the opportunity to participate in academic events funded by the university, to publish, and to retain access to resources.*
>
> **Respondent — Topic 3 (Financial Stability)**

Together the five themes elicited by Q9 reveal a consistent hierarchy in researchers' conception of effectiveness: financial stability enables research continuation, which enables career development and institutional resilience. Effectiveness is therefore understood not as a single intervention but as a systemic condition.

## 7.3 Barriers to Programme Access (Q12)

165 substantive responses addressed why respondents did not use support programmes. This question is analytically critical because it reveals the gap between instrument availability and actual reach.

***LDA Topics — Five Access Barrier Types***

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 1 | No Institutional Access / Programmes Not Available Locally | support of researchers · programmes · international support | 46 |
| 2 | Information Gaps & Low Awareness | information · programmes · didn't know · such programmes | 49 |
| 3 | Personal Constraints & Workload | conditions · workload · no relocation | 25 |
| 4 | Didn't Know Programmes Existed | didn't know · existence · time constraints | 31 |
| 5 | Mobility Restrictions & Eligibility Barriers | abroad · eligibility · mobility restrictions | 14 |

> *Since I am abroad, I have no right to apply for any of the national programmes: participation is only permitted for those physically in Ukraine. Frankly, this is rather frustrating — support is not provided to those who most need a stable academic position.*
>
> **Respondent — Topic 2 (Eligibility & Mobility)**

> *I was not sufficiently informed about their existence, and the topics of the available grants did not match my research area. Many programmes are oriented toward departure abroad — a concern for those of us who cannot or do not wish to leave.*
>
> **Respondent — Topic 4 (Awareness Barrier)**

The largest single cluster (Information Gaps, n = 49) confirms that awareness failures are as significant a barrier as eligibility constraints or personal circumstances. A substantial share of researchers who did not access support were not aware programmes existed, suggesting that communications and outreach infrastructure is a policy-actionable gap.

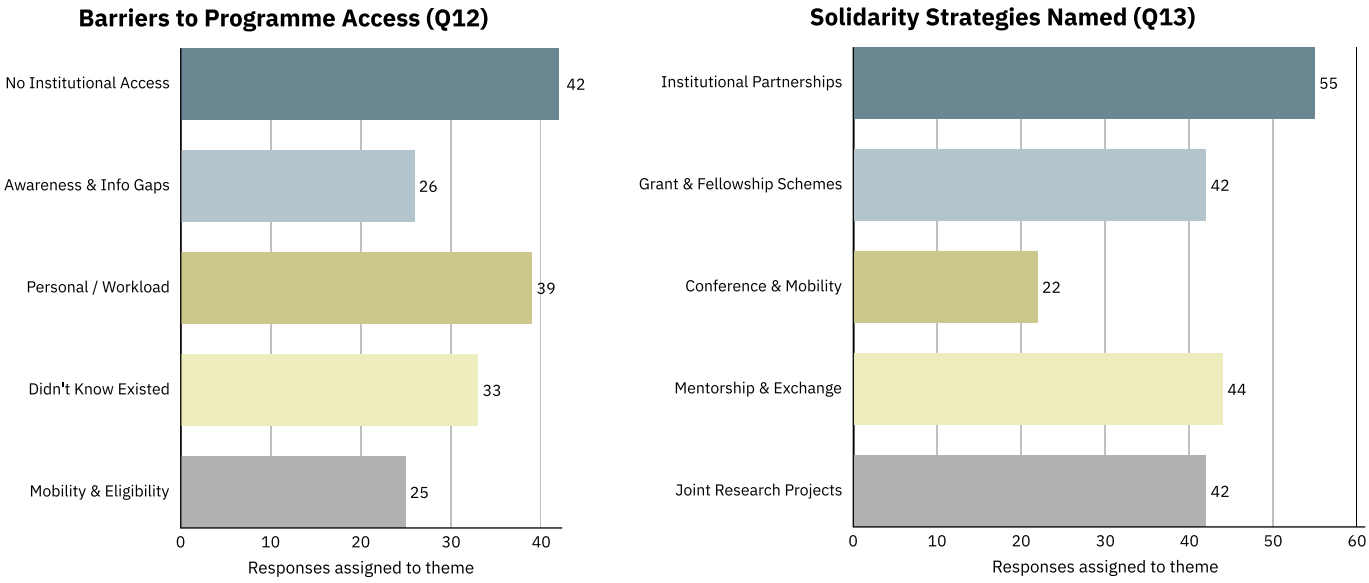



***Figure 10. Barriers to programme access by theme (Q12, left) and effective solidarity strategies named by respondents (Q13, right)***

# 7.4 Effective Solidarity Strategies (Q13)

205 substantive responses described solidarity strategies that respondents found effective. This question explicitly invited researchers to identify what works — generating positive, practical content.

### *LDA Topics*

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 1 | Institutional Partnerships & International Cooperation | support · research · cooperation · international | 43 |
| 2 | Grant & Fellowship Opportunities | grants · researchers · fellowships · at-risk | 47 |

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 3 | Conference & Mobility Opportunities | participation · international · conferences | 32 |
| 4 | Mentorship & Knowledge Exchange | mentorship · experience sharing · networks | 46 |
| 5 | Joint Research Projects | joint research · projects · data · collaborative | 37 |

Grant and fellowship opportunities (Topic 2, n = 47) and mentorship and knowledge exchange (Topic 2, n = 46) emerged as the two most frequently cited effective strategies. Joint research projects (n = 37) also feature prominently, reflecting appreciation for instruments that sustain academic connections rather than simply providing financial relief.

## 7.5 Recommendations to the Ukrainian Government (Q14)

246 substantive responses addressed policymakers in Ukraine. This produced the longest average response length in the dataset (mean 263 characters), reflecting researchers' high engagement with domestic policy reform and, for many, accumulated frustration.

***LDA Topics***

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 1 | Reduce Bureaucracy & Enable Brain Circulation | reduce bureaucracy · funding · increase · brain circulation | 56 |
| 2 | Wartime Researcher Protection & Mobility | wartime protection · mobility restrictions · continuation | 35 |
| 3 | Research support programs and reforms | systemic reform · research funding · programmes | |
| 4 | Research Personnel Salaries | salary · wage increase · remuneration | |
| 5 | Institutional Accountability | institutional accountability · funding · Ukraine | |
| 6 | Systemic Research Funding Reform | systemic funding reform · grants · research programs | 54 |
| 7 | Salary & Wage Increases | salary · wages · salary increase | 54 |

> *Creating mechanisms for "brain circulation" rather than brain drain is the main risk today. Develop normative frameworks for remote affiliation, so that researchers working abroad can maintain formal ties to Ukrainian institutions without sanctions.*
>
> **Respondent — Topic 1 (Bureaucracy & Brain Circulation)**

> *Increase salaries. Conditions for international projects. Encourage international cooperation and reduce bureaucratic barriers. The current situation — decreasing wages while reporting requirements increase — is unsustainable.*
>
> **Respondent — Topic 4 (Salaries)**

> *It is critically important to preserve the ability of Ukrainian researchers to participate in national grant programmes regardless of their physical location, provided they remain affiliated with Ukrainian institutions.*
>
> **Respondent — Topic 2 (Wartime Protection)**

Bureaucracy reduction is the largest cluster (n = 56), followed by salary increases and systemic funding reform (both n = 54). Together these three clusters account for 67% of substantive responses and converge on a single systemic diagnosis: Ukrainian science is chronically underfunded, over-regulated, and inadequately rewarded — conditions that the war has worsened but not created.

## 7.6 Recommendations to International Donors and Organisations (Q15)

223 substantive responses addressed international donors and organisations, generating the richest and most varied response corpus. The mean response length (269 characters) was the highest of all open-ended questions, suggesting that researchers perceive international actors as both more receptive and more capable of acting on their recommendations than domestic policymakers.

### *LDA Topics*

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 1 | Increased & Long-term Funding | long-term funding · projects · programmes · Ukrainian researchers | 68 |
| 2 | Support for Researchers Remaining in Ukraine | support in-country · programmes · projects · return | 43 |
| 3 | Conference & Mobility Grants | conferences · fellowships · grants · participation | 33 |
| 4 | Programme Visibility & Outreach | programme visibility · information · outreach | 40 |
| 5 | Expanded & Accessible Grant Opportunities | grant expansion · Ukrainian · funding · increase | 39 |

> *Donors should focus on long-term support instruments, not just short emergency grants, to ensure stability of research activity; combine financial support with professional integration — inclusion of Ukrainian scholars in consortia, joint projects, and programmes; flexible funding conditions — remote work, budget redistribution, project extension; support institutions as well as individuals, to preserve research schools and teams in Ukraine.*
>
> **Respondent — Topic 1 (Long-term Funding)**

> *Reintegration grants: create targeted programmes for returning researchers so they can apply experience and networks gained abroad to Ukraine's research system. The most effective mechanisms simultaneously provide resources, inclusion in international networks, and the ability to work on research with long-term impact.*
>
> **Respondent — Topic 2 (In-country Support)**

> *Women researchers who left Ukraine with minor children and bear full responsibility for their safety, education, and integration almost entirely fall outside the field of vision of support policies. School attachment limits mobility and effectively excludes them from programmes requiring physical movement.*
>
> **Respondent — Topic 3 (Equity & Visibility)**

The dominance of long-term funding (n = 68) as the top recommendation is consistent with effectiveness data showing short contract duration as the primary limitation of existing instruments. The explicit call for support of in-country researchers (n = 43) reflects a widely held perception that international support disproportionately reaches those who have left Ukraine, leaving the majority who remained underserved.

# 7.7 Other Comments on War's Impact on Science (Q25)

78 substantive responses were collected on this general open-ended question. Despite the smaller corpus, four coherent topics emerged from LDA analysis.

***LDA Topics***

| # | Theme Label | Key Terms (translated) | n |
|---|---|---|---|
| 1 | Systemic Impact on Academic Institutions | universities · institutional impact · academic activity | 16 |
| 2 | Brain Drain & Future of Ukrainian Science | brain drain · Ukrainian science · future | 16 |
| 3 | Adapting Research to Wartime Conditions | war conditions · adapting · new challenges | 20 |
| 4 | Individual Researcher Experiences | individual experience · researchers · personal impact | 26 |

> *Ukrainian science was very weakly integrated into the western academic ecosystem even before the large-scale war, for well-known reasons. These reasons have not disappeared after February 24, 2022. Moreover, they continue to operate alongside new ones. Three strategic aspects require attention: repatriation of intellectual capital; rebuilding institutional capacity; and connecting returning researchers to reformed institutions.*
>
> **Respondent — Topic 2 (Brain Drain)**

> *The war is not only on the battlefield — a hybrid war is also taking place in science. Ukrainian-authored articles are subject to longer peer-review processes in some journals. We are discriminated against in some contexts where our perspectives are equated with those of Russian scholars, despite the fundamental difference in our situations.*
>
> **Respondent — Topic 3 (Hybrid War in Science)**

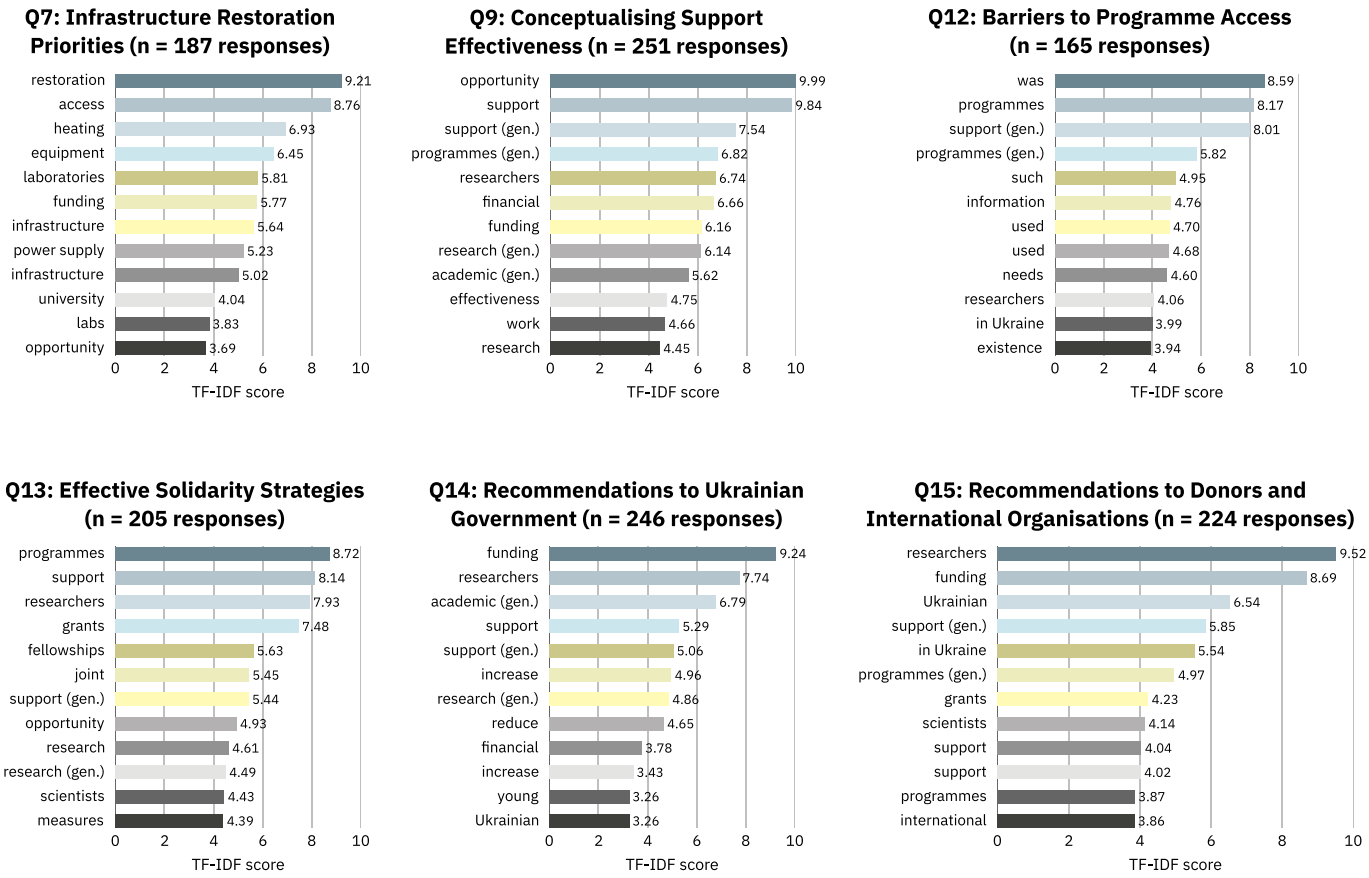



***Figure 11. Top TF-IDF keywords per open-ended question (translated from Ukrainian). Terms are ranked by corpus-weighted TF-IDF score***

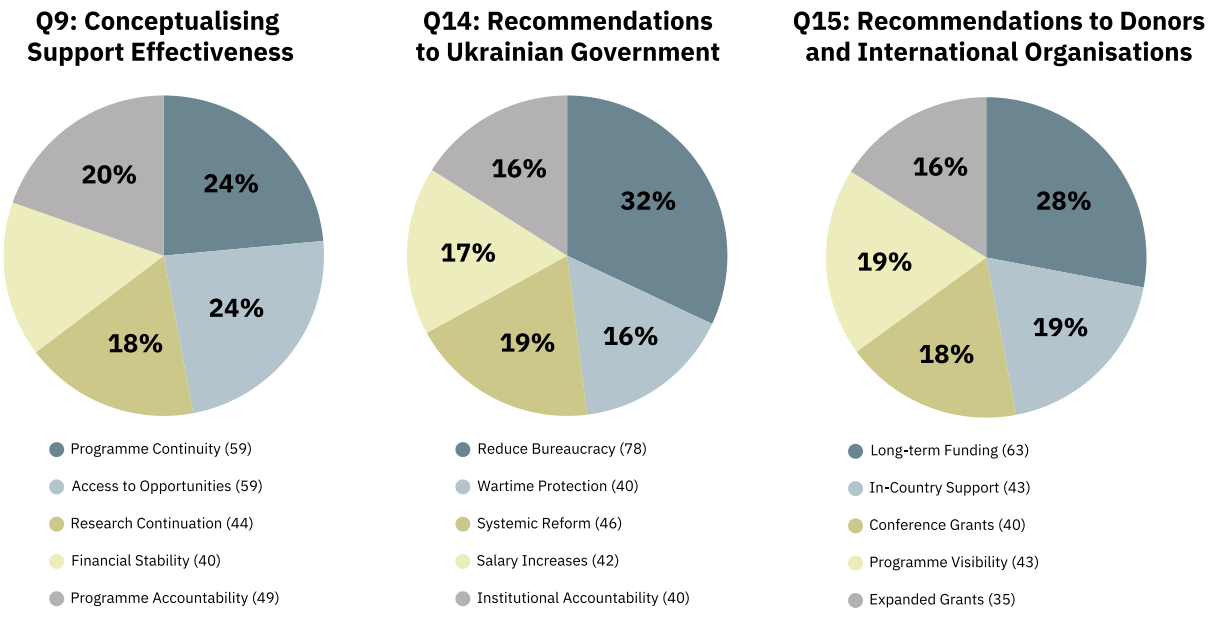



***Figure 12. LDA topic distribution for three policy-relevant questions (Q9, Q14, Q15)***

# 7.8 Cross-Question Thematic Synthesis

Reading the NLP findings across all seven questions reveals four cross-cutting themes that exceed any individual question:

**1. Financial Underpinning as a Systemic Precondition**
Financial support surfaces as the dominant concern in every question — from infrastructure restoration (funding for equipment) to effectiveness definitions (financial stability) to government recommendations (salary increases) to donor recommendations (long-term grants). The data suggest that most other support instrument failures are either caused by or exacerbated by chronic financial insufficiency, both nationally and in the design of international instruments.

**2. Information Failure as a Structural Barrier**
The barriers analysis (Q12) reveals that the second-largest group of non-users (n = 49) did not access programmes because they were unaware of them, not because they were ineligible or personally constrained. This information-access failure recurs in donor recommendations (Q15), where outreach and communication receive their own topic cluster. It implies that improving communications infrastructure could expand programme reach without new funding.

**3. The In-country versus Abroad Divide**
A consistent tension runs through Q12, Q14, and Q15 responses between researchers who have left Ukraine (who face mobility restrictions, serial precarity, and integration challenges) and those who remain (who face infrastructure destruction, salary collapse, and exclusion from internationally-oriented programmes). Both groups express frustration with support systems calibrated to the other group. This structural asymmetry is not adequately addressed by existing instrument typologies and represents a design gap.

**4. Gender and Family as Under-Institutionalised Dimensions**
Gender and family concerns surface persistently across Q9, Q15, and Q25, despite not being a structured survey category. Researchers with children face compounded barriers: school attachment limits mobility; single-parent status (disproportionately women) limits work time; and existing programmes rarely account for family co-mobility. These concerns are under-measured in quantitative analyses and require qualitative attention. *7. Grouped effectiveness scores: international (dark) vs. Ukrainian national (grey). Dashed line = neutral score of 3.0.*

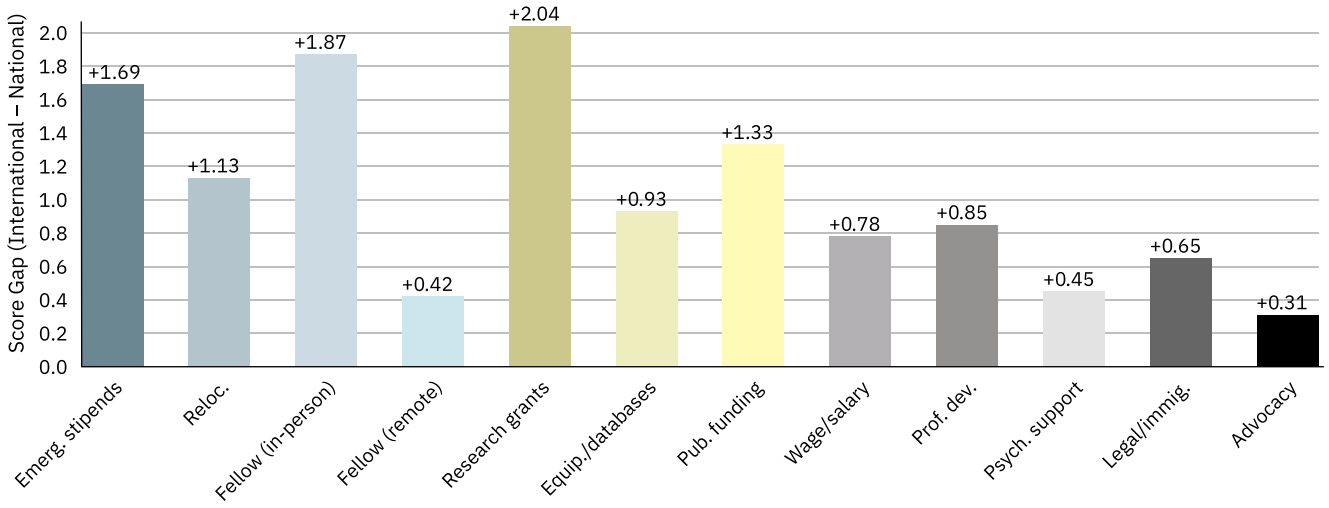



***Figure 13. Score gap (International minus National) per instrument***

# Concluding Summary

The survey data — across both structured responses and open-ended narratives — converge on a coherent and sobering picture of the Ukrainian research community under full-scale war. The majority of respondents remain in Ukraine, maintaining formal affiliations under severely degraded conditions. Those who have left face precarious contracts, short-term placements, and the risk of permanent disconnection from Ukraine's research system. Support instruments have provided meaningful assistance, particularly in infrastructure access, grants, and in-person fellowships. However, the NLP analysis of open-ended responses adds important texture to the quantitative data: effectiveness is understood not as a one-off intervention but as a systemic condition enabling financial stability, research continuity, and long-term career planning. Barriers to access are as much about information failures and eligibility design as about resource constraints. And the voices of researchers — especially women with dependents and those remaining in Ukraine — reveal equity dimensions that structured survey items cannot fully capture.

Together, the quantitative and textual evidence support four overarching policy implications: (1) funding must be longer-term and more predictable; (2) information and outreach infrastructure must be strengthened to close the awareness gap; (3) support instruments must be redesigned to serve both in-country and displaced researchers equitably; and (4) gender, family, and social integration must be institutionalised as design dimensions rather than afterthoughts in both international and national support programmes.

**WHITE PAPER SUPPLEMENT 2 —** SURVEY QUESTIONNAIRE

**Survey of Ukrainian Researchers on the Impact of War on Their Professional Activities**

***Dear Respondent,***

The Science at Risk initiative (https://scienceatrisk.org) is conducting a short survey of Ukrainian researchers on the impact of the war on their professional activities. If, after 24 February 2022, you paused your research activities, joined the Armed Forces of Ukraine / Territorial Defence Forces, or changed your professional field, we would also be very grateful for your participation. The questionnaire takes approximately 15–20 minutes to complete. All responses are anonymous and will be used exclusively in aggregated form for the preparation of the white papers "Profiles of Ukrainian Researchers in Times of War" and "Effectiveness of Support Instruments for Researchers at Risk," to be published in spring 2026 on the Science at Risk platform (https://scienceatrisk.org). We sincerely thank you for your time and participation.

**Section 1. Impact of War on Academic Activity**

**1. Current professional status** (single choice)
Where are you currently working / pursuing your degree?

- University in Ukraine / National Academy of Sciences of Ukraine / other Ukrainian research institution
- Employed in two or more Ukrainian research institutions/universities
- Simultaneously employed in a Ukrainian institution and a foreign university/ research organization
- Employed in a Ukrainian research institution as secondary employment, with primary employment outside academia
- Employed in a non-academic institution in Ukraine (NGO, think tank, museum, etc.)

- Employed in a university/research institution abroad
- Temporary affiliation abroad (fellowship, visiting position, training)
- No institutional affiliation, but continuing research activity
- Not currently engaged in research due to service in the Armed Forces of Ukraine
- Not currently engaged in research due to change of profession
- Parental leave
- Retired
- Unemployed
- Other

**2. Change in academic career status after 24.02.2022** (single choice)
- No change
- Promotion
- Lower academic position
- Lost affiliation due to internal displacement or emigration
- Lost affiliation due to relocation of institution
- Lost affiliation due to institutional closure
- Changed profession
- Retired
- Other

**3. Was your institution relocated due to military events?** (single choice)
- Yes, after 2014
- Yes, after 24.02.2022
- Yes, relocated more than once
- No

**4. Most urgent current needs as a researcher** (choose up to 3)
- Academic mobility (domestic and international)
- Financial support (salary, grants, institutional funding)
- Psychological support
- Access to infrastructure (labs, equipment, field sites)
- Access to databases, libraries, materials
- Professional development (training, collaboration, publishing opportunities, mobility)
- Opportunities to conduct research abroad
- Personal and family safety
- Living conditions (housing, electricity, internet)
- Other

**5. Difficulties experienced due to martial law** (choose up to 3)
- No difficulties experienced
- Reduced teaching load / dismissal
- Reduced research funding
- Unequal distribution of workload/ resources
- Increased workload to obtain military exemption/deferral
- Restrictions on academic mobility
- Limited access to research materials/ fields/topics
- Need for additional income sources due to low salary
- Other

**6. Impact of war on access to institutional infrastructure** (single choice)
- Complete interruption of research due to destruction/displacement
- Significant disruption and delay of research
- Minor or temporary disruption
- Minimal or no impact
- No access to any Ukrainian research infrastructure
- Other

**7. Which infrastructure is most critical for your research recovery?** (open-ended)

**8. Post-war priorities for recovery of science in Ukraine** (choose up to 3)
- Professional development and training
- Financial support (salaries, grants)
- Housing and resettlement
- Reintegration of military experience into academia
- Academic mobility
- Social support (mental health, working conditions, insurance)
- Research infrastructure access
- Engagement of young researchers

- Return and reintegration of researchers from abroad
- Security for researchers and families
- Other

**Section 2. Experience with Researcher Support Programmes**

**9. Indicators of effectiveness of support programmes during wartime** (open-ended)

**10. International support instruments used (2022–2025)** (multiple choice)
- Emergency fellowships / short-term funding
- Relocation programmes
- Temporary academic positions (in-person)
- Temporary academic positions (remote)
- Researchers-at-risk programmes (e.g., Scholars at Risk, CARA)
- Small research grants / publication support / equipment access
- Salary support
- Career development (mentorship, training, grant writing, language courses)
- Psychological / psychosocial support
- Legal or migration assistance
- Advocacy / human rights programmes
- None of the above
- Other

**11. Ukrainian support instruments used (2022–2025)** (multiple choice)
- Emergency fellowships / short-term funding
- Relocation programmes
- Temporary academic positions (in-person)
- Temporary academic positions (remote)
- Researchers-at-risk programmes (e.g., Scholars at Risk, CARA)
- Small research grants / publication support / equipment access
- Salary support
- Career development (mentorship, training, grant writing, language courses)
- Psychological / psychosocial support
- Legal or migration assistance
- Advocacy / human rights programmes
- None of the above
- Other

**12. If you did not use any support programmes, why?** (open-ended)

**13. Effective strategies of international and national solidarity with at-risk researchers** (open-ended)

**14. Recommendations for Ukrainian policymakers** (open-ended)

**15. Recommendations for international organizations and donors** (open-ended)

**Section 3. Socio-Demographic Information**

**16. Gender** (single choice)

**17. Age** (single choice)

**18. Academic degree** (single choice)

**19. Career stage** (single choice)
- Early career (0–10 years after PhD)
- Mid-career (10–20 years after PhD)
- Senior (20+ years after PhD)
- Other

**20. Field of research** (single choice)

**21. Current region of residence** (single choice)
- Eastern / frontline regions
- Central Ukraine
- Western Ukraine
- Temporarily occupied territories
- Abroad

**22. Region of residence as of 24.02.2022** (single choice)

**23. Displacement experience (2014–present)** (multiple choice)
- No displacement experience
- Internal displacement (2014–2021)
- International displacement (2014–2021, returned)
- International displacement (2014–2021, remained abroad)

- Internal displacement after 24.02.2022 (returned)
- Internal displacement after 24.02.2022 (still relocated)
- International displacement after 24.02.2022 (returned)
- International displacement after 24.02.2022 (still abroad)
- Other

**Closing Section**
**Comments and feedback on the questionnaire** (open-ended)
**Overall satisfaction with the survey** (1–5 scale)
- **What could be improved?** (multiple choice + open-ended)
- Reduce number of questions
- Reduce number of open-ended questions
- Add more predefined answer options
- Modify response options
- Other

**Additional comments** (open-ended)

**WHITE PAPER SUPPLEMENT 3 —** PRISMA Systematic Literature Review

*Prompt (Key steps on literature search, using PRISMA approach)*
Link to the concept: https://www.prisma-statement.org/prisma-2020-flow-diagram

The main tasks:
- Search for academic and grey literature published from 1920 to present that addresses support instruments for scientists at risk in Europe.
- Include studies, reports, and evaluations (not limited).
- In this process, we should be focusing on:
- Support programs, fellowships, funding options, legal aid, and institutional networks aimed at scientists, researchers, and academics identified as at risk due to political, social, or academic threats.
- Geographical scope limited to European countries and European Union initiatives.
- Outcomes related to access, inclusion, integration, academic freedom protection, and career sustainability of scientists at risk.
- Historical evolution and contemporary developments, including notable programs such as Inspireurope, MSCA4Ukraine, and SAFE fellowships.
- Types of support: national programs, European-level initiatives, visa facilitation, funding access, and capacity building.

NB: Limit search to databases and sources covering all domains of science, history of this topic, including on higher education, and policy research.

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