

# Predatory Journals in the Academic Environment of Azerbaijan

written by Araz Aliyev Araz Əliyev

Every year, numerous authors from Azerbaijan publish their articles in journals that the international academic community considers *predatory*. The term “predatory publisher” was coined by Jeffrey Beall who has listed and researched potential predatory publishers and predatory independent journals since 2008.[\[1\]](#) The open-access (OA) list, now called Beall’s List, contains over a thousand publishers and journal titles with a list that is constantly updated. Although the list is controversial, more sophisticated lists have been compiled in subsequent years, such as Cabells’ Predatory Reports, to identify predatory journals.

Issues common to predatory journals are the publication of papers that are not academic at all, misinformation about indexing in well-known databases, dubious sponsorship and partners, no policies regarding plagiarism, rapid publication – several times a month – without peer review.[\[2\]](#) Because a predatory journal or publisher will often claim to be a non-profit when it is actually a for-profit company, its main aim is to gain financial benefits from authors, flouting academic principles and ethical norms. An increase in the percentage of researchers from a given country publishing in predatory journals indicates a contamination of the country’s academic environment, a weakening of research skills, and a spread of plagiarism and fabrication in the sciences and humanities. But what is the situation in Azerbaijan’s academic environment? What are the reasons that Azerbaijani authors publish with predatory journals and how might some of them be alleviated?

To find some answers to these questions, I studied three

predatory journals and monitored whether Azerbaijani authors have published their articles in them. The three journals I chose for monitoring (*Norwegian Journal of Development of the International Science*, *Danish Scientific Journal* and *Slovakia International Scientific Journal*) are either on Beall's List or have been declared as predatory by the academy of science of the country in which they claim to operate.[\[3\]](#) That is, the predation of these journals is not a matter of controversy in the academic sphere. I defined the monitoring period as the first 3 months of 2024 and the full year of 2023. My main target for this selection is to determine the participation rate of Azerbaijani authors in predatory journals and to compare results by period. The monitoring established that some 484 Azerbaijani authors submitted a total of 256 articles to publish in these journals. The results I obtained show that Azerbaijani authors consistently publish their articles in predatory journals, that they are doing so at an increasing pace, and that the measures taken so far to inform scholars about predatory journals have not been successful. The main causes of the problem are loopholes in the score-ranking system of higher education institutions, the inaction of Azerbaijani institutions controlling scientific articles in academia, and the poor dissemination of information on predatory journals to authors.

### **Azerbaijani researchers in predatory journals: 2024**

During the first 3 months of 2024 alone, 136 authors from Azerbaijan published 69 articles in the predatory journals *Norwegian Journal of Development of the International Science*, *Danish Scientific Journal* and *Slovakia International Scientific Journal*. Of these authors, one is an academician, eight university professors, 21 associate professors, 20 doctors of philosophy, six doctoral students, five masters and three bachelors. Five of the authors published articles in two or more journals. Other than Azerbaijanis, the authors publishing in the three journals are mainly researchers from other post-Soviet countries. Despite the fact that these

publishers have business addresses in European countries, there are almost no European researchers among the authors. All these journals have similar platforms, content and working principles and use two languages (English and Russian). The publishing charge for these journals are 28, 30 and 32 euros, respectively, paid before submitting the article. Let's take a closer look at each of these journals separately.

The first journal is *Norwegian Journal of Development of the International Science*.[\[4\]](#) Established in 2016, the journal publishes 24 issues per year. Some 93 authors from Azerbaijan have submitted a total of 45 articles published in 6 issues of this journal during the first three months of 2024. These authors include numerous researchers and lecturers, including one academician, seven university professors, 16 associate professors, 13 doctors of philosophy, six doctoral students, five masters and two bachelors (see Table 1).

**Table 1:** Distribution of Azerbaijani authors by educational institution who published articles in the *Norwegian Journal of Development of the International Science* during the first three months of 2024.

Universities and Scientific Institutions	Number of Researchers (2024)
Azerbaijan Medical University	18
Scientific institutions under the Ministry of Science and Education (MSE) (Institute of Physics, Institute of Petrochemical Processes, Institute of Catalysis and Inorganic Chemistry, Institute of Bioresources, Institute of Chemistry of Additives)	17
Nakhchivan State University	15
Azerbaijan State Oil and Industry University	9
Zagatala Agricultural Scientific Research Institute	6
Azerbaijan National Academy of Sciences (ANAS)	4
Azerbaijan State Pedagogical University	4
Baku State University	3
Azerbaijan State University of Economics	2
Azerbaijan Scientific-Research and Project-Research Energy Institute	2
Sumgayit State University	1
Azerbaijan Technical University	1
Nakhchivan Agricultural Scientific Research Institute	1
Middle East Technical University (Türkiye)	1
Adıyaman University (Türkiye)	1
Independent	8

The second journal is *Danish Scientific Journal*.[\[5\]](#) Established in 2017, the journal publishes 12 issues per year. Some 21 co-authors from Azerbaijan have submitted a total of nine articles published in three issues of this journal during the first three months of 2024. These authors are scientific workers and researchers, including, among others, two university professors, five doctors of philosophy and one bachelor (see Table 2).

**Table 2:** Distribution of Azerbaijani authors by educational institution who published articles in the *Danish Scientific Journal* during the first three months of 2024.

Universities and Scientific Institutions	Number of Researchers (2024)
Scientific institutions under the MSE (Institute of Polymer Materials, Institute of Microbiology)	8
Azerbaijan Medical University	4
Institute of the V. Akhundov National Scientific Research Medical Prophylactic (Ministry of Health)	3
Azerbaijan National Academy of Sciences (ANAS)	2
Nakhchivan State University	2
Baku State University	1
Ganja State University	1

The third journal is *Slovakia International Scientific Journal*.[\[6\]](#) Although Beall's List does not include this journal, the Slovak Academy of Sciences stated on its official website that it did not have any sort of relationship with the publisher and would list it as a predatory journal.[\[7\]](#) Established in 2017, the journal publishes 12 issues per year. Some 27 co-authors from Azerbaijan have submitted a total of 15 articles published in three issues of this journal during the first three months of 2024. These authors are scientific workers and researchers, including, among others, one university professor, six associate professors and three doctors of philosophy (see Table 3).

**Table 3:** Distribution of Azerbaijani authors by educational institution who published articles in the *Slovakia International Scientific Journal* during the first three months of 2024.

Universities and Scientific Institutions	Number of Researchers (2024)
Nakhchivan State University	13
Azerbaijan Medical University	4
Azerbaijan State Pedagogical University	3
Azerbaijan Scientific Research Animal Husbandry Institute	3
Azerbaijan Technical University	2
Baku Higher Oil School	1
"Sukanal" Scientific Research and Project Institute	1

Of the articles published by Azerbaijani researchers, the

above-mentioned journals published 36 authored articles and 33 co-authored articles. The articles were, respectively, on philology (9), physics (9), medicine (7), chemistry (5), pedagogy (4), biology (4), mathematics (3), law (3), data analytics (3), arts (2), music (2), economics (2), history, philosophy, business, security, logistics, economics, zoology, architecture (1), and other topics.

### **Azerbaijani researchers in predatory publishing: 2023**

348 authors from Azerbaijan published 187 articles in the three predatory journals throughout 2023. Of these authors, 20 are university professors, 38 associate professors, 56 doctors of philosophy, seven doctoral students, ten masters and four bachelors. Ten of the researchers (three university professors, one associate professor, two doctors of philosophy, and others) published their articles in two or more journals. Ten authors (including two university professors, one associate professor, one doctor of philosophy) published articles in two or more journals. Let's take a closer look at each of these journals separately.

Last year, the *Norwegian Journal of Development of the International Science* published 99 articles by 175 authors from Azerbaijan, 15 of whom published articles in more than one issue of the journal. These authors include seven university professors, 23 associate professors, 41 doctors of philosophy, four doctoral students, five masters and two bachelors (see Table 4).

**Table 4:** Distribution of Azerbaijani authors by educational institution who published articles in the *Norwegian Journal of Development of the International Science* throughout 2023.

Universities and Scientific Institutions	Number of Researchers (2023)
Nakhchivan State University	44
Azerbaijan Medical University	29
Scientific institutions under the MSE (Institute of Physics, Institute of Catalysis and Inorganic Chemistry, Institute of Polymer Materials, Institute of Microbiology)	27
Azerbaijan Scientific Research Animal Husbandry Institute	19
Azerbaijan State Oil and Industry University	17
Baku State University	11
Ganja State Agrarian University	5
Azerbaijan State University of Culture and Arts	4
Azerbaijan State Pedagogical University	4
Azerbaijan National Academy of Sciences (ANAS)	3
The Academy of Public Administration under the President of the Republic of Azerbaijan	1
Ganja State University	1
Azerbaijan State University of Economics	1
Baku Engineering University	1
Baku Music Academy	1
Azerbaijan University of Languages	1
Adivaman University (Türkiye)	1
Independent	5

The *Danish Scientific Journal* in that same timeframe published 53 articles submitted by 115 authors from Azerbaijan, four of whom published their articles in more than one issue of the journal. These authors include ten university professors, eight associate professors, six doctors of philosophy, three doctoral students and three masters (see Table 5).

**Table 5:** Distribution of Azerbaijani authors by educational institution who published articles in the *Danish Scientific Journal* throughout 2023.

Universities and Scientific Institutions	Number of Researchers (2023)
Azerbaijan Medical University	31
Ganja State Agrarian University	17
Institute of the Akhundov National Scientific Research Medical Prophylactic (Ministry of Health)	14
Nakhchivan State University	13
Azerbaijan State Oil and Industry University	11
Azerbaijan State Pedagogical University	7
Baku State University	6
Azerbaijan Technical University	4
Azerbaijan State University of Economics	1
Independent	1

The *Slovakia International Scientific Journal* published 35 articles in its 12 issues submitted by 68 authors from Azerbaijan throughout 2023, five of whom published their articles in more than one issue of the journal. These authors include six university professors, eight associate professors, 11 doctors of philosophy, two masters and two bachelors (see Table 6).

**Table 6:** Distribution of Azerbaijani authors by educational institution who published articles in the *Slovakia International Scientific Journal* throughout 2023.

Universities and Scientific Institutions	Number of Researchers (2023)
Azerbaijan Medical University	13
Azerbaijan Technical University	13
Baku State University	9
Nakhchivan State University	9
Azerbaijan State Pedagogical University	5
Azerbaijan State Oil and Industry University	4
Azerbaijan National Academy of Sciences (ANAS)	3
Ganja State University	3
Azerbaijan Scientific Research Animal Husbandry Institute	3
Ganja State Agrarian University	2
Azerbaijan State University of Culture and Arts	2
Sumgavit State University	1
"Sukanal" Scientific Research and Project Institute	1

Of the articles submitted by Azerbaijani researchers during 2023, the above-mentioned journals published 86 single-author articles and 101 co-authored articles. The articles were on



philology (40), medicine (21), physics (17), mathematics (13), chemistry (12), arts (11), biology (9), economics (8), pedagogy (7), agriculture (6), history (5), geography (4), zoology (2), law (1), music (1), philosophy (1), and other topics.

Although my monitoring only covers the first 3 months of 2024 and all of 2023, these journals have been published continuously since 2016 and 2017. Therefore, the above figure for Azerbaijani authors is likely to be many times higher if determined from 2016. On the other hand, there are other journals whose names have not been added to the list of predatory journals and whose predatory nature has not yet been agreed upon internationally, but that fully meet the basic criteria established for predatory journals.[\[8\]](#)

Also, my monitoring-based observations show that across the time period there has been growth in the number of submissions by Azerbaijani researchers to predatory publishers. During the first three months of 2023, the three journals published 41 articles submitted by 87 Azerbaijani authors. That increased to 69 articles and 136 authors in the corresponding period of 2024. Moreover, this growth occurred in parallel with a decrease in the number of domestic authors' articles published in journals indexed by reputable databases.

Azerbaijan ranks 94<sup>th</sup> among countries contained in the journal and country rankings for the year 2022 by the number of articles (1.993) published in journals indexed by reputable databases (*Scopus*, *Web of Science*, etc.). In 94<sup>th</sup>, Azerbaijan clearly lags behind countries such as Tanzania (85), Uganda (81), Sri Lanka (77), Nepal (78), Kenya (71), Ghana (67), and Iraq (42).[\[9\]](#) Also, Azerbaijan has dropped two positions since the 2021 indicators. Although it is difficult to directly link this decline to the rates of growth observed in my research, it is safe to say that the trends are related.

## **Combating predatory journals in Azerbaijan**

When it comes to world practice, there are some incentives that governments have put in place in order to effectively combat predatory journals and protect the academic environment. These practices include requirements that articles that are part of grant projects intended for scientific research be published in leading journals contained in international indexes such as *Scopus* and *Web of Science*. Some countries also require that authors be informed through training material about the list of existing predatory journals and their working principles, and that should they have any relationship with predatory journals, they will be removed from particular projects.[\[10\]](#) These methods not only prevent researchers from being targeted by predatory journals, but also allows them to share their scientific results objectively with the global public. However, there is no information in Azerbaijan about the widespread use of any such incentives in the fight against predatory journals.

There is research on the topic of predatory journals in Azerbaijan, albeit at a limited level. A major initiative, launched in 2017, was pioneered by the Institute of Information Technologies under ANAS (later MSE). At the same time, the main sources on predatory journals are two articles authored by R. Sh. Hasanova and F. Sh. Asgarov, employees of the said institution.[\[11\]](#) In both articles, the authors provide readers with preliminary information on the concept of predatory publishers and journals. They also explain some of the methods used to identify predatory publishers, while pointing out that protection from such journals requires more than the individual research of the author. In their second article, they propose the development of an Azerbaijani-language version of the widely used anti-predatory system that identifies predatory publishers.[\[12\]](#) The articles also make use of the translation into Azerbaijani of subsections of the *Think!-Check!-Submit!* online international initiative.[\[13\]](#) The authors' proposed idea has since been put into practice, and now there is a an Azerbaijani-language questionnaire that

allows authors to check predatory journals (*Düşün!-Yoxla!-Təqdim et!*).[\[14\]](#)

But this online system is in the form of a survey and provides authors with results based on their understanding of how to answer the questions. An author must therefore have a complete and comprehensive piece of information about the journal, so many authors either have difficulty obtaining this information, especially about foreign journals, or do not research at all, or the information that potential predators provide about themselves is fake. All of this affects the results the online system gives about a journal's potential predatory nature.

Some researchers see authors' publications in predatory journals as done out of desire for scientific reputation or career, out of desperation, or out of ignorance. As a solution, they propose the creation of a body of special experts who will compile and confirm an annual list of predatory journals.[\[15\]](#) Also, since 2019, continuous online seminars have been held in Azerbaijan to provide information about predatory journals.[\[16\]](#) In order to combat predatory journals, regular trainings and workshops are organized at many Azerbaijani universities in collaboration with Clarivate Analytics.[\[17\]](#) These workshops provide authors with basic information about predatory journals as well as authoritative scientific metric systems.[\[18\]](#)

Azerbaijan has undertaken a number of activities, particularly in the field of education, since 2017 to combat predatory journals. However, the scope of the work done has been relatively limited and remains at the level of small workshops or trainings; it has not risen to a level that will educate a wide academic audience. On the other hand, the proposed methods, even if more widespread, cannot fix the problem to a serious extent. They only provide a temporary solution to the problem. Everything is left to the author's individual intuition and evaluation. In this regard, we need to examine

the causes of Azerbaijani authors' propensity to publish in predatory journals.

## **Causes of the problem**

The vast majority of researchers who turn to predatory journals are researchers and teaching staff. Out of 484 authors (observed publishing in the three journals during the first three months of 2024 and all of 2023) I have identified, only 35 (13 doctoral students, 15 masters and seven bachelors) are students, 19 of whom are co-authors with their supervisors or those with a degree. This point suggests that the problem is less at the doctoral and master's level and more among the teaching and research staff of universities and scientific institutions. The main reason for this is probably that the Supreme Attestation Commission (SAC) has defined a list of specific journals for doctoral students and undergraduates in which they can publish their articles.[\[19\]](#) The SAC has also defined specific indexes to include journals that will be consulted for the purpose of publishing articles outside the country.[\[20\]](#) Articles published in journals not contained in these indexes and not listed by the SAC are not be accepted in the final defense process. This certainly affects submissions of doctoral students and undergraduates to predatory journals. But there are no such checks of this kind for teaching and research staff in universities and scientific institutions.

Why do Azerbaijan-based researchers submit articles to predatory journals? Is it because of the researcher's irresponsibility and/or desire for a fictitious scientific reputation, or because of problems at an institutional level?

First of all, let me point out that it is difficult to determine whether authors are aware that the journals they send articles to are predatory. We can assume that some of them are indeed unaware of predatory journals. This finding suggests that some universities have failed in their efforts to inform their faculty about predatory journals. According to

my monitoring results, the names of one academician, 28 professors, 59 associate professors, 76 PhDs have been found in the journals under review. Most of them are teaching and research staff at universities in which staff conduct educational seminars on avoiding predatory journals.

The second and most important reason is the score-rating system used in universities to assess the scientific activity of research and teaching staff. This system is based on the assessment of the activities of the research and teaching staff during a certain period of time in terms of teaching quality, teaching-methodical works, scientific-research works, evaluating them according to the score system. The score-rating system, internal to many universities, is aimed at ensuring the development of academic staff and increasing their efficiency. But there are some loopholes in these systems. As a result of these loopholes, the score-rating system allows researchers who fail to meet high standards to submit their research to predatory journals to achieve a passing score. For example, Table 8 below reflects a part of the *score-rating table for the last five years of a teacher's activity* prepared by the Azerbaijan Medical University for the year 2023/2024. The teaching and research staff of the university are rated 7 points for articles published in journals indexed by reputable databases, 3 points for journals with domestic impact factor, 5 points for foreign journals with impact factor higher than 2 and 2 points for a foreign journal having no impact factor at all.[\[21\]](#)

**Table 7:** Assessment of scientific articles in the *score-rating table for the last five years of a teacher's activity* prepared by the Azerbaijan Medical University for the year 2023/2024.

3.2.2. Research paper (for each)	In periodical scientific publications included in international indexing databases (Web of Science; Scopus; PubMed; Medline)	7	Sample of the journal or copy of the cover page, table of contents and article
	Local impact factor (in publications with index 2 and above)	3	
	In foreign scientific journals with an impact factor above 2	5	
	In journals with foreign scientific, official citation and index, but having no impact factor	2	
	In domestic scientific journals recommended by the Supreme Attestation Commission	3	

Note that the *Norwegian Journal of Development of the International Science* claims an impact factor of 4779, the *Danish Science Journal* 3556 (Cosmos Impact Factor), and *Slovakia International Scientific Journal* 5.19 (SJIF impact factor). However, authors and universities often do not check these self-proclaimed rankings against those in authoritative rankings (SCImago Journal Rank, SNIP, Cite Score, etc.).

It seems that universities not only demand high standards from research professors, but also set secondary, tertiary standards for those who cannot meet these standards. Lowering standards at this level not only prevents researchers who cannot meet high standards from publishing articles in predatory journals, but even encourages them to do so. For an author who cannot meet high standards, predatory journals where they can publish 5-6 articles a year for a tangible fee is a more practical option. This is because the priorities that universities create for authors are not scientific innovations or recognition in authoritative indices, but simply the internal annual score-rating system. This is evidenced by the fact that in 2023/2024 a total of more than 90 employees of Azerbaijan Medical University authored articles in predatory journals. By lowering the expectations of their faculty, they are effectively leaving the door open for predatory journals. As long as this open door exists, predatory journals will remain relevant, no matter how much information has been made on this topic.

The third reason is that scientific articles submitted to a university (or institute) according to the score-rating table are not verified by the universities. The authors themselves were probably not entirely aware of that their chosen journal is predatory. However, the relevant university administration (such as vice-rector for scientific work, scientific secretariat, academic councils of faculty, etc.) is to check the content of these articles and the standards of the journal in which they are published. The failure of these organizations to fulfill their responsibilities is one of the main obstacles to addressing predatory journals. The results of my monitoring show that a number of universities have very serious loopholes in this area. For example, authors who consistently publish articles in predatory journals work at a few specific universities. Teaching and research staff at Nakhchivan State University (96), Azerbaijan Medical University (94), and scientific institutions under the Ministry of Science and Education (52) are among those who publish most frequently in predatory journals. Azerbaijan State Oil and Industry University (41), Azerbaijan State Pedagogical University (23), Baku State University (30), and others may also be considered problematic institutions. Most likely the authors' articles were not checked by their university administrations.

### **What to do?**

The monitoring in this article simply focuses on results for three journals, but there are dozens of potentially predatory journals. While it is impossible to accurately determine the extent of the problem as a result of this monitoring, the figures I have obtained provide sufficient grounds for concern and suggest that the work done in Azerbaijan to combat predatory journals thus far has been insufficient. Measures must be taken to prevent the damage caused by such journals to Azerbaijan's academic environment and the reputation of its authors.

Firstly, the Ministry of Science and Education, Azerbaijan National Academy of Sciences and other responsible bodies need to conduct continuous monitoring and research of predatory journals by creating a new agency to that end and expanding their staff and technical capacity. They can prepare annual reports on the results of monitoring, a list of predatory journals and share results with universities and authors.

Secondly, a single mechanism for higher education institutions could be developed by the universities themselves or directly by the MSE to close loopholes in the score-rating lists. These loopholes encourage authors who cannot meet high standards to publish in predatory journals. Addressing loopholes may prevent new authors from turning to predatory journals. To this end, authors could be encouraged by universities to publish articles only in journals indexed by reputable databases (such as *Scopus* and *Web of Science*), or a list of reputable scientific journals that are constantly updated could be compiled.

Thirdly, Azerbaijan needs to improve university quality control and reform internal score-rating systems, while identifying potential risks and limiting authors' access to predatory journals.

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[8] Along with the 3 journals I monitor, *Journal of Science*. Lyon (France), *Science of Europe* (Czech Republic), *The Scientific Heritage* (Hungary), *Polish Journal of Science* (Poland), *German International Journal of Modern Science* (Germany), *International Independent Scientific Journal* and *Annali d'Italia* (Italy), and journals such as *Znantseva Misel Journal* (Slovenia) are also likely to be predatory journals. Although there is no official source confirming these 8 journals as predatory, they all have the same domain registration address and phone number, as well as page designs and structures, of the three journals I have monitored.

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