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**REPORT
OF THE SECOND ASIAN NUCLEAR
SAFETY NETWORK (ANSN)
CONSULTATION MEETING**

DAEJEON, KOREA, REP. OF

24-26 MARCH 2003

INTERNATIONAL ATOMIC ENERGY AGENCY

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1. Introduction:

The Second Asian Nuclear Safety Network (ANSN) Consultation Meeting was convened by the IAEA and hosted by the Korea Institute of Nuclear Safety (KINS). The meeting was held from 24 to 26 March 2003 at the headquarters of KINS in Daejeon and attended by 33 participants from China, France, Germany, Indonesia, Japan, Korea Rep. of, Malaysia, Philippines, Russia, Spain, Thailand, U.S.A., Vietnam and the IAEA. [The list of participants \(Photograph\)](#) and [Agenda](#) are attached.

2. Objectives:

The purpose of the meeting was to review progress of the pilot project, to elicit views on ANSN scope of work for 2004 and beyond and to discuss the role of Hubs and National Centers and ANSN sustainability.

3. Results:

The documents and viewgraphs of each presentation are hyperlinked in the text.

Monday, March 24, 2003

Representatives from 13 countries and the IAEA were welcomed by Mr. Chang-Woo Kim, Director of the Atomic Energy International Cooperation Division – Atomic Energy Bureau – Ministry of Science and Technology (MOST).

Mr. Kim emphasized the importance of the training and education in nuclear safety in the Asian region. One hundred and one nuclear power plants are in operation in the Asian region, and 22 units are currently under construction. The ANSN is seen to be a valuable tool for sharing nuclear safety knowledge and experience.

I. Opening Remarks and [Meeting Objectives](#)

Luis Lederman pointed out that the ANSN project is moving rapidly. He noted the significant progress that had been made since the first meeting in August 2002 in Tokyo.

The goal of this pilot project is to demonstrate feasibility of the ANSN by achieving practical results. This will provide a clear demonstration of what the network will be capable of delivering.

He noted that all presentation material from this meeting will be provided to the participants on CDROM for future reference.

With regards to the ongoing ANSN development work, he stressed the importance of feedback from the users.

II. Presentations from Hubs on Potential Contributions to the ANSN

Speakers from [Germany](#), [Japan](#), France, [China](#), [Korea](#), [Russia](#), and [the U.S.](#) summarized their progress and potential contributions through 2004 and beyond. Germany plans to establish a hub for national purposes and to contribute to the ANSN. France will participate through either the German or a common European hub under consideration. Russia reported that the Russian Ministry of Atomic Energy (MINATOM) has agreed in principle to establish a hub at the International Nuclear Safety Center of Russian MINATOM (RMINSK) to join the ANSN.

Each of the three Asian hubs has made significant progress in the development of a national system for sharing education and training materials related to nuclear safety. In Korea, a national project has been established under the general coordination of MOST involving Korea Institute of Nuclear Safety (KINS), Korea Atomic Energy Research Institute (KAERI), Korea Hydro and Nuclear Power Company (KHNP), Universities, and others. KINS has been assigned as the hub operator.

III. Status and Expectations of National Centers

Speakers from [Indonesia](#), [Malaysia](#), [Philippines](#), [Thailand](#), and [Vietnam](#) spoke of their plans for 2003 – 2004. All are examining IT capabilities in their country and are planning web sites or connecting their existing web sites with the ANSN. Indonesia and Vietnam are planning to conduct Basic Professional Training (BPT) courses based on previous IAEA courses attended.

It was confirmed that educational materials in nuclear and radiation safety is most valuable, as is safety information related to research reactors, such as inspections, regulation, preparation of safety analysis reports, and emergency preparedness.

Subsequently it was agreed that Indonesia, Malaysia, Philippines, Thailand and Vietnam would nominate contact points as a liaison to be involved in the development stages of the pilot project in order to provide the feedback from the end-user's point of view.

IV. Integrated Safety Evaluation

[The concept of the ISE](#) was presented. The IAEA has initiated the drafting of ISE reports according to the format and contents prescribed in the "ISE guidelines" prepared by the IAEA.

The ISE reports will be written, revised, and completed by each one of the respective countries. Each report will address the progress achieved in each country in the following topics:

- Legal and governmental framework for safety

- Safety of research reactors
- Education and training
- Nuclear power plant safety (China only)

ISEs on nuclear power plant safety in China will be conducted based on the report presented in the framework of nuclear safety convention.

The reports will mostly rely on the result of safety missions and expert missions carried out by the IAEA in each one of the areas above.

A milestone implementation schedule has been prepared by the IAEA and agreed to by the relevant countries. Further adjustments of the schedule will be made by the IAEA in consultation with each country, the objective being to complete all ISE Reports no later than October 2003 for the EBP technical meeting in December of 2003.

It was agreed to use the scale prepared by the IAEA (1-4) to evaluate achievements in each topical area in each country.

It was noted, however, that it is not possible to fully credit the achievements of each country solely to the EBP.

There was general consensus on the ISE approach and that the ISE reports will be an invaluable tool to be used for assessing the results of the EBP and to focus its new phase proposed for 2004 and beyond.

Lessons learned from ISEs will be shared in the frame of the ANSN in 2004 and beyond.

Tuesday, March 25, 2003

V. Result of the Hub Coordination Activities

Outcome of the Co-ordination Meeting in February 2003

The results from the hubs co-ordination meeting in February were recaptured, including the description of the agreed database structure, taxonomy agreed and prototype implementation.

The importance of stronger feedback from hubs and national centers was stressed, as well as the need for increased coordination of development activities.

Development at IAEA since February

The ANSN team at IAEA has been strengthened by a cost-free expert from China for 1 year and increased coordination and support from ANL. IAEA has completed the development of a prototype database and a simple data entry application. An ANSN web

community with features such as sharing documents and creating discussion groups has been successfully established and is now being utilized.

It was explained how the IAEA prototype will be implemented in 3 distinct stages, starting with a basic web based search and retrieval system expected to be completed by the end of May 2003. This will be followed by a more enhanced and automated system by September 2003, resulting in the further developed system in November 2003. In order to meet the milestones, it is essential that the hubs classify and describe the training materials and send this information to IAEA and furthermore to store the training materials on their respective web servers.

As soon as a workable version of the ANSN web site is established, it will be made available for testing. Access will be provided to designated contact points in each of the national centers in order to test the system and provide the IAEA and other relevant parties with feedback from the end-user's point of view.

Following an explanation of the basic principles of the system, a demonstration of the data entry application followed. This application will be made available to the hubs, and to the national centers as needed.

VI. Progress at the Hubs:

[Japan](#) and [Korea](#) have been working on the development of their respective ANSN databases and web sites. Significant progress has been made and selection and classification of training materials has commenced.

[China](#) has made detailed plans for the establishment of IT infrastructure and the development of ANSN database and web sites.

It became apparent that the rather independent development of the last few weeks resulted in a number of highly creative approaches in the prototype development at the individual hubs. While some effort was duplicated, the resulting prototypes allow for choosing the most suitable design for further refinement.

VII. Measures to ensure quality of ANSN:

The GRS has finalized [a set of minimum quality criteria and guidelines \(link for view graph\)](#) that should be used to ensure the quality of training materials that are being made available through the ANSN. The guidelines were adopted by the meeting participants as general guidance for the use at the hubs.

It is expected that the hubs will develop their own specific quality procedures based on the guidelines.

VIII. Education and Training Materials Available to the Pilot Project

[China](#), [France](#), [Germany](#), Japan ([link1](#), [link2](#)), Korea, the U.S. ([link1](#), [link2](#), [link3](#)) and [the IAEA](#) have presented the material on education and training that they intend to input to the ANSN for the pilot project. Input data will be prepared in the hubs according to the attributes specified for the structure of groups (courses), documents (lectures), and items (files) and transmitted to the IAEA. The IAEA will also compile the material in the master index for future interrogation and retrieval by users.

Preliminary input data will be submitted by the hubs by May 1, 2003. The contribution from each hub will be completed by Sep 1, 2003.

Material from France will initially be input to the IAEA hub.

IX. Utilization of EBP Knowledge for Preparation of National Training Courses

The training material prepared and distributed in the framework of the EBP is already being used by [Indonesia](#) and [Vietnam](#) to prepare their national Basic Professional Training courses in nuclear safety respectively in August and November 2003. The IAEA has been requested to assist in the course preparations and to provide lecturers as well as support of translation of some materials into local languages for training purposes.

X. ANSN Topical Groups

Korea presented the development of a forum for exchanging technical knowledge on the topic of accident analysis and computer codes for research reactors. The forum will be invaluable to follow up the training provided by KINS in 2001 – 2002 on “safety analysis methodology and computer code utilization”.

The main objective of this topical group to be organized, maintained and moderated by KINS in cooperation with the IAEA, is to further assist the core of experts that participated in the above mentioned training to carry out their assignments related to the preparation of safety analysis reports for their research reactors.

XI. IT Development Team Meeting

The meeting was held to coordinate the IT development activities to avoid duplicate development, but also to share work done previously and to delegate software development where possible. It was agreed that:

- Japan will complete the application for entering data to the index database (May 1, 2003)

- IAEA will work on defining the XML data structure and provide a proposal to the other hubs for review and approval (May 15, 2003)
- ANL will develop a MySQL and Oracle version of the master index database and make it available to those interested (April 15, 2003)
- Code tables, such as database structure, taxonomy, country codes, language names will be made available on the ANSN web community. All parties will have to adhere to these codes unless otherwise agreed.
- The Korean ANSN web site was reviewed and found to be very close to what IAEA is planning to develop. The IAEA requested that if possible the design, source code etc should be provided to IAEA to facilitate the development of the ANSN web site search and retrieval functionality.
- Further coordination related to the IT activities should be maintained and strengthened. This could be done through the use of the ANSN web community and periodic small meetings of the IT experts from IAEA and the hubs.

Wednesday, March 26, 2003

XII Ibero-American Radiation, Transport and Waste Safety Network

Spain presented [the status of the Ibero-American network](#) on Radiation, Transport and Waste Safety. This project will use the experience gained in the ANSN developments. It will address matters related to radiation, transport and waste safety. The network will include radiation protection of workers and medical practices, safety of radiation facilities, safe management and control of radioactive materials including spent fuel and radioactive sources, among other important subjects.

It is expected to launch a project before the end of the year with Spanish funding. A good coordination between ANSN and the Ibero-American Initiative should be warranted and would be mutually beneficial.

XIII Further Meetings

The results of the pilot project will be presented at the ANSN Technical Meeting in Vienna in December 2003. In preparation for this meeting, the IAEA will consider the need to convene one or more meetings involving the hubs and the IT developers.