

OTHER ACTIVITIES

INTERNATIONAL RELATIONS

India along with the member states of IAEA, participated in the international project on “Innovative Nuclear Reactors and Fuel Cycles (INPRO)”.

BARC took an active part in the Regional Co-operative Agreement (RCA)/ IAEA programmes. Evaluation was carried out on selected projects under the joint UNDP/RCA/IAEA project, RAS/97/030, the objective of which was to assess the effectiveness of the training courses for meeting the objectives of the respective projects. Training was offered under IAEA fellowship programmes on various fields. During the year, five RCA/IAEA Training Events/Workshop/ Meeting were hosted.

India has been a designated member of the Board of Governors (BoG) of the International Atomic Energy Agency (IAEA) since the inception of the IAEA. Besides the General Conference of IAEA, India actively participated in other important meetings including Board of Governors, Programme and Budget Committee, Technical Assistance and Cooperation Committee, etc. India was also represented in 11 committees of IAEA related to safety, safeguards, nuclear engineering and applications. India continued to offer training facilities, fellowships, scientific visits, etc. to various countries and trained 31 IAEA fellows. India also made available the services of 53 scientists as experts to various countries under the IAEA Technical Co-operation scheme in the field of peaceful uses of atomic energy. Under Indo-German Bilateral agreement 20 Indian scientists visited Germany and 6 German scientists visited India. Under Indo-French bilateral cooperation 4 Indian scientists visited France and 6 French scientists visited India.

Around 476 scientists/engineers from India participated in international symposia, workshops, conferences and meetings held under the auspices of various international/multinational organisations and the IAEA. India also hosted 13 IAEA meetings/symposia on important issues, such as, Radioisotopes for sediment transport studies; Interventional nuclear medicine; Application of nuclear techniques in the prevention of degenerative diseases in ageing; Electronic networking and outreach; Improved dosimetry procedures in radiotherapy; and Tracers in oil field investigations; Radiation processing of Cellulose and its derivations. 104 participants across the world attended 13 other international meetings hosted by India including World Association of Nuclear Operators - Tokyo Centre (WANO-TC) Governing Board Meeting.



100th series magnet being handed over to Dr. A. Ijspeert, Group Leader, LHC – ICP, by Director, CAT.

On a request from IAEA, India participated in the IAEA's programme for search of orphaned radiation sources in Georgia. Indian experts team joined IAEA to Georgia to ascertain situation regarding the radiological emergency and also supplied medicines costing about Rs. 1,00,000/-. Further, India had supplied 10 Nos. of GM Survey Meters and Aerial Gamma Spectrometry to IAEA costing approximately Rs.3,00,000/-.

As part of continuing collaboration between India and Vietnam in the field of nuclear sciences, "Vietnam - India Nuclear Science Centre (VINSC)" was set up at Dalat, Vietnam and was inaugurated on January 10, 2002. Indigenously designed and manufactured laboratory equipment (worth US \$ 215,000) in the area of radiation measurement, analysis, monitoring, dosimetry and equipment for analytical, biotechnology and electronics were installed by the team of five experts and the Vietnamese scientists/engineers were trained in their operation, use and maintenance. The Centre is being used for training and regular laboratory work.

The three units of DAE i.e. NPCIL, NFC and AMD are members of World Nuclear Association (WNA), a global non-governmental trade organisation concerned with nuclear power generation and all other aspects of the nuclear fuel cycle. WNA also fosters commerce and cooperation within the nuclear industry in promoting the cause of nuclear energy in trans national fora. Our scientists take active part in various WNA activities.

India and the European Organisation for Nuclear Research (CERN) agreed to extend their 1991 cooperation agreement concerning collaborative work in the framework of the development of computing and computational GRID technology for Large Hadron Collider Project

(LHC) by another 5 years with effect from 2002. CERN also granted the status of Observer State to India as the 6th State outside Europe.

The World Association of Nuclear Operators (WANO) so far has completed peer review of four NPCIL Plants namely KAPS, NAPS, Kaiga and RAPS. These peer reviews enable our plants to compare their performance with the best industry practices world wide. A large number of NPCIL engineers have participated in the WANO peer review carried out at various plants in the world.

PLANNING AND MANAGEMENT SERVICES

The information base on the performance of various operating units was maintained and the status of major projects was monitored. The X Five Year Plan for the Department was formulated. Procedure for monitoring X Plan programmes were streamlined. Periodic information reports for the Prime Minister and the Atomic Energy Commission were prepared. Analysis of the periodic performance of various Public Sector Undertakings of DAE were carried out and background papers for their quarterly performance reviews were prepared.

During the year 2002-2003, an online file tracking and monitoring office automation software was implemented at DAE.

The Computer Information and Security Audit Group constituted for the purpose of overseeing the security aspects of the Department's IT infrastructure, continued to function and conducted IT security audits in some Units of the Department.

The Crisis Management Group (CMG) of DAE continued to manage a round-the-clock Emergency Communications Room at the Secretariat, which has multiple communications links with the major facilities of the Department.

USE OF HINDI

This Department is a research oriented organization and the working of it is mainly scientific and technical in nature. Though, the literature in such a high tech area of nuclear science is still not much available in Hindi, efforts however, were made to promote the use of Rajbhasha Hindi in the various disciplines of nuclear science and technology. As in the past, DAE and some of its Units/PSUs continued to hold seminars and talks in Hindi on diverse subjects. In total 35 seminars / talks were organised.

Other activities were as follows:

The Department conducted the Sixth Rajbhasha Sammelan on 15-17 January, 2003 at Indore. A special two-day scientific terminology workshop for DDs / ADs was also organized during the sammelan. The Department and its establishments conducted a Hindi Day / Week / Fortnight and various competitions and programmes were organised during that period with a view to popularize Hindi and encourage employees to use Hindi in their routine official work. Many employees showed keen interest and took part in various competitions, and those attained better positions were awarded prizes.

Progress was also made in the field of implementation of the Official Language Policy of the Union in the Department and its Constituent Units as well as in the PSUs under its control and the same was regularly monitored through meetings of the OLIC and quarterly progress reports. In-service training in Hindi, Hindi typewriting and Hindi stenography was imparted to 606 officials, 205 typists and 29 stenographers respectively.

1395 officials were trained in the Hindi workshops organised by DAE and its Units/PSUs. Under the liberalised Incentive Scheme for writ-

ing original notes and drafts and doing other work in Hindi, 160 officials were given cash awards. In addition to this, 360 officials, 45 typists and 3 stenographers were given cash awards and other incentives for successfully passing the Hindi, Hindi typing and Hindi stenography examinations respectively under the Hindi Teaching Scheme.

Hindi books worth Rs. 3,67,076 were also purchased during the period under review. All Gazette Notifications, Cabinet Notes, Reports and other documents submitted to various committees of the Parliament were as usual prepared bilingually.

The quarterly Hindi Bulletin "Parmaanuu" which is brought out by DAE to disseminate information about its research and development activities, plans and programmes entered its twenty seventh year of publication. The Units and PSUs also brought out souvenirs in Hindi on the proceedings of the seminars / conferences organised by them. The Hindi Vigyan Sahitya Parishad, a voluntary organisation of BARC published a popular Hindi quarterly bulletin "Vaigyanik", Booklets / pamphlets on various subjects related to DAE's activities were also brought out in Hindi under a public awareness programme.

The Department and its Units and PSUs represented in their respective Town Official Language Implementation Committees and implemented the decisions taken at those meetings in their offices. This year, the Parliamentary Committee on Official Language inspected Madras Atomic Power Station. The Rajbhasha Sansthan, New Delhi gave first prize to TAPS in its 45th seminar. The Department conferred Rajbhasha Shield, 2002 to IGCAR, Kalpakkam and UCIL, Jaduguda for doing commendable work in Hindi.

The total strength of Hindi staff at present in DAE and its various Units / PSUs / Aided Institutions

is 111. The total strength of Hindi staff at present in DAE and its various Units / PSUs / Aided Institutions is 111, consisting of Joint Director, Senior Manager, Dy. Directors, Managers, Dy. Manager, Senior Officer, Dy. officer, Assistant Director, Assistant Manager, Hindi officer, Assistant Hindi officer, Senior Hindi Translators and Junior Hindi Translators.

VIGILANCE

The overall responsibility of vigilance activities rests with the Chief Vigilance Officer (CVO) of DAE. To facilitate proper functioning of the vigilance machinery and to establish effective co-ordination amongst the organisations, a senior officer in each Unit has been designated as Vigilance Officer for vigilance functions. In the public sector undertakings, such as ECIL and IREL, full time CVOs are available to co-ordinate vigilance activities. Action is on hand for the appointment of full time CVOs in NPCIL and UCIL also.

Vigilance functions include timely transmission of various vigilance returns to the Department of Personnel & Training/Chief Vigilance Commission (DP&T/CVC), issuance of prosecution sanctions, processing of various vigilance cases, monitoring of the progress of inquiry proceedings, investigations of complaints, and others. In addition, an Annual Action Plan is worked out by all DAE units, and efforts are made to implement the same in the ensuing year.

In the meeting of CVOs/VOs of the Department, it was decided to make efforts towards strengthening of Vigilance Administration, including the effective implementation of various instructions/guidelines issued by CVC.

As per the directives of CVC, Vigilance Awareness Week was observed from October 31 to November 6, 2002 in the Department as well as its constituent Units/Pub-

lic Sector Undertakings/Aided Institutions, by taking the vigilance pledge, arranging lectures, essay competitions, quiz competitions, drawings etc. on vigilance awareness.

Under the guidelines of CVC, nominations of technical experts in the field of purchase, stores, civil, electrical, horticultural works, etc. were being called from Units, for setting up an inspection team to assist CVO in the intensive examination and technical auditing of contractual work. Guidelines were also issued from time to time for improvements in the material procurement system.

Auditing of the transactions of the Department was carried out regularly by concerned agencies.

The overall performance of the vigilance machinery of the Department was very satisfactory.

STAFF RELATIONS/DEPARTMENTAL COUNCILS

During the report period, the industrial relations in DAE organisations remained cordial. Meetings of the Departmental Council and general discussions with the staff representatives were held regularly.

The Industrial Relations at NPCIL Units were peaceful and cordial. The emphasis remained on productivity and production.

Industrial relations in all the heavy water plants remained very cordial.

EMPLOYEES' WELFARE

The Contributory Health Services Scheme (CGSS), for the healthcare of the employees of DAE organisations, is in operation in as many as 12 locations. Recently it has been extended to Hyderabad.

As in the past, the DAE Sports & Cultural Council during the year 2002-2003 continued with its regular activities. Many new activities were also included and the existing facilities were enhanced at many places.

The XVIII DAE Sports & Cultural Meet was organized for 12 events at 8 different locations by the 10 DAE Units. More than 1500 employees took part in these events. Many new playing facilities were developed at various locations, for conducting the meets.

One of the employees from Nuclear Fuel Complex participated in the 11th World Veterans Table Tennis Championship held in Switzerland.

Many promotional activities such as affiliation to various Sports Bodies at the National level and participation of DAE Teams in the All India Tournaments etc. were also carried out and encouraged. Billiards was the new activity started at Mumbai. Capital sports equipment subsidy was extended to many Units for the enhancement of their playing facilities.

Under its Health & Fitness activities, "Healthy Living" programmes and "Yoga" activities were organized at different centers to promote the concepts of healthy living amongst employees. Annual Summer Yoga Camp was held at Mumbai. One day seminar on Alternative Medicine was organised. Two persons were sent for advance training in Yoga techniques and five persons participated in the International Conference on "Yoga Research and Value Education" held at Lonavala. More units were encouraged to setup Fitness Centers for their employees and family members. A new Fitness Centre is being setup at Kota and the most of the existing ones were upgraded. Many modern techniques in this field were tried out on the new equipment in its Pilot Fitness Centre at Mumbai, including the Aerobics.

Annual Summer Sports Camps for school going children were held at most of the Centers, in association with the Atomic Energy Education Society. More than 1200 children took part in these camps. Based on



Dr. Anil Kakodkar, Chairman AEC, with the "AJANTA" Team-overall winner of XVIII DAE Table-Tennis Meet.

these Summer Camps and also out of the earlier ones, about 150 children were selected and were put under further training in different games under the Advance Coaching Schemes of DAE Sports & Cultural Council. Some of these children have been participated at the national & international level. This year one student from Mumbai was selected for Asian Junior Karate Championship held in Tokyo. One girl student from Jaduguda participated in the 64th Junior National & Inter-State Table Tennis Meet held at Chennai. Two children from the nearby "Home for Mentally Deficient Children" were also trained for their participation in the National Games at Kolkata.

In the Nature & Adventure section, the regular DAE Annual Trek "Girisanchar-14" was organized with the approval of the Indian Mountaineering Federation, in the Harishchandragad – Ratangad region of Sahyadri and around 150 persons participated in the same. Four members participated in an expedition to Stok-Kangri Peak. Some employees also attended the advance training courses in these areas.

Under the Fine Art activities,

Hobby Courses in different types of painting were organized. Training in Music and Dance was also imparted at some centres. Subsidy for procurement of musical instrument at AERB was provided. This year also Painting Competition at All India Level was held at Mumbai in association with the AEES, for all the school going children of DAE family and an exhibition of all the prize winning entries was held.

Contributory Health Service Scheme (CHSS)

The Contributory Health Service Scheme provides comprehensive mental and physical health to its employees and their family members. It provides care at the three levels namely Primary Level (Dispensaries), Secondary Level (BARC Hospital), and Tertiary Level (Panel Hospital). There are about 85,000 beneficiaries of the scheme which includes more than 10,000 referrals from outstation DAE units.

During the report period, more than 5,60,000 patients were treated in hospital and dispensaries, family welfare programmes continued, and the database of CHSS population was maintained.

Children Education

Education to the children of the employees of DAE and its constituent units is provided by the Atomic Energy Education Society (AEES). From a modest beginning in the year 1969 with one school in Anushaktinagar, AEES presently administers 30 schools and junior colleges at 15 stations in different parts of India.

During the year under review, AEES achieved several milestones in its pursuit for excellence in academic as well as non-academic areas. Several initiatives taken included like enriching libraries, providing computer aided education, extending better sports facilities and arranging educational programmes for the students.

In the All India Secondary School Examination of March 2002, the pass percentage was 94.84 and in the higher secondary examination, the pass percentage was 92. Five AEC Schools secured hundred percent results while 14 schools crossed 90% mark. Atomic Energy Junior College, Mumbai bagged third rank in the Mumbai division in the merit list. Many schools produced 100% result in various subject in the All India Secondary School Examination examination. AEJC, Mumbai, Kalpakkam, AECS, Kakrapar and Jaduguda (EM) produced 90% and above result in the AISSC examination.

Various infrastructure facilities like auditorium, classrooms and computer laboratories were added in some schools. Three new schools were started functioning at Kalpakkam, Tarapur and Kudankulam. Under the horticulture programme, environmental awareness was inculcated in the students. A rare botanical lab with the flora of the island city of Mumbai was developed.

Efforts are afoot to strengthen the primary education. The pre-pre-

paratory and preparatory classes are running successfully at different centres. The appointment of headmistresses at all centres has brought significant improvement in the primary education. The activity rooms equipped with teaching aids and LCD projectors have revolutionized teaching-learning process in the schools.

AEES has prepared its own textbooks and teachers' guide in English and Mathematics for primary classes. Reader-1 & II for English and Ladder-1 & II for Mathematics are being successfully used by the primary children. At the secondary stage, the strengthening of libraries, science and computer laboratories is an ongoing process. All India Jr. Science and Mathematics Olympiad and AEES Science Exhibition have become regular features.

The academic achievements of students are noteworthy. Master Ravishankar Sundararaman of AEJC, Mumbai won the gold medal in the International Physics Olympiad held at Ball. About 250 students got admission in professional colleges of high repute.

In sports, a student of AECS, Mysore participated in the Asian Youth Chess Championship and got a bronze medal. Several students from AEC Schools participated at National level sports tournament and won prizes. An NCC student of AECS, Mumbai was selected to attend the Republic Day parade. NCC cadets won scholarships and best cadet awards during training camps.

The talent nurture programme for the bright children from rural/tribal areas was expanded to four more centres - Jaduguda, Narwapahar, Indore and Kalpakkam. Under this programme, 285 children from nine centres are getting free education and other facilities.

Two AEES teachers were conferred National Award for the year

2001 for their outstanding contribution in the field of education.

WELFARE OF WOMEN

A women's Cell in BARC set up in 1977, was reconstituted in March 2002. The Cell is headed by a senior woman scientist and consists of other 12 members including Counsellor. During the year a seminar on the theme 'Profiles of progressive women' was held. A Panel discussion was held and four Panel Experts from Medical, Law and Education fields participated in the same.

A new Day Care Centre is being set up at Anushaktinagar, BARC for the benefit of Departmental employees. The Centre, with the active involvement of Women's Cell, will provide basic child-care facilities, library, play materials etc. for the overall development of the children.

The National Board for Higher Mathematics (NBHM) had set up a Committee for Promotion of Mathematics among Women. The Committee's recommendations accepted by the Department cover travel support to a person accompanying women candidates appearing for interviews for NBHM awarded scholarships at the masters or Ph.D. entry level, award of NBHM Special Lecturership to women mathematicians (about five in a year), and Travel Grants to women to attend conferences, short term visiting programmes to universities and research institutes and special leave facilities, and creation of a few NBHM posts (each tenable for a period of three years) which will be available to women mathematicians during the process of their relocation in case of transfer of their spouses.

NPCIL follows all Instructions/Directions issued in respect of Women Welfare and complies with statutory provisions as applicable towards welfare measures. NPCIL has taken all steps to maintain the pride and dignity of the women work-



View from DAE pavilion at the exhibition “Pride of India” of the Indian Science Congress, held at Bangalore during January 3-7, 2003

force and institutionalized it by forming Complaint Committees headed by a Senior Lady Officer in all the units of NPCIL, which ensures addressal of deprivation of Women rights and non-compliance of policy decisions.

NPCIL provides equal employment opportunity to women and women employees are represented at all levels in the organisation. Women employees have been representing in the National/Regional meets of Forum of Women in Public Sector (WIPS-under the aegis of SCOPE) of which NPCIL is a life member.

PUBLIC AWARENESS

DAE, in its perseverance to promote awareness about the peaceful uses of atomic energy in the right perspective, among the public and to keep the public abreast with current developments in this field, organized and participated in a host of programmes, such as, information literature, exhibitions, seminars, essay and quiz contests workshops etc.

DAE has been producing and disseminating information through periodicals and other information literature brought out in English and Hindi. Information is also accessible from the department’s website (www.dae.gov.in)

A number of Public Awareness Seminars were organised in different parts of the country including some far off places like North Eastern Hill University (NEHU), Shillong and Manipur University, Imphal. DAE also participated in many seminars arranged by other organisations by arranging Public Awareness Lectures on Atomic Energy. These included United Schools International, New Delhi, Nagpur University, Nagpur, Indian Institute of Physics, Bhubaneswar, Nehru Centre, Mumbai etc. Large number of Public Awareness Lectures were also delivered on invita-

tion from various organisations, academic institutes etc.

The department organized a workshop for journalists at the Uranium Corporation of India Limited (UCIL), Jaduguda in November 2002. Press meets were organised in some cities for the local and regional press about the activities of the department with special emphasis on those having a direct bearing on the people of the concerned region.

Exhibitions provide an effective platform for communication with masses where an organisation can showcase its recent achievements and the role it plays in National Devel-

Journalists being taken around the tailing pond at UCIL, Jaduguda during a journalists’ workshop organised during November 9-10, 2002



opment. DAE like every year participated in a number of exhibitions through out the country. Some of them are highlighted below.

DAE put up an impressive pavilion in the exhibition 'Science Expo-2003-Pride of India' organised during the 90th session of the Indian Science Congress at Bangalore University, Bangalore during January 2003. The highlights of the exhibition were an actual working laser, the latest ANUPAM Supercomputer and an articulated master-slave manipulator. Over 3 lakh people visited the pavilion.

An exhibition – 'India in Atomic Age' was set up at the Nehru Memorial Museum and Library, Teen Murti House, New Delhi, from August to December 2002. The exhibition included a section on the evolution of the DAE program with pioneering contributions of Late Pandit Jawaharlal Nehru and Late Dr Homi Jehangir Bhabha. The exhibition was highly popular among the visitors to this historical place.

The department also contributed towards setting up of a Science Museum at Andaman and Nicobar Islands by the National Consortium of Science Museums (NCSM). The department also participated in a number of exhibitions arranged by various organisations in different parts of the country. Several hundred visitors including students and teachers from many schools and colleges in and outside Mumbai visited the Permanent Exhibition of DAE at its headquarters at Mumbai.

DAE organises 'All India Essay Contest in Nuclear Science and Technology' in over 10 languages every year since 1989. The 14th such contest was held during the year. The winners of the contest were shown various DAE installations in Mumbai and the Tarapur Atomic Power Station. The winners of the contest were awarded certificates and cash prizes during the Founder's Day Celebra-

tions. A Quiz competition on Atomic Energy was held at Imphal in collaboration with Study Forum for Advanced Technologies (North East Region) and Manipur University, Imphal. The top three winners of this competition were invited to Mumbai and were shown around various DAE facilities along with the winners of the All India Essay Contest.

National Technology Day was celebrated on 11th May and on this occasion, the four Padma Award winners from the department were felicitated. On the same day, a film on the Uranium Corporation of India (UCIL) titled "Jaduguda-Fueling the Growth of the Nation" was inaugurated.

As part of the ongoing activity of neighbourhood development, a contact program was held at Khetolai village of Pokhran Tahsil, Rajasthan in August 2002. The residents of the village were briefed on various peaceful uses of atomic energy. They brought to the attention of the department, a certain mysterious disease which had spread among their cows. DAE brought this matter to the attention of the College of Veterinary and Animal Science, Bikaner, Rajasthan who deputed a team of experts to investigate and their reports concluded that the disease was due to deficiency of Phosphorus and Vitamin-A in that area.

With a view to enhance the awareness of the employees of DAE and its constituent units, several internal public awareness programs like lectures/seminars etc were arranged.

A number of audio visual aids were developed for facilitating the public awareness activities of the department. A film on Uranium Corporation of India Ltd. titled 'Jaduguda Fueling the Growth of the Nation' was completed. Another film on Refurbishment of CIRUS reactor was also prepared. An interactive multimedia film along with a touch screen display system has been

developed. A large number of presentations on various activities of DAE and various issues related to Atomic Energy were also developed.

NPCIL disseminated factual information on nuclear energy to various sections of society through a broad range of public awareness programmes. The NPCIL website was maintained and updated regularly. A hit rate of about 50,000 during the year was registered.

NPCIL also conducted several workshops and seminars and participated in various educational exhibitions.

LIBRARY & INFORMATION

BARC Library grew into a multidimensional information hub, which included a digital library, modern infrastructure and facilities.

Web On-Line Public Access Catalogue (OPAC) interface was improved further. Steps were taken for elaborate bibliographic data validation of Library holdings as well as for developing bar coded Photo Library Membership I-cards. The local Network was also upgraded and the web development and many modules were added to its portal.

For web enabling the digital resources, Citrix Meta Frame and IRIS solutions were implemented. During the year a total of 90 digital resources such as standards, codes, databases, references, encyclopaedia, patents, tutorials etc were made available through Saraswati Intranet.

For accessing the online digital resources on the Internet, an online information gateway "Lakshya" was also implemented.

The Library and Information Services, IGCAR was involved in forming DAE consortium of libraries to access online over 1,500 Journals.

The "Information Resource Management on ANUNET (IRMA)" server with IGCAR Library holdings and full text resources were made available, to various DAE Units.