Document Title	NSDL Collection Development Policy
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NSDL Collection Development Policy

1.0 Mission of the Library

The National Science Digital Library (NSDL) is dedicated to providing organized access to high-quality resources, materials, products, and services that support teaching, learning, and research at all levels of science, technology, engineering, and mathematics (STEM). We strive to meet the educational and information needs of a wide variety of users, from pre-kindergarten-to-12 teachers and students, to self-directed adults, in both formal and informal education settings.

The long-range goals of the Library are to increase literacy and interest in science, mathematics, and technology; ready tomorrow's workforce for STEM-related careers; support the advance of knowledge and the solving of real-world problems; and promote continued excellence in the nation's scientific pursuits. Creating bridges between STEM research and education is fundamental to the NSDL mission.

NSDL supports its mission by

- providing access to collections of high-quality instructional materials, open-access repositories of research-level articles and reports, and other reliable STEM-focused resources
- enabling the discovery of content offered by the major scientific publishers
- creating efficient online-discovery systems that make it possible to search across collections and publications

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- providing access to data, imagery, and scientific, educational, and evaluative information, and to instruction about new ways for educators and learners to use that information
- promoting tools and interfaces that optimize use of online resources and stimulate educational innovation
- offering user-support services for creation, use, and re-use of instructional materials
- providing distribution systems that facilitate the sharing of resources and tools in open-access formats
- facilitating multiple STEM communication and collaboration networks

The NSDL embodies long-standing library traditions of service, longevity, equal access, fair use, and privacy, as well as innovations that foster a spirit of inquiry and the accessibility of science to all. The Library endorses the American Library Association's Bill of Rights.

2.0 Communities Served by NSDL

NSDL exists to serve the needs of a broad and inclusive spectrum of users: pre-K-to -12 teachers and students; faculty and students at colleges, universities, and technical schools; professional researchers and practitioners; and those who teach and learn in informal educational settings such as museums, science centers, and public libraries. We provide resources of interest to the general public, as well as material appropriate for educational administrators, librarians, and policymakers. NSDL also acts as a nexus between the private sector and public interests, and among the scientific research, publishing, and educational communities.

Our user base also includes contributors of library materials and developers of library services. These individuals and groups perform an important role in meeting user needs across the many different communities that comprise NSDL.

NSDL charges no fees for searching the Library or for use of the resources it makes discoverable. Access to the majority of these resources is free. Some of the organizations that provide content to NSDL, however, require registration and a log-in, and some charge a fee or require subscription to retrieve their specific resources.

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3.0 Resource Ownership, Management, and Description

With the exception of materials created by or through NSDL (including, for example, expository and contextualizing content, publications, weblogs, wiki articles, reports, annotations, and resource lists), most of the individual resources and collections of resources the Library curates are not housed on NSDL computers or storage systems. Rather, catalogue records about the resources are registered with NSDL, while the resources themselves are held and managed by their owners or providers. (See Terms of Participation for statements of the rights of contributors and description of NSDL practices.)

NSDL provides discovery opportunities and targeted channels to these resources and collections primarily by gathering, organizing, and disseminating structured information about them. The Library holds this descriptive information, referred to as *metadata*, in the form of digital catalogue records. These records are employed to enable users to learn about, locate, and interact with NSDL-registered STEM resources, which may reside anywhere across the Internet.

An important objective of NSDL is to allow users to search multiple participating collections simultaneously and locate within them individual resources (referred to as *items*) relevant to the users' needs. The efficient operation of this NSDL service largely depends on participating collections' provision of quality metadata about the items of which they are comprised. The collections that work most effectively within NSDL are those that are well managed by a reliable source; that is, collections that offer quality metadata, reliable delivery, ongoing maintenance, and assurance of longevity. In some cases, particularly for collections of resources that are largely textual, open access to content may allow automated processes to create some of the desired characterizations of items. Collections are strongly encouraged, however, to provide item-level metadata embodying key characteristics of their resources—title, URL, brief description, subject, resource type (e.g., data set, lesson plan, article), and the educational level for which an item is appropriate—sufficient to support effective searching by NSDL's many audiences.

For collections interested in participating in NSDL via provision of item-level metadata, detailed information is provided in the Metadata Guidelines.

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4.0 Collection Scope

4.1 Subject matter. The resources to which NSDL provides organized access are referred to as the NSDL Collection. This Collection supports the study and teaching of STEM concepts, processes, states, cycles, interactions, and procedures. Resources included in the Collection reflect all time scales and spatial scales and offer perspectives ranging from the local to the global. NSDL includes interdisciplinary resources, both materials that draw on more than one of the STEM disciplines and materials relevant to relationships between STEM disciplines and public policy, law, health, and economics and other social sciences. Since almost all scientific materials have the potential to be used in some aspect of education and/or research, the subject-matter scope of the Library is very broad.

4.2 Geographic focus and languages. The NSDL Collection strives to support STEM education in the United States in particular. Science, however, is international. Consequently the Collection includes material from around the world, and many of the collections and resources in the Collection will be of value to educators and instructors outside the United States. The majority of the resources in the Collection are in English, but resources in other languages are in scope, particularly instructional materials in other languages used by students in the United States.

4.3 Nature of the materials. The resources that comprise the NSDL Collection vary greatly in magnitude, depth, educational level, level of review, and type of resource. They include

- *instructional materials*, such as classroom activities, laboratory experiments, demonstrations, models, case studies, courses, simulations, tutorials, syllabi, curricula, modules, field trip suggestions, problem sets, teacher guides, lesson plans
- *pedagogical resources*, including teaching techniques, online professional development courses, educational research
- *assessment materials*, such as exams, quizzes, questionnaires, self-assessments, answer keys, rubrics, portfolios
- *research materials*, including journal articles, research findings, conference proceedings, theses, models
- *reference materials*, such as bibliographies, abstracts, policies, indices, glossaries

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- *datasets*, including visual, factual, and numeric information; remotely sensed and observed data; trials, databases
- *audio/visual resources*, including animations, simulations, interactives, movies, photographs, diagrams, sound and voice recordings
- *collections*, such as aggregations of educational materials, repositories of research papers, libraries of digitized primary sources
- *serial publications*, such as newsletters and magazines
- *events*, including archived broadcasts, podcasts, and webcasts; information about on-site conferences and workshops; news and opportunities pertaining to grants, exhibits, jobs, and professional development
- *tools and products*, such as software or applications for interacting, accessing, manipulating, or viewing resources; calculators and converters
- *community services*, including weblogs, forums, listservs, wikis

4.4 Access. NSDL is committed to providing wide access to STEM materials. The Library favors resources and collections that comply with Section 508 of the Rehabilitation Act, which requires that all individuals with disabilities have access to and use of information and data comparable to that provided to individuals without disabilities, unless the provision of such access would impose an undue burden on the provider.

The Library also favors resources that are readily accessible online. However, we appreciate that in the world of science, it is often necessary to work with such real-world objects as rock samples, soil types, fossil specimens, museum collections, and equipment and other materials. Therefore we consider it appropriate to include in the Library information about physical collections and about obtaining science-related materials and equipment.

Likewise, in selecting web sites for inclusion in NSDL, we favor those that offer digital resources accessible to users everywhere, but we may consider sites that offer information about particularly noteworthy on-site educational programs or facilities likely to be of interest to Library users living in a specific geographical region of the United States.

In order to ensure a more complete representation of trustworthy and valuable STEM resources, NSDL actively encourages leading publishers of STEM educational materials and STEM research to participate in the Library. Many of these publishers offer free access to some portion of their content, while charging a fee or requiring subscription for unlimited access. Some users of NSDL, through their affiliation with subscribing institutions or organizations, will have full

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access to publisher materials requiring subscription. Access to catalogue records that provide information about publisher materials is available to all users of NSDL.

4.5 Sources of content. The sources of NSDL content include

- STEM-focused collections developed by professional organizations, universities, and grant-funded projects
- web sites created by reputable and reliable organizations or individuals
- publishers of STEM content
- STEM-focused companies such as educational software developers
- original content created by or through NSDL
- other digital libraries

In keeping with our dedication to strengthening bridges between STEM research and education, inclusion of the education and outreach efforts of NSF-funded research projects is a particular goal of the NSDL Collection.

4.6 Materials considered unsuitable for the NSDL Collection. The NSDL Collection will strive not to include the following:

- "bad science," i.e., contemporary materials that present information or theories the scientific community at large considers inaccurate or discredited, or that represent a variety of pseudoscience, except when such materials are appropriately tagged or embedded in educational materials designed to raise awareness. (This does not include tentative findings, presented through forums such as journals or conference proceedings, that are subsequently overturned by further research, nor does it include historical documents representing knowledge of a previous generation. See the Quality Guidelines below, particularly characteristic #2.)
- socially undesirable materials, e.g., pornography
- web sites created primarily to advertise a service or product unrelated to STEM education or research

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5.0 Quality Guidelines*

NSDL has resource-quality guidelines for Library materials in order to assist in identification and selection, define a level of expectation/performance, and provide guidance in development. These quality guidelines apply to Library materials as defined in the NSDL Mission and Scope.

Because the Library includes many types of materials intended to address the needs of a wide range of audiences, it is not expected that every resource in the Library will meet all of the NSDL quality guidelines at once. In particular, the level of review of individual resources will necessarily vary. In considering collections of materials intended for use in grades pre-K-to-12 educational settings, in which students generally work within well-defined curricula directed by an instructor, we strongly favor collections that have an effective review process for selecting resources of high quality and pedagogical effectiveness. It is also within the Library's scope and mission, however, to include repositories of research-level materials that operate on the principal of unrefereed self-archiving by author, when such repositories have been recognized to have value for the scientific research community. The expectation is that Library materials, in keeping with their specific natures, will adhere as much as possible to the quality characteristics described below.

5.1 The resource is relevant to STEM education or research.

The NSDL statements of Mission and Scope define parameters of science, technology, engineering, and mathematics (STEM) education and research within which the Library strives to offer materials. Library materials should fall within this mission and scope. NSDL collects materials designed for teaching, learning, and conducting research relevant to STEM. Background material, reference works, and other supporting resource types are not excluded if they are within scope.

5.2 The resource is scientifically accurate.

NSDL materials should adhere to sound scientific principles and practices. Library materials should meet as many as possible of the following criteria:

- Review for accuracy has been made by qualified specialist(s) in the appropriate field; ideally, the qualifications of the specialists are disclosed.
- The review was conducted by people not directly involved with or benefiting from the design and production of the resource.

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- Errors of fact identified in the review process have been corrected before accessioning.
- The resource identifies assumptions and distinguishes between observation/fact and interpretation/hypothesis.
- Reference lists or bibliographies are present.
- Links to related web sites are provided.
- Technical terms are defined or a glossary is provided.

NSDL recognizes that there may be important exceptions to this guideline. For example, historical documents, representing knowledge of a previous generation rather than current scientific knowledge, can be important for learning about the history and process of science. Other examples include resources that express one point of view on a controversial topic and might be considered by some to be outside sound scientific practices. Resources of this kind can be valuable for teaching students such critical thinking skills as evaluating viewpoints and weighing the effects of motives and biases.

5.3 The origin of the resource is attributed.

Resource attribution may be to a person or persons, to an organization, or to both. The rationale for this guideline is that knowledge about the origin of Library materials (authors, sponsors, or publishers) helps NSDL collection developers and Library users judge the reliability of material. This means the following, as appropriate, is known about the material:

- name of the resource creator (individual and/or sponsoring institution)
- contact information for the resource creator or maintainer
- date of resource creation or most recent update

5.4 The resource is robust and functional.

Library materials should be fully operational when Library users discover them. Therefore Library materials should

- be free of conspicuous bugs, defects, and nonworking elements (links that don't work, graphics that don't display, applets that don't run) that inhibit intended use
- work on current versions of major web browsers, under operating systems used widely in educational settings
- allow printing of text and graphic elements

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5.5 The resource is educationally documented.

A well-documented instructional resource includes

- age or educational level for which the resource is recommended
- skills and understandings needed prior to working with the resource
- learning objectives
- commonly observed mistakes or misconceptions
- notes on instructional strategies
- alignment with educational standards

If the resource describes an activity, it should also include

- a list of materials required, with links to suppliers or other information about where to acquire uncommon materials
- safety precautions
- an estimate of time required, especially for lab exercises and similar activities

5.6 The resource is pedagogically effective.

Resources that are pedagogically effective tend to have the following characteristics:

- The instructional time required for use of the resource is commensurate with the importance and magnitude of the learning achieved.
- The level of difficulty is appropriate for the stated target audience.
- The instructional strategies build toward mastering the stated learning objectives.
- Student learning achieved by the use of the resource is assessable; ideally, the resource includes assessment options with or within the material and guidance for teachers, such as an answer key or scoring rubric.
- Feedback is available from educators who have observed learners interacting with the material.
- Feedback has been gathered from learners who have used the material.
- Feedback is included from an expert in pedagogy.

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5.7 The resource makes an important or significant contribution to learning.

Library materials should deal with content, skills, or understandings that are likely to be important to a significant fraction of STEM educators, learners, or researchers. While the material itself may not state why the learning made possible by the resource is important or significant, one should be able to make a case for it—on grounds, for example, that the material supports

- learning called for in national or state educational standards
- learning on a topic of societal importance
- mastering of foundational skills needed for advancement in a discipline or career
- understanding of a concept central to a STEM discipline
- understanding of linkages and interactions among or within STEM disciplines, or between STEM and other disciplines

5.8 The documentation provided for the resource is complete.

In addition to the above-mentioned educational documentation and attribution as to origin, there are other kinds of documentation that particular types of Library materials should provide.

Documentation of **resources with specific technical requirements** should include

- specification of hardware required to use the material
- specification of software, including plug-ins, required to use the material, including links or contact information for users needing to acquire such software
- disclosure of any known hardware or software incompatibilities
- for software or complex resources, a clear and comprehensive user's guide
- file sizes of downloadable materials or large viewable files

Documentation of **data** should include

- basic information (or a link to information) about the instrument that collected the data, including how the instrument works
- for individual datasets, information about when and where the data was collected

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- for derived data products or merged datasets, links to the data archive or other source of description about how the data were processed or merged, and information about when and where the data was collected
- links to sources of original data and tools to access the data

Documentation of **models** should include

- name of the model
- description (or link to a description) of assumptions underlying the model and how the model works

5.9 Educators and learners will find the resource easy to use.

Since an important component of the NSDL mission is provision of organized access to high-quality materials that support innovations in teaching and learning at all levels, instructional materials should be easy to use for educators and learners. Easy-to-use resources tend to include the following characteristics:

- Navigation pathways are self-evident and intuitive.
- Preparation time and effort required by an instructor is not excessive relative to the educational potential of the material.
- Methods are provided for adapting to students' and teachers' individual differences, interests, abilities, and needs. Ideally, the resource will provide any or all of the following:
    - teacher-editable versions of student handouts (MS Word or PDF documents)
    - several levels of difficulty or complexity in student activities
    - links to maps or local datasets for use in different locations
- Information about ease of use is provided, if possible. There is particular value in feedback of the following kinds:
    - from educators who have observed learners interacting with the material
    - from learners who have used the material
    - from an expert in usability of the material

5.10 The resource is engaging for learners.

NSDL favors instructional materials that engage and motivate learners to

- show curiosity about a topic or the material
- ask questions or seek out further information

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- perform at a high level (i.e., do their personal best work)

Ideally, instructional materials should provide feedback

- from educators who have observed learners interacting with the material
- from learners who have used the material
- from educational specialists familiar with the target audience

5.11 The resource is free of distracting or off-topic advertising.

Library materials should be as free of distracting advertising as possible, especially advertising that is irrelevant or that interrupts or interferes with the use of the material.

5.12 The resource is easily accessible to users.

To ensure wide accessibility and use, NSDL favors materials that are free or available at low cost. NSDL does not, however, exclude materials potentially useful to specific audiences on the grounds that fees, subscriptions, or other access requirements have been put in place by the owner. We do require that such access requirements be made known to NSDL at the time of accessioning.

*These Quality Guidelines are based on those developed in 2003 by the Collections Committee of the Digital Library for Earth System Education (DLESE), which NSDL thanks for its contribution.

6.0 Selection Responsibility

Responsibility for the development of the NSDL Collection is shared by the NSDL Collection Development Team and a consortium of partner digital libraries referred to as Pathways. The Pathways libraries enable NSDL to better address the needs of its wide spectrum of users by focusing on specific audiences that are describable by educational level (e.g., the Middle School Pathway, the Pathway for Community and Technical Colleges), discipline (e.g., the Engineering Pathway, the Biological Sciences Pathway), or resource type (Pathway to Multimedia Resources for the Classroom). The Pathways libraries share the NSDL commitment to advancing STEM education and offer resources that comply with this Collection Development policy.

Resources and collections are selected for inclusion in NSDL by the Pathways and by the NSDL Collection Development Team. Each Pathway identifies,

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selects, and/or creates resources that fall within that particular Pathway's scope; provides digital-library services to its particular clientele; and shares metadata about its resources with NSDL. The NSDL Collection Development Team identifies and selects resources within the overall scope of NSDL, and has particular responsibility for identification and selection of broad-based collections and other types of resources that fall outside the scope of the individual Pathways.

Users of NSDL are actively encouraged to suggest resources or collections for inclusion in NSDL, or via the recommendation procedures of the individual Pathways. The Collection Development Team welcomes recommendation of individual resources and overtures from both small and large collections of resources. We support contributions from individuals, groups, projects, and organizations. We strongly favor collections that have an effective review process for selecting high-quality resources. We are particularly interested in resources and collections in areas identified by user feedback or evaluation studies as deserving of greater coverage and that contribute to achievement of the Library milestones and objectives.

7.0 Accessioning

Accessioning is the process of incorporating new materials into a library or archive. In the NSDL context, accessioning refers to the process by which new resources or collections are accepted and integrated into NSDL, through introduction into the Library of structured, descriptive information about them.

To be eligible for inclusion in NSDL, all materials must meet the following requirements:

- They are appropriate to fulfilling NSDL's Mission.
- They are within NSDL's Scope.
- They adhere sufficiently to the NSDL Quality Guidelines that are appropriate to the nature of the materials.
- There is reasonable assurance that they will be maintained.

The specific procedures described in the remainder of this section are those followed by the NSDL Collection Development Team. Procedures for contributing resources and/or collections to the Pathways libraries that partner with NSDL are provided by the individual Pathways libraries.

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The Collection Development Team welcomes Library users' suggestions for adding to the Library individual resources or resource collections. Users who wish to suggest individual resources are invited to fill out the Recommend a Resource form to provide us with basic descriptive information about the recommended resource. Sponsors of collections interested in being included in NSDL are invited to review the information found on the Contribute Collection page of nsdl.org and to contact NSDL about their interest in submitting a collection. Collection sponsors should be prepared to discuss with the Collection Development Team their ability to provide metadata that meets NSDL's Metadata Guidelines.

When considering resources or collections for inclusion in NSDL, the Collection Development Team considers whether the subject matter is within scope and examines the development and/or selection criteria followed by the sponsors and applied to the resource or collection under consideration. In cases in which NSDL is unfamiliar with the creator or sponsor of a suggested resource or collection and information about its development and/or selection criteria is not readily available, the NSDL Editor-in-Chief is responsible for judging whether NSDL accessioning criteria are met and the resource or collection is therefore eligible for inclusion in NSDL. The Editor-in-Chief works in consultation with the Collection Development Team and with other members of NSDL Core Integration, and calls as needed on the expertise of the NSDL Collection Advisory Committee, consisting of STEM educators, librarians, and other content specialists.

If materials under consideration are found to meet accessioning criteria and are therefore judged eligible for inclusion in NSDL, the appropriate parties—usually the content and/or metadata creators or providers—are notified and asked to follow the procedures outlined in the box below and to maintain the materials thereafter.

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For a Resource	*For a Collection*
- Read our <u>Terms of Participation</u> - Notify us if <u>Metadata Presentation, Redistribution, and Use</u> by NSDL systems, services, and partners is not acceptable - Notify us if <u>Content Presentation and Archiving</u> is not acceptable	- Read our <u>Terms of Participation</u> - Notify us if <u>Metadata Presentation, Redistribution, and Use</u> by NSDL systems, services, and partners conflicts with the collection's policies - Notify us if <u>Content Presentation and Archiving</u> conflicts with the collection's policies - Create and/or make available to NSDL <u>descriptive information (metadata)</u> about the resources in the collection - Provide a contact person responsible for materials organization and management

If the Collection Development Team has received a suggestion to include in the Library materials that are judged ineligible for inclusion in NSDL, the appropriate parties may be notified and advised of possible next steps.

8.0 Deaccessioning

Deaccessioning, or weeding, is the process of removing materials from a library, or, within a digital library, rendering them no longer discoverable. Deaccessioning of resources and collections is occasionally necessary for the maintenance of a useful and reliable repository.

The NSDL Collection Development Team will use the following criteria in determining whether to deaccession Library materials:

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- Library materials are deemed inappropriate, i.e., they are found to fall outside the NSDL Scope statement or to otherwise fail to meet the accessioning criteria described in this document
- Library materials do not adhere sufficiently to the Quality Guidelines that are appropriate to their nature.
- The technology needed to use the materials is no longer available or supported.
- The metadata associated with the materials has proven to be insufficient to support effective searching, and/or access to content is not sufficient to allow automated processes to create characterizations of items that can support effective searching.
- Library materials are broken or nonfunctional (e.g., a URL consistently returns an error message in response to repeated attempts to access it over a reasonable length of time).
- There has been an official finding of plagiarism or copyright violation concerning the materials.
- The person or organization that contributed the materials has requested their removal from NSDL.
- NSDL can no longer technically support the collection or resource in its system and services.

Library materials can be reaccessioned, provided that the accessioning criteria described above are met.

Situations may also arise in which the Collection Development Team, after careful evaluation, elects to deaccession a collection's item-level metadata records, while retaining in the Library a record describing the collection as a whole. A collection's Item-level records may be deaccessioned based on the following criteria:

- Technical issues have arisen or have been discovered that represent serious, long-term obstacles to efficient harvesting of the collection's item-level metadata.
- The item-level metadata the collection makes available to NSDL has proven to be insufficient to support effective searching, and/or access to content has proven to be insufficient to allow automated processes to create characterizations of items that can support effective searching.
- Inclusion of the collection's item-level records in the Library has proven detrimental to the functioning of the Library as a whole; that is, the collection's items frequently overwhelm Search Results or otherwise impede effective searching of the Library.

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NSDL may resume harvesting of a collection's item-level metadata if significant change in these situations has occurred.

8.1 Requests for reconsideration of library resources. Users who discover nonfunctioning resources (e.g., broken links) within the Library are encouraged to contact NSDL. We welcome as well other comments about the Collection or individual items in the Collection, particularly information about user interests or needs. Decisions about the inclusion of specific resources or collections in NSDL are governed, however, by the Collection Development Policy. The following procedure has been established for users wishing to make a formal challenge to the presence of a resource or collection in NSDL, or to the decision to remove a resource or collection from the Library.

Users are asked to complete the Request for Reconsideration of Library Resources form. When submitted, the form is received by the Editor-in-Chief, who together with the Collection Development Team will review the rationale for the inclusion of the challenged resource in the Library, or the rationale for having deaccessioned the resource. If the Team disagrees with the user, they will forward the Request for Reconsideration, together with a statement of their rationale, to NSDL's Executive Director and to at least two members of the Collection Advisory Committee, chosen for the relevance of their experience to the resource or collection in question. These parties will confer at the earliest possible date and render a decision, which will be conveyed by the Editor-in-Chief within one month of the Library's receipt of the Request for Reconsideration. This response will be provided in writing. It will describe what action is being taken and the reasons for this action. The decision will be final.

9.0 Terms of Participation

9.1 Contributor Rights

Contributors of resources to NSDL are often authors of those resources and/or creators of structured information—or metadata—describing the resources. This section describes the rights of these two major types of stakeholders and the terms to which they agree in contributing resources to the Library.

Rights of resource creators. Creators (or their institutions, as applicable) retain their respective individual intellectual property rights with regard to individual resources contributed to NSDL. NSDL encourages creators to include in the metadata about their resources a statement of copyright, information on how the materials may be used, or a link to their Terms of Use.

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Rights of metadata creators. Collection builders or metadata creators (or their institutions, as applicable) retain their individual intellectual property rights with regard to their metadata. Collection builders agree that NSDL may modify and reformat metadata to function within NSDL systems, services, and partner libraries. Collection builders must notify NSDL if they do not want their metadata redistributed (see the following section, Metadata Presentation, Redistribution, and Use). Metadata created on the NSDL portal or through NSDL-hosted tools is the intellectual property of the University Corporation for Atmospheric Research (UCAR) on behalf of NSDL, for which it acts as management entity.

9.2 Metadata Presentation, Redistribution, and Use

Metadata is a library material that provides structured, descriptive information about other library materials. This section describes how NSDL systems, services, partners, or other third parties may treat metadata in terms of presentation, redistribution, and use, unless otherwise informed at the time of original distribution of metadata from a collection to NSDL. NSDL may at any time place further limits on presentation, redistribution, and use when other third parties are involved.

Presentation. Metadata is displayed publicly to end users by NSDL systems, services, and partners, or to other third parties not necessarily associated with NSDL. Display may be at the level of full metadata records, at the level of individual elements within metadata records, or a combination of the two.

Redistribution. Unless a contributor and NSDL have otherwise agreed, NSDL systems, services, and partners or other third parties may make all or a substantial part of metadata digitally available to others through any means of aggregate (batch) dissemination now known or later devised.

Use. Metadata may be used for the provision of a service within the scope of NSDL. Such use must be noncommercial, in the sense that the service does not directly generate revenue for the service provider. Any additional management and ownership information that contributors wish to associate with their collections (e.g., origin of metadata, copyright management information, contact information) is retained by the service provider.

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9.3 Content Presentation and Archiving

Presentation and access to Library materials is central to the NSDL mission. Unless a contributor and NSDL have otherwise agreed, NSDL attempts to present and make library materials widely accessible through time. In keeping with this philosophy, content held within the NSDL repository or linked to through metadata is presented and preserved through the processes described below.

Content presentation. Actual content—not metadata—that is stored within the NSDL repository is accessible through NSDL systems and services, unless specific use restraints have been placed on the content.

Content archiving. Because online materials often change or relocate within six months of creation, NSDL strives to keep an archived version of every resource in the Library. The archived version is exposed in searches; that is, when NSDL users search the Library and receive search results, they may choose to go directly to the resource or to an archived version of the resource. NSDL employs the following archiving procedure:

1. URLs that have been registered into NSDL are retrieved.
2. Each URL is crawled, unless no-crawl flags have been set.
3. Data is archived.
4. Links are provided to NSDL so that the archived copy can be retrieved when the original is no longer available.

For more information, see NSDL Archive document.

Maintenance of this Document

This document has been developed by the NSDL Collections Development Team and approved by the Policy Committee on November 8, 2007. The Collection Development Team is responsible for its maintenance. The document will be reviewed and revised as necessary to reflect changes in the capabilities, practices, and procedures of NSDL.

Contact

For further information or to address specific questions, please contact us.