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BUILDING A ROBUST SCIENCE ECOSYSTEM IN UKRAINE:

UNESCO's Action Plan for Sciences

The UNESCO International Expert Mission to Assess Damage to Cultural and Religious Sites in Odesa, Ukraine (hereinafter “the Mission”), was made possible thanks to the financial support of the Heritage Emergency Fund (HEF). UNESCO thanks its donors: the Qatar Fund for Development, the Government of Canada, the Kingdom of Norway, the French Republic, the Principality of Monaco, the Republic of Estonia, ANA Holdings INC, the Kingdom of the Netherlands, the Slovak Republic, the Grand Duchy of Luxembourg, the Principality of Andorra, the Republic of Serbia.

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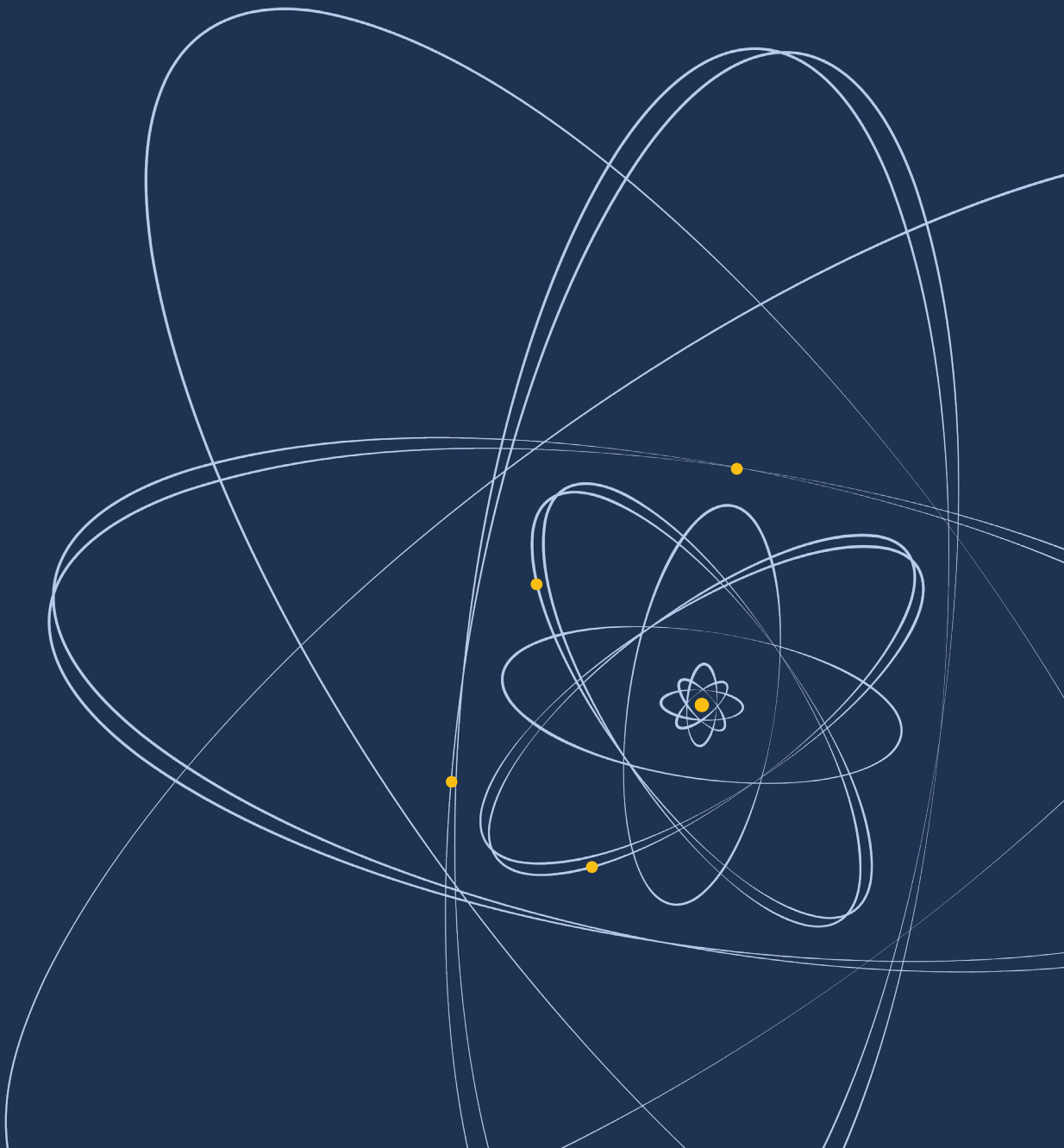
This Action Plan aligns with Ukraine's strategic priorities, as articulated in the Strategic Action Plan of the Ministry of Education and Science of Ukraine by 2027 (hereafter referred as MESU Strategic Action Plan by 2027)[1], and supports Ukraine's European aspirations. It reflects UNESCO's commitment to fostering robust partnerships and was developed as a follow-up of close consultations with key science and research actors in Ukraine, aimed to ensure the plan addresses the current needs and challenges of the Ukrainian scientific sector, particularly considering the ongoing reconstruction efforts and Ukraine's path toward European integration.

This Action Plan was refined in close consultation with the Association of Vice-Rectors of Research of Ukraine, the Ministry of Education and Science of Ukraine, as well as with feedback from the National Academy of Sciences of Ukraine, the Junior Academy of Sciences of Ukraine, and Taras Shevchenko National University of Kyiv. The plan also benefits from the support of the European Union Delegation in Ukraine, reflecting a shared vision and coordinated approach to strengthen Ukraine's scientific sector and align its research landscape with European standards and innovation priorities.

Furthermore, this Action Plan is aligned with the United Nations Decade of Action for Science for Sustainable Development (2024–2033), leveraging global efforts to enhance the role of science in building resilience, fostering innovation, and driving sustainable recovery.

1. Ministry of Education and Science of Ukraine (2024), Strategic Action Plan of the Ministry of Education and Science of Ukraine by 2027 - "Education for Winners". Kyiv: Ministry of Education and Science of Ukraine.

I.
Current Challenges for Ukraine's Science Ecosystem



The war is resulting in widespread damage to the science sector at large. The identified issues hamper livelihood of scientists to cope with the war and, in the more long-term, on the recovery and reconstruction of the sector. In partnership with the Junior Academy of Sciences (JAS)[2] and the Science at Risk platform[3] respectively, UNESCO has supported two assessments that have measured the war impact on the sector's infrastructure facilities since February 2022 and on the livelihood and working conditions of Ukrainian scientists. The two assessments have highlighted some of the main following trends.

A) War-induced damage to Ukraine's science ecosystem: scientific and research infrastructures, professional brain drain, and funding shortages

The war damaged and destroyed a third of Ukraine's scientific infrastructure: The war has severely disrupted research efforts, stalling critical technological and medical advancements. As of March 2024, **1 443 buildings** from **177 public scientific institutions** had been destroyed or damaged. Recent findings estimate that in total, **29.4% of Ukrainian research institutions** have suffered physical damage, leaving researchers unable to access laboratories and essential resources.

This widespread destruction and disruption hinder Ukraine's ability to lead its reconstruction efforts, delaying innovation in key sectors like health, energy, agro-industry, food production and infrastructure which are essential for long-term recovery.

1. **The war is displacing scientists and threatening a significant brain drain:** Further to the direct threat on their safety, the war has caused a significant displacement of Ukraine's scientific workforce, with up to **20% of researchers** forced to **flee the country or relocate internally**. Approximately **30%** of Ukrainian scientists have transitioned to remote work, a significant portion being those who have been displaced or emigrated. Many displaced scientists have lost access to essential research facilities, and the brain drain threatens Ukraine's ability to recover its intellectual capital. Despite 80% of researchers remaining in the country, their ability to continue meaningful research is severely impacted by unstable working conditions and a lack of funding.

2. **Economic strain and funding deficits are crippling Ukraine's scientific sector:** The reorientation of Ukraine's budget toward military and defense needs has led to a sharp decline in scientific funding, with research funding **dropping to 0.33% of GDP** in 2022, far **below Ukraine's target of 1.7%**. This war-induced financial strain has worsened pre-existing issues of underfunding. As a result, 83.8% of researchers reported that their financial situation has deteriorated, with many only able to afford basic necessities, which significantly reduces research productivity.

2. United Nations Educational, Scientific and Cultural Organization (2024), Analysis of War Damage to the Ukrainian Science Sector and Its Consequences. Paris: United Nations. The assessment evaluates damages and losses at July 2022.
3. Assessment of the status of scientists in Ukraine, commissioned by UNESCO and prepared by Science at Risk!, forthcoming publication, 2024.

B) Scientific collapse:
a critical threat to Ukraine in coping with war-induced threats and ability to support recovery and reconstruction

1. **Compromising Ukraine's ability to cope and response to war-induced threats and foster scientists' resilience:** The destruction of research facilities and the displacement of scientists have severely impacted Ukraine's capacity to cope with the impacts of the war in critical civilian areas such as medical research, digital infrastructure, and communications. Scientific expertise is crucial in implementing technologies that ensure the resilience of Ukraine's infrastructure, including communications systems, civilian protection tools and healthcare. The war has disrupted essential research in prosthetics, trauma care, and rehabilitation technologies—all areas critical to civilian recovery and healthcare efforts. Without access to labs and resources, Ukraine faces significant challenges in advancing technological and medical innovations needed to protect and sustain its society and economy.

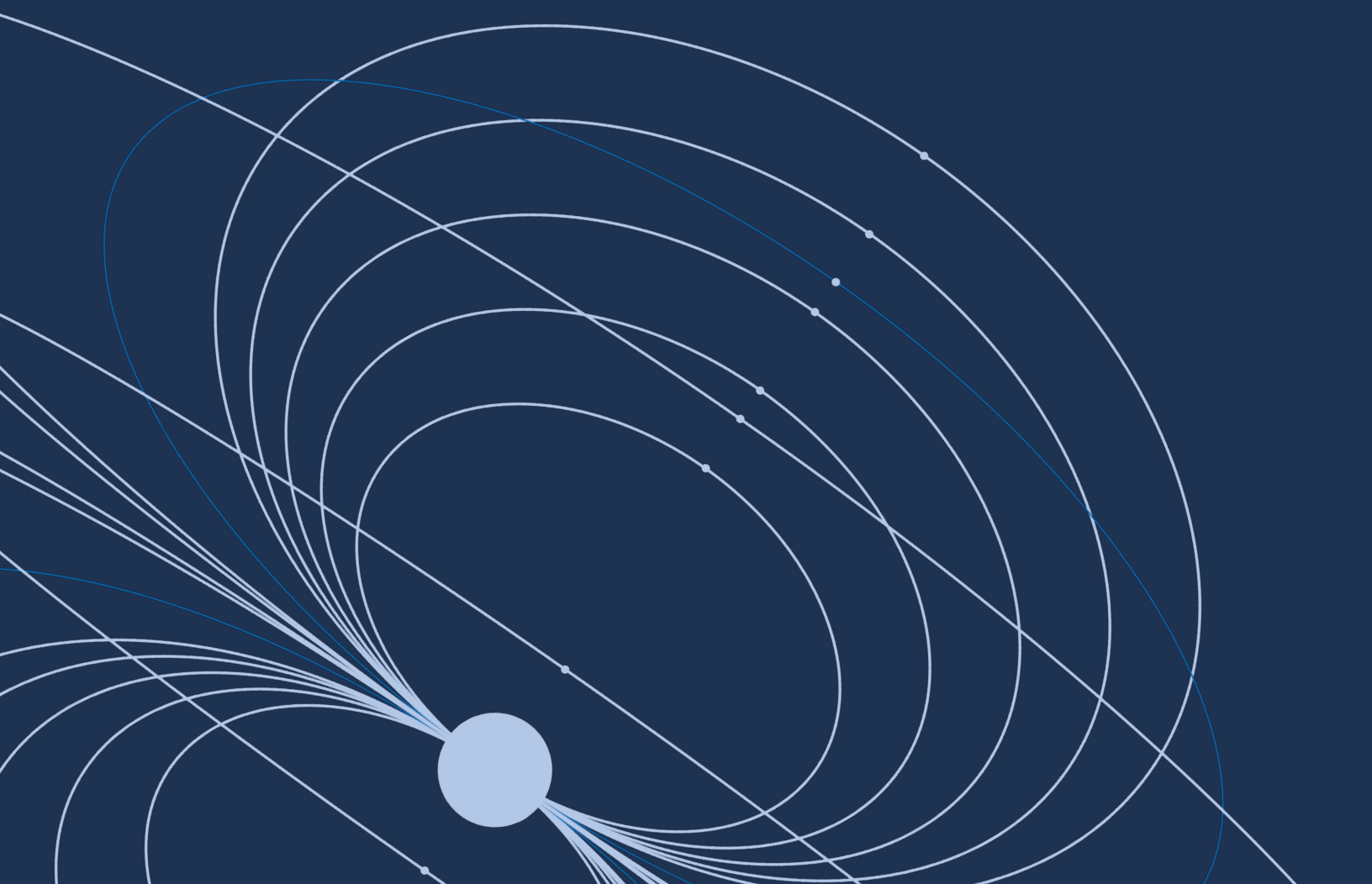
2. **Jeopardizing Ukraine's reconstruction and long-term recovery:** The loss of infrastructure and scientific talents significantly hinders Ukraine's long-term recovery and reconstruction. Key sectors like energy, industry, agriculture and infrastructure development depend on research and innovation; without critical facilities, Ukraine lacks essential data and expertise to rebuild sustainably. The brain drain further threatens recovery by reducing the talent pool needed for innovation in green energy, technology, and agriculture, risking economic setbacks.

   The weakened status of scientists, already underfunded and undervalued, complicates the path to recovery. Social and human sciences are crucial for understanding societal needs, fostering inclusive governance, and crafting effective public policies, making them essential to a comprehensive recovery strategy that addresses both technical and socio-political challenges.

3. **Governance, lack of updated data to inform the response and adequate legal operational frameworks and policies to address the current and future challenges:** As the situation in the country remains volatile, an important gap as regards the situation of scientific and research facilities as well as of scientists concerns the need to expand and deepen data collection and analysis and maintain updated such analysis, including of existing support mechanisms as well as of impact on groups such as female and youth scientists, internally displaced, scientists with disabilities, etc. The war has also exacerbated some structural factors that are hampering investments and are likely to have repercussions on the country's pathway to EU accession. Among others, the constellation of state policies would benefit significantly from revisions across domains, especially to increase alignment as well as the implementation of international normative instruments adopted by Ukraine.

Without a coordinated plan to strengthen Ukraine's science ecosystem the war-induced negative impacts will intensify. The absence of structured support risks prolonging infrastructure gaps and exacerbating the brain drain, forced displacement of the sector's most fundamental resources, as scientists seek more stable opportunities abroad. Strengthening responses through targeted funding to Ukraine's sectors, international partnerships, and strategic planning is critical to preventing further setbacks and building a resilient scientific ecosystem capable of supporting Ukraine's recovery and long-term resilience.

II.
UNESCO’S Strategy for the Resilience, Recovery Anderconstruction of Ukraine’s Science Ecosystem



Why UNESCO?

As a global leader in science, education, and culture, UNESCO has **extensive experience in supporting countries including during crises**, fostering collaboration, and protecting scientific infrastructure. Through frameworks like the Recommendation on Science and Scientific Research (2017), Open Science (2021), and Ethics of Artificial Intelligence (2021), UNESCO ensures alignment with global standards. Its capacity to coordinate international efforts makes it a key partner in Ukraine's recovery.

With **UNESCO's Field Office in Ukraine**, opened in October 2022, UNESCO is committed to long-term support, enabling effective coordination with stakeholders to rebuild a resilient, innovative science ecosystem.

As Ukraine faces unprecedented challenges on its way toward recovery, supporting science and innovation is not only urgent but essential for the country's reconstruction and resilience. This Action Plan tackles immediate needs and sets the foundation for Ukraine's long-term reconstruction, where scientific advancement will drive economic stability, social cohesion, and public welfare. By fostering strong connections between scientists and small and medium enterprises (SMEs), the plan ensures that science supports recovery in a way that is deeply rooted in the Ukrainian economy. This plan emphasizes compliance with international standards, embedding a resilient scientific framework for sustainable recovery and future growth.

This plan is also aligned with Ukraine's priorities. Ukraine's National Recovery Plan of July 2022 recognizes the crucial role of science and scientists in building resilience and in reimagining the country's future. Interventions proposed by UNESCO converge with National program #12: Improve Education system with focus on key competences and innovation, specifically its science related projects, and with *National program #15: Secure targeted and effective social policy, including returning refugees, specifically for returning researchers*.

<u>As such, this Action Plan combines a two-fold approach:</u>

1. **Emergency response:** address the damage to scientific infrastructure and the need to urgently improve the status and well-being of its scientific researchers, supporting emergency response, livelihood of scientists and access to research facilities, to strengthen their ability to cope with war-inducted criticalities and support retention of jobs in the country.

2. **Sustainable response:** support the development of a resilient scientific ecosystem, aligned with international standards, and foster the active involvement of the Ukrainian scientific community in national recovery by connecting it with SMEs, NGOs, and decision makers. This approach prioritizes mid- and long-term actions across a wide range of scientific disciplines, beyond technology and innovation, while ensuring that national policies create a nurturing environment for all areas of scientific advancement. A balanced emphasis on both applied research with higher Technology Readiness Levels (TRL) and fundamental, curiosity-driven research is essential to drive sustained societal and economic recovery and to mitigate the brain drain effect. UNESCO's Action Plan will advocate for the national recognition of curiosity-driven research as a priority, supporting the UN's Leave No One Behind (LNOB) approach.

A) Short-term priority (12 to 18 months): Urgent stabilization and preservation of Ukraine's scientific capacity

Main objective:

Stabilization of Ukraine's scientific sector by providing rapid support to scientists in Ukraine, enabling remote access to critical research infrastructure, and ensuring continuity of scientific work in the crisis situation.

Pilot action(s):

1. **UNESCO's Remote Access to Lab Equipment Initiative (UNESRALE):** Aligned with Ukraine's objective of bringing closer Ukrainian and European research facilities (*MESU Strategic Action Plan by 2027, objective 6.1*), UNESRALE will enable Ukrainian scientists, including displaced researchers, to remotely access advanced scientific equipment and research infrastructure within the European network. A dedicated digital platform will also connect beneficiaries with partners, international laboratories, and peers, fostering collaboration and providing access to essential data. Supported by targeted training, this initiative will empower researchers to operate high-end tools remotely, ensuring continued scientific productivity and integration into global research networks.

2. **Science, Technology, Engineering, and Mathematics (STEM) training for teachers and youth:** Support elementary- to high-school teachers and students with hands-on STEM-related tools to enhance their scientific and critical thinking skills. This will help to empower the youth and prepare them for the recovery phase after the war.

3. **UNESCO's Science Grants for Ukraine:** In close cooperation with the **National Research Foundation of Ukraine**, establish a fast-track grant and emergency fellowship mechanism to support the livelihoods of war-affected scientists, based on a fair and inclusive application of the National system of researchers (to be created by the Ministry of Education and Science Ukraine in 2025), and the merits of the research applications/proposals while prioritizing the most vulnerable, including young and women scientists, internally displaced scientists and scientists with disabilities. In line with the objective 6.2 of the MESU Strategy by 2027, particular attention will be paid to those working in sectors critical to Ukraine's resilience, recovery and reconstruction. **Fostering gender equality** is essential in scientific fields, especially as women make up a significant portion of Ukraine's scientific workforce and face increased vulnerabilities. To support and retain this talent. In alignment with UNESCO's Global priority for Gender Equality and of its G20's commitment to gender equality in science[4], these grants will also include tailored incentives aimed at empowering women scientists. Furthermore, these grants will foster an inclusive ecosystem that advances research addressing recovery needs, social cohesion, and cultural resilience, supporting Ukraine's long-term societal recovery.

4. United Nations Educational, Scientific and Cultural Organization (2023) Changing the Equation: Securing STEM Futures for Women. Paris: United Nations.

WOMEN IN SCIENCES:

In March 2024, UNESCO launched a Call to Action to address the persistent gender gap in science. Globally, **women make up only 33% of researchers** and just 22% of professionals in artificial intelligence (AI). Additionally, women and girls are 25% less likely than men to know how to use digital technology for basic purposes, four times less likely to have programming skills, and 13 times less likely to file for ICT patents. These figures underscore the importance of targeted efforts to empower women in scientific fields, ensuring they can contribute fully to innovation and global progress.

4. **Mental Health and Psychosocial Support Network (MHPSS) for scientists and researchers**: Building on UNESCO's MHPSS network in the Education sector, this initiative expands support to scientists through a hybrid platform, providing comprehensive mental health resources to scientists across Ukraine. Key figures within the scientific sector, such as heads of research institutes, university leaders, and HR personnel, will receive targeted training to implement MHPSS strategies effectively.

5. **Data-driven ecosystem for Ukraine's scientific transformation and recovery:** Establish a **four-sub-activity system** designed to respond to the urgent needs of Ukraine's science ecosystem and provide support for long-term recovery. Its core functions include:

Sub-activity 1: **International coordination Task Force:** UNESCO aims to establish a group comprising dedicated representatives from the Ukrainian government, Ukrainian scientific institutions, and international stakeholders to streamline global support for Ukraine's science ecosystem. This task force will focus on advocacy, enhancing synergies, and optimizing efforts while explicitly ensuring complementarity with the International Coalition for Science, Research, and Innovation in Ukraine. It will work in close coordination with the Coalition, aligning activities to foster cohesive, efficient resource mobilization and effective international collaboration, thereby avoiding redundancy and duplication;

Sub-activity 2: **The Ukrainian Scientific Forum:** UNESCO will support the establishment of a hybrid forum that facilitates continuous and dynamic discussions between the Ministry of Education and Sciences of Ukraine and key local actors—such as the National Academy of Sciences of Ukraine, the National Research Foundation of Ukraine, the Parliamentary Committee on Education, Science and Innovations, associations of university leaders (rectors, vice-rectors on research), Councils of Young Scientists at the Ministry of Education and Science of Ukraine, NGOs, businesses relying on R&D, SMEs, and Ukrainian scientists abroad and displaced. This forum will capture diverse perspectives and provide a mapping of needs and challenges facing Ukraine's science ecosystem. A particular consideration will be to ensure a free and safe environment for scientists in Ukraine. Through the production of recommendations directly managed by UNESCO, the forum will continually inform and integrate the work of both the International Coordination Task Force and the Legal & Policy Task Force;

FREEDOM AND SAFETY OF SCIENTISTS:

In line with the Recommendation on science and scientific researchers (2017) and in response to concerns for the growing pressure on scientists – a priority also under Action 30 of the Pact for the Future. According to a 2023 study in 117 countries, one in two female scientists (49%) say they have been sexually harassed in the workplace[5]; 391 attacks on higher education were documented in 51 countries and territories between July 2023 and June 2024[6]. Strengthened by a Member States' driven Call to Action on Freedom and Safety of Scientists in March 2024[7], the Programme aims to increase data collection, policy support, the development of institutional capacities on the ground, advocacy and alliance-building. Particular attention is paid to the protection of scientists in emergencies and conflicts.

Sub-activity 3: **Ukraine Science Data Portal:** UNESCO will support the creation of a centralized data portal, contributing to the **Objective of comprehensive digitalization** under the MESU Strategic Plan for 2027. Managed by the **Junior Academy of Sciences of Ukraine (JAS)** or another institution, this portal will integrate information from scientific actors nationwide, monitor war-related damages, and map sector needs. The clear mechanism and methodology of transmitting the information to the Ukraine Science Data Portal will be defined and the potential contributors of all levels will be informed and trained to use it. Built on the JAS platform and integrating other information systems, it will enhance them by adding necessary modules and content supporting the development of the National Electronic Scientific Information System (**URIS**) as well as modernization of the National Repository of Academic Texts (**NRAT**). The portal will provide real-time data to support the **International Coordination Task Force**, the **Ukrainian Scientific Forum**, and the **Legal & Policy Task Force**, strengthening Ukraine's science ecosystem and aiding recovery efforts.

Sub-activity 4: **Legal & Policy Task Force:** UNESCO will establish a working group to guide Ukraine in adopting and complying with international standards, contributing to the **Operational Objectives 6.3.2 and 6.2.3** of the Ministry of Education and Science of Ukraine's Strategic Plan for 2027. This task force will prioritize the integration of UNESCO's science-related recommendations, including the **Recommendation on Science and Scientific Researchers (2017)**, **Open Science (2021),** and **Ethics of Artificial Intelligence (2021)**, into Ukraine's operational policies. A key initiative will be the development of a matching table to align recognized skills and certifications, particularly those acquired abroad, with national standards, streamlining administrative procedures and reducing regulatory burdens in scientific activity while fostering academic and research integrity, facilitating reintegration for returning scientists and enhancing the internationalization of Ukrainian science. Due regard will be attached to reintegration of scientists and young researchers who return from the war, especially those with disabilities. This approach will promote alignment with global best practices, rebuild the scientific ecosystem, and address critical issues such as researcher safety, freedom of research, and private investment in the scientific sector.

5. www.ipsos.com/en/one-two-women-scientists-say-they-have-experienced-sexual-harassment-work#:~:text=One%20in%20two%20(49%25),sexual%20harassment%20during%20their%20career.
6. https://www.scholarsatrisk.org/resources/free-to-think-2024/
7. United Nations Educational, Scientific and Cultural Organization (2024) Call to Action on the Freedom and Safety of Scientists. Paris: United Nations.

The implementation of the above-mentioned actions as a system, will serve as good practice and experience of support to scientific ecosystems under the impact of long-lasting wars, and should be summarized and promoted for UNESCO's decision-making and learning lessons by UNESCO's member states, primarily those affected by conflicts and disasters.

B) Medium-term priority (18 months to 5 years): Coordination of global efforts and ensuring resilience in Ukraine's science ecosystem

Main objective:

Ensure that Ukraine's scientific community has the resources and support to build resilience to the impacts of the war by aligning international assistance and partnerships with the sector's specific needs.

Pilot action(s):

1. Annual impact assessment on the science ecosystem in Ukraine: The main pilot action will be the publication of a yearly assessment detailing the damages, challenges, and evolving needs of Ukraine's science ecosystem amid the war. Using data from the Ukraine Science Data Portal and insights from the Ukrainian Scientific Forum, UNESCO will work closely with national and international partners to create a comprehensive report. This assessment will identify priority needs, support targeted policy development, and reinforce the inclusion of scientific indicators in Ukraine's Rapid Damage and Needs Assessment (RDNA), contributing to sustainable reconstruction and EU-aligned resilience efforts;

2. UNESCO's Scientific Hub for Ukraine's resilience and recovery: Aligned with Operational Objective 6.4.3 of the MESU Strategic Plan for 2027, this Hub will act as a dedicated physical and digital space to foster collaboration between scientists—both inside and outside Ukraine—and industries, particularly SMEs engaged in reconstruction efforts. Beyond a simple matchmaking platform, the Hub will create an active environment for in-person and online engagement, promoting partnerships and technical expertise. Building on short-term actions such as UNESCO's Science Grants for Ukraine and Remote Access Initiatives, the Hub will support the reintegration of Ukrainian researchers by connecting them with sectors critical to defense, recovery, and reconstruction. It will strengthen the ecosystem of competitive state funding for scientific research and development, enhancing Ukraine's resilience and innovation capacity.

3. UNESCO skilling and reskilling programme for Ukrainian scientists: UNESCO will launch a comprehensive program to support Ukrainian scientists through skilling, reskilling, tailored to meet the evolving demands of Ukraine's reconstruction. This initiative will provide targeted training in essential management skills, including research program and project management, international cooperation, communication, grant management and administration, along with technical areas such as risk preparedness, resilience, AI, digital innovation, and green technology. The courses will also cover issues such as upholding human rights in science, research integrity and upholding of ethical principles. By equipping scientists with these critical skills, the program aims to foster a capable and adaptable workforce for a sustainable recovery. Emphasizing reintegration and talent mobility, it will offer high-impact research fellowships aligned with national priorities,

promoting career development through international collaboration and industry partnerships. Building on UNESCO's previous emergency grants, this program ensures continuity for past recipients and positions Ukraine's scientific sector for sustainable growth and innovation.

C) Long-term priority (5 years +): Sustainable recovery of Ukraine's science ecosystem that supports reconstruction efforts

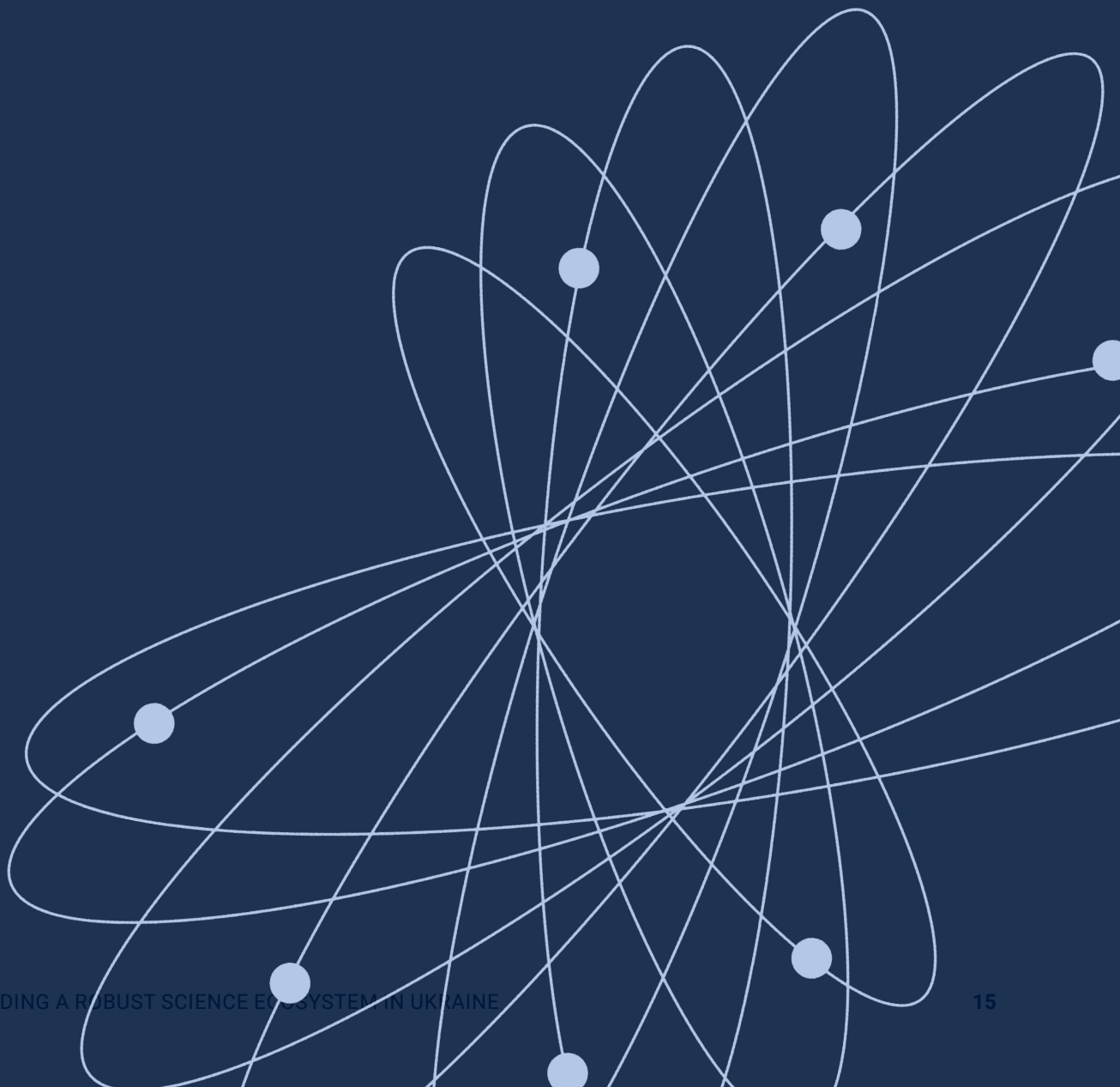
Main objective:

Leverage scientific advancement and technological innovation to rebuild a robust scientific and economic ecosystem that supports Ukraine's reconstruction and long-term self-reliance, with a specific emphasis on sustainable development and integration with global scientific standards. This approach aligns with the UNSDGs, particularly in quality education (SDG 4), industry, innovation, and infrastructure (SDG 9), and global partnerships (SDG 17), underscoring UNESCO's commitment to sustainable recovery and long-term resilience.

Pilot action(s):

Building on prior achievements and continually adapting to Ukraine's evolving needs and challenges, UNESCO will implement long-term actions designed to strengthen Ukraine's science ecosystem. Leveraging scientific advancements and technological innovation, UNESCO aims to develop a resilient scientific and economic ecosystem to support Ukraine's reconstruction and self-reliance. These adaptable pilot actions will evolve based on thorough assessments and tailored tools, enabling UNESCO to respond effectively to emerging challenges. This flexible approach ensures that Ukraine's scientific sector remains robust, sustainable, and aligned with global standards.

III.
Pathways for International Support and Engagement for Science Through UNESCO



A) Total estimated fundings needed:

PILOT ACTIONS	NATIONAL REGISTRY NUMBER		
	SHORT-TERM (2025)	MID-TERM (2026-2030)	LONG TERM (+2030)
Remote access to scientific equipment and facilities	3	7	7
Science Grants for Ukraine	5	7	7
Mental Health and Psychosocial Support Network (MHPSS) for scientists and researchers	1.5	6.5	6.5
Data-driven ecosystem for Ukraine's scientific transformation and recovery (composed of 4 sub-activities)			
Sub-activity 1: International coordination Task Force	1	3	3
Sub-activity 2: The Ukrainian Scientific Forum	3	2.5	2.5
Sub-activity 3: Ukraine Science Data Portal	3	5	5
Sub-activity 4: Legal & Policy Task Force	1.5	1.5	1.5
Annual impact assessment on the science ecosystem in Ukraine	-	5	5
UNESCO's Scientific Hub for Ukraine's reconstruction and resilience	-	7.5	7.5
UNESCO skilling and reskilling programme for Ukrainian scientists	-	5	5
Total:	**18**	**50 (10/y.)**	**50 (10 /y.)**

B) Main lines of action:

Short term (12 to 18 months):

Remote access to scientific equipment and facilities:

- Initial mapping: map out Ukrainian partners and their needs, identify matching international partners with available scientific equipment;
- Establishment: set up of the remote access.

Establishment of a digital platform:

- Connecting beneficiaries and donors: to sustain the collaboration and monitor the impact;

STEM training:

- Establish a stock of STEM-related tools: these tools will be selected based on the needs of the different schools or displaced students;
- Regular training: hold the regular training activities for teachers and students in different area of the country, ensuring training of the trainers.

Science Grants for Ukraine:

- Initial mapping: identify the adequate sectors and vulnerable groups to support in partnership with the Ministry of Education and Science of Ukraine and the National Research Foundation of Ukraine, based on a fair and inclusive application of the National system of researchers that will be created in 2025, and the merits of the research applications;
- Fund allocation: secure initial funding and develop application processes focused on critical recovery fields;
- Set up the grant mechanism and launch the call for applications: in partnership with the Ministry of Education and Science of Ukraine and the National Research Foundation of Ukraine.

Mental Health and Psychosocial Support Network (MHPSS) for Scientists and Researchers:

- Initial mapping: conduct a survey to determine the psychological support needs of the scientific community in cooperation with JAS and relevant stakeholders;
- Training program development: identify MHPSS professionals and provide training for science-sector leaders to implement support strategies.

Data-driven ecosystem for Ukraine's scientific transformation and recovery:

- Sub-activity 1: International Coordination Task Force:
  - ***Mapping of international initiatives:*** commission a survey on existing international scientific support programs to prevent overlaps and maximize coordination;
  - ***Establishment of the Task Force:*** identify already contributing partners and partners willing to join efforts, convey on a regular basis to provide feedbacks on the needs and challenges from the Data Hub and Scientific Forum.
- Sub-activity 2: Ukrainian Scientific Forum:
  - ***Initial mapping:*** identify key stakeholders, including academic institutions, NGOs, and representatives of displaced scientists;
  - ***Operational planning:*** develop a schedule of forums or discussions to gather insights on sector needs and challenges;
  - ***Fueling the international & legal task forces:*** establish a methodology to streamline information, data, challenges and needs in a coherent way to the international and the legal & policy task forces.

- Sub-activity 3: Ukraine Science Data Portal:
  - ***Map existing data collection efforts:*** commission the Junior Academy of Science to complete an inventory of the current data collection platforms;
  - ***Consolidation and designing of the portal:*** Identify a service provider for the dashboard to unify the data into the Data Portal and provide the necessary technical, logistical, financial, and other types of support for the development of the National Electronic Scientific Information System (URIS) and the National Repository of Academic Texts (NRAT), including expanding their existing capabilities and creating new modules;
  - ***Set up the centralized data system:*** establish reporting lines and methodology with the contributors to the centralized data system to collect and share real-time updates on scientific impacts and recovery progress.
- Sub-activity 4: Legal Framework:
  - ***Legal Gap Analysis:*** commission a legal/public policy firm to map gaps in Ukraine's legal framework relative to UNESCO's science-related recommendations;
  - ***Establishment of the Task Force:*** in cooperation with the EU, identify focal points at the MESU;
  - ***Develop an implementation plan:*** develop an action plan to align Ukraine's policies with international standards and support reintegration of scientists;
  - ***Start trainings:*** start trainings of the legislators and monitor compliance with UNESCO's science-related recommendations.

Medium term (1-5 years):

Remote access to scientific equipment and facilities:

- Expand partnership: develop additional collaborations with international labs to diversify available equipment and resources;
- Trainings: continue the organization of regular technical training sessions for scientists accessing remote facilities, focusing on maximizing tool efficiency.

Science Grants for Ukraine:

- Long-term funding: explore partnerships with private and public donors to secure multi-year funding;
- Monitoring and evaluation: establish a framework to track research progress and outcomes, adjusting funding priorities based on emerging needs;
- Network building: Facilitate networking among grant recipients and international peers to foster collaborations and knowledge exchange.

Mental Health and Psychosocial Support Network (MHPSS) for scientists and researchers:

- Expand the network: build a wider network of MHPSS professionals across Ukraine, including hybrid support options;

- Continue training: keep providing training sessions for institution leaders to create in-house support programs;
- Impact evaluation: collect feedback from participants and update the program to address emerging mental health challenges specifically.

Data-driven ecosystem for Ukraine's scientific transformation and recovery:

- Sub-activity 1: International coordination Task Force:
  - ***Annual partnership review:*** reassess partnerships and address any new needs or overlaps;
  - ***Funding synchronization:*** align international financial and technical support to maximize collective impact.
- Sub-activity 2: The Ukrainian Scientific Forum:
  - ***Quarterly gatherings:*** continue facilitating regular meetings to discuss new developments, challenges, and future needs;
- Sub-activity 3: Ukraine Science Data Portal:
  - ***Data expansion:*** Integrate new data categories (e.g., displaced scientists' status, research infrastructure needs);
  - ***Public Access Pilot:*** develop a controlled access feature allowing researchers and policy makers to access real-time data.
- Sub-activity 4: Legal & Policy Task Force:
  - ***Policy Review and update:*** produce a quarterly report on the advancement of policies' alignment with UNESCO and global standards;
  - ***Adoption support:*** keep supporting the enactment of UNESCO-aligned policies through providing training and resources for national, regional and local administrations.

Annual impact assessment on the science ecosystem in Ukraine:

- Data collection framework: define specific indicators and sources for data collection through the Science Data Portal and Forum;
- Collaborative review: involve Ukrainian institutions in co-authoring the assessment to ensure relevance and ownership;
- International dissemination: present findings in global forums to keep raising awareness about the long term impact of the damages for the recovery and reconstruction efforts to attract donor interest and support.

UNESCO's Scientific Hub for Ukraine's reconstruction and resilience:

- Space Establishment: identify a central location for the Hub, ensuring accessibility to scientists and SMEs;

- Set up the matchmaking system: identify a partner for the development of a platform for connecting scientists with businesses involved in reconstruction efforts;
- Resource database: compile resources for skills training, funding opportunities, and technical assistance.

UNESCO skilling and reskilling programme for Ukrainian scientists:

- Needs assessment: conduct surveys to identify priority skill areas for Ukrainian scientists;
- Program partnerships: collaborate with universities and industries to design courses in risk preparedness, digital skills, and health sciences;
- Certification pathways: offer certified training programs to provide credentials recognized locally and internationally.

C) Ways Forward

The **Action Plan for Sciences in Ukraine** will serve as a foundational resource for high-level international donor conferences to quantify and prioritize the needs within Ukraine's science ecosystem. It will also support national coordination, aligning ongoing and planned efforts across research and development sectors. UNESCO encourages partners to reference and contribute to this document regularly, fostering a dynamic, responsive approach. As a living document, **this Action Plan will adapt to evolving needs**, with UNESCO ensuring continuous follow-up in close collaboration with the Ministry of Education and Science of Ukraine.

UNESCO Antenna in Ukraine

ukraine.desk@unesco.org @UNESCOinUkraine @UNESCO_kyiv