INIS in Slovenia

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ABSTRACT

INIS (International Nuclear Information System) is the world leading information system on the peaceful uses of nuclear energy. It is operated by the International Atomic Energy Agency (IAEA) in collaboration with Member States and co-operating international organisations. The collection of input and the dissemination of output to users are decentralised. Only the data processing and output production are centralised in the INIS Secretariat. This is the most comprehensive coverage and effective method of handling information on different languages. In INIS Database there are more than 2.3 million items and among them 550 000 scientific reports, dissertations, brochures and patents. This information can be obtained from Local INIS centre, trough Internet and by prescription. The Slovenian Local INIS point is Slovenian Nuclear Safety Administration. The paper will in detail discuss the information which can be obtained from INIS data base and how that can be done in Slovenia. The second part will emphasise input of information, published in Slovenia, to the INIS data base.

1 INTRODUCTION

INIS (International Nuclear Information System) is the world’s leading information system on the peaceful uses of nuclear science and technology. It is operated by the International Atomic Energy Agency (IAEA) in collaboration with its Member States and co-operating international organisations. The INIS collects and distributes scientific information in all areas of nuclear science and technology published in Member States, including bibliographic data and the full text of documents not readily available through commercial channels. INIS provides a comprehensive information reference service for literature in nuclear science and technology. To do this, INIS processes most of the world’s scientific and technical literature that falls within its subject scope and maintains a database which currently contains over 2.3 million bibliographic references, making it the world’s most comprehensive information source on the peaceful applications of nuclear science and technology.

The INIS Database is a bibliographic database compiled from the data submitted by INIS Members. It contains bibliographic citations and abstracts of journal articles, research and development reports, conference papers, books, patents, theses, laws, regulations and standards. The Database is updated weekly with an annual increase between 60,000 and 80,000 references, with a time span of 1970 to the present. INIS inputting centres scan regularly a total of about 4,000 journals for relevant articles. Majority of INIS records contain
English abstracts. All of the bibliographic references found in Database have been selected, abstracted and indexed in English by INIS Members according to agreed rules and standards.

The subject scope, which mirrors the activities of the IAEA, includes information on every aspect of the peaceful uses of nuclear science and technology.

The subject fields covered are as follows:

- nuclear power and safety,
- safeguards and nuclear disarmament,
- nuclear relevant chemical sciences,
- nuclear relevant physical sciences,
- plasma physics and fusion technology,
- nuclear materials,
- nuclear engineering,
- environmental and economic aspects of nuclear and non-nuclear energy,
- nuclear medicine,
- nuclear techniques in animal production and
- nuclear techniques in plant breeding.

Membership to INIS is open to countries who are members of the IAEA, to United Nations organisations and to other subject-oriented international or intergovernmental organisations with whom the IAEA has relations. Currently, 109 countries and 19 international organisations participate in INIS. Every INIS Member is represented in the System by a Liaison Officer officially appointed by the national authority, or the executive head, in the case of an international organisation.

The INIS Liaison Officers play a key role: they are responsible for organising the collection of information and the preparation of input for INIS on a national level, as well as for the dissemination of INIS products, in addition to the promotion of those products. The Liaison Officer is responsible for co-ordinating INIS activities between the INIS Secretariat and the country. The Liaison Officer of each country of residence will welcome users requests and questions on input, services and other issues related to INIS.

The INIS Members’ responsibilities include amongst others:

- the collection, selection, description, categorisation, indexing, abstracting and related preparation of items of literature published within its national boundaries (or organisational confines if an international body) and submission to the INIS Secretariat in Vienna in accordance with the definitions, rules, procedures, formats;
- providing the Agency with the full text of each item of non-conventional literature, either as originally published or in a form jointly determined, prepared to a standard specification, provided there is no legal prohibition or limitation;
- contributing advice and recommendations on matters relating to the maintenance, improvement and further development of INIS;
- providing information services to and maintaining contact with, to the extent practicable, the users of INIS information products and services within the applicable boundaries/confines and for representing user views at INIS meetings;
- establishing and carrying out promotional activities throughout the applicable boundaries/confines so that all persons who can derive benefit from INIS are made aware of its potential and the information services that can be derived from it.
2 INIS OPERATION

INIS is the first international information system in which both the collection of input and the dissemination of output to users are decentralised. Only the data processing and output production are centralised in the INIS Secretariat. This decentralised approach to input and output was selected because it results in the most comprehensive coverage of nuclear literature, the most effective method of handling information in different languages, and the most satisfactory services for users of the information. It is also instrumental in spreading the operational costs of the system in a reasonably equitable manner. Figure 1 presents how INIS operates.

Figure 1: Overview of INIS operation

Subject specialists in the INIS Members' inputting centres select documents for input into the System if they contain significant information that falls within the INIS subject scope. The INIS record for a piece of literature consists of three main components (Figure 2):

- a bibliographic description, identifying authorship, publishing, and similar details;
- a set of descriptors, identifying the subject content of the piece of literature, selected from the INIS Thesaurus;
- an abstract summarising the information contained in the piece of literature.

It is a requirement of INIS that literature submitted for inclusion in the System should be analysed down to its smallest bibliographic component. For example, journals are analysed to the level of individual articles; conference proceedings are analysed to the level of conference papers; monographic series are analysed to the level of volumes and within this into individual contributions. For each analysed part, full bibliographic information must be given. This includes author (personal and/or corporate), title, edition, identifying numbers if any, publisher, physical description, language if other than English, and appropriate bibliographic notes. For conference papers and proceedings, the title, date and place of the conference are also supplied. Certain data that are part of the bibliographic descriptions of
documents are standardised. These include the form of full journal titles, the names of countries and international organisations and the names of languages.

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<td>Gortnar, O.; Stritar, A. (eds.) (Nuclear Society of Slovenia (Slovenia))</td>
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<td>Funding Organization: European Nuclear Society (Switzerland); Ministry of Science and Technology of Slovenia, Ljubljana (Slovenia); Ministry of Economic Affairs of Slovenia, Ljubljana (Slovenia); Inst. Jozef Stefan, Ljubljana (Slovenia); Slovenian Nuclear Safety Administration, Ljubljana (Slovenia); Agency for Radwaste Management, Ljubljana (Slovenia); ENCONET Consulting GmbH, Vienna (Austria); SIAP d.o.o, Pesnica pri Mariboru (Slovenia); S-NET Internet Provider, Ljubljana (Slovenia)</td>
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Legend: CA - corporate authors  AV - availability  
RP - report number  DEI - descriptors selected from the Thesaurus by the indexer  
IS - international standard number  DEC - all broader terms assigned by the computer

Figure 2: INIS record from INIS Database on the Internet
INIS uses both subject categories and descriptors (key words) in subject analysis to facilitate the efficient manual or computerised retrieval of information. The descriptors to identify the subject content of a document are assigned by the subject specialists in the inputting centres using the Thesaurus. As part of the record, the descriptors can also be used for online retrieval of document records from the computer stored file or from CD-ROM.

It has always been a requirement of INIS that every item reported to the System should be accompanied by an abstract, the only exception to this rule being items classified as short communications. For many items, the electronic record contains a second abstract in another language, usually the language of the original document.

INIS Members submit input in machine-readable form, via Internet (e-mail/FTP), on diskette or magnetic media, in a standardised format conforming to the guidelines. Most inputting Centres utilise the PC based input preparation package ‘FIBRE’ (Friendly Inputting of Bibliographic Records) which has been designed by INIS. FIBRE is a tool, addressed to the INIS Centres, to streamline their input preparation with higher quality and consistency, reduce costs through lower correction efforts and improve processing time. Once the input reaches the INIS Secretariat, bibliographic description of records are processed with checking programs and errors are identified and corrected by specialists in INIS Secretariat and then converted by programs into an internal working format and processed. The indexing and abstracting of records is subjected to a continuing quality control based on an expert system. This system identifies records with a high probability of error for scrutiny by subject specialists of the INIS Secretariat. Their corrections, comments and advice are passed on to the subject specialists in the inputting centres. At the end of each processing cycle a final consolidated output file is created.

In a system such as INIS, for which the input is prepared by specialists in many countries and with varied backgrounds and traditions in information processing, it is essential to operate using precise standards and rules in order to assure the consistency and high quality of the resulting information files. INIS follows international standards as much as possible and implements new standards from the International Organisation for Standardisation (ISO) as they become available.

2.1 Non-conventional literature (NCL)

Literature reported to Database falls into two categories, conventional and non-conventional:

- **Conventional** literature is commercially available through normal distribution channels, such as books and magazines.
- **Non-conventional literature** (NCL, also called ‘grey literature’) comprises scientific and technical reports, patent documents, preconference papers, conference papers and noncommercially published theses, which are not readily available through commercial channels.

An outstanding feature of INIS is the easy access to the full text of NCL. Full text of such literature is received in electronic form or hard copy and is processed for distribution in the form of microfiche, CD-ROM, e-mail or FTP. The full text INIS NCL collection counts over 500,000 full text documents from 1970 to the present. Documents are available on CD-ROMs. Copies of individual documents found in the INIS NCL collection can be ordered from the INIS Clearinghouse or from some of the National INIS Centres. Currently, INIS has arrangements with more than 40 INIS National Centres to provide document delivery services to users within their national boundaries. All requests for individual reports produced since
are referred to these Centres if they exist in the country of the requester. All reports published after 1997 are available electronically in Acrobat PDF format. Some reports published prior to 1997 can also be delivered electronically depending on the size of the report or analytic requested.

2.2 INIS Training Programme

The INIS Training Programme has functioned since the inception of INIS and continues to play a significant role in INIS activities. The Programme is designed to guarantee the continuation of the high quality of INIS output products. The Programme, generally carried out through training seminars and workshops, includes various aspects of the INIS philosophy and operations. Literature selection and collection, bibliographic description, subject analysis, usage of the Database and other output products, information management, privileges and responsibilities of INIS membership, nuclear energy information through the Internet, etc. are a few of the topics covered in training courses. The workshops also provide a forum for discussion of specific matters and challenges experienced by INIS centre staff and offer the opportunity to network and participate in regional co-operation.

In 1997, in order to assume year-round training capability, the INIS Secretariat provided INIS members with a PC-based Training Package. The Package is a self-contained, step-by-step guide to input preparation with working examples and self-testing exercises. It is available on CD-ROM and is designed for individualized, self-paced training. Text displayed on the screen is in English; however, sound versions are available in English, French and Spanish.

The INIS Distance Learning Program (DLP) was launched to the INIS Members on December 2000. The Program provides comprehensive instructions about input preparation. It consist of two courses, subject analysis and bibliographic description, which includes instructions on electronic full-text submission. The INIS Distance Learning program provides basic training, while the classroom training will provide advanced training course and respond to specific needs of the INIS Members.

3 INIS IN SLOVENIA

The Slovenian Local INIS point is Slovenian Nuclear Safety Administration (SNSA). SNSA has access to all products and services for all users in Slovenia free of charge.

Products and services:

- **INIS Atomindex file** – available at SNSA. The basic INIS output product is the INIS Atomindex file. This file is made available free of charge to all INIS Members. The INIS Secretariat has an Internet FTP server to distribute information; after each weekly production cycle, a new file is loaded on the FTP server and INIS Liaison Officers are informed via e-mail. For INIS centres who do not have FTP facilities, the INIS Secretariat sends INIS Atomindex files and INIS Authorities on CD-ROM.

- **INIS Database on the Internet** - Database is available via the Internet on the IAEA host at [http://www.iaea.org/inis/](http://www.iaea.org/inis/), under a Web-based retrieval software. It is updated weekly, with an average annual increase of 70 000 to 80 000 records. The basic features of the service are:
  - searchable with a Web Browser that supports the "JavaScript 1.1" standard or more;
  - different search interfaces to accommodate different user requirements and levels of expertise;
  - current awareness services; saving queries for future execution;
  - links to full text delivery sources;
update frequency: weekly.
The INIS Online Service is available on a subscription basis and only within INIS Member States and co-operating international organisations participating in INIS. In Slovenia it is available from those libraries:
- University Library Maribor,
- Faculty of Law Maribor,
- Library of Technical Faculties Maribor,
- Central Biotechnical Library,
- Nova Gorica Polytechnic,
- Central Medical Library,
- Slovenian Nuclear Safety Administration,
- Central Technical Library and the network of University of Ljubljana libraries are in process of obtaining the access to the INIS Database on Internet.

- **INIS Database on CD-ROM** – available at IJS Science Information Centre and SNSA.
- **INIS Non-Conventional Literature on CD-ROM** – available at SNSA.

Liaison Officer at INIS Centre in Slovenia is responsible for the preparation of input of items published in Slovenia that falls within the INIS subject scope, and submission to the Secretariat in accordance with the rules.

INIS Centre in Slovenia started with contributions in 1998. The inputs to the INIS Database are covering:
- Nuclear and Radiological Safety in Slovenia – Annual Reports,
- Regional Meetings: International Conference Nuclear Energy in Central Europe,
- Some Thesis (Ph.D) and
- Proceedings of the International Workshop on Anharmonic Properties of High-$T_c$ Cuprates.

In preparation is journal “Radiology and Oncology”.

Figure 3 shows input to INIS Database in Slovenia.

![INIS - INPUT in SLOVENIA](image)

**Figure 3: Input to INIS Database in Slovenia**

Authors from scientific work published in Slovenia or meetings held in Slovenia but published elsewhere (e.g. Singapore) are invited to cooperate with Liaison Officer. The first step is to inform us of such literature.

The next step would be to provide:
- copy of the work to SNSA or original which SNSA will return,
- an abstract summarising the information contained in the item in Slovenian and in English and
at least 10 descriptors (key words).
Organisations and authors who are interested for the preparing of input of items for INIS Database are welcomed to contact Liaison Officers at INIS Centre at SNSA for help and instructions.

4. CONCLUSION

INIS is the world leading information system on the peaceful uses of nuclear energy with more than 2.3 million items and among them 550 000 scientific reports, dissertations, brochures and patents. From our experiences the usage of this database in Slovenia is insufficient. Information from the INIS Database can be obtained from Local INIS centre (SNSA), through Internet, by subscription and from seven university libraries. With regard to the number of scientists involved in the field of nuclear science and technology and new access from university libraries we expect wider usage of INIS Database.

REFERENCES


