

NATIONAL SERVICE SCHEME

During the period under report, the enrolment of volunteers in Meghalaya reached 8222, covering 24 colleges and a Post-Graduate Unit, with a total of 38 Programme Officers.

NSS programmes in Meghalaya were adversely affected due to non-receipt of funds from the State Government. Programmes were, hence, centrally organised by the NSS office as there were no funds to release to the colleges for conducting activities in their respective colleges. Some of these programmes were :

1. To mark the occasion of World Environment Day, a tree plantation programme was held on 5th June, 1998 at the approach area to the NEHU Permanent Campus, Umshing. About 100 volunteers of the P.G. Unit participated.
2. As part of the NEHU Silver Jubilee Celebrations, the NSS Cell held a photo exhibition of activities during 9th - 14th November, 1998 at Bijni Complex.

Following the decision taken in the 16th University Advisory Committee meeting, a Local Advisory Committee to facilitate quick and ready advice to the Programme Co-ordinator was constituted in May 1998.

According to reports received till March '99 in Mizoram enrolment of volunteers has reached 13966, covering 29 colleges with a total of 59 Programme Officers. Most of the Programmes conducted in Mizoram centred round the Special Camp Theme 'Youth for Sustainable Development' with emphasis on Watershed Development and Watershed Management. Some of the activities involved were repair of roads, construction of waiting sheds and public benches, construction water-points and watertanks, drainage systems and public urinals. Under Regular Activities, the units participated in various activities such as development of College Campus, beautification and cleanliness drives, awareness programmes relating to AIDS, drug abuse and other issues, blood donation Camps.

Dr. Elizabeth Laitflang, Reader in Political Science, was Coordinator till March 1999 when Dr. R.N. Sharan, Head, Department of Bio-Chemistry took over as Coordinator. Shri U.R. Dutta, Programme Officer, Tura Government College has been appointed as Deputy Programme Co-ordinator, NSS, NEHU for supervision of NSS programme at Tura.

CENTRAL SERVICES

COMPUTER CENTRE

The Centre provides computation facility to faculty members, research scholars and students of the University, and conducts training programmes in computer related subjects and develops software for NEHU administration.

At present, there is a VAX 3100-40 computer system with nine terminals, one network server and nineteen personal computers connected on a LAN. Utilisation of the computer system is on an average 8 hours per day. The total number of users

per day is more than fifteen. Ninety percent of the machine time is devoted to research and teaching, while ten percent is devoted to other work.

Head : Dr. S.N. Rai.

Faculty :

Director : Dr. S.N. Rai, Ph.D (BHU)

Lecturer : Dr. T.K. Sinha, Ph.D (NEHU)

Sr. Systems Analyst : Mr. P.P. Dey, B.Tech (Warangal)

System Analysts : Mr. S. Ghosh, ME (Jadavpur)

Ms. B. Rynjah, B.Tech (Kakinada)

Meetings :

A meeting of the Management Committee was held on 26th August 1998 and decided to start three Certificate Courses of 6 month duration. These courses will commence during 1999.

Courses Conducted :

Computer Courses for IGNOU Students & Training of NEHU personnel. Conducted a Computer Appreciation Course for two persons from USIC, NEHU.

Other Activities :

The Centre assisted in computerised word processing for the Annual Report of NEHU 1998-99 in English and Hindi, and provided technical support for running the E-Mail facility of the University.

Dr. T.K. Sinha taught courses to the M.Sc. students in the Department of Physics, NEHU.

P.P. Dey maintained the software for the Finance Department of the University.

The Centre procured computers, printers, UPS, software from M/s Siemens Nixdorf Information Limited and IBM Inc. With the grants received from U.G.C. for modernisation and strengthening of Computer Centre. The computers from M/s Siemens Nixdorf has been installed in a client server model.

CENTRAL SERVICES

LIBRARY

COMPUTER CENTRE

The University library system comprises of Central Library at Shillong. Campus library at Aizawl and campus library at Tura. Besides there are six departmental libraries located in Sociology, Education, Physics, Mathematics and Chemistry and in the School of Life Sciences the University library has currently 1,66,660 books and 36,895 bound volumes of Journals. The library maintains a special collection on North East India and special efforts are made to acquire all books published in English.

During the last twenty five years, an amount of about Rs. 10 crore has been spent on the collection development in the libraries. Currently, the Central Library has

an annual allocation of Rs. 60 lakhs for periodicals and Rs. 10 lakhs for books spread over all subjects. The library remains open from 9 a.m. through 6 p.m.

The various sections of the library has been connected with Computer network. The library has CDNET, FAX, E-Mail scanner, reprographic facility and audio visual equipment. The library has also created Computer database of books having 25,000 records.

The library also brought out 4 (four) exhaustive bibliographical works on the North-Eastern Region during 1979-1983 which have proved a great help to the research scholars and teachers. These are :

1. Social Science Research on North-East India : a select bibliography, 1979.
2. Nagaland, Arunachal Pradesh, and Mizoram : a select bibliography, 1979.
3. Meghalaya, Manipur, and Tripura : a select bibliography, 1983.
4. Dissertations on North-East India, 1983.

Summary of Basic Data as on 31/3/99 (Shillong Campus only)

Registered users	3122
Foreign Journals subscribed	276
Indian journals subscribed	215
Average No. of readers consulting the library daily	445
Average No. of Books issued daily	373
Books added during 1998-99	1184
Bound volumes of Journals added	131
Sitting arrangement for Library users	225
Annual Budgetary allocation for Periodicals	Rs. 60 lakhs
Annual non-plan allocation for Books	Rs. 10 lakhs
Plan allocation for Books and Journals	Nil

Acquisition of Books and Journals

A tentative cumulative break up of the collection upto 31st March 1999 is as follows :

Major Areas	Volumes
1. Humanities and Social Sciences, Environmental Sciences	105053
2. Physical Sciences	15835
3. Life Sciences	13130
4. Others	28852

Total No. of Books	162870
5. Bound Periodicals	36895
Total (Books and Bound Periodicals)	199765

Publications : Dr. Lalit P Pathak, University Librarian

Books : *Sociological Concepts and Terminology*. New Delhi, Anmol Publishers, 1998 : 484 p.

Journal Articles : "Periodical subscription in the universities : some unsolved problems". *Herald of Lib.Sci.* 36 (3-4), 1997: 191-94.

Seminars/Conferences :

Attended : Dr.Lalit P Pathak, University Librarian, attended a Seminar on Scenarion of Public Libraires in the 21st Century organised by the Rajaram Mohunroy Library Foundation at Guwahati on 23 and 24 April 1998, and also read a paper "Type of Literature Required for Encouraging A Library Movement in India".

HEALTH CENTRE

The Health Centre which was established in 1979, now has two branches (I) at Bijni Complex and (ii) at Permanent Campus, at Shillong and also a branch at Aizawl Mizoram.

The Health Centre caters to the health needs of nearly ten thousand beneficiaries (students, staff and their dependants). And is manned by two Doctors each at Bijni Complex and the Permanent Campus, and one Doctor at the Aizawl Campus. Besides, there are other para-medical staf also attended to each of the Centres.

FACILITIES :

Medical Officers are available for regular consultation at fixed hours as well as for emergency consultations. The Health Centres stock all necessary medicines and dispenses them. Dressings, Injections and Minor surgical operations are done. The regular Immunization facilities are available and the Health Centre participates in the National Pulse Polio Programme every year. The patients requiring in-patient treatment are referred to the Local Hospitals recognised by NEHU. As all specialities are not available in Shillong, some cases are referred to the Hospitals out side the state. The Health Centre maintain the list of voluntary donors from among the NEHU community.

FUTURE PLANS :

There is a proposal to appoint Lab-Technician for doing Pathological and Bio-Chemical investigations. A proposal has also been made by the Health Centres to computerise the services at Health Centres. When the computer is available latest medical information will be tapped through the Inter-Net. A Computerised E.C.G. machine procurement is under process. A thirty bedded Hospital has also been proposed which is expected to come into being at the Permanent Campus, Mawlai.

UNIVERSITY PUBLICATIONS

NEHU Publication Cell was established in 1983 as an autonomous but constituent unit of the University to promote and undertake publications in various areas and for different target groups. It has mainly been concerned with publication of university level textbooks, supplementary reading materials and reference books, research works particular those relating to the north eastern region, and the NEHU Journal of Social Sciences and Humanities. It has also taken up publication of endowment lectures delivered in this university and Official publications like the Acts, Statutes and Ordinances, the Annual Report and the Newsletter. Books of a more

general nature have also been published. Though most of these publications are in English the Cell has also undertaken publishing in local languages. Negotiation are on to tie up distribution of these publications with a reputed distributor. With the installation of a press which became functional from 1991-92 printing of several publications have been done in house. In addition much of the University's requirements of stationery and various types of forms are printed in the press. The Unit is able to advise and assist the University in all matters relating to printing and publishing.

The management of the Cell is vested in a seven member Governing Board with the Vice-Chancellor as its Chairman, and the Director as Member Secretary. To assist and advise on all matters relating to the Press is a Press Advisory Committee consisting of persons with technical expertise from government and local presses.

NEHU Publications is a largely self financing unit, and has developed out of a small investment made at the time of its establishment. Proposals are underway for the proper utilisation of the UGC's publication grant under its Unassignment Grant Scheme. The Press for which there is a separate Press Revolving Fund, is also largely self financing.

The Cell sold books worth Rs. 2,78,504/- during the year under report.

REGIONAL SOPHISTICATED INSTRUMENTATION CENTRE

The Regional Sophisticated Instrumentation Centre at the North-Eastern Hill University, Shillong was inaugurated on the 7th July, 1984. It is sponsored by the Department of Science and Technology, Government of India with the objective of extending sophisticated analytical services to and cultivating an instrumentation culture in the scientific community of the region.

In its 15 years since its establishment, the RSIC has succeeded in making a mark for itself. The Centre has given analytical services to almost all the scientific institutions in the region. These include all Universities, a large number of colleges, almost all Central R&D organisations (ICAR, AMD, RRL.), private institutions (Tea Research, Meghalaya Electronics Development Corporation), and many individuals. The Centre has also been receiving samples from other parts of the country, which include Orissa, North Bengal, Jammu, Kerala, Bangalore and Chennai.

The Centre has been offering repair and maintenance services on instrumentation to the Shillong-based Departments. These include NEHU (from lasers to Photoacoustics), Pasteur Institute (IR, UV), hospitals (X-ray machines, lyophilisers, ECG units). The Centre also offers compressor based services (ACs, dehumidifiers, refrigerators, cold rooms,) as well as computer software and hardware support.

Its Human Resources Development programme has included training workshops and placement opportunities in its different sections for up-to two months duration.

In order to offer value added service to the end user, the staff are encouraged to undertake research. In addition to design and fabrication of small accessories to

increase the versatility of specific equipment, progress has been made in sample preparation techniques, at least one of which has been included in international protocols. A patent application has also been successfully filed by one of the staff members.

Aside from being awarded research grants from the DAE, DST and CSIR, staff members have also been selected for prestigious fellowships like Australian Development Corporation Scholarship (ADCOS), Better Opportunity for Young Scientists in Chosen Areas of Science and Technology (BOYSCAST), Fellow of the Royal Microscopical Society (U.K.), and Fellow of the Indian Chemical Society. Staff members have published over 90 (ninety) research papers in international journals.

Staff members have been recognised to review top scientific journals such as Nature (U.K.), Synth. React. Inorg. Met.- Org. Chem., (U.S.A.), and J. Microscopy (Oxford).

Head : Professor Darlando Khathing

Date of Meetings :

(a) Centre Management Committee : 5th September, 1998 (27th CMC)

(b) Steering Committee : 24th August, 1998 at DST, New Delhi

Other activities :

Organising workshops/providing analytical services to the scientist/researchers/R&D organisations/Universities in the region. Providing Maintenance Services to Institutions within Shillong. This includes Research Instruments, Computers, Chilling Units, A/Cs Refrigerators, cold rooms.

Scientific Officers :

Senior Scientific Officer : T. Chakraborty - M.Sc., Ph.D. (NEHU)

Scientific Officers : T.S. Basu Baul - M.Sc. (Jab.), Ph.D.(N.Bengal)

S. Dey, M.Sc., Ph.D. (NEHU)

T. Job, M.Sc. (NEHU), M.Tech (I.I.Sc.)

B. Dkhar, M.Sc. (NEHU)

Funds received from agencies other than NEHU/UGC : DST 100%

Workshop Organised:

- A) A 3-day regional workshop on Trace Element Analysis was organised from 19th to 21st November, 1998.
- B) A 3-day regional workshop on FT-NMR was organised from 23rd to 25th November, 1998.
- C) A 2-day regional workshop on Scanning Electron Microscopy was organised from 27th to 28th November, 1998.

Publications :

1. Basu Baul, T.S. and Tiekink, E.R.T.(1998). The crystal and molecular structures of $R_2Sn(O_2CR^1)Cl$: $R=Me$, tBu , and Ph ; $-O_2CR^1 = o$ -(2-hydroxy-5-methylphenylazo) benzoate, *Z. Kristallogr.*, **211**, 62-68.
2. Basu Baul, S., Basu Baul, T.S., Rivarola, E., Dakternieks, D., Tiekink, E.R.T., Syng-ai, C. and Chatterjee, A. (1998). Synthesis and characterisation of diorganotin(IV) complexes of N-(2-pyridylmethylene)- arylamines and mutagenicity testing in vivo of $Et_2SnCl.L^4[L^4=N-(2-pyridylmethylene)-4-toluidine]$, *Appl. Organometal. Chem.*, **12**, 503-513.
3. Dakternieks, D., Basu Baul, T.S., Dutta, S. and Tiekink, E.R.T.(1998). Synthesis, characterization, and X-ray structures of diphenyltin (IV) N-(2-hydroxyacetophenone) glycinate, its 1:1 adduct with triphenyl tin (IV) chloride, and related systems, *Organometallics*, **17**, 3058-3062.
4. Willem, R, Verbruggen, I., Gielen, M., Biesemans, M., Mahieu, Basu Baul, T.S., and Tiekink, E.R.T. (1998). Correlating Mossbauer and solution and solid state ^{117}Sn NMR data with X-ray diffraction structural data of triorganotin 2-[(E)-2-(2-hydroxy-5-methylphenyl)-1-diazenyl]benzoates, *Organometallics*, **17**, 5756-5766.
5. Basu Bau, S., Basu Baul, T.S. and Tiekink, E.R.T. (1999). Crystal structure of dichlorodimethyl [N-(2- pyridylmethylene)-3-toluidine]tin, $C_{15}H_{18}Cl_2N_2Sn$, *Z. Kristallogr.* **214**, 207-208.
6. Basu Baul, S., Basu Baul, T.S. and Tiekink, E.R.T. (1999). Crystal structure of dichlorodimethyl[N-(2- pyridylmethylene)-4-toluidine] tin, $C_{15}H_{18}Cl_2N_2Sn$, *Z. Kristallogr.* **214**, 209-210.
7. Basu Baul, S., Basu Baul, T.S., and Tiekink, E.R.T. (1999). Crystal structure of dichlorodimethyl [N-(2- pyridylmethylene)-2-toluidine] tin, $C_{15}H_{18}Cl_2N_2Sn$, *Z.Kristallogr.*, **214**, 211-212.
8. Basu Baul, S., Basu Baul, T.S., and Rivarola, E. (1999). Organotin (IV) complexes of aromatic acid hydrazide: Preparation and Spectroscopic studies, *Synth. React. Inorg. Met. Org. Chem.*, **29**, 215-231.
9. Dey, S. (1998). A Scanning Electron Microscopic study on the body cuticle and associated sensilla of an ant (worker) *Tetraponera rufonigra*, *Proc. Natl. Acad. Sci.* **68**(B), 1.
10. Raghavarman, A.R., Dey, S., Henry R., and Hermann, Jr. (1998). Acidmucopolysaccharides in the body cuticle of the peripatus, *Typhloperipatus weldoni* in relation to the cutaneous mode of sperm transfer, *J. Endocrinol. Reprod.* **1,2**: 82-83, JER. 10.

11. Singh, R.K., Asthana, B.P., Singh, P.R., Chakraborty, T. and Verma, A.L. (1998). Raman study of the vibrational relaxation of the (CN) stretching mode of acetonitrile in Binary liquid mixtures with hydrogen donor solvents, *J. Raman Spectrosc.* 29, 561-566.

Other activities:

Patent Filed

The process of producing the compound "Diethyldichloro(N-(2-pyridylmethylene)-4-toluidine tin) (IV)" is patented (No. awaited) with the help of Patent Facilitating Cell of the Department of Science & Technology, Government of India, New Delhi. The patent is filed in the name of the Registrar, North-Eastern Hill University, Shillong and Dr. T.S. Basu Baul, RSIC, Shillong as the inventor.

Other activities : Dr. T.S> Basu Baul has delivered lectures on the course entitled "Applications of Spectroscopic methods - Application to Inorg. Chemistry" for the III semester M.Sc. students of Chemistry Department (October -November 1, 1998).

UNIVERSITY SCIENCE INSTRUMENTATION CENTRE

The establishment of University Science Instrumentation Centre was approved by the UGC Visiting Team for the Fifth Five Year Plan. USIC facilities were envisaged to cater to the needs of different Science Departments and University Departments for repair and maintenance of equipment, fabrication of different gadgets for scientific research, fabrication of different items of wood and other items in the Mechanical Section. USIC has a large number of sophisticated machines in the Mechanical and Carpentry Sections which have been installed, and are working satisfactorily. Over the years, USIC has been undertaking repair and maintenance of different items and fabrication of many accessories required by user departments. The Centre is well equipped for undertaking various types of jobs in different Sections, and the facilities are being utilised by different Departments of the University. Based on the infrastructure and facilities available, USIC facilities have been upgraded to Level - II based on the recommendation of UGC Visiting Team during 1994-95.

Head : Professor A L Verma

Courses conducted :

Certificate Course : USIC, NEHU jointly with Western Regional Instrumentation Centre, Mumbai conducted a Certificate Course/Training Programme on "Maintenance of Instruments" from 28th October to 3rd November, 1998.

Students intake :	SC/ST/Genl./OBC	Male/Female	Total
	8 15 5	27 1	28

Other activities :

Electronics Section :

The Electronics Section had carried out repair, fabrication of miscellaneous electrical and electronics items for different Science Departments and Sections of the University.

Glass Blowing Section :

This Section undertook repair of glasswares and fabrication of glass items for different departments.

Mechanical Section :

The Mechanical Section of USIC had fabricated some scientific parts for Science Departments, repaired some microscopes, and fabricated miscellaneous steel items for different sections of the University.

Carpentry Section :

This Section had fabricated miscellaneous wooden items for different departments of the University including repairing works.

Faculty :

Professor : A.L.Verma, M.Sc., Ph.D.

Other activities :

USIC had organised a USIC DAY on 8.6.98 as part of the year-long celebration of the 50th Anniversary of the Independence of India. Participants from different departments of the University had attended where demonstrations of the different machines were also conducted.

DEVELOPMENT ACTIVITIES

PLANNING

After the IXth Plan proposal was finalised and submitted to the U.G.C. The Plan proposal was to be bifurcated again by 2/3 and 1/3 rd as required by the U.G.C. However, the calculation was done and submitted to the U.G.C. The Plan proposal has now been approved and received by the University.

The headwise allotment of fund is as below :

1. Spill Over -- Rs. 332.97 Lakhs.
2. New Construction -- Rs. 765.60 Lakhs.
3. Teaching and Non-teaching (Tech) Staff -- Rs. 370.00 Lakhs.
4. Equipment and Teaching Aids -- Rs. 145.00 Lakhs.
5. Library Books -- Rs. 81.80 Lakhs.
6. N.A.A.C. -- Rs. 5.00 Lakhs.

Allocation against item No.6 above, has been made to open a Cell for the National Assessment and Accreditation Council in the University. The notification to open the Cell is due.

Out of the approved Plan grant the following amounts have already been sanctioned during the year.