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Educational aspect in the legal regulation of scientific research in the constituent instruments of UN Specialized Agencies

Aspecto educativo en la regulación jurídica de la investigación científica en los instrumentos constitutivos de la Agencia Especializada de la ONU

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Abstract

The aim of the article is to explore how the integration of educational aspects into the legal regulation of scientific research is addressed within the constituent instruments of UN specialized agencies. It seeks to show how education serves as a bridge between scientific advancements and their practical applications, making research more accessible to society. The article identifies a gap in systematic scholarly inquiry into international legal cooperation on scientific research, highlighting the need for a more comprehensive analysis. The methodology employed includes comparative and systematic analysis of relevant international legal documents, focusing on how scientific activity is reflected in the statutory frameworks of various UN organizations. The article applies methods of analysis and synthesis, as well as structural, formal-legal, and hermeneutic approaches, utilizing both deduction and induction. The most relevant results indicate that scientific activity is consistently regulated within key treaties, especially in the UNESCO Constitution and IAEA Statute. The article also identifies references to science and scientific activity in the statutes of other organizations, including the World Meteorological Organization, WHO, FAO, and the International Maritime Organization, showing the wide regulatory framework governing scientific research across different sectors.

Keywords: legal regulation, UN specialized agencies, scientific research, international organizations.

Resumen

El objetivo del artículo es explorar cómo se aborda la integración de los aspectos educativos en la regulación jurídica de la investigación científica en los instrumentos constitutivos de los organismos especializados de las Naciones Unidas. Busca mostrar cómo la educación sirve como puente entre los avances científicos y sus aplicaciones prácticas, haciendo que la investigación sea más accesible a la sociedad. El artículo identifica una brecha en la investigación académica sistemática sobre la cooperación jurídica internacional en materia de investigación científica, destacando la necesidad de un análisis más integral. La metodología empleada incluye un análisis comparativo y sistemático de documentos jurídicos internacionales relevantes, centrándose en cómo se refleja la actividad científica en los marcos

estatutarios de varias organizaciones de las Naciones Unidas. El artículo aplica métodos de análisis y síntesis, así como enfoques estructurales, formales-jurídicos y hermenéuticos, utilizando tanto la deducción como la inducción. Los resultados más relevantes indican que la actividad científica está regulada de manera consistente en tratados clave, especialmente en la Constitución de la UNESCO y el Estatuto del OIEA. El artículo también identifica referencias a la ciencia y la actividad científica en los estatutos de otras organizaciones, incluida la Organización Meteorológica Mundial, la OMS, la FAO y la Organización Marítima Internacional, lo que muestra el amplio marco regulatorio que rige la investigación científica en diferentes sectores.

Palabras clave: regulación legal, agencias especializadas de la ONU, investigación científica, organizaciones internacionales.

Introduction

The regulation of scientific research at an international level is crucial for ensuring global cooperation, transparency, and ethical standards. As science increasingly shapes global challenges like climate change, health crises, and technological advancements, robust legal frameworks are essential to managing research practices and fostering equitable access to scientific benefits. However, the legal mechanisms governing scientific activity, particularly within the context of UN specialized agencies, have not been systematically explored, highlighting the need for this study. Moreover, incorporating educational aspects into this regulatory framework is vital. Education helps not only in disseminating scientific knowledge but also in making legal regulations more transparent, fostering a better-informed global public that can actively engage with scientific advancements.

The study aims to examine the legal regulation of scientific research within UN specialized agencies, with a focus on how education enhances the understanding and effectiveness of these regulations. This topic is especially relevant given the increasing need for international legal cooperation on scientific issues.

The article begins by reviewing existing scholarship on the international legal regulation of science, highlighting the absence of systematic inquiry into the topic and underscoring the originality of incorporating education into these discussions. A comparative and systematic analysis of relevant UN documents follows, utilizing various legal methods such as analysis and synthesis to examine how scientific activity is addressed within different agencies. The results illustrate how scientific research is integrated into the statutory frameworks of organizations like UNESCO and the IAEA, while also comparing the regulatory approaches of these bodies. Furthermore, the study explores the educational aspects of these frameworks, stressing their importance in fostering public engagement and understanding. Ultimately, the article concludes that education is crucial for improving the transparency and accessibility of scientific regulations, which in turn ensures their effective implementation.

The article reveals that scientific activity is consistently regulated within the foundational documents of various UN organizations, particularly in UNESCO and IAEA statutes. It also identifies a growing trend of incorporating educational initiatives into these regulatory frameworks. Education not only improves the dissemination of scientific research but also ensures that legal mechanisms are more accessible and understood by the public. This educational integration enhances the impact of international legal frameworks by fostering a globally informed and engaged community, thereby strengthening the practical application of scientific advancements.

This study contributes to the field by bridging the gap between legal regulation and educational dissemination, demonstrating the importance of education in international scientific governance. Its findings underscore the need for further scholarly attention to this interdisciplinary area, which combines international law, scientific research, and education.

Literature Review

Among Ukrainian scholars, the mentioned issues were addressed in the works of Babin (2014; 2023), but comprehensive monographic studies on relevant matters have not yet been conducted. Additionally, references to research were made in the work of the International Maritime Organization (Babin, Chvaliuk, & Plotnikov, 2021a; Babin, Plotnikov, & Prykhodko, 2023), and the Food and Agriculture Organization of the United Nations (Babin, 2019; Babin, Chvaliuk, & Plotnikov, 2021b), as well as other United Nations bodies (Babin, 2014; Babin, 2023), but they were fragmentary in nature.

Special rapporteurs of the UN in the field of cultural rights, A. Xantaki, and on the right to education, F. Shakid, attempted to generalize relevant findings (Babin, & Tytska, 2023; Babin, & Tytska, 2024), concerning the right to science in the international legal dimension. Furthermore, in her own report A/HRC/55/44 to the UN Human Rights Council in 2024 titled "The Right to Participate in Science," Special Rapporteur Professor A. Xantaki (2024) emphasized the importance of an inclusive approach to realizing the right to science. She advocated for the creation of numerous and large-scale mechanisms for scientific and political interaction, as well as the implementation of special measures to remove barriers to exercising this right. Xantaki underscored the urgent need for states, international organizations, and private entities to adhere to a human rights approach in all science-related matters.

Moreover, UN Special Rapporteur A. Xantaki (2024) noted that a broad, inclusive, and decolonized interpretation of the concept of "science" is essential for exercising the right to participate in scientific activities. She emphasized that the involvement of various scientific societies enriches the scientific component of society, ensuring the representation of different stakeholders and the development of comprehensive solutions to current problems. Xantaki recommended that UN bodies "request all United Nations bodies and satellite agencies to review their regulatory frameworks in line with a human rights approach to science and the right to participation in science, including the sharing of the benefits of scientific progress and emerging technology" and to "strengthen, through its monitoring processes, the implementation of the right to participate in science, including through core indicators and guiding questions." She also suggested studying the proposal for the introduction of a new position of Special Rapporteur on the right to science and technology, fully understood as one of the cultural rights.

However, these proposals have not yet been systematically implemented, even at the doctrinal level, and in the report A/HRC/55/44, as the latest key document regarding the international legal dimension of scientific activity, the issue of the statutory acts of specialized UN agencies was not addressed. Similarly, contemporary authors who have investigated scientific activity in international law from a human rights perspective have not addressed this issue. These include articles by Achermann, & Besson (2023), Plozza (2023), Shaver (2010; 2015), and the monograph on the right to science by Ch. Romano & A. Bodgio (2024).

The integration of educational aspects into the regulatory frameworks of scientific research is highlighted in the works of various scholars and reports. For instance, the emphasis on education in promoting understanding and accessibility of scientific research is underscored in the reports by UN Special Rapporteurs. Education is considered essential not only for disseminating knowledge but also for fostering an inclusive approach to science. By educating the public and policymakers about scientific research and its benefits, these frameworks can ensure broader participation and adherence to ethical standards.

Educational initiatives within the legal frameworks of UN specialized agencies can enhance the capacity of researchers and institutions, ensuring that scientific research is conducted responsibly and its findings are effectively utilized. This approach is aligned with the recommendations by A. Xantaki, who advocated for educational measures to remove barriers to the right to participate in science.

Furthermore, the role of education in the right to science is also reflected in the broader discourse on human rights and scientific activity. Authors such as Shaver (2010; 2015) and Romano & Bodgio (2024) have

emphasized the importance of educational programs in ensuring that scientific advancements are accessible and beneficial to all segments of society.

In summary, the literature underscores the need for integrating educational aspects into the legal regulation of scientific research. This integration is crucial for enhancing public understanding, ensuring ethical compliance, and fostering inclusive participation in scientific activities.

Methodology

This study is qualitative, chosen for its focus on interpreting and understanding legal texts within UN specialized agencies' statutory frameworks. A qualitative approach allows in-depth exploration of how scientific research is regulated and how educational aspects are integrated into this regulation. The research employs various qualitative methods, including comparative analysis, systematic analysis, and formal-legal methods, which are suitable for analyzing the complex, text-based nature of international legal documents.

Application of Methods:

Comparative Analysis: This method was used to compare the regulatory approaches to scientific research across the statutory documents of different UN agencies. The study examined how these documents reflect scientific activities and educational initiatives.

Systematic Analysis: This method helped structure the legal documents as components of the international legal system, assessing their coherence and consistency in regulating scientific research.

Analysis and Synthesis: These methods were applied to break down the legal texts into specific regulatory components and then synthesize the information to form a comprehensive understanding of the legal landscape governing scientific research.

Structural Methods: These were applied to analyze how scientific research is organized and presented within the documents, focusing on practical regulatory frameworks.

Formal-Legal and Hermeneutic Methods: These were used to interpret legal texts and assess the likelihood of substituting the category of scientific research with other legal constructs in the statutory documents.

Deductive and Inductive Approaches: These methods helped derive broader conclusions about the nature of legal regulation from specific examples in the documents, ensuring a thorough exploration of legal norms.

Integration of Educational Aspects:

The study incorporated educational analysis by evaluating how UN specialized agencies' documents incorporate educational programs and initiatives aimed at enhancing scientific literacy. The comparative educational framework was used to assess the effectiveness of these educational elements, highlighting their contribution to the legal regulation of scientific research. Systematic educational integration ensured that educational theories were applied to the legal texts, making the study applicable to both legal scholars and educational practitioners.

Document Selection Process:

The primary sources were the authentic statutory documents of UN agencies, available on official websites. Inclusion criteria involved documents that directly referenced scientific research or educational initiatives within their regulatory frameworks. Documents were excluded if they did not address scientific activity or had only tangential references to education. A systematic search was conducted to identify relevant legal

documents, ensuring comprehensive coverage.

Validity and Reliability:

To ensure validity, the study focused on official and authentic documents from trusted sources such as UN websites. The comparative approach across multiple agencies enhanced the reliability of the findings by providing diverse perspectives on scientific regulation. The use of established qualitative methods like hermeneutics and formal-legal analysis further strengthened the credibility of the analysis.

Limitations and How They Were Addressed:

One limitation encountered was the variation in how different UN agencies address scientific research, making comparison difficult. To address this, the study employed a standardized comparative framework to ensure consistency. Another limitation was the lack of comprehensive data on the implementation of educational initiatives. This was mitigated by focusing on the presence of educational references within the statutory documents, allowing for a general analysis even in cases where data was sparse.

Software and Tools:

While the study did not require specialized software for analysis, tools like NVivo or similar qualitative analysis software could be used for coding and organizing themes if necessary. However, in this case, the analysis was performed manually due to the focused nature of the document review and the relatively small number of documents analyzed.

Results and Discussion

Contemporary international law has not yet developed a system of separate universal conventions specifically addressing aspects of scientific research; however, these challenges have found reflection in many fundamental treaties of a universal legal nature. While the UN Charter does not contain specifically formulated mechanisms regarding scientific activity (United Nations, 1945), norms concerning scientific research exist, for example, in the Constitution (Statute) of UNESCO dated November 16, 1945 (United Nations Educational, Scientific and Cultural Organization (UNESCO), 1945).

Among other things, Article 1 of the UNESCO Constitution defines the organization's purpose as "to contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations." This article assigns UNESCO to "maintain, increase and diffuse knowledge," among other things, by "encouraging cooperation among the nations in all branches of intellectual activity, including the international exchange of persons active in the fields of education, science and culture and the exchange of publications, objects of artistic and scientific interest and other materials of information."

Interestingly, the authentic text of the UNESCO Constitution contains in Articles 4 and 5 regarding scientific research two terms that complement each other: "the sciences and humanities," which in the single available translation of the Constitution into Ukrainian are translated as "humanitarian sciences" and "sciences," respectively, or are listed jointly as "natural-humanitarian sciences." However, this document does not contain detailed regulations on relations in the field of science or scientific research (Verkhovna Rada of Ukraine, 1945).

It is worth noting that under the auspices of UNESCO operates the International Centre for the Study of the Preservation and Restoration of Cultural Property, whose Statute was first approved on December 5, 1956, and in its current version has the task of "collecting, studying, and disseminating documentation on scientific and technical problems of the preservation and restoration of cultural property"; additionally,

"governmental or private institutions of a scientific or cultural nature" may be included as associated members of the Center (International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), 1956).

Considerable attention to scientific activity is paid by the Statute of the International Atomic Energy Agency (IAEA) of 1956 with subsequent amendments. According to it, the IAEA is authorized to promote and provide support for scientific research in the field of atomic energy and the development of atomic energy and its practical application for peaceful purposes worldwide, as well as "to perform any operations or provide any services which may be of benefit in scientific research in the field of atomic energy, provide services, materials, equipment, and technical means to meet the needs of scientific research in the field of atomic energy, the development of atomic energy and its practical application for peaceful purposes" (IAEA, 1989).

Moreover, this Statute assigns the IAEA to "foster the exchange of scientific and technical information on peaceful uses of atomic energy" and to "encourage the exchange and training of scientists and experts in the field of peaceful uses of atomic energy." Additionally, among the requirements for IAEA personnel, the Statute includes "such qualified scientific and technical and other personnel as may be required to fulfil the objectives and functions of the Agency" (IAEA, 1989).

It is worth mentioning that to develop the relevant provisions of the IAEA Statute, the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology was approved in 2017, replacing a similar Agreement from 1987, which was extended for six five-year periods. The Regional Agreement regulates the conduct of the IAEA and states regarding "joint projects for research, development, and training" and "other joint activities in the field of nuclear science and technology."

According to this Regional Agreement, when approving such a joint project, the related "research, development, and training program" is considered, and during the project implementation, "each participating government, subject to compliance with its national laws and regulations," provides necessary scientific and technical resources and personnel for the execution of the joint project and "takes all reasonable and appropriate measures for scientists, engineers, or technical experts," both regarding work at designated own facilities and while working at foreign facilities. Additionally, for each joint project, a Project Committee is established to monitor its implementation, make recommendations to governments and the IAEA regarding the joint project, and review the progress of implementing these recommendations (IAEA, 2017).

It is also worth mentioning Article 2 of the Convention of World Meteorological Organization, according to which the objectives of this institution include facilitating "worldwide cooperation in the establishment of networks of stations for the making of meteorological observations as well as hydrological and other geophysical observations related to meteorology, and to promote the establishment and maintenance of centres charged with the provision of meteorological and related services", as well as promoting "activities in conducting scientific research and training in the field of meteorology and, where necessary, in related fields, and promoting coordination of international aspects of such activities" (World Meteorological Organization, 1947).

Moreover, the preamble of the World Health Organization (WHO) Constitution states that "enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition" and lists among the functions of this organization "to promote and, where necessary, to recommend national and international action with respect to" scientific, technological, social, and economic research pertaining to health, nutrition, and agriculture, as well as "to disseminate scientific knowledge and to encourage the development of teaching and research in the field of health" (World Health Organization, 1946).

In addition, the Food and Agriculture Organization (FAO) of the United Nations Constitution assigns to this institution the function of "promoting and, where appropriate, recommending national and international action with respect to" scientific, technological, social, and economic research related to food, nutrition, and agriculture, as well as "the dissemination of information on nutrition and agricultural science and practice" (Food and Agriculture Organization of the United Nations, 1945).

It is noteworthy that certain statutory documents of specialized agencies of the UN system, which objectively have a broad mandate in organizing scientific research in the respective direction, avoid using the word "science" itself; for example, the International Telecommunication Union Convention uses only the word "research" regarding the relevant activities (International Telecommunication Union (ITU), 1993).

Similarly, the Convention establishing the International Maritime Organization in Article 38 specifies the competence of the organization's Marine Environment Protection Committee to "ensure the provision of scientific, technical, and other practical information on the prevention and control of marine pollution from ships to disseminate to States, particularly developing States, and, where appropriate, to make recommendations and develop guidelines" (WIPO, 1967).

The statutes of other specialized agencies of the UN system also contain separate mentions of scientific issues; for example, the Convention Establishing the World Intellectual Property Organization mentions scientific works, inventions in all fields of human endeavor, and scientific discoveries only in the definition of intellectual property, as well as "all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields", but at the same time the corresponding functionality for the organization or for its bodies, this international agreement does not outline (International Maritime Organization, 1948).

In subparagraph "d" of Article 2 of the Constitution of the United Nations Industrial Development Organization (UNIDO) of 1979, it is specified that this UN institution "promote and encourage the development and use of planning techniques, and assist in the formulation of development, scientific and technological programmes and plans for industrialization in the public, co-operative and private sectors"; this Constitution mandates UNIDO to carry out the development, transfer, and adaptation of technology at global, regional, national, and sectoral levels (United Nations Digital Library, 1979).

It is worth noting that under the auspices of UNIDO, the International Centre for Genetic Engineering and Biotechnology (ICGEB) was established in 1983, as reported by the Centre itself in 2024. The Madrid Statute, which came into force in 1994, legalized the Centre as an international organization that integrates its main headquarters with a network of national, sub-regional, and regional branch centers. The tasks before the Center are set out in Article 2 of the Statute: Promote international cooperation in developing and applying peaceful uses of genetic engineering and biotechnology, in particular for developing countries; Assist developing countries in strengthening their scientific and technological capabilities in the field of genetic engineering and biotechnology; Serve as a forum for the exchange of information, experience, and know-how among scientists and technologists of member states.

Act as a focal point of a network of affiliated (national, sub-regional, and regional) research and development centres (United Nations Treaty Collection, 1983).

Among the functions of the Center, Article 3 of the Madrid Statute establishes research and development, including work at experimental facilities, in the field of genetic engineering and biotechnology; training directly at the Center and outside it for scientific and technical personnel; provision, at the request of member states, of advisory services on the development of national technical potential; promotion of "interaction between the scientific and technological communities of the Member States through programmes to enable visits of scientists and technologists to the Centre, and through programmes of associateship and other activities"; convening expert meetings; establishing a network of national and international institutions for joint research programs, etc.

According to Articles 6 and 7 of the Madrid Statute, in appointing their representatives to the Center's Board

of Governors, member states “shall pay due regard to their administrative capability and scientific background”, and the Center's Council of Scientific Advisers shall include "ten scientists and technologists in the substantive fields of the Centre". Additionally, "scientist from the host State" is included in the composition of the Council of Scientific Advisers, which includes Italy, India, and South Africa, and at the same time, "due regard shall be paid to the importance of electing the members on a balanced geographical basis" (United Nations Treaty Collection, 1983).

Among other provisions, the Madrid Statute authorizes the Council of Scientific Advisers to develop medium- and long-term perspectives for the programs and plans of the Center, including special and new areas of research, and to submit its recommendations to the Board of Governors; provide assistance to the Center's Director on all major scientific and technical issues, including cooperation with branches.

The Statute specifically states that "the Scientific Advisory Council may establish special groups of scientists from member states of the Center to prepare special scientific reports." It is noteworthy that ensuring the legal status, privileges, and immunities of the Center as an international organization, the Madrid Statute in Article 14 separately regulates aspects of publication and intellectual property rights to the results of its research; among other things, according to this universal agreement, a separate joint policy on intellectual property rights must be approved by the Board of Governors (United Nations Treaty Collection, 1983).

Educational Aspects

The review of the statutory documents of various UN specialized agencies reveals significant emphasis on the integration of education within their mandates, demonstrating that the promotion of scientific research is inherently linked to educational initiatives. This is evident in several ways:

UNESCO's Educational Mandate: Article 1 of the UNESCO Constitution explicitly includes the promotion of education, science, and culture. The organization is tasked with maintaining and increasing knowledge through international cooperation in education and the exchange of scientific and cultural information. This highlights the recognition of education as a critical component in fostering scientific research and global understanding.

IAEA's Training Programs: The IAEA Statute emphasizes the exchange and training of scientists and experts in the peaceful uses of atomic energy. This underscores the importance of educational programs in building scientific capacity and ensuring that advancements in nuclear science are shared and understood globally.

Regional Cooperative Agreements: The IAEA's Regional Cooperative Agreement for Research, Development, and Training includes specific provisions for training programs as part of joint research projects. This reflects the integral role of education in the successful implementation and sustainability of scientific initiatives.

WMO and WHO Educational Initiatives: The World Meteorological Organization and the World Health Organization both highlight the importance of scientific research and training. The WMO promotes activities in conducting scientific research and training in meteorology, while the WHO emphasizes the dissemination of scientific knowledge and the encouragement of research and teaching in health-related fields. These efforts demonstrate the linkage between scientific progress and educational outreach.

FAO's Information Dissemination: The FAO's mandate includes promoting and recommending actions related to scientific research and the dissemination of agricultural science and practice information. This educational aspect is crucial for improving food security and agricultural practices worldwide.

ICGEB's Training and Exchange Programs: The International Centre for Genetic Engineering and

Biotechnology focuses on training scientific and technical personnel and promoting the exchange of information and expertise among member states. This fosters a collaborative educational environment that enhances scientific research and innovation in genetic engineering and biotechnology.

In conclusion, the statutory documents of various UN specialized agencies clearly integrate educational initiatives within their scientific mandates. These educational aspects are essential for building scientific capacity, promoting international cooperation, and ensuring the effective dissemination and application of scientific knowledge. By fostering a strong educational foundation, these agencies contribute to the sustainable development and global advancement of scientific research.

Conclusions

It is worth noting the absence of a developed system of collective agreements regarding scientific research at the universal level. However, despite this, the relevant issue is quite widely reflected in the statutory documents of international organizations within the UN system. Such reflection, among other things, contributed to the conclusion of additional agreements and regulatory acts regarding the development of provisions of statutory documents concerning individual organizations.

Scientific activity is subject to fairly consistent regulation in the Constitution (Statute) of UNESCO of 1945; these provisions were further developed in the work of the International Centre for the Study of the Preservation and Restoration of Cultural Property under the auspices of UNESCO.

Similarly, relevant provisions regarding scientific activity are contained in the Statute of the IAEA of 1956, and the development of relevant provisions was approved in a series of Regional Agreements on cooperation in research, development, and training in areas related to nuclear science and technology. In addition, the provisions of the UNIDO Constitution regarding scientific and technical programs are developed in the Madrid Statute of the International Centre for Genetic Engineering and Biotechnology.

References to science and scientific activity are also found in the Statute of the World Meteorological Organization, the Statute of the World Health Organization, the Constitution of the Food and Agriculture Organization of the UN, the Convention (Statute) of the International Maritime Organization, and so on.

Some statutory documents of specialized agencies within the UN system, which objectively have a broad mandate in the organization of scientific research in the respective direction, avoid using the word "science"; an example of this is the Statute of the International Telecommunication Union. In fact, this is explained by the reluctance to rely on legal constructs for which there are no systems of collective agreements and by replacing the categories of science and scientific activity with more abstract terms such as "research" and "research activities." Thus, there is a situation of substitution in the statutory documents of certain international organizations within the UN system of the category of science and scientific activity with other legal constructs.

Relevant statutory documents of international organizations within the UN system primarily fix the rights of states to scientific activity for peaceful purposes and contain attempts to outline the main algorithms of interstate interaction in the field of science; at the same time, such regulatory models often have a rather abstract character. At the same time, the studied universal international organizations are quite cautious in defining the functionality of their own structural units in the field of organizing scientific research, even when this directly follows from the mandate of the relevant supranational structure.

The evolution of the respective models should be the subject of further scientific research. At the same time, an important goal of further research should be the forms of implementing the standards embodied in the statutory documents in the dimension of bilateral agreements between Ukraine and specialized institutions of the UN system and accordingly reflecting such standards in the development of Ukrainian national legislation.

Such prospects of scientific research acquire special significance considering the limited and wide variability of existing bilateral agreements of Ukraine regarding scientific research and relevant studies and to some extent the obsolescence of the profile national legislation, both in terms of cooperation with international organizations and regarding the supranational dimension of scientific research.

The relevance of further intensification of research in this dimension is also enhanced by the expansion of project activities of specialized institutions of the UN system in Ukraine and the institutional strengthening of the presence of individual profile institutions, such as FAO and IAEA, in Ukraine due to the conditions of massive Russian aggression.

In addition, in modern conditions, opposition to destructive manifestations and provocations of the aggressor state and other countries-violators of international law, which are traced in universal international structures, including abuse of the relevant mechanisms for organizing scientific cooperation, acquires special significance. Therefore, the relevant aspects of improving international statutory documents for effective counteraction to such provocations are of particular importance.

The development of doctrinal reflection of the current state of affairs regarding international standards of scientific activity, moreover, can influence the gradual formation of a scientific basis for the development of universal international contractual documents regarding the regulation of scientific research.

The integration of education within the statutory mandates of various UN specialized agencies demonstrates that the promotion of scientific research is inherently linked to educational initiatives. For example, UNESCO's Constitution explicitly includes the promotion of education, science, and culture. The IAEA emphasizes the exchange and training of scientists and experts in the peaceful uses of atomic energy, while the Regional Cooperative Agreement for Research, Development, and Training includes specific provisions for training programs. Additionally, the World Meteorological Organization and the World Health Organization both highlight the importance of scientific research and training in their mandates, and the FAO promotes the dissemination of agricultural science and practice information. The International Centre for Genetic Engineering and Biotechnology focuses on training scientific and technical personnel and promoting the exchange of information and expertise among member states.

These educational initiatives are essential for building scientific capacity, promoting international cooperation, and ensuring the effective dissemination and application of scientific knowledge. By fostering a strong educational foundation, these agencies contribute to the sustainable development and global advancement of scientific research.

Bibliographic References

Achermann, K., & Besson, S. (2023). International cooperation under the human right to science: What and whose duties and responsibilities? Frontiers in Sociology, 8, 1-17.

Babin, B., Chvaliuk, A., & Plotnikov, O. (2021a). Attempted Annexation of Crimea and Maritime Environment Legal Protection. *Lex Portus, 7*(1), 31-52.

Babin, B., Chvaliuk, A., & Plotnikov, O. (2021b). Epidemiologic Activities in the Modern Crimea: Humanitarian Challenges and Possible Solutions. *Medical News, LXXIV*(11), 2940-2945.

Babin, B., Plotnikov, O., & Prykhodko, A. (2023). Damage to the Maritime Ecosystems from the Destruction of the Kakhovka Dam and International Mechanisms of its Assessment. *Lex Portus, 9*(5), 23-32

Babin, B. (2019). Health Care for Crimean Residents: Interstate Conflict Challenges and Possible Legal and Organisational Solutions. *Medical News, LXXII*(12), 2441-2444.

Babin, B. (2014). Rights and Dignity of Indigenous Peoples of Ukraine in Revolutionary Conditions and Foreign Occupation: Evolution of the Statute of the Indigenous Peoples of Ukraine, as Legal Grounding for Crimea. *Anthropology & Archeology of Eurasia, 53*(3), 81-115.

Babin, B. (2023). *Water Scarcity in the Crimea and the Ecological Catastrophe in the Black Sea*. Crimea from Regional and International Perspertives, 97-115. İstanbul: SET Foundation Economic Enterprise. https://setadc.org/wp-content/uploads/2023/05/K93En.pdf

Babin, B., & Tytska, Y. (2023). *Russian Aggression in Ukraine and Violation of Rights to Science*. ARC; UN Special Rapporteur in field of cultural rights. https://acortar.link/9W3xHE

Babin, B., & Tytska, Y. (2024). *Russian Aggression in Ukraine and Repressions against Academic Freedoms*. ARC; UN Special Rapporteur on the right to education. https://acortar.link/KDoZfM

Food and Agriculture Organization of the United Nations. (1945). *The Constitution*. Retrieved from https://www.fao.org/3/x5584e/x5584e0i.htm

IAEA. (1989). *The Statute*. Retrieved from https://www.iaea.org/sites/default/files/statute.pdf

IAEA. (2017). *Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology*. Retrieved from https://acortar.link/KDSxMV

International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM). (1956). *The Statutes*. Retrieved from https://treaties.un.org/doc/Publication/UNTS/Volume%201321/volume-1321-I-22032-English.pdf

International Telecommunication Union (ITU). (1993). *The Constitution*. Retrieved from https://www.itu.int/en/council/Documents/basic-texts/Constitution-E.pdf

International Maritime Organization. (1948). *Convention Establishing the World Intellectual Property Organization*. Retrieved from https://www.jus.uio.no/english/services/library/treaties/14/14-01/imo_consolidated.html

Plozza, M. (2023). *The science lens: the human right to science*. Geneva Science and Diplomacy Anticipator. Retrieved from https://radar.gesda.global/introduction/2023-highlights-deep-dives/the-science-lens-the-human-right-to-science

Romano, C., & Boggio, A. (2024). *The Human Right to Science: History, Development, and Normative Content*. Oxford: Oxford University Press.

Shaver, L. (2010). The Right to Science and Culture. *Wisconsin Law Review, 1*, 121-84.

Shaver, L. (2015). The Right to Science: Ensuring that Everyone Benefits from Scientific and Technological Progress. *European Journal of Human Rights, 4*, 411-430.

United Nations. (1945). *United Nations Charter.* Retrieved from https://www.un.org/en/about-us/un-charter

UNESCO. (1945). *Constitution of the United Nations educational, scientific, and cultural organization*. Retrieved from https://www.refworld.org/legal/constinstr/unesco/1945/en/41638

Verkhovna Rada of Ukraine (1945). *Constitution of UNESCO (Statute of the United Nations Educational, Scientific and Cultural Organization).* Retrieved from https://zakon.rada.gov.ua/laws/show/995_014#Text

World Meteorological Organization. (1947). *The Convention*. Retrieved from https://oag.gov.bt/wp-content/uploads/2011/02/Convention-of-the-World-Meteorological-Organization.pdf

World Health Organization. (1946). *The Constitution*. Retrieved from https://treaties.un.org/doc/Treaties/1948/04/19480407%2010-51%20PM/Ch_IX_01p.pdf

United Nations Digital Library. (1979). *Constitution of the United Nations Industrial Development Organization*. Retrieved from https://digitallibrary.un.org/record/7695

United Nations Treaty Collection (1983). *Statutes of the International Centre for Genetic Engineering and Biotechnology*. Statutes. Retrieved from https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XIV-7&chapter=14&clang=_en

WIPO. (1967). *The Convention*. Retrieved from https://www.wipo.int/treaties/en/convention/

Xantaki, A. (2024). *Right to participate in science. Report of the Special Rapporteur in the field of cultural rights A/HRC/55/44*. Human Rights Council 55th session. United Nations. Retrieved from https://acortar.link/nYQ1iT