



News from the INIS and Nuclear Knowledge Management Section
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For further information, please contact:

International Atomic Energy Agency,
P.O. Box 100, Wagramer Strasse 5,
A-1400 Vienna, Austria
Telephone (+431) 2600-0; Facsimile
(+431) 2600-7;
E-mail: Official.Mail@iaea.org

Responsible for the contents of this publication:
Mr. Peter J. Gowin,
INIS & NKM Section, Department of Nuclear Energy

Message from the Section Head



Welcome to this first newsletter aimed at informing you about current developments in Nuclear Knowledge Management (NKM) and the International Nuclear Information System (INIS). Since joining the Agency in April 2005 I have been greatly impressed by the range of activities in this field and wish to share some of them, in this bi-annual publication, with those of you interested in using nuclear information and in developing nuclear knowledge management programmes.

I would also like to share with you my vision for the Section. I strongly believe that knowledge powers the future and that knowledge is the basis of all nuclear activities. My vision is that

the INIS & NKM Section will be the world's most authoritative and comprehensive source of reliable nuclear information – and that existing nuclear information and knowledge will be available in Member States, whenever and wherever needed, for the peaceful, safe and efficient use of nuclear energy.

This first issue constitutes a review of the year 2005 in these fields and informs you about some of our planned activities for 2006 and 2007. It provides you with a flavour of some of the work that has been carried out and invites you to contact individuals, or check out websites, if there is more that you wish to learn about this increasingly important field of activity. I hope that you will take a few minutes to read further. If you would like to share with me any comments on this newsletter, I will be pleased to hear from you.

Robert Workman
INIS & Nuclear Knowledge Management Section

International Atomic Energy Agency, P.O. Box 100, Wagramer Strasse 5,
A-1400 Vienna, Austria; Telephone (+431) 2600-22882;
Facsimile (+431) 2600-29882; E-mail: r.workman@iaea.org

*IAEA Director General Dr. Mohamed ElBaradei:
From his statement to the IAEA General Conference 2005*

Management of Nuclear Knowledge

“The management of nuclear knowledge has emerged as a growing challenge in recent years, and we have had varied success in addressing different aspects of the problem. Regarding one aspect – the preservation of six decades of nuclear science and engineering studies – we are making good progress. As one key example, the Agency’s International Nuclear Information System (INIS) has been expanding at a record pace, with over 100 000 bibliographic records and more than 250 000 electronic full text documents added last year alone. Students at 273 universities now have free access to the INIS database, and the system has grown to nearly 1 million authorized users.

A second aspect of knowledge management relates to retaining the benefits of nuclear safety experience – sometimes referred to as “maintaining the safety case” – at operational reactors. In this area too, we have had some success. The Agency recently participated in a joint assistance mission with WANO (the World Association of Nuclear Operators) at the Krško nuclear plant in Slovenia, focused on helping plant management to systematically capture undocumented information – such as the safety and technical insights of retiring workers. Building on a recommendation from that visit, we hope to develop policy guidance on this topic for nuclear power plants, with

strategies and procedures based on best industry practices. Regarding the third aspect of nuclear knowledge management – developing the next generation of nuclear scientists and engineers – we still have much to do. While some countries (such as China and India) are turning out science and engineering graduates at record rates, the same does not hold true for others. The creation of the World Nuclear University (WNU), as a global network of relevant industrial, educational and research institutions, has been a step in the right direction.

The insights gained from standardizing the curricula of the European Nuclear Engineering Network are being shared with other such networks and educational institutions. And the first WNU Summer Institute, with considerable Agency support, was held earlier this year, with good results. A workshop last month in Trieste, at the Abdus Salam International Centre for Theoretical Physics, also focused on best practices in supporting young nuclear professionals.

However, we must do much more, in my view, if we are to ensure succession planning for the ageing nuclear workforce – and particularly if the projected expansion of nuclear power is to occur...”

Strategic thinking on the Agency’s role in NKM

In December 2005, the Agency’s Programme Coordination Committee approved an internal policy paper titled Role and Strategy of the International Atomic Energy Agency (IAEA) in Helping Member States to Manage Nuclear Knowledge. The paper seeks to define the concept of NKM in the Agency’s context, to describe what this concept entails for IAEA interactions with its Member States and to outline the present role of the IAEA in current NKM activities and the strategy of the IAEA for future activities to help Member States manage their nuclear knowledge.

Key Elements of the Strategy

- Providing guidance for policy formulation and implementation of nuclear knowledge management;

- Strengthening the contribution of nuclear knowledge in solving development problems, based on needs and priorities of Member States;
- Pooling, analysing and sharing nuclear information to facilitate knowledge creation and its utilization;
- Implementing effective knowledge management systems;
- Preserving and maintaining nuclear knowledge;
- Securing sustainable human resources for the nuclear sector; and Enhancing nuclear education and training.

News from INIS



35 years of INIS

INIS celebrated its 35th anniversary in 2005 through special events in Member States and in the INIS Secretariat, including the Jubilee Consultative Meeting of INIS Liaison Officers in April 2005. The anniversary marks 35 years of experience in handling the world's scientific and technical nuclear literature.

Next meeting of INIS Liaison Officers 2006

INTERNATIONAL NUCLEAR INFORMATION SYSTEM

The 33rd Consultative Meeting of INIS Liaison Officers will be held 30 October – 1 November 2006 in Vienna, Austria.

INIS in Member States

INIS growth in terms of number of users and cooperation with Member States has been intensified. Six new members have joined INIS: Burkina Faso, Kyrgyzstan, Haiti, the Middle Eastern Radioisotope Centre for the Arab Countries (MERRCAC), the World Nuclear Association (WNA) and the World Nuclear University (WNU). This brings the total number of participating members to 136 (114 Member States and 22 international organizations). A new INIS Centre was established in Azerbaijan under an existing TC project, whilst another TC project to establish an INIS Centre in Tajikistan continued. Two new TC projects were started: one to establish an INIS Centre for the United Republic of Tanzania and one to upgrade the National Information and Documentation Centre of the

Egyptian Atomic Energy Authority. During the INIS Training Seminar held in November 2005, participants from 28 national INIS centres were successfully trained in all aspects of INIS operation. Training in the use of INIS is also provided through the INIS Distance Learning Program. INIS grants free access to universities, in support of education and training, an offer that has been taken up by 283 academic organizations – a further 33 during 2005.

INIS becomes multilingual

In co-operation with the National INIS Centres, the first electronic version of the INIS Multilingual Thesaurus (Arabic-Chinese-English-French-German-Russian-Spanish) has been developed. Users of INIS can now search in all those languages. In addition, multilingual user interfaces are being developed.

Digitizing documents to preserve knowledge

INIS is playing an active role in the preservation of information by digitizing printed information. In 2005 over 1.5 million pages were digitized in close cooperation with the Russian and French INIS Centres and with the Department of Nuclear Sciences and Applications. In addition all materials related to INIS and available in-house were digitized and published as INIS Historical Materials.

Technology advances in INIS

The Computer-assisted Indexing (CAI) system has been improved and upgraded. The CAI software Version 1.10 is now used, instead of FIBRE, by the INIS subject specialists. To support the identification of descriptors in the free

text (title, abstract, free keywords) “hidden terms” have been introduced as an extension of the Thesaurus, which

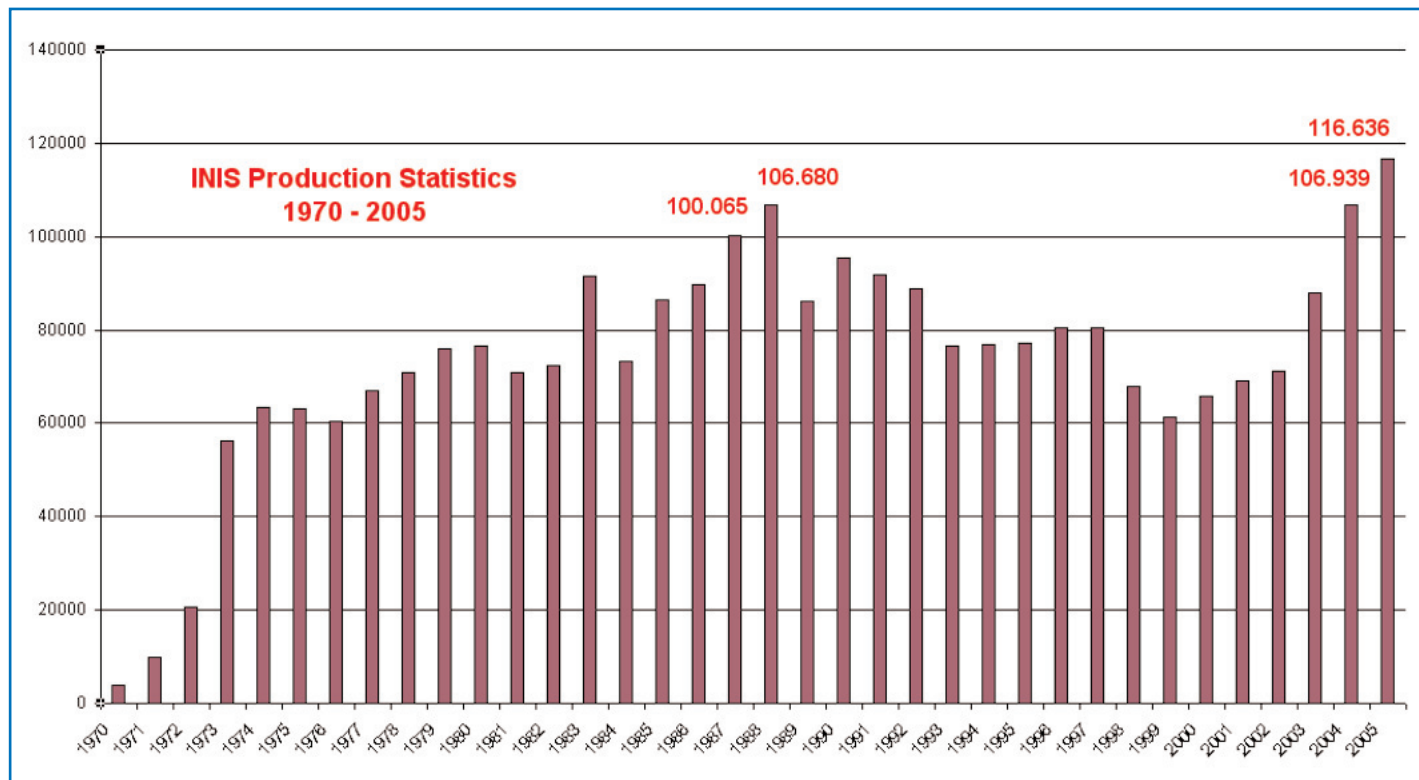
identifies phrases or character strings of free text and points to the valid descriptor.

INIS production reaches all-time high

The Agency’s International Nuclear Information System (INIS) has been expanding at a record pace. Over 116,000 abstracted and indexed records and more than 250,000 electronic full text documents were added to the database

last year alone, bringing the total to over 2.6 million records and 600,000 full text documents.

This is the highest growth in the history of INIS.



Managing Nuclear Knowledge

NKM focus in 2005 on methodologies and guidance

The focus of the NKM activities in 2005 has been on the development of methodologies and guidance, on creating a “knowledge management culture” involving governments, industry and academia, and on dedicated projects in nuclear knowledge management.

Download the new NKM Glossary at
<http://www.iaea.org/km/documents/NKM-Glossary.pdf>

International Conference on Knowledge Management in Nuclear Facilities

The International Conference on Knowledge Management in Nuclear Facilities will be held 18–22 June 2007 in Vienna, Austria. Details of the conference will be made available on our knowledge management website
www.iaea.org/km.

Technical Meeting

A Technical Meeting to develop guidance documents for nuclear knowledge management in government, industry and academia will be held in late 2006 in Vienna, Austria.

Supporting education and training



The INIS&NKM Section has supported the first Summer Institute of the World Nuclear University through a Technical Meeting, held in June 2005, to develop the curriculum of the Summer Institute. The Summer Institute

was then held in Idaho Falls, Idaho from 9 July through 20 August 2005, supported through the IAEA's Technical Cooperation programme. 75 individuals from 33 Member States participated in the Summer Institute, which is planned to be held again in 2006 in Sweden and France. Learn more about the WNU at:

<http://www.world-nuclear-university.org/>



The Asian Network for Education in Nuclear Technology (ANENT), established by the IAEA in 2004, has become operational in 2005. ANENT was established through an IAEA Technical Meeting to support education and training in Asia. A website has been set up and is being expanded to include a long-distance learning platform for teachers and students. A reference curriculum for nuclear engineering is being developed, in cooperation with the European Nuclear Education Network (ENEN), the World Nuclear University and the World Association of Nuclear Operators.

ANENT is a new partnership for cooperation in human resource development and research in nuclear technology as a key strategy for capacity building, nuclear infrastructure development and better use of available information resources.

The objective of ANENT is to facilitate cooperation in education, related research and training in nuclear technology for capacity building, nuclear infrastructure development and better use of available information resources in nuclear domain through:

- sharing of information and materials of nuclear education and training;
- exchange of students, teachers and researchers;
- establishment of reference curricula and facilitating mutual recognition of degrees; and

- facilitating communication between ANENT member institutions and other regional and global networks.

For more information log-on to the ANENT website
www.anent-iaea.org

Workshop on Nuclear Knowledge Management

The INIS&NKM Section organized a workshop on managing nuclear knowledge in August 2005 at the International Centre for Theoretical Physics, Trieste, Italy, supported also by the WNU. 41 participants from 24 Member States and international organizations shared best practices in transferring knowledge to young nuclear professionals.

School of Nuclear Knowledge Management



The next workshop at ICTP on that topic will be held as School of Nuclear Knowledge Management, 18–22 September 2006, in Trieste, Italy. See

<http://www.ictp.it/pages/events/calendar.html>
for details.

Coordinated Research Project on Knowledge Preservation

A new Coordinated Research Project (CRP) on Comparative Analysis of Methods and Tools for Nuclear Knowledge Preservation has commenced. The main objective of the CRP is to assist Member States in the selection and implementation of appropriate cost-effective knowledge preservation technological solutions to ensure preservation of critical knowledge in the nuclear sector.

If your institute would like to join the CRP, or want to find out more, please have a look at the detailed Information Sheet

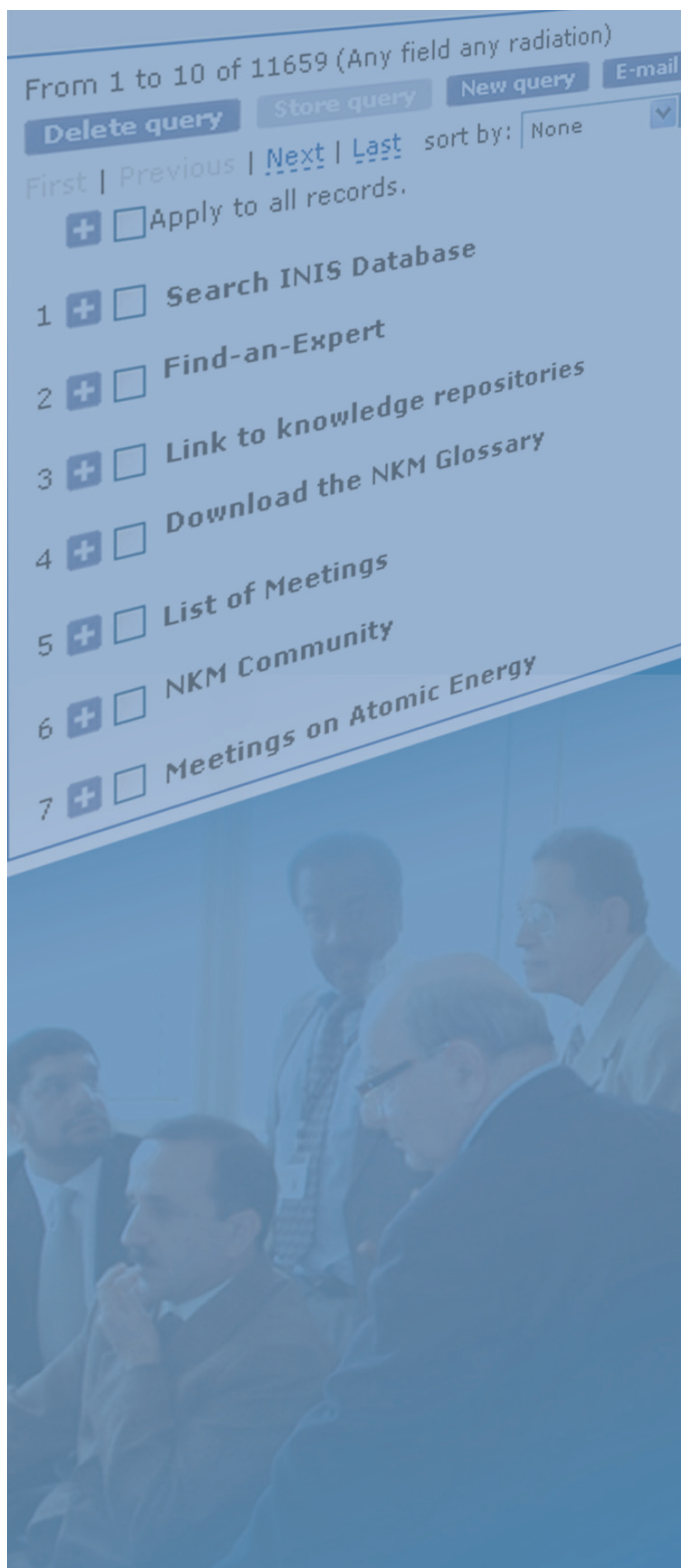
http://www.iaea.org/km/documents/InformationSheet_CRP.pdf

Learn more about other projects, publications and activities

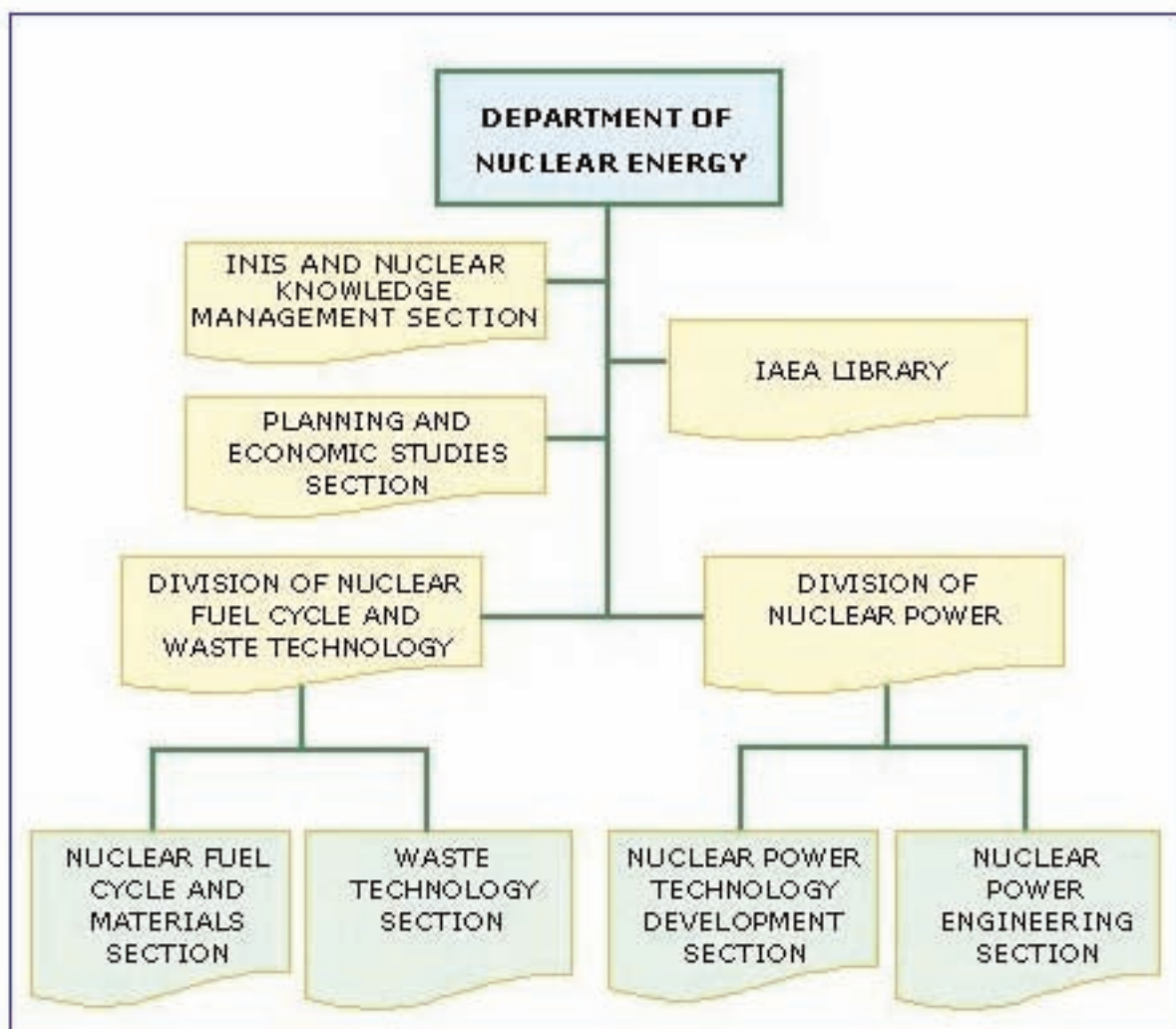
The INIS&NKM Section is also pursuing NKM projects in nuclear industry operating organizations, for knowledge management in CIS countries, for knowledge loss risk assessments and others. Please see our knowledge management website

www.iaea.org/km

for details and news.



The INIS and Nuclear Knowledge Management Section in the Department of Nuclear Energy



Visit the Nuclear Knowledge Portal

www.iaea.org/km

www.iaea.org/inis

The purpose of the Nuclear Knowledge Portal is to offer professionals in the nuclear field a direct and efficient access path to scientific and technical expert knowledge. The main gate is <http://www.iaea.org/inis/aws/index.html>. From there, you can access:

Find-an-Expert Facility

Looking for an expert? By searching recent entries to the INIS database of scientific publications for authors in the nuclear field, you can identify experts who are presently active in a given subject domain. The query will return the names and affiliations of experts together with the titles of their recent publications.

IAEA Nuclear Knowledge Desk

Has searching public resources failed to provide you with satisfying answers? Pose your scientific/technical question to the Ask-an-Expert Service. Nuclear experts will try to answer your question or to put you in contact with a specialist.

Nuclear Reactors Knowledge Base

Do you need comprehensive information on specific reactor types? In the nuclear reactors knowledge base, technical information and information on related IAEA activities and activities in Member States are arranged by reactor type.

IAEA Databases

Do you need specific data? The IAEA maintains well over 100 databases related to its activities in the nuclear field, many of which are available to the public.

IAEA Web Resources

You know your subject area and want to find related information? The IAEA maintains a public web site with more than 50.000 individual web pages. This page facilitates subject oriented access to the main working areas of the Agency.

Internet Directory of Nuclear Resources

Do you find that searching the Internet is too imprecise? The IAEA maintains a growing database of annotated links to Web sites on the Internet that are related to various fields of nuclear science and technology and the IAEA's work. Consult the IAEA's annotated collection of thousands of nuclear resources on the Internet.

IAEA Publications

Looking for IAEA publications? Extensive information on Agency publications issued since 1960, plus data on new publications appear on the web site on the day that they are released.

Meetings on Atomic Energy

Do you want to meet colleagues or present your work? An edited worldwide listing of current and planned conferences, symposia, seminars, exhibitions and training courses related to nuclear energy and its peaceful uses is now available online as well as in printed format.

