Newsletter

Forum for Nuclear Cooperation in Asia (FNCA)

Vol. 1. · No. 1 December 2000

Issued by
Office of Atomic Energy for Peace
THAILAND

The First Meeting of Forum For Nuclear Cooperation in Asia (FNCA-1) Bangkok, Thailand, November 10-15, 2000

The First Meeting of the Forum for Nuclear Cooperation in Asia (FNCA) was held in Bangkok, on 10-15 November, 2000. It was co-hosted by the Ministry of Science, Technology and Environment (MOSTE) of the Kingdom of Thailand and the Atomic Energy Commission (AEC) of Japan, and organized by Office of Atomic Energy for Peace (OAEP) and Japan Atomic Industrial Forum Inc. (JAIF). Ministers and Senior Officials responsible for the peaceful nuclear research, development and utilization from nine Asian countries comprising the Commonwealth of Australia, People's Republic of China, Republic of Indonesia, Japan, Republic of Korea, Malaysia, Republic of the Philippines, the Kingdom of Thailand, and Socialist Republic of Vietnam met here. The Meeting also welcomed the participation of the International Atomic Energy Agency (IAEA) representative as an observer.

The Forum assumed the activities of the former International Conference for Nuclear Cooperation in Asia (ICNCA), which had been led by Japan for the past ten years. At the Tenth Meeting of the ICNCA, the participating countries agreed that the ICNCA should be transformed into the Forum for Nuclear Cooperation in Asia (FNCA) with the first Forum Meeting to be held in Thailand.

The vision statement was developed at the first FNCA Coordinators Meeting and adopted later on at this first Forum Meeting in Bangkok as follows : "The FNCA is to be recognized as an effective mechanism for enhancing socio-economic development through active regional partnership in the peaceful and safe utilization of nuclear technology."

Rationale for the FNCA

The Asian region is one of the regions which enjoys highest economic growth rates in the world. To sustain such growth in the face of limited resources and the need to protect and preserve the environment, the region can benefit from effective utilization of nuclear technology. According to the projections for expansion of nuclear power generation, the region is expected to be one of the three major nuclear-generation centers along with the United States and Europe early in the 21st century. In addition to nuclear power generation, nuclear applications in fields, such as food and agriculture, human health care, improvement of industrial technology, and environmental protection, are of equal importance in people' s daily life.

In recognition of the above situation, regional cooperation to further the safe and peaceful use of nuclear technology will be significantly advanced by carrying out the Regional Nuclear Cooperation Activities (RNCA) currently in seven fields :

- Utilization of Research Reactor,
- Application of Radioisotopes and Radiation for Agriculture,
- Application of Radioisotopes and Radiation for Medical Use,
- Public Information on Nuclear Energy,
- Radioactive Waste Management,
- Nuclear Safety Culture, and
- Human Resources Development.

Direction of Future Activities

The Meeting adopted the FNCA Strategic Plan. Officials from FNCA countries will further cooperate to introduce and implement appropriate projects in those fields where socio-economic benefits can be clearly expected, and to make FNCA activities more efficient through better linkages with the IAEA and other appropriate international organizations. In this regard the initiatives listed in the Strategic Plan are welcomed.

The FNCA countries recognize that their contributions of manpower and finance are important to strengthen and expand the FNCA activities. Each country will try to establish a domestic system to support FNCA activities.

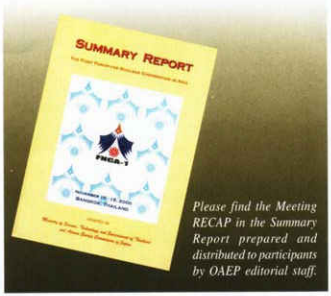
The nuclear accidents of the past two years such as the criticality accident at the JCO nuclear fuel facility in Japan and the radiological accident involving the spent Cobalt-60 source in Thailand should never occur again. To achieve this goal, development and utilization of nuclear technology in each country should be carried out with full attention to the safety aspect. It is also important to use the experiences of these unfortunate accidents as lessons in implementing the FNCA activities in the future.

The Meeting approved the following provisional venues of Workshops in FY 2001 :

- Utilization of Research Reactor : *(China/ Vietnam)*
- Application of Radioisotopes and Radiation for Agriculture : *Thailand*
- Application of Radioisotopes and Radiation for Medical Use : *Malaysia*
- Public Information on Nuclear Energy : *The Philippines*
- Radioactive Waste Management : *(Vietnam/ Korea)*
- Nuclear Safety Culture : *Japan*
- Human Resources Development : *(Japan/ Korea)*

Next Meetings

The Meeting agreed that the second and the third Meetings of the FNCA would be held in Japan and Republic of Korea in 2001 and 2002, respectively.



Please find the Meeting RECAP in the Summary Report prepared and distributed to participants by OAEP editorial staff.

SOM-1 OPENED-UP THE FORUM

The first day of this decisive three-day Meeting opened up on Friday (Nov. 10, 2000) with the first Senior Official Level Meeting (SOM-1) in preparing the Ministerial Level Meeting (MM) to be emerging on the second day of the Meeting.

SOM-1 meeting was officially opened by Mr.Kriengkorn Bejraputra, the Secretary General of the Office of Atomic Energy for Peace of Thailand.

Mr. Kriengkorn Bejraputra, the Secretary General of OAEP, welcomed the delegations from member states of FNCA, in the opening session of SOM-1.

Main topics discussed in SOM-1 included the FNCA framework, strategic plan and new projects, all of which were initiated in the FNCA first Coordinators Meeting held on March 7 and 8, 2000 in Tokyo, Japan. Another interesting issue was Japan 's proposition on long term program for research, development and utilization of nuclear energy in Asia.

Mr. Tetsuya Endo, Commissioner, AEC of Japan presented the Speech Report on "The Long-Term Program for Research, Development and Utilization of Nuclear Energy."

FIRST FNCA DECLARED OPEN

In the bright and shiny Monday morning of November 13, 2000, the second day of the FNCA-1 Meeting, after the warm welcome address to the forum by H.E. Dr. Arthit Ourairat, Minister of Science, Technology and Environment of Thailand, H.E. Dr. Trairong Suwankiri, Deputy Prime Minister of Thailand, as the chairman of Thai Atomic Energy Commission, delivered his opening address and welcome to all Ministers and other participants. He mentioned that peaceful use of atomic energy was introduced to the Kingdom of Thailand in 1962. As a State Party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), Thailand has joined United Nations to support world peace and security through the non-proliferation of nuclear weapons.

AGENDA

Date : November 10-15, 2000
Place : The Sukhothai Hotel, Bangkok
Friday : Nov. 10, 2000
- Senior Official Level Meeting-1 (SOM-1) : Preparing Meeting
- Opening Session
- Special Report of Japan 's New Long-Term Program
- The FNCA Framework : Discussion
- The FNCA Strategic Plan and New Projects

Monday : Nov. 13, 2000
- Ministerial Level Meeting (MM) on "Future Nuclear Energy and It's Safety in Asia"
- Opening Session
- Country Paper Presentation
- Discussion & Adoption of the FNCA Framework
- Round Table Discussion on :
  1. Promotion of Nuclear Energy Applications
  2. Nuclear Safety
  3. How to Promote Cooperation among the FNCA Countries
- Closing Session & Press Conference

Tuesday : Nov. 14, 2000
- SOM-2 : Follow up Meeting to MM
- Discussion on what was suggested in the MM
- Discussion of Draft Sumary Report
- Closing

The promotion on peaceful use of nuclear energy in Thailand was further pursued by establishment of the Treaty on Southeast Asia Nuclear-Weapons-Free Zone in 1997. In addition, the technical cooperation between State Parties and the International Atomic Energy Agency (IAEA) has been established to promote the use of nuclear energy safely and effectively.

***Opening Address** by **H.E. Dr. Trairong Suwankiri** Deputy Prime Minister of Thailand and Chairman of Thai Atomic Energy Commission.*

Since, there were incidents of "nuclear and radiological leaks" such as Chernobyl and recently in Japan and Thailand. This reflects a strong and broader regional cooperation is needed. This meeting provides a good opportunity among Asian nations to point out the direction of shared future particularly on nuclear safety. In these regards, "safety culture" will play important roles to ensure fair responsibilities among regulators and users of nuclear/radioactive materials. "Thailand strongly believes that this FNCA meeting and the public relation activities would arouse Thai public awareness concerning the issue and serve as a basis for further enhancement of safety culture in the region", he emphasized.

He believed that this new cooperative scheme would provide a valuable opportunity to ensure the development and utilization of nuclear energy. He also expected that the word "peaceful" would not only be symbolic but also realistic.

"On behalf of the Royal Thai Government, I wish you all the success and fruitful meeting as well as a happy stay in Thailand. I now have the honor to declare open the First Forum for Nuclear Cooperation in Asia." he wrapped up his address.

***Opening Address** by **H.E. Mr. Tadamori Oshima** Minister of State for Science and Technology of Japan.*

Also on this same memorable occasion of opening the Ministerial Level Meeting, H.E. Tadamori Oshima, giving an opening address on behalf of the co-host, expressed his welcome and gratitude to all representatives from member states and the International Atomic Energy Agency (IAEA) for their participation in the forum.

"We enjoy various benefits from the use of nuclear energy. In Japan which relies on overseas supply sources for 80% of its primary energy requirements, nuclear power generation plays a leading role in securing a stable supply of energy with consideration given to environmental problems." He stated.

Moreover, radiation is utilized in diverse fields, such as medical and industrial sectors. The Forum for Nuclear Cooperation in Asia, FNCA, is aimed on exchanging opinions and information on such topics as the problems and current status of nuclear energy use in member states. Furthermore, FNCA aims at contributing to socio-economic development in respect of peaceful and safe utilization of nuclear technologies.

The topics to be discussed on the FNCA can be divided into 3 topics : promotion of nuclear energy application, nuclear safety and nuclear cooperation. The discussion will promote the mutual understanding among the participating countries and direction for future activities.

Due to the diversity of religion, culture, polictics and economy among Asian nations, he believed that it is very useful to develop nuclear energy and carry out common tasks from their respective standpoints. He emphasized that FNCA is the one and only place of regular meeting among the representatives of Asian nations who are responsible for the national nuclear policies.

Participants at the Ministerial Meeting

Press Conference

EXHIBITION

Participants at the Banquet

TECHNICAL VISITS

SUPPORTING GROUP : Japanese and Thai working in team.

Professor Helen Garnett, Chief Executive, ANSTO, Australia

On 13 July 2000 contracts for the design and construction of Australia' s replacement nuclear research reactor were signed. The reactor will have a power rating of 20 MW and will produce a maximum neutron flux more than four times greater than ANSTO 's existing reactor, HIFAR. The replacement research reactor is planned to be operational in 2005 and will achieve performance levels for neutron science at least ten-times higher than those of HIFAR.

ANSTO has participated in the integrated development and testing program for a synroc-based pyrochlore-rich titanate ceramic for the plutonium immobilisation project as a member of a team, led by Lawrence Livermore National Laboratory (LLNL). Significant progress was made in developing business opportunities for ANSTO 's synroc technology.

In August 2000 there were two announcements concerning progress on a national approach towards radioactive waste management in Australia. The first announcement was that the site for the national near-surface repository for low level and short-lived intermediate level radioactive waste would be in the central-north region of South Australia. The second announcement was that a nationwide search has been initiated for a national store for Australia 's small volume of longer lived intermediate level waste.

Australia has been participating actively in conceptual discussions with the IAEA concerning the integration of safeguards, in trials of new monitoring equipment and in strengthening environmental monitoring and other detection techniques.

Australia has played a leading role in the development and implementation of IAEA conventions and standards on nuclear safety. Australia will be hosting, and providing lecturers for, a Regional Training Course on the Safe Transport of Radioactive Material at the end of this month.

Australia has been pleased to continue support for regional nuclear cooperation activities under the FNCA framework contributing actively to the RNCA areas of Safety Culture, Radioactive Waste Management and Research Reactor Utilisation. In the area of Safety Culture, Australia wishes to emphasise the importance of maintaining the momentum on safety culture between the annual meetings and is pleased that agreement was reached on the exchange of information via a web page and other reporting.

Mr. Zhang Huazhu, Chairman of China Atomic Energy Authority, China

With 50 years of development, a comprehensive nuclear science, technology and industry system has taken shape in China with substantial achievements in the peaceful application of nuclear energy in particular. Up to now, 2 nuclear power plants with 3 units have been established and are in safe operation, and 4 NPPs with 8 units are under construction. In addition to achievements in nuclear power, China also made major developments in nuclear technology application.

China attaches great importance to the issue of nuclear safety and has made tremendous input of manpower and capital in all aspects concerning nuclear safety. A comprehensive nuclear safety regulations system has been set up.

China will make full play of its resource advantages, optimize energy structure, promote utilization factor, and strengthen environmental protection so as to achieve sustainable development. Nuclear power, as a safe and clean energy, will be developed in an appropriate way. China' s nuclear power will be developed following the guideline of "relying on our own strength while cooperating with foreign partners, introducing technology and promoting localization". Nuclear technology application will be positively promoted to achieve further industrialization. At the same time, China will further the work in the field of basic research of nuclear science.

As to the function of FNCA, China has the following ideas. China fully recognize the positive role of ICNCA up to now. FNCA shall give prominence to special features of Asia to avoid overlapping or simple duplication of the work of IAEA and other related international organizations. The major function of FNCA is to exchange information and coordinate cooperation. It is not, and shall not become a permanent regional organization.

Dr. Muhammad A.S., Hikam, M.A., State Minister for Research and Technoloty of the Republic of Indonesia

The FNCA is a very important forum for the development and application of nuclear technology for the welfare of the people. This first meeting is also of strategic importance in which Indonesia confirms its commitment to cooperation in the peaceful utilization of nuclear energy in Asia.

Indonesia proposed to the FNCA selected cooperative projects namely :

a) Application of radiation mutation breeding for alternative staple food crops, for example sorghum.

b) Application of Sterile Insect Technique (SIT) in fruit crops.

c) Application of brachy therapy and accelerators or therapy of cancers.

d) To keep up to date on international developments on nuclear power, its economic, technological, and sociopolitical, Indonesia proposes "Nuclear Energy and Sustainable Development".

H.E. Mr. Tadamori Oshima
Minister of State for Science and Technology, Chairman of Atomic Energy Commission, Japan

In order to secure a stable supply of energy and improve the quality of people's life, Japan has promoted the development and utilization of nuclear energy for decades on the fundamental principle of peaceful use and safety.

An estimate shows that the radiation utilization has an economic size of ¥ 8.6 trillion in Japan, accounting for 1.7% of its gross domestic product (GDP). Use of nuclear energy can contribute much to the improvement of people's life in Asia through radiation application in agriculture, medical treatment and so on.

In addition, laser systems, accelerators, and nuclear reactors provide the latest means for research on advanced science and technology. Japan is also promoting research and development projects actively for fusion energy and innovative reactors.

The criticality accident at the JCO's uranium processing plant in Tokaimura was the severest accident unparalleled in Japan's history of nuclear utilization. After the accident, the Government took action to strengthen safety regulations for nuclear operators and to enhance cooperation between the central and local governments for effective measures against emergent nuclear disasters.

Japan intends to positively offer its past experience in utilization of nuclear energy for Asia, and, in this context, international nuclear cooperation, particularly with Asian partners, is given priority.

A series of the International Conference for Nuclear Cooperation in Asia, (ICNCA) was reorganized to the Forum for Nuclear Cooperation in Asia (FNCA) because of the need to build a framework for more strategic and effective nuclear cooperation in the region.

Under the partnership based on mutual understanding, the FNCA is operated by the commitment and mutual contribution of the participating countries. More active participation in this framework by the FNCA countries is requested to promote nuclear cooperation in the 21st century. Japan, both as a sponsoring and a participating country, will continue to take positive measures for further development of this framework.

Mr. Jung-Kil Han Vice Minister of Science and Technology of the Republic of Korea

The Republic of Korea has endeavored to achieve self-reliance in nuclear technology to compensate for the shortage of natural energy resource. Therefore, a comprehensive promotion plan for nuclear energy was established.

Based on this promotion plan, the Korean Government launched the national long term nuclear R&D program and raised the nuclear R&D fund that was derived from designated fraction of revenues from nuclear power generation. As a result of this national effort, Korea has achieved remarkable progress in resolving the shortage of energy supply.

Furthermore, Korea has made a significant progress in the development of Korean Next Generation Reactor (KNGR) design and System-integrated Modular Advanced Reactor (SMART). A lot of research such as utilization of radiation from generator or and radioactive sources and cancer treatment using brachy therapy have been conducted.

For the nuclear safety activities, Korean Government continues to incorporate the recommendations of the first review conference of nuclear safety convention into its domestic laws and regulations. As a result, the Periodic Safety Review (PSR) system is in the process of implementation and also the recommendations of the International Commission on Radiological Protection (ICRP) will be gradually put into action.

Korea is now developing Information System on Integrated Radiation Safety (ISIRS), an internet based system capable of tracing and monitoring all the processes involved in the use of radioactive source, from production or importation to final disposal. A national policy on nuclear safety that stipulates nuclear safety is the top priority for the Korean Government.

Korea has accumulated valuable experience and technical expertise in nuclear technology and will support and advice in nuclear education and training programs for many developing countries, FNCA member countries and the international organizations.

Honourable Dato Law Hieng Ding Minister of Science, Technology and the Environment, Malaysia

In Malaysia the Atomic Energy Licensing Board (AELB), under the Atomic Energy Licensing Act, is the authority to regulate and control all atomic energy related activities. There is also a code of practices to supplement the Act and its subsidiary regulations.

Under the Atomic Energy Licensing Act, users of atomic energy in Malaysia are divided into two main activities namely medical and non-medical activities. The medical activities are under the jurisdiction of the ministry of health, while non-medical activities are under AELB.

Radiation workers in Malaysia, are required to be extremely monitored of dose received while working with radiation sources. Dosimetry and calibration services to all radiation users are provided by the Secondary Standard Dosimetry Laboratory (SSDL) at the Malaysian Institute for Nuclear technology Research (MINT). The radioactive wastes in Malaysia can be divided into two categories; waste containing or contaminated with short and medium lived radionuclides and waste containing long-lived thorium and uranium, commonly known as TENORM. MINT conducted the research to resolve for the permanent TENORM waste disposal, and disposal of hazardous waste including radioactive waste. Training courses on radiation protection radiation workers to have the necessary understanding and knowledge of radiological safety also were conducted by MINT.

It is expected that Malaysia utilization of nuclear technology in the nonpower sector will increase further in the future, both in medical (nuclear medicine center, cyclotron facility and Positron Emission Tomography (PET) facility) and non-medical applications (agricultural sector such as a gamma green house facility.) MINT will embark a number of development projects including improvement and maintenance of existing infrastructure; establishment of new centers, expansion of the existing facilities and organizational development in the next five years. Furthermore, the Emergency Response Team will be upgraded to comply with National Safety Council 's requirement to deal with nuclear radiological accident in the National Disaster Management and Relief Committee.

The current Philippines Energy Plan (PEP) projects an energy demand rising due to expanding economy, growing population and higher disposable incomes. The indigenous energy production will not be able to match the strong demand growth projected to increase in the future. The nuclear option is one of the possible sources for energy production in the Philippines beyond 2020. The Nuclear Power Steering Committee (NPSC) was formed to attain the objectives of the overall nuclear power program.

The Science Agenda of the Philippines use nuclear science and technology program to improve the productivity and competitiveness of the country 's production sector. The nuclear science and technology have increasingly contributed to the improvement of the quality of the Filipino life in the areas of agriculture, health and medicine, industry and the environment.

The Philippine Nuclear Research Institute (PNRI) has been the center of nuclear science and technology activities in the country. For Example, PNRI has established a nuclear-based assay for the red tide toxins for enhanced management of the harmful algal bloom or red tide phenomenon, which affects a number of seafarming areas in the Philippines.

The Philippines has a centralized facility for the collection, treatment, and interim storage of the low-level radioactive wastes that are generated from small nuclear applications in medicine, industry, research and training. However, the Philippines has planned to have a new 20-megawatt research reactor in a new site.

Honorable Dr. Filemon A. Uriarte, Jr., Secretary, Department of Science and Technology, the Philippines

The development of a strong safety culture and the communication of this culture to develop public could consensus that would allow the Philippines to consider nuclear power as an option in its energy mix. The safe non-power utilization of nuclear energy and nuclear technique would impact on the future of nuclear power in the region as a potent tool for sustained growth in the region. The cooperation within the framework of the FNCA provides a balanced approach to the challenges facing the region particularly in the area of nuclear science and technology. As the cooperation continues, the Philippines will be a full support in FNCA activities.

Dr. Arthit Ourairat, Minister of Science Technology and Environment, Thailand

Contributions of science and technology have been increasingly essential in upgrading and enriching quality of life of the Thai society as globalization prevails and economic difficulty continues. Among other science disciplines, nuclear science has been recognized to be an important extension of the basic science from which sizeable number of advanced technologies are developed and utilized for peaceful purposes. In such development, Thailand commits to the NPT regime and continues to be an active member state of the IAEA. Thailand also commits to the continuing effort to enhance its capability in nuclear, radiation and waste safety. OAEP's increased regulatory capability is expected to play essential role in support of all on-going planned development activities in nuclear science and technology in the future to ensure public confidence of nuclear energy. The establishment of the Ongkharak Nuclear Research Center is truly the major new prospect for nuclear science and technology development in Thailand. There are also continuing prospects for peaceful and safe uses of nuclear energy in development of agricultural products, public health care and public welfare as well as well as increasing industrial productions.

Dr. Vuong Huu Tan, Vice-Chairman, Vietnam Atomic Energy Commission, Vietnam

Utilization of nuclear and radiation techniques has been actively contributing to socio-economic development of Vietnam through the national programs on food security, health care, water resource management, the environmental protection, etc. The mutation breeding technique using irradiation has been contributing to the creation of many new plant varieties with high value, in particular, of new rice varieties certified as national ones. A network of nuclear medicine departments has been set up in the country with 23 units in comparison with 2 units before the Dalat reactor was put into operation. Every year, the Dalat nuclear research reactor produces about 200 Ci radioisotope and radiopharmaceuticals for medical diagnosis and treatment. Neutron activation analysis using the Dalat reactor has been developed and used in many fields such as environment, mineral exploitation, biology, soil science. Nuclear techniques have been successfully applied in many fields such as sedimentation study, upgrading the efficiency of oil and gas recovery; investigation of the seepage in hydropower dams, studying groundwater research as well as assessment of water pollution, etc.

Vietnam highly appreciates the role of the international and regional cooperations in the promotion of the nuclear energy utilization. Some new projects Vietnam would like to propose in the future as follows : Production and utilization of Tc-99 m generator from nuclear research reactor ; Production and application of bio-fertilizer by using nuclear techniques ; Research of radiation technology by using accelerators.

Vietnam strongly believe that under the Forum framework, the cooperation with Japan and Asian countries will play an important role in Vietnam' s nuclear policy in the future. In order to strengthen the cooperative relationship between Vietnam and Asian countries,

Mr.Qiao Jihui, Deputy Director General for Technical Co-Operation, IAEA

The IAEA major functions are to promote of nonproliferation safe guard, safety and technology transfer. The situation regarding to nuclear power is not positive. Developed countries hesitate to go further for the new constructions; whereas plans are on hold in developing countries. The negative factors related to nuclear power are public concerns over safety and waste, lack of economic competitiveness, high capital costs and large infrastructure requirement. However, the positive aspects are advanced reactors hold promise. A World Energy Council study recently concluded that the current reliance on nuclear power needs to be stabilized with the possibility of future expansion. Therefore, the IAEA' s major role is to ensure that nuclear option remains open and available. The Asian Governments will support on the nuclear application in any aspects. The key for the survival of all nuclear institutes at present is to pay attention on the non-power nuclear application and take it to the marketplace both commercial and mainstream development ministries. IAEA will continue to co-operate and support RCA and FNCA in Asia region to bring the nuclear business to the prospective.

FNCA ADOPTED STRATEGIC PLAN

The Meeting adopted the operational strategies according to the following goals :

- To achieve socio-economic development by safe utilization of nuclear technology
- To utilize nuclear technology in those fields where it has a distinct advantage
- To respond to the needs of the FNCA countries

Framework of Operation

The FNCA Framework includes meetings and coordinated projects in agreed fields of activity.

Strengthening National Effort

- Each participating country of the FNCA will establish a national mechanism to promote and support the FNCA activities. Each country is also encouraged to contribute to the funding of the FNCA activities within its country.
- The FNCA Coordinators are requested to monitor the effectiveness of project implementation in their respective countries.

Strengthening Planning and Review of Projects

- A proposal for a new project, significant change to, or cessation of, an existing project will be discussed at the Coordinators Meeting. If the proposal is judged appropriate it will be submitted to the next Forum Meeting where proposals will be officially adopted. Alternatively, proposals coming forward and endorsed at the Forum Meeting and will be considered in detail at the next Coordinators Meeting. This will ensure adequate consideration within the participating countries.

- For a new project the following information is required :
  - objectives of the project
  - a lead/host country(ies) and a lead/host organization(s)
  - outline of the project including duration, budget size, milestones and expected outputs
  - requirements for participating countries
  - available resources and facilities

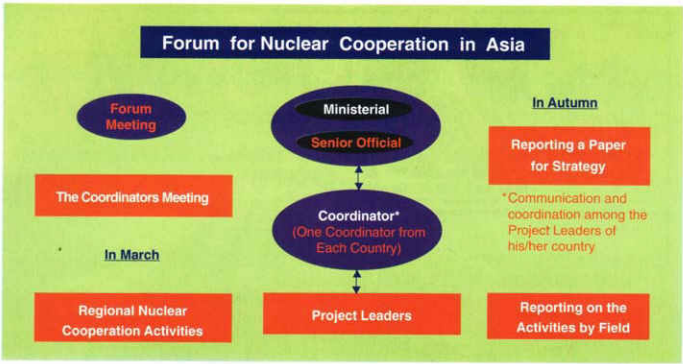
- A new project may be introduced even if not supported by all countries provided that the resources necessary are made available by the supporting countries.

CURRENT STATUS :

Activities are currently pursued in the following seven fields :

- Utilization of Research Reactors
- Application of Radioisotopes and Radiation for Agriculture
- Application of Radioisotopes and Radiation for Medical Use
- Public Information on Nuclear Energy
- Radioactive Waste Management
- Nuclear Safety Culture
- Human Resource Development

It has been agreed that more focus can be achieved in the projects under these respective fields and a greater degree of linkage between the activities is desirable. Participating countries are urged to consider possible options for the future.



CURRENT ACTIVITIES

1. Utilization of Research Reactor

Efficient Tc-99m generator production system using new JAERI technology from Mo-99 produced by n-γ reaction. Applications of NAA (neutron activation analysis) for environment monitoring and mineral resources exploration will be also result-oriented activities.

2. Application of Radioisotopes and Radiation for Agriculture

For mutation breeding, specific crops which need improving yield and/or disease resistance to be identified before the Coordinator Meeting in March 2001. A possible new project on biofertilizer technology to increase yield of grain legume and rice avoiding environmental pollution is proposed.

3. Application of Radioisotopes and Radiation for Medical Use

For treatment of uterine cancer (highest incidence in developing countries), expansion of application of established radiation treatment protocol and establishment of new protocol aiming at more efficient treatment to be scheduled.

4. Public Information on Nuclear Energy

Emphasis to be on the support of national public information activities in each country.

5. Radioactive Waste Management

The immediate cooperation on good management practice of spent radioisotope source is proposed with the establishment of regulation and management systems for radioisotope utilization in terms of registration, reporting, collection and storage of spent sources. Concrete measures tackling this problem are to be discussed in the workshop which will take place in Australia this coming December.

6. Nuclear Safety Culture

The 10 year vision is "That safety culture programs should be implemented and effective at a comparable level in all nuclear facilities in FNCA countries".

Over the next three years, the workshops will focus on sharing information from countries with established programs and providing support to countries with the intention to adopt nuclear power or where assistance in implementing safety culture programs has been requested. Other activities will include reporting against the agreed safety culture indicators and NSC articles.

7. Human Resources Development

Human Resources Development strategy for national nuclear program to be formulated by high level officials through a workshop with a focus on enhancement of safety in radioisotope and research reactor application.

FNCA-1
The First Forum for Nuclear Cooperation in Asia
10 - 15 November 2000, BANGKOK
"Future Nuclear Energy and Its Safety in Asia"

การประชุมว่าด้วยความร่วมมือด้านนิวเคลียร์ทางสันติ ในภูมิภาคเอเชีย ครั้งที่ 1 (FNCA-1)

10 – 15 พฤศจิกายน 2543

โรงแรมสุโขทัย กรุงเทพฯ

"พัฒนานิวเคลียร์อย่างปลอดภัย ประเทศไทยก้าวหน้า"

The First Forum for Nuclear Cooperation in Asia

10 - 15 November 2000, BANGKOK

The Sukhothai Bangkok Hotel, South Sathorn, Bangkok

"Future Nuclear Energy and Its Safety in Asia"

คณะทำงานด้านประชาสัมพันธ์และนิทรรศการ FNCA-1 :
โทร. 562-0085, 579-5230 ต่อ 118
โทรสาร 5613013