SciELO Network - Priority lines of action for professionalization, internationalization, and sustainability - 2024-2028

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1. Introduction

This document updates the priority lines of action of the SciELO Program for the next five years (2024-2028) with the aim of advancing the communication of open science research by the journals of the national collections of the SciELO Network. The perspective is that all journals in all collections are aligned with the open science modus operandi by the end of 2025. The deadline may be earlier than 2025 by decision of the collections' coordinators.

The priority lines of action guide the progressive convergence of the decentralized and autonomous operation of national collections whose governance modalities and operation plans are centered on national conditions and priorities that result in different timings in the adoption of standards, good practices, and research communication innovations of the SciELO Publishing Model.

SciELO's priority lines of action include professionalization, internationalization, and operational and financial sustainability. They are promoted, assisted, and monitored by the coordinators of the national collections and are applied by the journals through the updating of editorial policies and management. The priority lines combine the conditions and priorities of the SciELO Network and specifically of each national collection with the state of the art in research communication and will be influenced in the next five years by advances in Open Science practices and particularly by using Artificial Intelligence applications and content.

Professionalization comprises, on the one hand, the alignment of journal policies and editorial management with the state of the art in scholarly communication, and, on the other hand, the proactive involvement of all actors operating the journals - editors, editorial staff, and reviewers.

Internationalization comprises, on the one hand, the presence in the global flow of research communication, and, on the other hand, the presence in the journal of foreign editors, reviewers, and authors.

Sustainability comprises the convergence of the availability of financial resources with the ability of journals to operate and publish without delay.

The most direct practical application of the priority lines of action are the national collections' indexing criteria for journal entry and retention, which are updated subsequently according to progress in implementing the priority lines. The indexing criteria should reflect the action lines and each national collection defines the expected dates of compliance with each of the standards and practices. Adoption of the open science practices is mandatory for all journals in all collections.

The priority lines of action for the years 2024-2028, which are proposed to be approved at the SciELO Network Meeting to be held on September 25-26, 2023 at the SciELO 25 Years Week, continue and update the lines defined at the SciELO Network 20 Years Meeting (1).

2. Background

The SciELO Network develops and operates collections of research communication objects progressively aligned with Open Science practices: national journal collections, regional journal collections, preprints collection, research data collection and scholarly book collection. The portal https://scielo.org/ provides access to all collections.

Journal collections constitute the main guiding component of the SciELO Network. Journals are responsible for communicating research through articles that, in the *modus operandi* of Open Science, may have been previously made available as preprints, most have associated research data files and inform the transparency of the manuscript evaluation process. They comprise the 16 collections that operate actively and decentrally in South Africa, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Spain, West Indies, Mexico, Paraguay, Peru, Portugal, Uruguay and the centralized thematic collection of Public Health.

Preprints are the initial means of research communication. In the SciELO Network they are operated as a centralized collection by the SciELO Preprints server.

The research data underlying the texts of preprints, manuscripts under review by journals and final articles are published in data file sets in the SciELO Data repository that virtually providesindividual repositories for the national collections and for each of its journals.

Academic books are operated in the SciELO Books collection still in a centralized way.

3. Professionalization

Professionalization is the priority line of action of the SciELO Network that guides the alignment of journals with the state of the art in research communication. Journals implement professionalization through their editorial policies, editorial management structures and practices, and editorial development plans. National coordinators promote, assist, and monitor the professionalization of journals.

It comprises the following sub lines of action: alignment with the Open Science *modus operandi*, compliance with research communication standards and good practices, and professionalized management.

3.1. Alignment with the Open Science *modus operandi*

Alignment with the *modus operandi* of open science within the SciELO Network comprises the following practices: communication of research objects with CC-BY or CC0 open access licenses, transparent or informed evaluation of manuscripts, speed of research communication, publication of structured full texts of research articles and other documents in open access, and declaration and publication of research data related to the articles or book chapters.

The submission of manuscripts must go through a checklist of compliance with Open Science practices. The SciELO Program provides the Open Science Compliance Form for SciELO journals - https://wp.scielo.org/wp-content/uploads/Open-Science-Compliance-Form_en.docx.

3.1.1 Open access licensing of research communication objects

The research objects preprints, articles and other research documents and data are always structured with two components: the metadata that bibliographically describe the research objects and the research objects themselves. The metadata of the SciELO Network communication objects have a public access license identified by the CC0 code, that is, they are made available without restrictions. The communication objects themselves have a CC-BY license, meaning access and use have no limitation except the obligation to cite the authors and the original source. The authors hold the copyright regardless of the medium in which their research communication objects are communicated under CC-BY license. The CC0 license for full texts must be accepted when requested by the authors in compliance with the requirements of their institutions or research funding agencies.

The adoption of CC0 licenses for metadata and CC-BY licenses for articles, book chapters and other communication objects is linked to the SciELO Program's principle that scientific knowledge is a global public good and to the fact that in most cases research funding resources are public and the role of the publication media is to certify the quality and promote the visibility of communication objects. Thus, in the Open Science model, journals, national journal collections, preprint servers and data repositories do not take ownership of communication objects.

3.1.2. Speed of research communication: preprints and continuous publication

One of the advances that the web, as a means of communicating research, allows us is to accelerate the availability of research communication objects. One of the objectives of Open Science is to accelerate research communication.

In this sense, journals are called to adopt practices that privilege editorial quality and rigor in the evaluation of manuscripts in the publication of the final versions of articles, while minimizing the delay in the communication of research. To this end, the SciELO model adopts continuous publication as the mandatory publication method of final articles and accepts the submission of manuscripts already deposited in Preprints servers.

3.1.2.1 Preprints and Preprint Servers

The SciELO Publishing Model defines preprints as research communication manuscripts not published by a journal. It comprises, on the one hand, manuscripts submitted by authors to SciELOPreprints or

any other preprint server, and, on the other hand, manuscripts approved by SciELO journals and submitted to SciELO Preprints while the manuscript is edited for its final versions.

Journals should make explicit in their instructions to authors that they accept the submission of manuscripts previously deposited in a preprint server. The national coordinators with the assistance of their respective advisory committees should set the deadline for all journals to adopt this practice.

In the checklist that the corresponding author answers when submitting the manuscript, the journal should ask if the manuscript is a preprint and if so, the name and address of the server. For this purpose, the SciELO Program provides the Open Science Compliance Form for SciELO journals.

Journals can restrict the acceptance of preprints only to trusted preprint servers, among them SciELO Preprints. Trusted preprint servers have the following characteristics:

- Have quality control known as moderation that identifies whether it is a research article or essay authored with relevant scientific production.
- Assign a DOI identifier to the preprint.
- Operate with versioning, i.e., a manuscript can be improved with new versions, which can occur after user reviews.
- When the manuscript is published in a journal the preprint is updated with a link to the final version.

Preprints are a publication modality of increasing use by researchers who aim to ensure authorship of ideas and research results, accelerate the availability of research results, and improve the manuscript before submission to a journal from comments or open peer reviews. The SciELO Preprints server offers authors two options for open review of manuscripts: one via comments through the Hypothes.is service and the other via collaborative and open peer review PREreview.

At the same time, journals are learning to make use of preprints to improve the research communication process. One advanced option for SciELO journals is to accept only the submission of manuscripts previously deposited in SciELO Preprints, that is, to adopt the practice of "publish first, evaluate later". Another is to use the preprints server to make calls for submission of manuscripts on a theme or special issue.

The SciELO Preprints server is operated by the Open Preprint Systems system maintained by the Public Knowledge Project (PKP). The server is an integral part of the SciELO Publishing Model and has its up-to-date documentation available in the server's FAQ section - https://preprints.scielo.org/index.php/scielo/faq.

3.1.2.2 Continuous publication

Continuous publication is the modality that applies to already edited articles as soon as they are in their final version, that is, they do not wait for the composition of an entire issue or edition of the journal to be published.

Continuous Publication is a mandatory practice for SciELO journals. The national coordinations must define the deadline for all journals to adopt this practice.

3.1.2 Publication of structured full texts in open acces s

The SciELO Network is a pioneer in the adoption of open access journal publishing, a condition forthe indexing of journals in the collections.

The articles texts and other documents published in open access without embargo by SciELO journals are structured and formatted in XML and PDF and published online in HTML. For registration and statistical purposes, documents are considered published when they are made available in the SciELO Network collections. Texts of book chapters are published in ePUB and PDFin SciELO Books.

All journal texts in XML must comply with the SciELO Publishing Schema formatting, version 1.9 or more updated, which follows the *ANSI/NISO Z39.96-2021* standard*, JATS: Journal Article Tag Suite*, version 1.3 or more updated. The updated SciELO Publishing Schema documentation is available at https://scielo.readthedocs.io/projects/scielo-publishing-schema/pt_BR/latest/ (Portuguese only).

XML texts are used for metadata generation and interoperability and serve as a source forformatting different presentation versions.

The full texts of journals in XML and PDF follow specific templates adopted by the journals and must be available on the web in open access under the CC-BY license.

3.1.4. Declaration and Publication of research data associated with texts

One of the most important practices of the modus operandi of Open Science is the documentation of the materials used and generated in the research made explicit or underlying the texts of the articles and book chapters that aim to facilitate the evaluation, the results reproduction, the research replicability, the data reuse, the cooperation with other researchers, and thus, maximize the return on investments in research.

Research data is a generic name that refers to the materials collected, used and generated during the execution of research associated with a manuscript. They are organized in the form of a file ora set of data files of different types and formats: numerical data in tabular form, data generated by computer systems and equipment, databases, supplementary texts, computer program sourcessuch as those used in statistical analyses, maps, diagrams, etc.

Journals should make it explicit in the instructions to authors that submitted manuscripts must necessarily be accompanied by a data availability statement associated with the manuscript text, whether data or materials from web-based sources were used or generated by the research, it being explicit or underlying the manuscript text. The data availability statement is a section that should be present in all articles as well as in other types of documents and should come at the end of the text before the references section. The national coordinators with the assistance of their respective advisory committees should set the deadline for all journals to adopt this practice.

The data availability statement can contain three types of documentation or combination of the three: specify the URL of each of the data files or location of physical document files; inform thatall

data are contained in the text; inform the limitation of data availability justified and accepted by the journals that, however, must be available for the peer review process.

Authors are responsible for depositing the data collected and generated in their research in a research data repository. Every data file and set of files must be accompanied by the relevant documentation and metadata. Research data repositories have interfaces that require the definition of metadata. Data files collected or generated by research published by SciELO journals must be made available with a CC-BY license. Data files used from sources available on the web have their own licenses.

The management and publication of research data collected or generated by research reported by SciELO journals should follow the FAIR principles (Findable, Accessible, Interoperable, and Reusable).

In the checklist the corresponding author answers when submitting the manuscript, the journal should ask if the manuscript contains the data availability statement and the web addresses of the data file(s). For this purpose, the SciELO Program provides the Open Science Compliance Form for SciELO journals.

Journals can recommend authors to use reliable repositories, such as SciELO Data, which provides a repository for each collection of the SciELO Network, which in turn provides specific repositories for each journal.

Trusted repositories such as SciELO Data have the following characteristics:

- Have quality control of the files and sets of files submitted for deposit. This quality control, known as curation, is carried out by the data repository's editor.
- Assign DOI to files and datasets.
- Have files metadata indexed in search data indexes.
- Are compatible with the FAIR principles.

The SciELO Data server is operated through the Dataverse system which is developed and maintained by Harvard University. The server is an integral part of the SciELO Publishing Model and has its updated documentation available in the SciELO Data section of the SciELO Network portal - https://scielo.org/en/about-scielo/scielo-data-en/.

3.1.5. Informed peer review of manuscript

Transparency in all research execution and communication processes is a precept of the Open Science modus operandi.

The most important process in research communication is the evaluation of manuscripts describing the research, a process that usually involves an editor, two or more reviewers and the authors and is known as peer review. The editor's role is to choose the reviewers, mediate the dialog between reviewers and authors, and decide or propose the approval or rejection of the manuscript, whether they are nominated associate editor, section editor, executive editor, or even editor-in-chief.

Regarding the transparency of peer review, a determining factor is whether the identity of the

actors and reviews are open. Thus, we can have a simple blind peer review in which the identity of the reviewers is unknown, double blind when the identities of both authors and reviewers are unknown and triple blind when it is also unknown who the editor is. It is worth remembering that the double or triple blind practice ceases to exist when the manuscript is a preprint.

Regardless of the type of peer review, the SciELO Publishing Model requires journals to progressively adopt informed manuscript peer review options, which should be specified in instructions to authors and in internal guides and forms for editors and reviewers on the peer review process. The national coordinations should set the deadline for all journals to adopt this practice.

The peer review options reported as open science practices promoted by SciELO are as follows:

- Publish in the final articles the name of the editor responsible for approving the manuscript, whether it is an associate editor or section editor responsible for peer review or the name of the editor-in-chief. There may be cases where the names of two or more editors are published.
- Publish the approved reviews of the articles edited by the editor responsible for approving the manuscripts. The reviewers may choose to sign the review or authorize its anonymous publication.
- Offer authors and reviewers the option of opening their identities in the interactions of the peer review process.

3.2. Compliance with research reporting standards and good operational practices

Compliance with international and national standards and best practices in scholarly communication is a principle of the SciELO Program and must be explicit in the editorial policies of the journals, instructions to authors and internal guides for the management and operation of the editorial flow. It aims to promote professionalization and ensure quality control throughout the production flow of articles and other documents published by SciELO journals considering the alignment with Open Science research communication practices.

The SciELO Publishing Model requires compliance with the following standards and good practices as a condition for the entry and permanence of journals in SciELO collections:

- Adoption of peer review in the evaluation of manuscripts either in single or double blind or open mode. All published articles must specify the dates of submission, approval, and publication.
- Ethical standards and practices with which manuscripts must comply, and the journal's policies and procedures for handling identified or reported ethical infractions.
- Instructions to authors updated annually defining the scope of the journal, types of acceptable documents, authorship, bibliographic standards for citation and referencing of other documents, formatting of tables, figures, etc., languages for acceptance of manuscripts and publication of final articles, use and purpose of any publication fees and updated amounts, explanation of the conditions for refusal of manuscript evaluation, the peer review process, ethical standards and good practices, and procedures for handling

ethical infractions.

- All articles should be published with their Digital Object Identifier (DOI) or equivalent for when DOI attributions are not available.

The SciELO Publishing Model requires that instructions to authors progressively define thefollowing standards and good practices for alignment with open science practices:

- Application of the checklist form for manuscript compliance with open science practices.
- Journals must be indexed in DOAJ which is the reference that SciELO uses for good publishing practices in open access.
- Manuscripts must have a data availability statement.
- All authors must have their ORCID in the institutional affiliation specification.
- All authors should have their contribution to the manuscript specified according to the CRediT (Contributor Roles Taxonomy) classification before the references at the end of the article.

The national coordinations with the assistance of their respective advisory committees should set the deadlines for all journals to adopt these practices.

3.3. Professionalized management

In the context of the SciELO Network, professionalized management is applied in a decentralized manner and independently to all its instances and governance structures: the Network itself, the National Coordinators of journal collections, the SciELO Preprints server editors, SciELO Data and the SciELO Books collection.

The management of the SciELO Network is governed without hierarchy through six main mechanisms:

- Dialogue between National Coordinations to exchange information, knowledge and experience.
- List of interests focused on methodological and technological issues.
- Periodic meetings of the National Coordinations which usually consist of a presentation on the state of play of methodologies and technologies followed by an exchange of ideas.
- Meetings of the Executive Secretariat of the Network which basically deals with the analysis of the difficulties and advances of the Network that should be discussed and promoted among the national coordinations.
- Every five years the self-assessments of the National Coordinations and the updating of the Network's Priority Lines of Action for the next five years; and,
- Five-yearly face-to-face meeting of the National Coordinators to share the progress of each national collection, review the methodologies and technologies of the SciELO Publishing Model and analyze challenges and future perspectives.

The governance of national journal collections varies from country to country but generally involves the national science and technology organization that funds the operation and development of the national collection, the organization responsible for National Coordination, which may eventually be the same funding organization and is assisted by a national advisory committee responsible for

indexing and collection development. The development of the nationalcollections follows the collection indexing criteria aligned with the priority lines of action.

Journals are governed by the owning or responsible institution, the editorial board that assists in the development of the journal and the improvement of its editorial policy, the body of associate or section editors responsible for the manuscript evaluation processes and the editor-in-chief responsible for conducting the editorial policy and management and the set of ad-hoc reviewers. Journals may have more than one editor-in-chief. This structure varies greatly between journals. Ideally, journals should have an updated Editorial Development Plan (EDP), bylaws and a succession plan for the editor-in-chief. Journal management has, among its main responsibilities, the production and publication of articles, which can be carried out with its own resources or by hiring third-party services for some or all editorial functions.

In this context, professionalized management in all instances of the SciELO Network should be governed by the principles of the SciELO Program, the Priority Lines of Action, and the SciELO Network Code of Conduct. Observing the conditions of each instance, professionalized management should always create conditions to maximize the contribution of each of the actors, which is especially valid in the management of journals with the involvement of editors, reviewers, and editorial staff.

4. Internationalization

Internationalization is SciELO's priority line of action that aims to promote, develop, and operate mechanisms and solutions that maximize the presence of journals and research in the global flow of scientific communication.

The flow of research communication has become universalized with the web, a phenomenon thatis popularly expressed in the idea that all scientific literature is indexed by Google and Google Scholar. Thus, an article or other object of research communication that is not accessible on the web "does not exist", i.e., "is not visible" in the flow of scientific communication.

SciELO's main specific objective is to maximize the visibility on the web of the journals it indexes and the research they communicate. Hence the adoption of open access with CC0 access license for metadata and CC-BY for full texts and data associated with the text.

Bibliographic indexes are the main instances of scientific communication flow. SciELO collections were created and operate as bibliographic indexes and solution to ensure the presence of SciELO journals in the global flow of scientific information to overcome the coverage limitations of international reference bibliographic indexes. However, it is essential to maximize the presence of journals in as many national and international bibliographic indexes and repositories as possible. This is an activity that should be systematically promoted by the SciELO Network as a whole, by the national coordinations and by the journals.

SciELO journals must be 100% indexed in Google Scholar, Crossref, DOAJ and SciELO Citation Index on the Web of Science (WoS) platform. Crossref in particular is a source for numerous other indexes. The SciELO Network as a whole, the national coordinators and the journals should jointly promote actions that maximize the indexing of journals in the Scopus and WoS databases that are

still used as a reference in the evaluation and ranking systems of scientific production.

The structure of the full texts of SciELO articles formatted in XML according to the SciELO Publishing Schema automatically provides the extraction of metadata for indexing in bibliographic indexes. In the case of documents in Portuguese or Spanish or another language other than English, the format requires the English versions of the title, abstract and keywords. It also allows the document to be published simultaneously in two or more languages, which promotes visibility to national and international users. In other words, SciELO Publishing Schema provides multilingualism and conditions to promote the visibility of journals.

In addition to bibliographic indexes, journals should maximize their presence on social networks and encourage authors to post their articles and data files both on social networks and on their academic networks. One action that national coordinations should promote with journals is the dissemination of articles through press releases that should be indexed by Google and posted on social networks.

In addition to maximizing indexation and publishing in English, internationalization of journals is promoted and expected in most journals with the significant presence of manuscript submissions from abroad. At the same time, internationalization should occur in editorial management with the active presence of editors and reviewers from abroad. The internationalization of editorial management and authorship in many cases are convergent and depend on the editorial policies of the journals. In general, more internationalized journals also perform better in terms of citations received. National coordinators with the assistance of advisory committees can establish indexing criteria that require journals to have increasing minimum proportions of internationalization of editorial management and authorship.

5. Operational and financial sustainability

The SciELO Network is operationally and financially decentralized. The development of national research communication capacities and infrastructures requires that sustainability prevails in the operation of national coordinations and journals. Sustainability comprises the conditions and capacities to operate the publication of journals continuously without interruptions and delays in the production flow of journals and following the state of the art provided by the SciELO Publishing Model. This requires a convergence of operational capacities and financial resources that sustain and enhance operational capacity.

The operational capacity of the national coordinations is the responsibility of the organization or consortium of national science, technology and innovation organizations that lead the SciELO project nationally. The operational capacity of the journals is the responsibility of their owning institutions and public support according to national support policies for nationally published journals.

The SciELO Program prioritizes the improvement and visibility of journals and the research they communicate and promotes the publication of non-profit journals on low-cost nationally operate platforms. However, when journals are unable to sustain their operation, they may resort to collecting a financial contribution from authors as established in the publication cost contribution guideline.

6. Implementation of the priority lines of action

The national coordinators are autonomous in managing the national collections and promoting their development according to the priority lines of action that establish objectives, results, and practices that the national collections and individual journals must comply with. The SciELO Publishing Model also considers that the journals of the national collections have flexibility in achieving the objectives and results and in adopting the practices defined in the priority lines of action. However, the plans of the national coordinators and journals should provide for the implementation of the priority lines in the period of five years, between 2024 and 2028.

The following table serves as a model for the implementation of the priority lines of action by groups of journals. For each objective, expected result or practice, the table guides the definitionof dates for compliance by 25%, 50%, 75% and 100% of journals.

Objective, outcome or practice	Dates for compliance by % of journals			
	25%	50%	75%	100%

References

1. SciELO. *SciELO - Priority lines of action 2019-2023* [online]. SciELO, June 2021. Available at: <https://wp.scielo.org/wp-content/uploads/priority-lines-action-2019-2023.pdf>.

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