TERI SCHOOL OF ADVANCED STUDIES
DARBARI SETH BLOCK, INDIA HABITAT CENTRE, NEW DELHI

MINUTES OF THE THIRD MEETING OF THE BOARD OF MANAGEMENT HELD ON 14th JUNE 2001 AT 1400 HOURS IN THE BOARD ROOM

The third meeting of the Board of Management was held on Thursday, 14th June 2001 at 1400 hours in the Board Room.

PRESENT:

The following were present:

Dr R K Pachauri - President (Chairman)
Justice Giridhar Malaviya
Prof R C Malhotra
Mr Champak Chatterjee
Mr C Dasgupta
Dr T P Singh - Director
Lt Col R P Singh - Secretary

Before taking up the Agenda, the Chairman welcomed the Members of the Board and expressed his gratitude to the eminent members for having agreed to guide the destiny of the school with their rich and varied experience. The Chairman also gave a brief background of the evolution of the School.

Item No. 1 **To confirm the minutes of the second meeting of the Board of Management held on 29th August, 2000**

The minutes of the second meeting of the Board of Management held on 29th August 2000 were confirmed, as circulated.

Item No. 2 **To report the matters arising from the minutes of the second meeting of the Board of Management held on 29th August, 2000**

The matters arising out of the previous meeting that were reported were noted.

Item No. 3 **To report the decisions taken by the President on behalf of the Board of Management**

The Board approved the decisions taken by the President on behalf of the Board and resolved as under:

(a) Formation of academic units in the TERI School of Advanced Studies

RESOLUTION NO.BM/01/2001: RESOLVED THAT the TERI School of Advanced Studies will have Faculties of Applied Sciences and Policy & Planning.

RESOLUTION NO.BM/02/2001 : FURTHER RESOLVED that the School will take necessary steps to establish the following Departments and Centres of Research in these faculties.

Faculty of Applied Sciences

- Department of Biotechnology
- Department of Natural Resources
- Department of Energy and Environment
- Centre of Research in Bioresources and Biotechnology
- Centre of Research in Energy and Environment

Faculty of Policy and Planning

- Department of Regulatory Studies
- Department of Public Policy

- Centre of Research in the Regulatory Studies and Governance
- Centre of Research in Policy Analysis

(b) Fee Structure of the M.Phil./M.Tech. and Ph.D. programmes to be conducted at the TERI School of Advanced Studies

RESOLUTION NO.BM/03/2001 : RESOLVED THAT the fee structure of the M.Phil./M.Tech. and Ph.D. programmes for the Academic Year 2001-2002 to be conducted in the School, as at Annexure 3.1, be approved.

The Board of Management suggested that

(i) Foreign students may be admitted to both the doctoral and master's programmes.

(ii) Fee structure for foreign students may be worked out separately and communicated to the UGC for their approval.

(iii) Fee structure for non-degree programme / courses be worked out at the prevailing commercial rates taking into account the professional time that would be spent on the conduct of these programmes / courses.

(c) Nomination to the Finance Committee

RESOLUTION NO.BM/04/2001 : RESOLVED THAT Prof Parthasarathi Shome, RBI Professor, ICRIER, and Air Cmde M M Joshi, Chief Administrative Services, TERI will represent the Board of Management and the Finance Committee of the School.

Item No. 4 To approve the Concept Paper of TERI School of Advanced Studies

A brief presentation on the Concept Paper, circulated at the meeting, was made and the Concept Paper was approved. The approved Concept Paper is enclosed at Annexure 4.1. The Chairman also

mentioned that efforts are being undertaken to establish linkages with reputed foreign universities. In this connection, a delegation from the Yale School of Forestry and Environment Studies, Yale University recently spent one week in the School to explore the possibilities of the type and nature of linkages that could be established to the benefit of both the Institutions.

Action
Director

RESOLUTION NO.BM/05/2001: RESOLVED THAT the Concept Paper of the TERI School of Advanced Studies, as per details given in Annexure 4.1, be approved.

Item No. 5 **To approve signing of Memorandum of Understanding (MoU) between TERI and TERI-School of Advanced Studies**

The Board of Management perused and approved the contents of the Memorandum of Understanding to be signed between TERI and TERI School of Advanced Studies and authorised the Director, TERI School of Advanced Studies to sign it on behalf of the School. It directed that in view of the change in designation of the Director, TERI to Director-General, TERI, the necessary amendment may please be carried out in the Memorandum of Understanding.

Action
Director
Registrar

RESOLUTION NO.BM/06/2001: RESOLVED THAT the Memorandum of Understanding to be signed between TERI and TERI School of Advanced Studies as given in Annexure 5.1 be approved.

Item No. 6 **To recognise TERI's Divisions as Centres of Research**

The recommendations of the Expert Committee were approved.

Action
Director

RESOLUTION NO.BM/07/2001: RESOLVED THAT the report of the Expert Committee set up to consider recognition of the Bioresources and Biotechnology Division of TERI as Centre of Research of TERI School of Advanced Studies, attached at Annexure 6.1, be approved.

Action

RESOLUTION NO.BM/08/2001: FURTHER RESOLVED THAT the Chairman be authorised to approve

President
Director

recommendations of other Expert Committees constituted for the recognition of other Divisions of TERI as Centres of Research, on behalf of the Board of Management.

Item No. 7 **To approve the procedure of appointment of Professionals in TERI as Adjunct Faculty in the TERI School of Advanced Studies**

The Board deliberated on the procedure of appointment of Professionals in TERI as Adjunct Faculty in the TERI School of Advanced Studies and authorised the Director, TERI School of Advanced Studies to appoint all the Research Professionals in recognised Centres of Research, who are involved in guiding Ph.D. students or in other academic activity of the Centre, as Adjunct Faculty provided they satisfy the criteria for Ph.D. supervision. The duration of the appointment of the Adjunct Faculty will be co-terminus with their involvement in the academic activity. All these Research Professionals will continue to receive their salary from TERI and they will be eligible to participate in the School activities as would regular faculty of the School.

Senior Fellows or Fellows in the recognised Centres of Research may be designated as Adjunct Professors, provided they possess the requisite experience and qualification for appointment as a regular Professor in the School.

Action
Director

RESOLUTION NO.BM/09/2001: RESOLVED THAT the Director, TERI School of Advanced Studies be authorised to appoint all the Research Professionals in recognised Centres of Research, who are involved in guiding Ph.D. students or in other academic activity of the Centre, as Adjunct Faculty provided they satisfy the criteria for Ph.D. supervision.

Item No. 8 **To Consider the Revised Guidelines issued by UGC for declaring an Institution as Deemed-to-be-University under Section 3 of the UGC Act, 1956**

Action
Director
Registrar

The Revised Guidelines issued by the UGC to be adopted by the Institutions for grant of Deemed-to-be-University status under Section 3 of the UGC Act 1956 in April 2000 vide their letter no.F.3-8/90 (CPP-I) dated 12th April, 2000 were perused by the members of the Board.

The Board of Management directed that the Guidelines 11, 12, 13, and 15 be noted for compliance.

A copy of the revised guidelines is attached at Annexure 8.1.

Item No. 9 **To consider the UGC recommendations regarding infrastructure and corpus funds of TERI-School of Advanced Studies**

The Board considered the recommendations of the Planning and Monitoring Board which had taken account of the stipulations laid down by the UGC regarding the Infrastructure Facilities and Corpus Fund of the TERI School of Advanced Studies and the following was discussed :

Buildings

(a) **Academic and Administrative Buildings** The Board felt that the requirement of 4000 sq.mts. of Academic and Administrative Buildings, as stipulated by the UGC, is far in excess of what would be required for the TERI School of Advanced Studies. However, in view of the aforesaid stipulations, it directed that a committee be constituted to determine the actual requirement of academic and administrative buildings required for the School and thereafter a four year plan be drawn up for the construction of academic and administrative buildings. The composition of the Committee would be as follows :

(i) Director, TERI School of Advanced Studies
(ii) Chief, Administrative Services, TERI
(iii) Registrar, TERI School of Advanced Studies

Action
Director

RESOLUTION NO.BM/10/2001: RESOLVED THAT a Committee be constituted to determine the actual requirement of academic and administrative

buildings required for the School and thereafter draw up a four year plan for the construction of academic and administrative buildings. The Composition of the Committee would be as follows :

(i) Director, TERI School of Advanced Studies
(ii) Chief, Administrative Services, TERI
(iii) Registrar, TERI School of Advanced Studies

(b) Teacher's residences and a faculty guest house The Board approved the recommendations of the Planning and Monitoring Board that till such time the School's own residential accommodation is constructed, TERI HRA rules be extended to employees of the School.

Action
Registrar
Finance Officer

RESOLUTION NO.BM/11/2001: RESOLVED THAT the TERI HRA rules be extended to employees of the School.

Corpus

The President informed the Board that a minimum Corpus of Rs.three crores, required by the TERI School of Advanced Studies in accordance with the revised guidelines issued by the UGC, would not be difficult to build up. In this connection, he stated that action has already been initiated to raise funds by requesting leading Corporates for endowing Chairs. First such letter has been addressed to Sir Mark Moody-Stuart KCMG, Chairman, Royal Dutch / Shell Group of Companies for setting up an endowed Chair on sustainable energy policy. The endowment requested was for a sum of Pounds Sterling 300,000.

The President also assured that TERI will provide all necessary financial aid to meet the running expenditure of the School and help to build the corpus.

Item No. 10 **To Consider revised Model Memorandum of Association (MoA) / Rules issued by UGC for declaring an Institution as Deemed-to-be-University under Section 3 of the UGC Act, 1956**

Action
Director
Registrar

The Board considered the revised Model MoA / Rules to be adopted by the Institutions for grant of Deemed-to-be-University status under Section 3 of the UGC Act 1956 in April 2000 vide their letter no.F.3-8/90 (CPP-I) dated 12th April, 2000 and approved the changes to be incorporated in the Trust Deed and Rules and Regulations of the TERI School of Advanced Studies.

A copy of the Rules incorporating the changes in the Trust Deed and Rules and Regulations is attached as Annexure 10.1.

Item No. 11 **To approve the annual accounts of the TERI School of Advanced Studies for the financial year 2000-2001**

The statement of unaudited accounts for the financial year ending 31st March, 2001 was placed before the Board of Management for consideration.

The Board of Management ratified the accounts for the year ending 31st March, 2001 and passed the following resolution :

Action
Finance
Officer

RESOLUTION NO.BM/12/2001: RESOLVED THAT the Income and Expenditure Account for the period ending 31st March, 2001 (Unaudited) and the Balance Sheet for the period ending 31st March, 2001 are hereby approved.

Item No. 12 **To approve the expenditure budget of the TERI-School of Advanced Studies**

Action
Finance
Officer

The Board of Management discussed the proposal as approved by the Finance Committee and while ratifying the proposal, directed that the budget be redrafted to indicate surplus / deficit and the same be circulated to the Members of the Board.

Item No. 13 **To review the procedure to be adopted for appointment of Director, TERI School of Advanced Studies**

Action
Registrar

The Board of Management reviewed the procedure that was adopted for appointment of the Director, TERI School of Advanced Studies as given in Clauses 15 (b) (i) and (ii) of the Rules and Regulations of TERI School of Advanced Studies.

It also discussed the proposed procedure to be adopted in future for the appointment of the Director, TERI School of Advanced Studies. The approved procedure is attached at Annexure 13.1.

RESOLUTION NO.BM/13/2001: RESOLVED THAT the procedure as outlined in Annexure 13.1 be adopted in future for appointment of Director, TERI School of Advanced Studies.

Item No. 14 **To delegate Powers to the Director, TERI School of Advanced Studies**

In order to enable the Director to perform his duties, operate accounts and admit students, etc., the Board, empowered vide Clause 5(a) (xxxii) of the Rules and Regulation, delegated certain administrative and financial powers to the Director, TERI School of Advanced Studies

RESOLUTION NO.BM/14/2001: RESOLVED THAT the Director, TERI School of Advanced Studies be delegated the following powers :

Action
Director

(a) The power of the Head of the Department for purpose of rules in the account code, the fundamental and supplementary rules of the Government so far as they are applicable to the business of the School.

(b) To incur expenditure subject to the budget provisions made for the specific purpose.

(c) To approve admission of students to the School in accordance with the procedures laid down by the Academic Council.

Item No. 15 To grant the Status of Professor to the Director, TERI School of Advanced Studies

The Board approved the granting of the status of Professor to Dr T P Singh, Director, TERI School of Advanced Studies. The Board, However, directed that in future when the post of Director of the School is advertised, the fact that the Director would be granted the status of Professor of the School should also be highlighted.

Action
Director
Registrar

RESOLUTION NO.BM/15/2001: RESOLVED THAT the Director, TERI School of Advanced Studies be granted the status of Professor in the TERI School of Advanced Studies.

The meeting ended with a vote of thanks to the Chair.

(R P Singh)
Registrar
Secretary-Board of Management

TERI SCHOOL OF ADVANCED STUDIES
Darbari Seth Block, India Habitat Center, New Delhi

No.:TSAS/CONF/BM/MINS/3/2001 Dated : 28:06:2001

Copy forward to all members of the Board of Management for favour of their comments. They are requested to kindly forward their comments, if any, by 16:07:2001. If no comments are received by that date, it will be presumed that they have no comments to offer and approve of the minutes as recorded.

(R P Singh)
Registrar
Secretary-Board of Management

Annexure 3.1

Fee Structure

A. One time payment (in Rupees)

Item	M.Phil/M.Tech.	Ph.D. Programme
Admission Fee	150	150
Grade Card	150	150
Provisional Certificate	100	100
Student Welfare Fund	200	200
Alumni fee	500	500
Identity Card	100	100
Modernisation Fees	500	500
Dissertation/Thesis Fee	700	1200
Total - A	**2400**	**2900**

B. Semesterwise Fees

Tuition Fees	6000	6000
Registration/Enrolment	300	300
Examination fees	300	300
Internet & Computer	1000	1000
Total – B	**7600**	**7600**

C-Deposits (Refundable)

Institute Deposit	1000	1000
Library Deposit	2500	2500
Total-C	**3500**	**3500**

Total fees payable at the time of Admission	**13500**	**14000**

Note:

1. Each student will be required to take accident insurance for 2 lakhs rupees to cover him/her against accident while working in the School.
2. Hostel Fees will be notified when the facilities are ready.

Annexure 4.1

CONCEPT PAPER –TERI-SAS

The Central Government vide its notification no.F.9-19/95-U-3 dated 5th October, 1999 has declared TERI-School of Advanced Studies (TERI-SAS) as a Deemed-to-be-University under the provisions of Section 3 of the University Grants Commission (UGC) Act of 1956 on the recommendations of the UGC. For this purpose, the UGC has approved the prescribed Rules and Regulations of the TERI-SAS which were communicated to the School vide letter no.F.9-19/95-U.3 dated 7th February 2000. The Deemed-to-be-University status of the TERI-SAS grants the school the rights to confer degrees under the provisions of Section 22 of the UGC Act of 1956. This concept paper analyses the objectives of TERI-SAS, as approved by the Government, and attempts to develop an organisational structure of the School.

1.0 Objectives

1. To provide for institution and training in energy studies, biosciences, environmental sciences, public policy and other such branches of learning as it may deem fit.
2. To provide for research and for the advancement of and dissemination of knowledge.
3. To do all such other acts and things as may be necessary or desirable to further the objects of the School. These may include, inter alia,

   (i) Establishment of and participation in collaborative activities with other educational institutions in and outside the country.

   (ii) To sponsor and organize teaching and training programmes, conferences and seminars on subjects of theoretical or practical relevance to the course of study; and

   (iii) To establish, acquire and maintain facilities such as offices, residential accommodation for staff, hostel for students, etc.

1.1 Objective 1

Objective 1 does not specify whether the institution be set up for imparting instruction to a formal degree/diploma or not. It is, therefore, implied that the school may run degree/diploma as well as non-degree/diploma programmes e.g short term courses, summer schools etc. The school being a school of advanced studies, all programmes in the school must necessarily be at the post-graduate level.

A provision has been made in this objective to add other branches of learning and suitable powers have been given vide clause 5(a) xxxiii of the rules to the Board of Management to establish, on the advice of academic

council, divisions, departments for academic work and functions of the school. The academic council vide clause 8(b) xiii is also authorised to make periodical review of the activities of the departments/centres and to take appropriate action. These provisions point to the need of setting up of a periodic review mechanism.

In light of the above analysis, objective 1 resolves into the following components:

1.1.1 To offer instructions in energy studies, biosciences, environmental sciences and public policy and other branches of learning at the post graduate level;
1.1.2 To offer degree/diploma as well as non-degree diploma programmes at post graduate level;
1.1.3 To make periodic evaluation of its Courses and programmes
1.1.4 To review, develop and update its curriculum so that the instruction remains at the cutting edge of knowledge/ Technology.

1.2 Objective 2

Objective 2 asks for the provision of facilities to carry out research and for the advancement and dissemination of knowledge. These facilities could be degree oriented e.g M.Tech., M.Phil., Ph.D or delinked from a degree/ diploma.

Advancement and dissemination of knowledge have been clubbed in this objective with a view to highlight the necessity of dissemination of the advancements.

In light of the above comments, we can split the objective 2 into the following :

1.2.1 To provide facilities for postgraduate study and research leading to postgraduate degrees like Ph.D. M.Tech., M.Phil., Post Graduate Diplomas, etc.
1.2.2 To provide facilities to disseminate the advancements.

1.3 Objective 3

This objective lists some of the actions which are necessary or desirable to achieve the above mentioned objectives. It has three components :

1.3.1 Objective 3 (i)

This component chooses collaboration with other educational institutions as a mechanism to further the objects of the school.

TERI-SAS has been conceived by the researchers and professionals of TERI. The areas specified in the objectives for the

TERI-SAS are the same in which TERI's expertise is recognised internationally. TERI has built world class infrastructure for carrying out research, development, design and demonstration work in these areas. The rules and regulations of the school vide clause 28 also place the responsibility of meeting the costs, charges, expenses, shortfall/ deficit on TERI. Therefore it is desirable that special links be created between TERI and TERI-SAS in order to take advantage of the knowledge of TERI's professionals, infrastructure and experience in evolving, running and updating the courses in the School. It is also desirable that we include DST recognised research and development establishments in addition to other educational institutions for establishing collaborative links.

Objective one lists the areas of work of the school as energy studies, biosciences, environmental sciences and public policy. These areas have been researched and developed in TERI to actively promote technologies, policies, and institutions for efficient and sustainable use of natural resources. The academic work in some of these areas will require field studies involving collection, analysis and interpretation of data which is usually available either with government departments or with NGOs. Therefore, collaborative links with Government departments and NGOs will be necessary to achieve the objectives of the school. In view of the above analysis, Objective 3(i) can be split into the following components

1.3.1.1 To foster special links with TERI to meet the objectives of the TERI-SAS.

1.3.1.2. To develop collaborative links with other educational institutions and R&D establishments, Government departments and NGOs in the country.

1.3.1.3 To develop collaborative links with other educational institutions and R&D establishments and NGOs outside the country.

1.3.2 Objective 3 (ii)

This component defines the mechanism of dissemination of knowledge which can be further split into following sub components

1.3.2.1 to offer degree/diploma as well as non-degree diploma programmes at post graduate level;(same as 1.1.2)

1.3.2.2to organize short term programmes relevant to the area of studies in the school.

1.3.2.3to sponsor and organize conferences and seminars of theoretical and practical interest.

1.3.3 Objective (iii)

This objective highlights the need to provide office as well as residential accommodation for staff and, hostel for the students as a necessary prerequisite to achieve the objectives of the school. The provision of residential accommodation both for the students and the faculty is incomplete without the necessary facilities for extracurricular activities which need to be provided for well rounded education of the students. This objective can therefore, be split into following executable actions:

1.3.3.1 to provide offices for the faculty and classrooms for teaching.
1.3.3.2 to provide computer room with internet facilities.
1.3.3.3 to provide residential accommodation for the students.
1.3.3.4 to provide residential accommodation for the faculty.
1.3.3.5 to provide facilities for extracurricular activities.

2.0 Evolving Appropriate Organisational Structures

2.1 Summary of the executable actions

In the last section the objectives of the school have been analysed in terms of executable actions. These are:

1.1.1 to offer instructions in energy studies, biosciences, environmental sciences and public policy and other branches of learning at the post graduate level;
1.1.2 to offer degree/diploma as well as non-degree/ non-diploma programmes at post graduate level;
1.1.3 to make periodic evaluation of its Courses and programmes;
1.1.4 to review, develop and update its curriculum so that the instruction remains at the cutting edge of knowledge/ Technology.

1.2.1 to provide facilities for postgraduate study and research leading to postgraduate degrees like Ph.D ,M.Tech., M.Phil., Diploma.S.A.S. etc.
1.2.2 to provide facilities to disseminate the advancements.

1.3.1.1 to foster special links with TERI to meet the objectives of the TERI-SAS.
1.3.1.2 to develop collaborative links with other educational institutions and R&D establishments , Government departments and N.G.Os within the country
1.3.1.3 to develop collaborative links with other educational institutions and R&D establishments and N.G.Os outside the country.

1.3.2.1 to offer degree/diploma as well as non-degree diploma programmes at post graduate level;(same as 1.1.2)

1.3.2.2 to organize short term programmes relevant to the area of studies in the school.
1.3.2.3 to sponsor and organize conferences and seminars of theoretical and practical interest.

1.3.3.1 to provide offices for the faculty and classrooms for teaching.
1.3.3.2 to provide computer room with internet facilities.
1.3.3.3 to provide residential accommodation for the students.
1.3.3.4 to provide residential accommodation for the faculty.
1.3.3.5 to provide facilities for extracurricular activities.

The above actions relate to:

(a) Teaching and Academic Research
(b) Collaborative links with TERI
(c) Collaborative links with other organisations
(d) Space for offices, classrooms, residential accommodation for faculty and students and extracurricular activities

2.2 Evolution of Organisational structure

The concept paper will focus on the first and second points mentioned above, to evolve an organisational structure that will facilitate the achievement of the objectives of the TERI-SAS.

2.2.1 Teaching and Research

All actions relating to offering instruction at postgraduate level, revision of curriculum and setting up infrastructure for research, establishing linkages with other organizations is a traditional role of a university and is handled by departments. The following activities can be ascribed to this stream of action:

(a) Teaching both degree and non-degree courses at postgraduate level in Energy, Environment, Bio-sciences and Public Policy and other branches of learning.(1.1.1, 1.1.2, 1.3.2.1, 1.3.2.2)
(b) Review and updating of programmes / courses their curricula and laboratory facilities so that the instruction remains at the cutting edge of technology.(1.1.3,1.1.4)
(c) Establish collaborative links with other institutions in and outside the country for placement of graduates, faculty development and for promoting R&D activities in general.(1.3.1.1 to 1.3.1.3)

In this stream of action the work is related to teaching in its entirety, from short term courses to Ph.D. research and to

curriculum development. Clearly, continued contact with students is the central theme of all such activity, which implies that the teaching faculty involved must be available to the students on the campus or through the School's website on the internet.

2.2.2 Special link with TERI

The development of special link with TERI which is involved in technology development and industrial R&D is also one of the executable actions. TERI has contact with corporate world, industry, national and international funding agencies and takes up projects for the development of needed technological know-how and backup. This clearly requires frequent visits to industry/organizations, quick response time and well planned activity that is compatible with industrial requirements.

Professionals in TERI are also Co-supervising Ph.D, M.Phil and M.Sc. projects of students registered in other universities. The results of their own work and that of their students are published in refereed journals. The school should take advantage of the expertise and scholarship of the TERI professionals by recognizing the divisions in TERI as centers of research for carrying out project work. The Professionals in the center can be offered joint appointments at the professorial level provided they have significant achievements in academic research and teaching and in technology / policy development (Selection procedure for making such appointments as per rules and regulations of TERI-SAS) and adjunct faculty positions at other levels. The professionals who hold joint appointments can spend up to 40% of their time in guiding projects of Ph.D./Master's students, teaching specialised courses and other activities in the school. TERI professionals would charge the time spent on TERI-SAS work against a TERI project code created for that purpose.

The Professors in the centres can hold administrative positions in the school and shall enjoy all the privileges under the rules and regulations of TERI-SAS.A similar provision be made in the TERI-SAS rules so that staff appointed in the school can be given joint appointment to work on sponsored Research and other projects of TERI.

2.2.3 Conclusion

It can be concluded that TERI-SAS needs to support an appropriate number of departments. These departments will have

full time faculty, adjunct faculty and professors holding joint appointments between TERI and TERI-SAS. The divisions in TERI may also be recognised as centres of research for carrying out postgraduate student projects. The research work of these students will need to be monitored by research committees within the School. A suitable structure for managing common laboratories and facilities will need to be evolved so that students work gets top priority.

The Departments and Centres for Research may be categorised to constitute two Faculties in the School, namely the Faculty of Applied Sciences and the Faculty of Policy and Planning. The Departments/ Centres for Research in each Faculty shall be as determined by the Board of Management from time to time.

3.0 Organisational Structure

The ideas of organisational structure, which have been developed in the previous section, can now be firmed up taking into account the special relationship the school enjoys with TERI. The major components in the school shall be departments and recognised centres of research in TERI. The staff working in the centres of research will be eligible for joint appointment in the school at the professor's level and as adjunct faculty at other levels.

3.1 Departments

3.1.1 Creation

1. When teaching and research are required to be initiated in energy, environment, bio-sciences, public policy and other areas of learning at the post graduate level.
2. Sustained funding is assured.

3.1.2 Main functions

1. Teaching at postgraduate level
2. Academic research including guiding of Ph.D. and M.Tech./ M.Phil. students.
3. Curriculum and laboratory development.
4. Sponsored R&D and consultancy.

3.1.3 Winding up

When the need for teaching in the discipline ceases.

3.1.4 Composition

1. Faculty positions, Full time and part time, including adjunct faculty engaged in supervising Doctoral Projects.
2. Administrative staff, technical staff

3.1.5 Infrastructure

Space for class rooms and laboratories: faculty rooms: secretarial facilities and stores. A separate budget under the control of the Head.

3.1.6 Activities

1. **Primary activities**: Teaching and academic research: Major faculty time spent on teaching, academic research, curriculum development. Research mainly open ended emphasis on high quality research publications, generation of instructional resource material and development of courses incorporating latest technological developments. Need to be in Delhi during the academic session.

2. **Secondary Activities**: Sponsored Research and consultancy. Maximum time 40%.

3.1.7 Administration

Head (From amongst Joint appointees from the centres and the Faculty in the department), Master's Programme Coordinator

3.1.8 Committee Structure

- Board of Studies (as per clause 13 of TERI-SAS rules)
- Student Research Committee
  An advisory committee, with participation from industry and appropriate faculty from other school departments and centres of research for monitoring activities and for long term planning and providing inputs to the School's Planning and Monitoring Board

3.1.9 Miscellaneous

1. Adjunct faculty from outside.
2. Curriculum Monitoring and Development cell with user/industry participation.
3. Faculty evaluation according to the stated functions of the department.
4. Each Ph.D. student to have an advisory committee nominated by his supervisor(s) and drawn from the parent department and other relevant centres. The committee will regularly monitor the progress of the student and appropriately advise the Board of Studies.

3.2 Recognised Centres of Research

3.2.1 1. Eligibility for Recognition

Existing Divisions in TERI (manned by at least 2/3 professionals having Doctorate degrees) carrying out R&D projects sponsored by industry and S&T funding agencies.

2. Authority for recognition

Board of Management on the recommendation of expert committee appointed by the Academic council.

3.2.2 Academic Functions of the Centre of Research

1. Participation in M.Tech. and research programmes : running specialised pre Ph.D. courses: and guiding Ph.D. scholars / Master's students registered in the School on developmental topics.
2. Continuing education programmes to disseminate modern technical know-how.

3.2.3 Composition

1. Faculty with Joint appointments between TERI and TERI-SAS, including adjunct faculty engaged in supervising Doctoral Research.
2. Administrative staff.

3.2.4 Activities

1. Primary activities: Sponsored R&D and technology including technology transfer. Research mainly goal oriented and supported by group activity and extensive interaction, within and outside TERI.
2. Secondary activities: teaching, academic research (Participation in the teaching programmes of the school and guiding of Ph.D students. Total time spent on secondary activities not to exceed 40%)

3.2.5 Administration

Head (From amongst the joint appointees and adjunct faculty from the Centres)

3.2.6. Committee Structure

- Board of Studies
- Student Research Committee

3.2.7 Miscellaneous

1. Each Ph.D. student to have an advisory committee (SRC) nominated by his supervisor(s) and drawn from departments / recognised centres of research.
2. Guiding of Ph.D. research is not a primary activity envisaged for the recognised centres of research. It is recognised that such activity is essential for professional development of centres faculty. The maximum number of students therefore needs to be limited.

3.3 M.Tech/ M.Phil Programmes

All master's programmes which require the use of laboratories of TERI need to be run jointly by departments with the assistance of recognised Centers of Research.

3.3.1 Criteria for creating a joint Master's Programme

1. To Propagate and Promote the findings of TERI
2. To meet Industrial manpower requirements in specific fields identified on the basis of in house survey or on the basis of forecast by industry Federations.
3. Adequate funding is available to run the programme for around 3-5 years.

3.3.2 Master's Programmes

They need to be managed and shall require:

(a) **Infrastructure:**

(i) Laboratories

(ii) Separate budget under the control of the coordinator to be allocated to the common facilities/ laboratories for running or augmenting the laboratories needed by the Master's programme.

(iii) Suitable space and secretarial staff for Coordinator, along with designated class room space for the programme.

(b) **Activities**

Teaching at Master's level and supervision of projects

(c) **Administration**

Programme Coordinator, appointed on rotation basis from participating departments of TERI-SAS / recognised Centers of Research, having full executive powers including financial powers.

(d) **Committee structure**

1. A Programme Execution Committee (PEC) with coordinator as Chairman and participating faculty as members. This committee will be responsible for admissions, running of courses, moderation of grades and all day to day academic matters.

2. Programme Advisory Committee (PAC) consisting of coordinator and Heads of respective units in TERI and TERI-SAS. The committee will be responsible for ensuring infrastructural inputs to the programme and also for monitoring the status of the programme. A yearly review may be conducted to provide appropriate feedback to the PEC and to the academic council for implementation.

3.4 Organisation of Common Facilities

The users of Common laboratories and facilities could be:

(a) TERI's professionals
(b) Ph.D students of TERI-SAS.
(c) Master's students of TERI-SAS

These Laboratories/facilities will need to be managed as common facilities.

Each Laboratory/ facility will be administered by an In-charge drawn from TERI or TERI-SAS and will be provided with adequate technical staff and budget for day to day operation and for up-gradation. The in-charge will be under overall control of the Dean of the Division in TERI of which this facility is part of. The common facilities will have an advisory committee with adequate representation from TERI and TERI-SAS user divisions/departments

The committee will be responsible for:

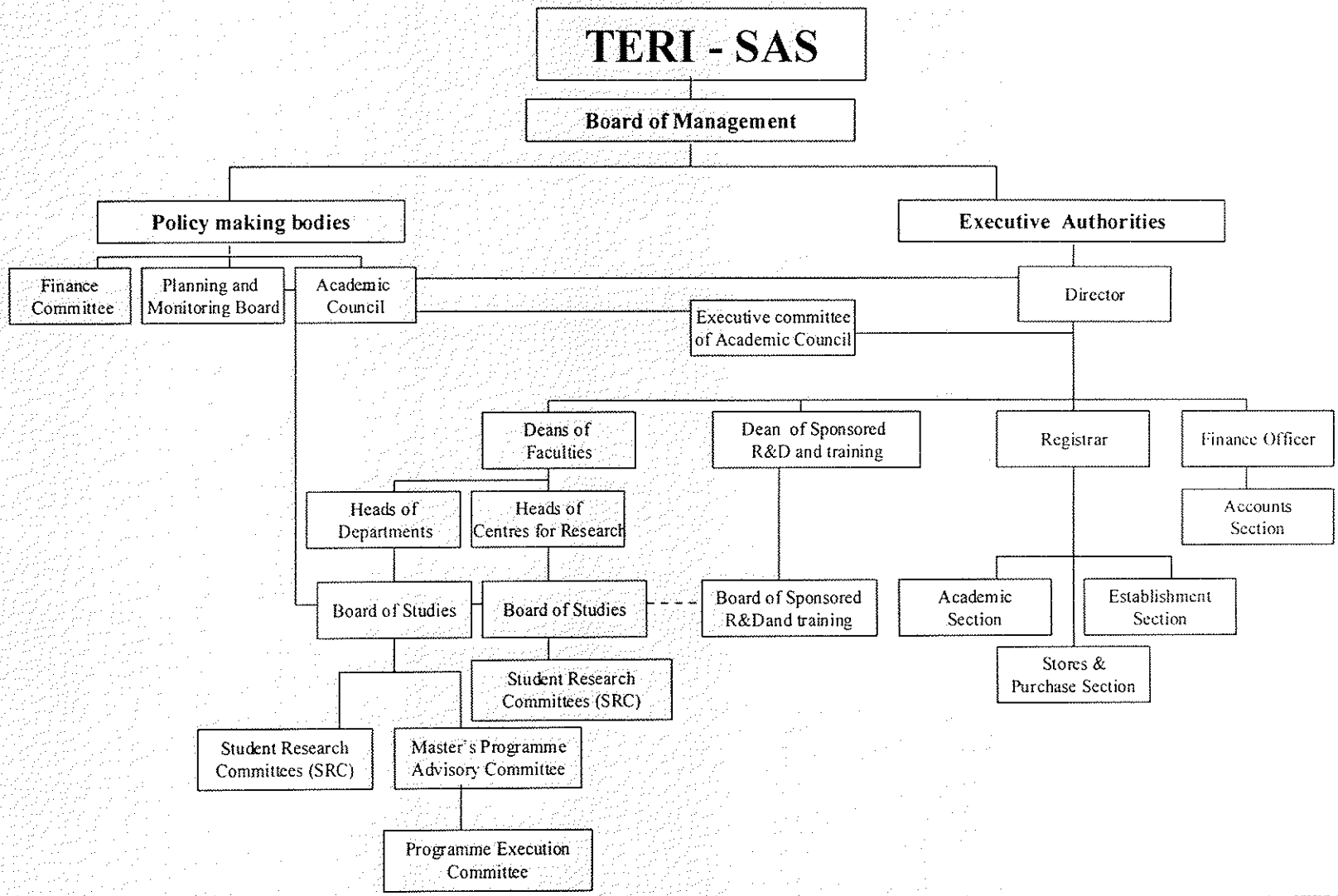
1. Defining operating norms and schedules.
2. Planning for up-gradation and modernisation of the facility / Laboratory to keep it responsive to the need of users.

3.5 The organisational structure, evolved in the above paras along with the Policy making bodies and executive authorities, as provided for in the rules and regulations of TERI-SAS is enclosed as Annexure 1.1.

Dean Sponsored Research, Development and Training and Executive Committee of Academic Council, consisting of Heads, Deans, and Registrar as the Secretary, is also included at the appropriate place in the organisational chart.

Information on Composition and Powers / Responsibilities of various committees referred to in the Organisational Chart may be seen at Annexure 1.2.

Annexure 1.1



Note : There is a provision of an Advisory Committee with one of the member of UGC as Chairman for an initial period of ten years to help in academic planning and growth of TERI-SAS

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COMPOSITION AND POWERS/ RESPONSIBILITIES OF VARIOUS COMMITTEES

1. BOARD OF MANAGEMENT

The Board of Management shall be the principal organ of management in the Institute.

Composition of the Board of Management

The Board of Management shall consist of:

(i) President (Director of TERI, ex-office-Chairperson)
(ii) Director
(iii) Deans of Faculties (if any)
(iv) Three nominees of the President
(v) One nominee of the Chairperson, UGC
(vi) One nominee of the Government of India.
(vii) Three teachers (Professor, Associate Professor, Assistant Professor) (by rotation) according to seniority.

The Registrar shall be the non-member Secretary.

Powers

The Board of Management shall be the principal executive body of the School and shall, in addition to all powers vested in it have the following powers:

(i) To manage and administer the revenues and properties of the School and to conduct all administrative affairs of the School not otherwise specifically provided for.
(ii) To create teaching and academic posts, to determine number, qualifications and cadres thereof as approved by the University Grants Commission and the emoluments of such posts in consultation with the Finance Committee.
(iii) To appoint such Professors, Associate Professors, Assistant, Professors and other academic staff as may be necessary on the recommendation of the Selection Committee.
(iv) To lay down the duties and conditions of service of the Professors Associate Professors, Assistant Professors and

other academic staff maintained by the School, in consultation with the Academic council.

(v) To provide for appointment of Visiting Fellows and Visiting Professors.

(vi) To create administrative, ministerial and other necessary posts in terms of the cadres laid down or otherwise and to make appointment thereof in consultation with the Finance Committee.

(vii) To grant leave of absence to the Director of the School or any other officer of the School and to make necessary arrangements for carrying on the functions of the officers proceeding on leave during their absence.

(viii) To regulate and enforce discipline among the employees of the School and to take appropriate disciplinary action, wherever necessary.

(ix) To manage and regulate the finance, accounts, investments, property and all other administrative affairs of the School and for that purpose to appoint such agent or agents as it may deem fit.

(x) To entertain and adjudicate upon and, if thought fit, to redress any grievances of the employees and students of the School.

(xi) To select an emblem and to have a common seal for the School and to provide for the custody and use of such seal.

(xii) To institute Fellowships, including Travelling, Fellowships, Scholarships, Studentships. Medals and Prizes in accordance with the bye-laws to be framed for the purpose.

(xiii) To amend and receive payment of fees and other charges.

(xiv) To appoint such committees for such purpose and with such powers as the Board of Management may think fit and to co-opt such powers on these committees as it thinks fit.

(xv) To appoint Auditors for the ensuing year.

(xvi) To open account or accounts of the School with one or more scheduled banks and to lay-down the procedure for operating the same.

(xvii) To manage the finances, accounts, investments, moveable properties, business and all other administrative affairs of the School.

(xviii) To issue appeals for funds for carrying out the objects of the Schools and consistent with the provisions of the objects clause of the School to receive grants, donations, contributions, gifts, prizes, scholarships, fees and other moneys, to give grants and donations, to award prizes, scholarships etc.

(xix) To purchase, take on lease or accept as gift or otherwise any land or buildings or works which may be necessary or convenient for the purpose of the School, and, on such terms and conditions as it may deem fit and proper and to construct or alter and maintain any such buildings or works.

(xx) To draw and accept and make and endorse discount and negotiate Government of India's and other promissory notes, bills and exchange cheques or other negotiable instruments.

(xxi) To transfer or accept transfers of any moveable property on behalf of the School.

(xxii) To advise the Holding Trustees on matters regarding acquisition management and disposal of any immovable property on behalf of the School.

(xxiii) To provide building or buildings, premises, furniture, fittings, equipment, appliances and other facilities required for carrying on the work of the School.

(xxiv) To execute in consultation with the Holding Trustees conveyance, transfer, Government Securities, reconveyance, mortgages, leases, bonds, licences and agreements in respect of property, moveable or immovable, belonging to the School or to be acquired for the purposes of the School.

(xxv) To appoint, in order to execute an instrument or transact any business of the School, any person as attorney of the School, with such powers as if may deem fit.

(xxvi) In consultation with the Holding Trustees, to raise and borrow money on bonds, mortgages, promissory notes or other obligations or securities founded or based on any of the properties and assets of the School or without any securities and upon such terms and conditions as it may think fit and to pay out of the funds of the School, all expenses, incidental to the raising of money and to repay and redeem any money borrowed.

(xxvii) To invest the funds of the School or money entrusted to the School in or upon such securities and in such manner as it may deem fit and from time to time transpose any investment.

(xxviii) To maintain a fund to which shall be credited:

(aa) All moneys provided by the Central or State Governments or the UGC.

(ab) All fees and other charges received by the School.

(ac) All moneys received by the School as grants, gifts, donations, benefactions, bequest or transfers and,

(ad) All moneys received by the School in any other manner or from any other source.

(xxix) To deposit all moneys credited to the fund in scheduled banks or to invest them in consultation with the Finance Committee.

(xxx) To maintain proper accounts and other relevant records and prepare Annual Statements of Accounts including the balance-sheet for every previous financial year, in such form as may be prescribed by the Regulations/Bye-laws.

(xxxi) To constitute, for the benefit of the teaching, academic, technical, administrative and other staff, in such manner and subject to such conditions as may be prescribed by the Bye-laws such as pension, insurance, provident fund and gratuity as it may deem fit for the benefit of the employees of the School and to aid in the establishment and support of Association, Institutions, Funds, Trusts and Conveyances calculated to benefit the staff and the students of the School.

(xxxii) To delegate all or any of its powers to any committee or sub-committee constituted by it or to the Director of the School or to any other person.

(xxxiii) To establish, on the advice of the Academic Council, Divisions and Departments for the Academic work and functions of the School and to allocate areas of study, teaching and research to them.

(xxxiv) To conduct examinations or tests for admission to the courses taught in the School, to conduct examinations for Degrees and Diplomas and to declare the results of such examinations and tests and to confer, grant or award Degrees, Diplomas, Certificates and other academic titles and distinctions.

(xxxv) To establish, maintain and manage hostels for the students of the School.

(xxxvi) To fix the emoluments and travelling and other allowances of examiners, moderators, tabulators and such other personnel appointed for examinations in consultation with the Academic Council and the Finance Committee.

(xxxvii) To recognise and maintain control and supervision on hostels owned and managed by other agencies for the students of the School and to rescind such recognition.

2. ACADEMIC COUNCIL (AC)

The Academic Council shall be the principal academic body of the School and shall, subject to the provisions of the Memorandum of Association and the Rules and Bye-laws shall have the control over and be responsible for the maintenance of standards of education, teaching and training, inter-departmental co-ordination, research, examinations and tests within the School and shall execute such other powers and perform such other duties and functions as may be prescribed or conferred upon it by the rules and Bye-laws.

Composition of Academic Council

The Academic Council shall consist of the following persons, namely:

(i) Director of the School

(ii) Deans of Faculties, if any

(iii) Heads of the Departments of the School

(iv) Professors other than the Heads of the Departments

(v) One Reader from each department other than the Head of the Department by rotation in the order of seniority nominated by the Director of the School.

(vi) One Lecturer from each department by rotation in the order of seniority nominated by the Director of the School.

(vii) Not more than five persons amongst educationists of repute or persons from any other field related to the activities of the School who are not in the service of the School, nominated by the President.

(viii) Not more than five persons who are not members of the teaching staff co-opted by the Academic Council for their specialised knowledge.

The term of members other than ex-officio members shall be two years, provided that the term of the members under (vi) and (vii) above shall be one year.

Powers of Academic Council

The Academic council shall be the principal academic body of the School and shall, in addition to all other powers and duties vested in it, have the following powers and duties viz:

(i) To exercise general supervision over the academic work of the School and to give direction regarding methods of instructions, evaluation or research or improvements in academic standards.

(ii) To promote research within the School, acquire reports on such researches from time to time.

(iii) To consider matters of academic interest either on its own initiative or at the instance of the Board of Management and to take proper action thereon.

(iv) To make arrangements for the conduct of examinations in conformity with the bye-laws

(v) To maintain proper standards of the examinations

(vi) To recognise diplomas and degrees of Universities and other institutions and to determine equivalence with the diplomas and degrees of the School.

(vii) To prescribe courses of study leading to degrees and diplomas of the School

(viii) To appoint examiners, moderators, tabulators and such other personnel for different examinations.

(ix) To suggest measures for departmental co-ordination

(x) To make recommendations to the Board of Management on:

(aa) Measures for improvement of standards of teaching, training and research

(ab) Institution of Fellowships, Travelling Fellowships, Scholarships, Medals, Prizes etc.

(ac) Establishment or abolition of departments / centres and

(ad) Bye-laws covering the academic functioning of the School, discipline, residence, admissions, examinations, award of fellowships and studentships, freeships, concessions, attendance etc.

(xi) To appoint sub-committees to advise on such specific matters as may be referred to it by the Board of Management.

(xii) To consider the recommendations of the sub-committees and to take such action (including making of recommendations to the Board of Management) as the circumstances in each case may require.

(xiii) To take periodical review of the activities of the Departments / Centres and to take appropriate action (including making of recommendations to the Board of Management) with a view to maintaining and improving the standards of instruction.

(xiv) To exercise such other powers and perform such other duties as may be conferred or imposed upon it by the rules and bye-laws

(xv) To recommend institution of Teaching posts, Professors, Readers and Lecturers to the Board of Management.

3. FINANCE COMMITTEE (FC)

Composition of Finance Committee

The finance committee shall consist of the following members:

(a) Director of the School – Chairman

(b) A person nominated by the President

(c) Two nominees of the Board of Management one of whom shall be a member of the Board

(d) A representative of the UGC

(e) A representative of the Central Government

Powers of the Finance Committee

(a) The Finance Committee shall meet at least twice a year to examine the accounts and to scrutinise proposals for expenditure

(b) The annual accounts and financial estimates of the School shall be placed before the finance committee for consideration and thereafter submitted to the Board of Management together with the comments of the Finance Committee for approval.

(c) The Finance Committee shall fix limits of the total recurring expenditure and the total non-recurring expenditure of the year based on the income and resources of the School. No expenditure shall be incurred by the School in excess of the limits so fixed.

(d) No expenditure other than that provided in the budget shall be incurred by the School without the approval of the Finance Committee.

(e) To recommend to the Board of Management the creation of all types of posts.

4. ADVISORY COMMITTEE (Ad. Com.)

For a period of first ten years after the conferment of deemed university status the institution will have an Advisory Committee under the Chairmanship of person nominated by the UGC from among members of the commission including Vice-Chairman. The Advisory Committee will include the Director of the School and its senior faculty alongwith one expert nominated by the UGC to help its academic planning and growth.

5. PLANNING & MONITORING BOARD (PMB)

The Planning and Monitoring Board shall be the principal Planning Body of the School and shall be responsible for the monitoring of the development programmes of the School.

Composition

The Director of the School shall be the Chairman of the Planning and Monitoring Board. It will include all Deans of the School, the Registrar, and two outside experts, including one nominee of the UGC.

Powers of the Planning & Monitoring Board

(a) The constitution, powers and functions of the Planning and Monitoring Board shall be prescribed by the Bye-laws.

(b) The Planning & Monitoring Board would have the right to advise the Board of Management and the Academic Council on any matter which it considers necessary for the fulfillment of the objectives of the School.

(c) The recommendations of the Planning and Monitoring Board shall be placed before the Board of Management for consideration and approval. Proposals relating to academic matters may be processed through the Academic Council.

6. BOARD OF STUDIES (BoS)

Composition

(a) There shall be one Board of Studies for each Faculty Department of the School

(b) The Board of Studies of each Department shall consist of:

(i) Head of the Department/ Dean of Faculty – Chairperson
(ii) All professors of the concerned Academic unit
(iii) Four members of the teaching staff including adjunct faculty, by rotation according to seniority.
(iv) Not more than 2 persons to be co-opted for their expert knowledge including those belonging to the concerned profession or industry.

Powers

The powers and functions of the Board of Studies shall be prescribed by the Bye-laws of the School.

7. MASTERS PROGRAMME ADVISORY COMMITTEE (MPAC)

Composition

i. Dean of Faculty
ii. Dean of TERI (drawn from Divisions contributing to the Programmes)
iii. Chairman PEC

Responsibilities

Responsible for ensuring infrastructural inputs to the programme and also for monitoring the status of the programme. Conduct yearly review to provide appropriate feedback to the PEC, Board of Studies, Academic Council, and the Planning and Monitoring Board of the School.

8. MASTERS PROGRAMME EXECUTIVE COMMITTEE (MPEC)

Composition

i. Programme Coordinator – Chairman
ii. All faculty members contributing to the Programme.

Responsibilities

The Committee will be responsible for admissions, running of courses, moderation of grades and all day to day academic matters.

9. STUDENTS RESEARCH COMMITTEE (SRC)

Composition

i. Board of Studies Chairperson or nominee
ii. One expert from within the faculty
iii. One expert from outside the faculty
iv. Supervisor (Convenor)

Responsibilities

The committee will be responsible for advising and monitoring the progress of the student

10. SPONSORED RESEARCH AND DEVELOPMENT BOARD (SRDB)

Composition

i. Director /Dean – Chairperson
ii. All Heads of Academic units or their nominees
iii. Two outside experts one each from Government and Corporate R & D
iv. Registrar (Secretary)

Responsibilities

i. Forecasting and anticipating national needs for manpower and technological know how.
ii. To develop rules to carry out sponsored Research, Development and Training programmes in the School for the approval of the Academic Council.
iii. Monitor and coordinate sponsored projects within the School as well as joint projects with collaborative Institutes.

11. EXECUTIVE COMMITTEE OF THE ACADEMIC COUNCIL (EC OF AC)

Composition

i. Director – Chairperson
ii. Deans/Heads of Departments/ Heads of Centres
iii. Registrar (Secretary)

Responsibilities

To consider any urgent matter within the purview of Academic Council, as decided by the Director.

Annexure 5.1

Memorandum of Understanding between TERI School of Advanced Studies (TERI-SAS) and Tata Energy Research Institute (TERI)

The Tata Energy Research Institute (TERI) is an autonomous, not-for-profit, research Institute established in 1974 in New Delhi, India to undertake and to conduct wide-ranging research development and application of non-depleting and non-polluting sources of energy (typified by solar energy, wind energy, tidal energy and thermal energy of the oceans) and research development and application of techniques aimed at achieving fuller and less-polluting utilisation of fossil and / or nuclear fuels.

In addition to research in these areas, TERI's objective has been to disseminate knowledge in these areas through various means.

and

The TERI School of Advanced Studies (TERI-SAS) was established as a Trust in 1998 at New Delhi and accorded the deemed university status in 1999 by the University Grant's Commission (UGC). TERI-SAS has been established to conduct training in energy studies, biosciences, environmental sciences, public policy and such other branches of learning as it may deem fit. In addition to training in these areas, TERI-SAS would also provide for research and for the advancement of and dissemination of knowledge through teaching and training programmes, conferences and seminars of theoretical and practical relevance for the courses of study.

whereas

Both TERI and TERI-SAS mutually agree to work together for mutual benefit towards achieving the aims and objectives of both the organizations. The parties have thereupon agreed on the following:

1. Research cooperation between TERI and TERI-SAS on mutually agreed terms and conditions.
2. Cooperative programmes with a long term perspective to be undertaken through
   - joint studies
   - exchange of research/teaching staff
   - programme information
   - seminars, symposia, conferences etc.
3. TERI agrees to provide initial corpus/financial support for the establishment/ infrastructural establishments of TERI-SAS.

4. TERI also agrees to provide its research and other staff to TERI-SAS for undertaking various teaching and other assignments on mutually agreed terms as joint appointments or as adjunct faculty.
5. TERI also agrees to make its infrastructure facilities available to TERI-SAS in the form of labs, field stations and other similar resources for the students and teaching staff of TERI-SAS to undertake research/practical work as per its programmes / curricula.
6. TERI-SAS agrees to compensate TERI suitably for services and facilities of TERI utilized by the School from time to time after meeting the expenses for the promotion of objects of the School as set forth in the Trust Deed.
7. To provide any other assistance to each other on mutually agreed terms and conditions so as to attain the common objective of research and dissemination of knowledge in the fields of energy, biosciences, environment and public policy etc.
8. In case of conflict that may arise on the interpretation of the terms and conditions and/or on any other issue between these two parties, the decision of the President TERI-SAS (Director-General of TERI, ex-officio) would be binding on both the parties.

This Memorandum of Understanding is signed on .....
at New Delhi by the two parties

for TERI School of Advanced Studies

for Tata Energy Research Institute

Witnesses
1.

2.

Annexure 6.1

REPORT OF THE EXPERT COMMITTEE SET UP TO CONSIDER THE RECOGNITION OF BIORESOURCES AND BIOTECHNOLOGY DIVISION AS CENTRE OF RESEARCH OF TERI SCHOOL OF ADVANCED STUDIES

The following Committee of Experts, as per the composition approved by the Academic Council of the TERI School of Advanced Studies was constituted to assess the Bioresources and Biotechnology Division of TERI for recognition as Centre of Research of the TERI School of Advanced Studies.

Prof Rup Lal - Professor, Molecular Biology Lab, Dept of Zoology, Delhi University

Prof P S Srivastava - Head, Centre for Biotechnology and Dean, Faculty of Science Jamia Hamdard University

Dr S C Adlakha - Consortium for International Representative

Prof Akhilesh K Tyagi - Head and Coordinator, Dept of Plant Molecular Biology South Campus

Dr Vibha Dhawan - Director, Bioresources and Biotechnology Division, TERI

Dr T P Singh - Director, TERI School of Advanced Studies

The members of the Committee were sent information on the Bioresources and Biotechnology Division of TERI, a copy of which is enclosed as Annexure 1.

The Committee met on 25th May 2001 at 1100 hours in the Board Room of TERI.

The following members attended the meeting :-

Dr T P Singh, Chairman & Convenor
Dr Rup Lal
Dr P S Srivastava
Dr Vibha Dhawan - Director, Bioresources and Biotechnology Division, TERI
Prof Subhash Chander Special Invitee

Dr S C Adlakha and Prof Akhilesh Tyagi regretted their inability to attend.

Dr Vibha Dhawan, Director, Bioresources and Biotechnology Division, TERI made a presentation on the Bioresources and Biotechnology Division, a copy of which is enclosed as Annexure 2. The presentation was followed by a visit to the laboratories of the Division.

After the visit, the Committee discussed the issue of recognition of the Bioresources and Biotechnology Division of TERI as Centre of Research of the TERI School of Advanced Studies taking into account the following parameters :

(a) Qualifications and number of Research professional staff within the Bioresources and Biotechnology Division

(b) Quality of research work being undertaken by the Research professional staff of Bioresources and Biotechnology Division

(c) Infrastructure facilities available in the laboratories of the Bioresources and Biotechnology Division for undertaking doctoral research.

The Committee finds the professionals, the quality of their work and the infrastructure facilities available in the laboratories of the Bioresources and Biotechnology Division are comparable to the best research department in the University system. In view of these findings, the Committee recommends that the Bioresources and Biotechnology Division of TERI be recognised as a Centre of Research within TERI School of Advanced Studies.

1. ---------- (Dr Rup Lal) 2. ---------- (Prof P S Srivastava) 3. ---------- (Dr Vibha Dhawan)

4. ---------- 28/5/2001 (Dr T P Singh)

Annexure I

S.No.	Name of TERI's professionals with Ph.D degree and 3 years of post doctoral experience	Area of Research	Ph.D thesis work supervision in the area		Publications in Refereed Journals		Major facilities available in the area for carrying out doctoral research:	Number and names of sponsored projects of three four years duration in which doctoral level work is possible (Details of projects are in Annexure I)	Maximum number of students for which funds and facilities can be earmarked for carrying out doctoral work during the year 2001-2002
			Thesis Completed	*Thesis in Progress*	*International*	*National*			
1.	Dr. Vibha Dhawan	*Plant Tissue Culture*	1	--	10	7	*Tissue culture room, Growth room, Laminar flow cabinet, Autoclave, Electronic balance, Cold room, Incubator Shaker, Hardening facility, Greenhouse, Polyhouse, Nursery*	1	4
2.	Dr. Sanjay Saxena	Plant Tissue Culture	--	--	3	--		2	
3.	Dr. P S S V Khan	Plant Tissue Culture and Plant Physiology	--	--	7	4		1	
4.	Dr. M S Lakshmikumaran	Plant Molecular Biology, and Genetic Engineering	7	3	27	5	*Tissue culture room, Growth room, Laminar flow cabinet, Autoclave, Centrifuges, Microfuge, Water baths, Refrigerated centrifuge, Ultra centrifuge, Ultra low freezer, Lyophiliser, Electronic balance, Cold room, Incubator Shaker, Radioactive facility, Scintillating Unit, DNA sequencing apparatus, Gel electrophoresis apparatus, Gel documentation unit, PCR machine*	4	3
5.	Dr. Abha Agnihotri	*Plant Tissue Culture, Crop Improvement*	--	--	14	3	*Laminar flow cabinet, Seed germinator, Table Top Centrifuges, Microfuge, Refrigerated centrifuge, Ultra centrifuge, Ultra low freezer, Lyophiliser, Electronic balance, pH meter, Olympus microscope with Camera attachment, Spectrophotometer, Oven, Multiple Soxhlet apparatus, Incubator Shaker, Gas chromatograph, HPLC, NIR, Autoclave, Media preparation room and lab facility, Tissue culture room, Controlled Growth room, Cold room, Field facility, etc.*	2	2
6.	Dr. Nutan Kaushik	Bioprospecting, Plant Protection	--	--	12	4	*Chromatograph, HPLC, NIR, spectrophotometer, Water baths, Refrigerated centrifuge, Ultra centrifuge, Ultra low freezer, Lyophiliser, Electronic balance, pH meter, Olympus microscope with Camera attachment, Controlled Growth room, BOD, lab facility, for natural product chemistry and insect bioassays, Autoclave, Table top Centrifuges, Microfuge, Cold room, Multiple Soxhlet apparatus, Insect culture room, shaker, field facility.*	2	2
7.	Dr. Ashok Choudhury	Genetic Transformation of Plants	---	---	5	2	Tissue culture room, Growth room, Laminar flow cabinet, Autoclave, Centrifuges, Microfuge, Water baths, Refrigerated centrifuge, Ultra centrifuge, Ultra low freezer, Lyophiliser, Electronic balance, Cold room, Incubator Shaker, Radioactive facility,	2	2

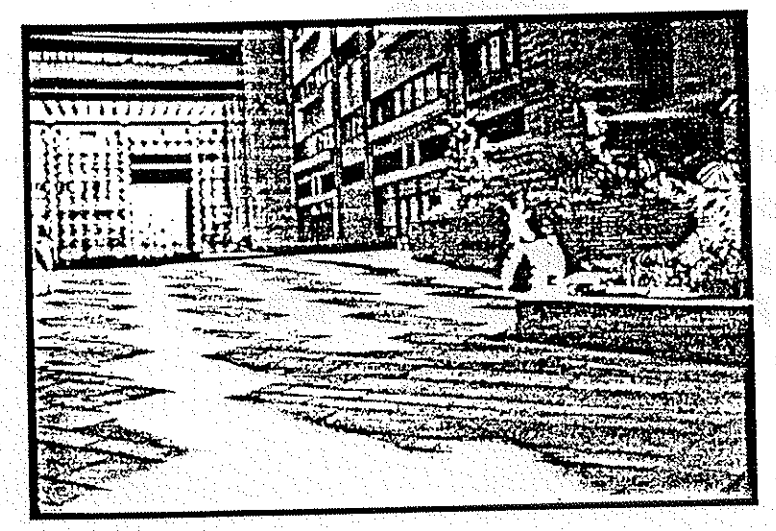
							Scintillating Unit, DNA sequencing apparatus, Gel electrophoresis apparatus, Gel documentation unit, PCR machine		
8.	Dr. Banwari Lal	Microbial Biotechnology/ Microbial Diversity	----	1	7	5	Centrifuge,GC, Spectrophotometer,Sequencing apparatus, Ice machine, Ultra centrifuge, Liquid Scintillation Counter, Anaerobic chamber, Lyophilizer, Automated Gene Sequencer 310, Bioreactor, PCR (2), Gel Documentation System, Shakers (6), Deep Freezers (-20, -85°C)	1	4
9.	Dr. Alok Adholeya	Mycorrhiza	4	4	23	7	All facility related to microbiology ,molecular biology and nutrient analysis	4	2
10.	Dr. N Ramesha	Microbial Biotechnology	---	---	2	3	Analytical instruments such as GC, HPLC, Spectrophotometer, *Microbiology Instruments: Inoculation chambers, incubation facility, incubated shakers, autoclave, Microscopes, Fermenter, Centrifuge, Ultrasonic cell disrupters, etc, *Molecular Biology instruments: PCR machine, ABI Prism Automatic as well as Manual sequencer, Hybridization chamber, , water bath with and without shakers, Ultra centrifuge, etc. *General instruments: Rotary evaporator, electronic balance, liquid scintillation counter, lyophilizer, ice machine, etc.	1	1
11.	Dr. J S Rawat	▪ Tree Physiology ▪ Cloning of Trees ▪ Joint Forestry management ▪ Climate Change	--	--	20	3	Analytical laboratory, Mist Chamber, Shade house, clonal nursery, Field Station	2	2
12.	Dr. S P Banerjee	Land and soil resource management - Eco-restoration	None	NA	---	---	Required facilities are available	None	One only under the present situation, provided the candidate fulfils either item 1 or 2 of the Categories of Admission contained in the Information Brochure 2001/2002 of TERI-SAS

ANNEXURE 1.1

Details of the projects for TERI-SAS

S. No.	Name	Project entitled	Funding Agency	Duration
1.	Dr. Banwari Lal	Microbial diversity of crude oil spill degrading micro-organism	DBT	Five years (From Nov 1999 to Nov 2004)
2.	Alok Adholeya	▪ Indo Swiss Programme on Mycorrhiza ▪ 2. BOF SLAG project from DBT	▪ SDC/DBT ▪ DBT	4 years (Till 2004) 3-4 years (Till 2004)
3.	N Ramesha	Bioremediation of pesticides contaminated soils and its effect on soil functionality	SDC and DBT	Three years
4.	Vibha Dhawan	Micropropagation Technology Park	DBT	Four years
5.	Sanjay Saxena	Regeneration and mass propagation of high value medicinal plant species by tissue culture	ICAR	Three years
6.	P S S V Khan	'Developing micropropagation protocol for commercial potential cultivars of walnut'	APEDA	Three years (R&D) and two years field evaluation.
7.	M S Lakshmikumaran	▪ Isolation of phloem specific promoters for tissue specific expression of lectin gene in plants for insect resistance ▪ Genetic manipulation of *Populus deltoides* ▪ Cataloguing the diversity of forest genetic resources using molecular markers -	▪ NATP ▪ DBT ▪ DBT	▪ Three years ▪ Three years ▪ Three years
8.	Ashok Chzudhury	▪ Genetic Manipulation of *Populus deltoides* ▪ Isolation of Phloem Specific Promoter for Tissue Specific Expression of Lectin Genes in Plants for Insect Resistance	▪ DBT ▪ NATP	▪ Eight year project (till 2006) ▪ To be continued in Xth plan till 2007
9.	Abha Agnihotri	▪ Indo-UK collaboration on oilseed crops ▪ Biparental mating and establishment of dihaploid culture for quality improvement in *B.juncea*	▪ DFID India- ICAR ▪ ICAR	▪ Three years ▪ Three years
10.	Nutan Kaushik	▪ Bioprospecting of the plants of family Myrtaceae for Pesticidal properties ▪ Biochemical evaluation of Neem germplasm for ctaloguing and value addition	▪ DBT ▪ NOVODB,Gurgaon.	▪ Five years 5 (started in 1997) ▪ Three years (started in 1999) Both the projects have high probability of getting extension for another 2-3 years.
11.	S P Banerjee			
12.	J S Rawat	▪ Clonal project for Delhi Forest Department ▪ Joint Forest Management Project	▪ Delhi Forest Dept. ▪ Winrock International India	▪ Two-Three years ▪ Two-Three years

Welcome to TERI!



Bioresources and Biotechnology Division

- **DIRECTOR**
  - **Area Convenors**
    - Microbial Biotechnology
    - Centre for Mycorrhizal Research
    - Plant Biotechnology
    - Plant Tissue Culture
    - Forestry/Biodiversity

Approx. 52 ongoing projects, sponsored by the followings

- Department of Biotechnology
- Oil Refineries
- Oil India Ltd.
- Forest Departments
- Food Processing Industry
- NATP
- ONGC
- NTPC
- Sugar Industry
- ICAR
- SDC

Microbial Biotechnology

MAJOR AREAS OF RESEARCH

- Bioremediation of Crude Oil spills and treatment of Oily sludge using microbes.
- Microbial enhanced oil recovery and removal of paraffins from oil wells.
- Biobleaching of paper pulp using xylanase enzyme.
- Assessment and documentation of Microbial diversity in soil contaminated with organic pollutants.
- Bioremediation of pesticides contaminated oil.