

# APPENDIX

## WHERE TO APPROACH FOR R&D FUNDS?

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### (1) University Grants Commission (UGC)

#### I. Introduction

UGC strives to promote teaching and research in emerging areas in Humanities, Social Sciences, Languages, Literature, Pure Sciences, Engineering & Technology, Pharmacy, Medical, Agricultural Sciences etc.

#### II Name of scheme(s)

##### Major and Minor Research Projects

##### Objective(s)

- To promote excellence in research in higher education by supporting research programmes of University and College teachers in various disciplines.
- Traditionally, universities have been the centers of research. Although, the Government has a network of science and technology laboratories for research and development, the major base of researchers in science and technology remains with the universities. Therefore, university and college teachers need to be supported to meet this requirement.

#### Contact Address

The Secretary, University Grants Commission, Bahadur Shah Zafar Marg  
New Delhi – 110002, Tel. No: (011) 23234019, 23236350, Fax. No.: (011) 23239659  
Website: [www.ugc.ac.in](http://www.ugc.ac.in)

### (2) All India Council for Technical Education (AICTE)

#### I. Introduction

The All India Council for Technical Education (AICTE) has been performing its regulatory, planning and promotional functions through its Bureaus, namely: Administration; Finance; Planning and Coordination; Under Graduate Studies; Post Graduate Education and Research; Faculty Development; Quality Assurance; and Research and Institutional Development Bureaus; and through its Regional Offices located in various parts of the country.

#### II. Name of scheme(s)

##### i) Research & Institutional Development Schemes

##### a) Modernization & Removal of Obsolescence Scheme (MODROBS)

- To equip technical institutions with modern infra-structural facilities in laboratory(s)/workshop(s)/computing facilities to enhance functional efficiency for teaching, training and research purposes. Creation of new laboratories is not envisaged. Maximum Funding is Rs. 15 lakhs with 2 years duration.
- The aims are contemporary Lab Work, relevant project work, indirect benefits to faculty/students of the institution through training programmes and consultancy work.

##### b) Research Promotion Schemes (RPS)

RPS aims to create research ambience by promoting research in technical disciplines and innovations in established and emerging technologies; and to generate Masters and Doctoral degree candidates. The three research avenues within RPS are the following:

- Proof of Concept work - Independent research activity which can lead to growth of knowledge/process in an area, which can grow into a major project. Funding for such projects would be limited to a one time grant of Rs. 5-10 lakhs.
- Capacity Building for research – A young faculty (30 years limit) with grant of Rs. 10-12 lakhs, is encouraged to carry out research at Doctoral level in a reputed institution. The funding can be used for both drawing of salary during leave without pay condition and towards purchase of equipment to carry out research in a Novel area.
- Patentable technology development by a group of faculty members, having proven track record, who aim at developing new research facilities, at the parent institution, being motivated chiefly by high-end output such as patentable technologies. Funding to such projects would be limited to a one time grant of Rs. 20 lakhs.

## ii) Industry-Institute Interaction Schemes

### a) Industry Institute Partnership Cell (IIPC)

To establish institute-industry liaison by encouraging: (1) conduct of industrial training programmes (2) facilitating exchange of resource personnel (3) carry out industrial R&D (4) conduct of industrial visits (5) developing appropriate curricula and (6) undertake consultancy services, etc.

### b) Entrepreneurship Development Cells (EDC)

To encourage students to consider self-employment as a career option and provide training in entrepreneurship.

### c) National Facilities in Engineering & Technology with Industrial Collaboration (NAFETIC)

To establish national level facilities in the frontier areas of Engineering & Technology through collaboration between industry(s) and institutions for product development, basic research, trouble shooting, consultancy, testing & training purposes.

### d) Nationally Coordinated Project (NCP)

To plan, coordinate & execute integrated R&D programmes at national level by a group of institutions. The technical/ financial/ administrative deliverables are to be spelled out clearly by the networking institutions with the lead institution being an IIT/IISc/IIM/NIT.

## III. Areas of research support

Engineering and Technology, Architecture , Town Planning, Management , Pharmacy, Hotel Management and Catering Technology, Applied Arts and Crafts etc.

### Contact Address:

Adviser-II, RID Bureau, All India Council for Technical Education  
NBCC Building, East Wing, 4th Floor, Pragati Vihar, Bhisham Pitamah Marg, New Delhi –110  
003, Telefax No: (011) 24369632,  
E-mail: rid@aicte.ernet.in, Website: www.aicte.ernet.in

## (3) Council of Scientific and Industrial Research (CSIR)

### I. Introduction

The major functions of CSIR include promotion, guidance and coordination of scientific and industrial research in India; establishment or development of and assistance to existing special institutions or departments for scientific study of problems affecting particular industries and trades; award of fellowship; utilization of Council's R&D results for industrial development; collection and dissemination of S&T information; and technology generation, absorption and transfer.

The Human Resource Development (HRD) Group of Council of Scientific & Industrial Research (CSIR) has a mandate to develop and nurture S&T manpower at the national level. It also promotes, guides and co-ordinates scientific & industrial research through research grants to Scientists/Professors working in Universities/R&D Institutes of Higher learning.

### II. Name of scheme(s) & Objective(s)

**1. Research Schemes**

To promote research work in the field of S&T including agriculture, engineering and medicine. Multi-disciplinary projects which involve inter-organisational cooperation (including that of CSIR Laboratories) are also considered. Preference is given to schemes which have relevance to research programmes of CSIR laboratories.

**2. Sponsored Schemes**

The Directors of CSIR laboratories may invite applications for research grants in specific areas of interest to their respective laboratories. They will forward these to the CSIR HRD Group. The scheme enables the CSIR laboratories to interact with university system, so that the CSIR laboratory can take the help of the faculty there to undertake part of the work of its core programme, for which it either does not have the time and or expertise.

**3. Emeritus Scientist Scheme**

To provide support to superannuated outstanding scientists to pursue research in their respective field of specialization and having relevance to the programmes of CSIR.

**4. Research Fellowships/Associateships**

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| ? Shyama Prasad Mukherjee Fellowship | ? Senior Research Associateship |
| ? Recognition of Excellence          | ? Shanti Swarup Bhatnagar Prize |
| ? CSIR Young Scientist Award         |                                 |

**5. Other Science and Technology Promotion Programmes**

- CSIR Programme on Youth Leadership in Science
- CSIR Diamond Jubilee Research Interns Award Scheme
- Visiting Associateship Scheme
- Partial Financial Assistance for holding National/International Conferences/ symposium/ Seminar/ Workshops in India
- Partial Travel Grants to Research Scholars
- Entrepreneurship Support to Research Scholars
- Faculty Training Programme and Adoption of Schools and Colleges by CSIR Laboratories

**Contact Address:**

The Head, Human Resource Development Group  
 Council of Scientific and Industrial Research,  
 CSIR Complex, Library Avenue, Pusa  
 New Delhi – 110 012, Tel. Nos: (011) 25748632, 25721585  
 Fax. No: (011) 25840887, 25860595,  
 E-mail: csircx@nda.vsnl.net.in,  
 Website: <http://csirhrdg.res.in>

**(4) Defence Research and Development Organisation (DRDO)****I. Introduction**

DRDO is dedicatedly engaged in the formulation and execution of programmes of scientific research, design and development, testing and evaluation leading to induction of state-of-art weapons and equipment which would compete and compare favorably with its contemporary systems available elsewhere in the world. It consists of a chain of laboratories/establishments situated all over the country, pursuing assigned scientific goals with delegated powers under the policy direction provided by the headquarters in New Delhi. DRDO also supports a substantial amount of extramural research in academic institutions and other laboratories on defence related problems through various grants-in-aid schemes and other sponsored projects.

**II. Name of scheme(s)****1. Extramural Research Scheme**

- Research sponsored in academic institutions under the extramural research (ER) scheme focuses on research on phenomena or observations that are not understood, and that lack of understanding is recognized as an obstacle to scientific or technological progress in the broad topic area of relevance to military R&D. The knowledge base so generated is embodied in

high-quality technical manpower and in the new understanding, techniques and design-tools developed through the basic research funded. Such new knowledge can also provide pathways to significant advances in the mission-effectiveness of traditional military roles.

- Collaterally with the expanded knowledge-base created, a primary end-result of the research that is funded under the ER program is a networked group of qualified people whose expertise resulting from the research can be drawn-upon to build an exploitable area of new technology that has potential military applicability.
- The ER scheme also supports the instrumentality of Memoranda of Collaboration (MoC) between DRDO Laboratories & Establishments and academia. These MoC invariably involve more than one DRDO establishment and cover explorations and investigations on a range of topics within a broad subject arena that generically cross-link the research activities of the collaborating Laboratories & Establishments and the research-disciplines of the selected collaborating academic institution. Such institutional cross-linking is organic, not episodic, and is made operational in an MoC through a management structure which includes in its standing arrangements representation of directors of the collaborating DRDO institutions.

**Contact Address :**

The Director, Directorate of Extramural & Intellectual Property Rights  
Defence Research & Development Organisation, West Block 8, Wing 5, 1st Floor, R.K. Puram  
New Delhi – 110066, Telefax: 011-26170928 ,  
E-Mail: erip\_er@drdohq.res.in, Website: www.drdo.com

**2. Aeronautics Research & Development Board**

Government has set up Aeronautics Research & Development Board to coordinate, fund and sensitize futuristic, scientific technological areas having potential application for aeronautical systems, at academic institutions and national scientific laboratories. For this purpose, Grants-in-Aid of Rs. 5 Crores per year has been earmarked. The objectives are:

- the Aeronautics R&D Board has instituted a Grants-in-Aid Scheme to nurture the available research talent and to develop facilities in IITs, Universities, Higher Technological Institutes, Colleges and other research centers including industry in the country for promoting research, design and development programmes in Aeronautics and Allied Sciences, keeping in view the future needs of the country with respect to aircraft, helicopters, missiles and all other air borne vehicles and their operation.
- besides the projects activities, the Board promotes Centres of Excellence in selected areas like Computational Fluid Dynamics, Systems Design & Engineering and Composite Structures Technology. Some more centers are under consideration.
- the Board also promotes Seminars, Presentation of papers in India & abroad, Writing of books, and promoting airmindedness in School children.

**Contact Address**

Secretary, AR&DB, Defence Research & Development Organization  
332, 'B' Wing, Sena Bhawan, New Delhi – 110 011, Tel. No: (011) 23014034, Fax. No.: (011) 23793004,  
E-mail: ardb@drdo.com , Website: www.drdo.com/boards/ardb/default.htm

**(5) Department of Atomic Energy (DAE)**

**I. Introduction**

The Department of Atomic Energy supports research programmes in Nuclear Science and Technology through the Board of Research in Nuclear Sciences (BRNS). BRNS support the following schemes.

**II. Name of scheme(s) & Objective(s)**

**1. R&D Project**

Fostering research capabilities and manpower development in universities and similar institutions of higher learning and research.

**2. Symposium/Conference/Workshop**

To promote large scale interactions in various disciplines of science and technology that are of interest to DAE.

**3. DAE Young Scientists Research Award**

To support young scientist below the age of 35 years in their initial years of settling down in a career of R&D.

**4. Dr. K.S. Krishnan Research Associateship**

To support talented science and engineering research scholars

**5. Raja Ramanna Fellowship**

To utilize the services of active retired scientists/engineers and technologists, who have been involved in high quality research in their specialized discipline in the units of the DAE or any National Laboratory or University/Institute

**6. Visiting Scientists**

To promote close interactions on specialized scientific and technical topics between the scientists and technologists from DAE and Universities/IITs/IISc/ National Labs.

**7. Homi Bhabha Chair Professorship**

These Chairs are instituted in recognition of sustained record of excellence and creative contribution to research and / or teaching in the area of interest to DAE.

**8. DAE Graduate Fellowships**

To provide excellent career opportunity to students qualifying for admission to the M.Tech Course in Indian Institute of Technology at Mumbai, New Delhi, Kanpur, Kharagpur, Chennai or Roorkee.

**9. DAE Graduate Fellowships for Ph.D.**

To provide an opportunity to work on projects of interest to DAE to those students who aspire to attain the highest academic qualification, (ii) to achieve the basic objective of strengthening linkages between the grant-in-aid institutions and the research centres for the benefit of advancing the pace of research in nuclear sciences, and (iii) to accelerate the speed to translating R&D into technology products and their applications.

**10. DAE-SRC Award**

The core objective is to augment support to individual research workers with highly innovative ideas and with proven abilities to pursue advanced research in frontier areas of science and engineering at an accelerated pace.

**Contact Address:**

The Scientific Secretary / Programme Officer ,BRNS Secretariat  
Department of Atomic Energy ,1st Floor, Central Complex,  
BARC, Trombay , Mumbai-400 085 . Tel. No: (022) 25505223/ 25593946/25595331/ 25595386  
Fax : (022) 25505151/ 25519613,  
E-mail: drppc@barc.ernet.in/ trehan@barc.ernet.in/ gnpandey@barc.ernet.in

**(6) Department of Biotechnology (DBT)**

**I. Introduction**

The setting up of a separate Department of Biotechnology (DBT), under the Ministry of Science and Technology in 1986 gave a new impetus to the development of the field of modern biology and biotechnology in India. In more than a decade of its existence, the department has promoted and accelerated the pace of development of biotechnology in the country. Through several R&D projects, demonstrations and creation of infrastructural facilities a clear visible impact of this field has been seen. The department has made significant achievements in the growth and application of biotechnology in the broad areas of agriculture, health care, animal sciences, environment, and industry.

**II. Name of scheme(s)**

- Agriculture
- Bioinformatics
- Biotech Product and Process Development
- Basic Research
- Human Resource Development
- Infrastructure Facilities

- International Cooperation
- Medical Biotechnology
- Bioresources
- Plant Biotechnology
- Societal Developments

### III. Areas of research support

- Animal Biotechnology
- Aquaculture and Marine biotechnology
- Basic Research in Biotechnology
- Biofuels
- Bioinformatics
- Biological Control of Plants pests, diseases and weeds
- Bioprospecting and Molecular Taxonomy
- Biotech process engineering and industrial biotechnology
- Biotechnology of Medicinal and Aromatics plants
- Biotechnology of Silkworms and host-plants
- Crop Biotechnology
- Environment & Conservation Biotechnology
- Food Biotechnology
- Medical Biotechnology (Vaccines, Diagnostics, Drug Development, Human Genetics & Genome Analysis, Serology, Biotechnology, Stem Cell Biotechnology)
- Microbial Biotechnology
- Plant tissue Culture
- Human Resource Development
- Nano Biotechnology
- Women Biotechnology & Programme for Rural Areas and SC/ST population
- Jai Vigyan National S&T Missions
- Patent Facilitation

#### Contact Address:

Scientist In-charge, Project Registry Cell, Department of Biotechnology  
Block 2, 7th Floor, C.G.O. Complex, Lodi Road, New Delhi – 110 003

Website: [www.dbtindia.gov.in](http://www.dbtindia.gov.in), [www.btisnet.gov.in](http://www.btisnet.gov.in), [www.dbtindia.gov.in/organisation/nodal.htm](http://www.dbtindia.gov.in/organisation/nodal.htm)

## (7) Department of Coal (DOC)

### I. Introduction

The Central Mine Planning and Design Institute Limited (CMPDI) is the nodal agency for coordinating R&D activities in Coal and Lignite sectors. The Ministry of Coal normally supports project of shorter duration (2-4 years). The findings of which, if completed successfully, can be used directly for commercial exploitation and benefit to the industry. However, in exceptional cases, research in newly emerging and front line areas of science and engineering and projects having long term implications can be supported.

### II Name of scheme(s)

#### Science & Technology (S&T)

Development of technology/system and its successful transfer for commercial applications.

### III. Areas of research support

- Production, Productivity & Safety
- Coal Beneficiation & Coal Utilization
- Environment & Ecology

#### Contact Address:

General Manager (S&T), Central Mine Planning & Design Institute  
Department of Coal, Gondwana Place, Konke Road

Ranchi – 834 008, (Jharkhand), Tel. No: (0651) 2231148

Fax. No: (0651) 2231447, E-mail: [cmpdihq@cmpdi.co.in](mailto:cmpdihq@cmpdi.co.in), Website: [www.scienceandtech.cmpdi.co.in](http://www.scienceandtech.cmpdi.co.in)

## (8) Department of Ocean Development (DOD)

### I. Introduction

The development in Ocean Science & Technology is linked with achievements in other scientific and technological areas. The research efforts should lead to fundamental understanding and ensure predictive capabilities. An important component of the development programme is technology. To be self reliant such

technologies would have to be largely developed, tested and operated indigenously. Several new technologies will have to be commercialized and made cost effective

## II. Name of scheme(s)

1. Assistance for Research Projects (ARPs) in Ocean Sciences (MRDF)
2. Manpower Training for Ocean Research & Management (MMDP)

## III. Objective(s)

- To encourage research in newly emerging and front-line areas of Marine Geology and Geophysics, Marine Coastal Ecology, Marine Biology, Marine Microbiology, Coastal Marine Culture Systems, Marine Benthos, Beach Placers, Ocean Engineering and Under Water Robotics.
- Subjects considered for support under the programme include physical and chemical oceanography, marine biology, marine geology, marine geophysics, ocean engineering, marine ecology, meteorology, marine instrumentation etc. Besides purely scientific projects, assistance is also extended to projects which have politico-geographic or social dimensions of the Indian Ocean and Antarctica.
- Under the MMDP Scheme, only fellowships & contingencies are provided for.
- To encourage Research Organizations, Institutions, IITs, Universities to undertake projects with industrial tie-ups.
- To generate reliable data and information system.
- To strengthen/create infrastructure facilities in Universities/Institutions/Organizations to generate manpower in the fields of Marine Science and Technology.

## IV. Areas of research support

Newly emerging and front-line areas of Marine Geology and Geophysics, Marine Coastal Ecology, Marine Biology, Marine Microbiology, Coastal Marine Culture Systems, Marine Benthos, Beach Placers, Ocean Engineering and Under Water Robotics.

### Contact Address:

The Director, Ocean Research & Manpower Development Programme  
Department of Ocean Development, Block 12, CGO Complex, Lodi Road  
New Delhi – 110 003, Tel. No.: (011) 24306839, 24362278, Fax No.: (011) 24360336, 24360779  
E-mail: [venkat@dod.delhi.nic.in](mailto:venkat@dod.delhi.nic.in), Website: [www.dod.nic.in](http://www.dod.nic.in)

## (9) Department of Science and Technology (DST)

### I. Introduction

The Department of Science & Technology plays a pivotal role in promotion of Science & Technology in the country. Science & Technology Policy-2003 states that “Special emphasis will be placed on equity in development, so that the benefits of technological growth reach the majority of the population, particularly the disadvantaged sections, leading to an improved quality of life for every citizen of the country.”

The Department has wide ranging activities ranging from promoting high end basic research and development of cutting edge technologies on one hand to service the technological requirements of the common man through development of appropriate skills and technologies on the other.

The Department supports research through a wide variety of schemes specifically carved out to meet the requirements of different sections of the scientific and engineering community.

### II. Name of scheme(s):

- Deep Continental Studies (DCS)
- Himalayan Glaciology (HG)
- Indian Climate Research Programme (ICRP)
- Instrument Development Programme (IDP)
- International S&T Cooperation (ISTC)
- Joint Technology Projects under STAC/IS-STAC
- Monsoon and Tropical Climate (MONTCLIM) & Agrometeorology
- Natural Resources Data Management System (NRDMS)
- Pharmaceuticals Research & Development Support Fund (PRDSF) Programme

- Programme Advisory Committee on Earth Sciences (PAC-ES): R&D Projects Scheme
- Science & Engineering Research Council (SERC)
- Science & Society Programmes (SSP)
- Seismology Programme (SP)
- State Science & Technology Programme (SSTP)
- Technology Development Programme (Joint Technology –Technology System Programme)
- Utilisation of Scientific Expertise of Retired Scientists (USERS)

**Contact Address:**

Department of Science & Technology ,Technology Bhawan,  
New Mehrauli Road ,New Delhi – 110 016 ,Telefax No: (011) 26963695  
E-mail: [venkatesh@nic.in](mailto:venkatesh@nic.in) ,Website: [www.serc-dst.org](http://www.serc-dst.org)

**(10) Department of Scientific and Industrial Research (DSIR)**

**I. Introduction**

The Department of Scientific and Industrial Research (DSIR) is a part of the Ministry of Science and Technology, which was announced through a Presidential Notification, dated January 4, 1985. The Department of Scientific and Industrial Research (DSIR) has a mandate to carry out the activities relating to indigenous technology promotion, development, utilization and transfer.

The Technology Promotion, Development and Utilization (TPDU) Programmes are directed towards meeting the specific needs of industry and are of particular relevance in the present context. Programmes and activities under the scheme are centered around promoting industrial R&D, development and commercialization of technologies, acquisition, management and export of technologies, promotion of consultancy capabilities, etc.

**II. Name of scheme(s)**

Technology Promotion, Development and Utilization Programmes & its Components.

**Objective(s)**

- Promote and support industry efforts towards R&D.
- Encourage R&D system-industry cooperation.
- Support industry for technology development, demonstration and absorption of imported technology.
- Build indigenous capabilities for development and commercialization of contemporary products and processes of high impact.
- Evaluate the status and performance of technology in selected sectors/areas.
- Facilitate effective transfer and management of technology.
- Promote international technology trade including export of technology projects, services and technology intensive products.
- Promote and strengthen consultancy capabilities for domestic use and export requirements. Support and use mechanisms, both national and international, towards transfer of technology, both within and outside the country.
- Generate endogenous capacities for the development and utilization of digital information resources for providing inputs to scientific & industrial research in the country.

These objectives are implemented through the following six component schemes:

- Industrial R&D Promotion Programme
- (i) Technology Development and Demonstration Programme
- (ii) Technopreneur Promotion Programme
- Technology Management Programme
- International Technology Transfer Programme
- Consultancy Promotion Programme
- Technology Information Facilitation Programme

**Contact Address:**



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Technology Bhavan, New Mehrauli Road ,New Delhi – 110016  
Tel. No : (011) 26960629 , Fax : (011) 26516078  
E-mail : [srv@nic.in](mailto:srv@nic.in), Website : [www.dsir.gov.in](http://www.dsir.gov.in)

## **(11) Indian Council of Medical Research (ICMR)**

### **I. Introduction**

The primary aim of the ICMR is to promote research in the country in the fields of medicine, public health and allied areas. The Council promotes biomedical research in the country through intramural research (through Institutes totally funded by ICMR) and extramural research (through grants-in-aid given to projects in non-ICMR Institutes).

### **II. Name of the scheme(s)**

- Ad-hoc Research Schemes : Open-ended Research (Ad-hoc Projects) on the basis of applications for grants-in-aid received from scientists in non-ICMR Research Institutes located in different parts of the country
- Senior Research Fellowship/Research Associate
- Junior Research Fellowships
- Emeritus Medical Scientist Scheme (for retired medical scientists and teachers, the Council offers the position of Emeritus Scientist to enable them to continue or take up research on specific biomedical topics.)

Other Research Activities:

- i) Short Term Research Studentship (for undergraduate medical students to encourage them to familiarize themselves with research methodologies and techniques)
- ii) National Task Force Projects : which emphasise a time-bound, goal-oriented approach with clearly defined targets, specific time frames, standardized and uniform methodologies, and often a multicentric structure
- iii) Centres for Advanced Research : setting up Centres for Advanced Research in different research areas around existing expertise and infrastructure in selected departments of Medical Colleges, Universities and other non-ICMR Research Institutes
- iv) Guidance for International Collaboration for Research in Biomedical Sciences
- v) ICMR International Fellowships for Biomedical Scientists from Developing Countries
- vi) ICMR International Fellowships for Indian Biomedical Scientists
- vii) ICMR Financial assistance to MD/MS/DM/MCH thesis programme
- viii) Grant-in-aid for organising Seminars/Symposia/Workshops

### **Contact Address:**

Director General, Indian Council of Medical Research , V. Ramalingaswami Bhawan ,Post Box No. 4911,  
Ansari Nagar , New Delhi- 110029 ,  
Tel.No: 91-11-26588895, 91-11-26588980 ,91-11-26588707, 91-11-26589794, 91-11-26589336, Fax: 91-11-26588662 ,E-mail: [icmrhqds@sansad.nic.in](mailto:icmrhqds@sansad.nic.in) ,Website: [www.icmr.nic.in](http://www.icmr.nic.in)

## **(12) India Meteorological Department (IMD)**

### **I. Introduction**

IMD was established in 1875. It is the National Meteorological Service of the country and the principal government agency in all matters relating to meteorology, seismology and allied subjects.

### **II. Name of scheme(s)**

**Research in meteorology and allied disciplines.**

The India Meteorological Department (IMD) entertains research projects in the field of meteorology and atmospheric sciences received from scientists working in universities / institutions and government organizations for their funding under its grants-in-aid programme.

### III. Areas of research support

Topics related to advancement of knowledge in the fields of meteorology and atmospheric sciences, with particular reference to the Indian region.

#### Contact Address :

The Director General of Meteorology  
Antarctic & Project Evaluation Cell, DGM's Office  
India Meteorological Department (IMD)  
Mausam Bhawan, Lodi Road, New Delhi – 110 003  
Tel. No: (011) 24618241 to 7 Extn. 4318  
Fax: (011) 24699216, 24623220  
E-mail: [apec@mail.imdmail.gov.in](mailto:apec@mail.imdmail.gov.in)  
Website: [www.imd.gov.in](http://www.imd.gov.in)

### (13) Indian Space Research Organisation (ISRO) - Department of Space

#### I. Introduction

The Indian Space Research Organisation (ISRO) was established in 1969. The Indian space programme has the primary objective of developing space technology and application programmes to meet the developmental needs of the country. Indian Space programme includes development of operational systems in the areas of satellite based remote sensing, telecommunications, broadcasting, meteorology and development of suitable launch vehicles for putting the satellite in various low earth orbits and geostationary orbits.

#### II. Name of Scheme(s)

1. ISRO Sponsored Research Programme (RESPOND)
2. Space Science Promotion (SSP)

#### Objective(s)

To conduct research and development activities in the relevant areas of space science, application and technology at the universities and academic institutions in the country. Also, to establish interactions between scientists working at ISRO and academic institutions to carry out joint research and educational activities of interest to the Indian Space Programme.

#### III. Areas of research support

Space science, application, technology, space communication, earth resources survey, meteorology and satellite geodesy.

#### Contact Address

##### RESPOND

Deputy Director, RESPOND  
ISRO Headquarters, Antariksh Bhawan  
New BEL Road, Bangalore – 560 094  
Tel. No: (080) 23416271, Fax. No: (080) 23419190  
E-mail: [scc@isro.org](mailto:scc@isro.org), Website: [www.isro.org](http://www.isro.org)

##### SPACE SCIENCE PROMOTION (SSP)

Programme Director, Space Science Office  
ISRO Headquarters, Antariksh Bhawan  
New BEL Road, Bangalore – 560094  
Tel. No: (080) 23415269, Fax. No: (080) 23415269  
E-mail: [ananth@isro.org](mailto:ananth@isro.org), Website: [www.isro.org](http://www.isro.org)

### (14) Ministry of Communications & Information Technology (MOCIT)

#### Department of Information Technology

#### I. Introduction

Department of Information Technology (DIT) since its inception has been giving importance to research and development. Promotion of research & development efforts in electronics and related fields in the country has been one of the major activities of Department of Information Technology.

#### II. Name of scheme(s)

- |   |                                    |
|---|------------------------------------|
| 1. Microelectronics & Nanotech Development Programme  | 5. Electronics in Health           |
| 2. Technology Development Council                     | 6. Human Computer Interface - TDIL |
| 3. Convergence, Communication & Strategic Electronics | 7. E- Commerce & Info-Security     |
| 4. Components & Material Development Programme        | 8. IT for Masses (Telemedicine)    |
|   | 9. Media Lab Asia                  |
|   | 10. Photonics Development          |
|   | 11. Industrial Applications        |

### III. Areas of research support

- |   |  |
|---|--|
| • Information Technology (Hardware/Software)        | • Rural Application  |
| • Convergence, Communication & Broadband Techniques | • Health & Biotechnology   |
| • Micro-electronics & Photonics                     | • Materials and Components including Microwaves & Millimeter waves |
| • Industrial Electronics                            | • Emerging Areas of Information Technology                         |
| • E-Commerce & Information Security                 | • Human Computer Interface/Language Technology                     |
| • Nanotechnology                                    |  |
| • Electronic Components & Material                  |  |
| • Strategic Electronics                             |  |

### Contact Address

The Secretary , Ministry of Communications & Information Technology  
 Department of Information Technology , Block-6, Electronics Niketan, CGO Complex  
 Lodi Road, New Delhi – 110003 ,  
 Tel. No.: (011) 24364041 ,Fax No. (011) 24363134  
 E-mail: secretary@mit.gov.in , Website: www.mit.gov.in

## (15) Ministry of Environment and Forests (MOEF)

### I. Introduction

The Ministry of Environment and Forests is the nodal agency in the administrative structure of the central government for planning, promotion and coordination of environmental and forestry programmes. The main activities of the Ministry are conservation and survey of flora, fauna, forests and wildlife; prevention and control of pollution, afforestation and regeneration of degraded areas and protection of environment. These tasks are being fulfilled through environmental impact assessment, eco-regeneration, assistance to organizations implementing environmental and forestry programmes; promotion of environmental and forestry research, extension, education and training to augment the requisite manpower; dissemination of environmental information; international cooperation and creation of environmental awareness among all sectors of the country's population.

### II. Name of scheme(s) (Under revision)

- |   |  |
|---|--|
| 1. Environmental Research Programme (ERP)               | 6. Wetlands  |
| 2. Ecosystems Research Scheme (ERS)                     | 7. National Natural Resources Management System (NNRMS)    |
| 3. Eastern and Western Ghats Research Programme (E&WRP) | 8. Ganga Action Plan/National River Conservation Programme |
| 4. Biosphere Reserves                                   | 9. Research and Consultancy Projects in Wildlife           |
| 5. Mangroves and Coral Reefs                            |  |

### Contact Address:

Adviser , Research Division , Ministry of Environment and Forests  
 Paryavaran Bhavan, Block No. 2 , CGO Complex, Lodi Road  
 New Delhi – 110003 , Tel.No: (011) 24362840 , Fax: (011) 24368654  
 E-mail: [rmehta52@yahoo.com](mailto:rmehta52@yahoo.com) , Website: www.envfor.nic.in

## (16) Ministry of Food Processing Industries (MFPI)

### I. Introduction

The Ministry of Food Processing Industries (MFPI) was set up in July, 1988 to give an impetus to development of food processing industries in the country. The Ministry is concerned with formulation and implementation of the policies & plans for the food processing industries within the overall national priorities and objectives. The Ministry acts as a catalyst for bringing in greater investment into this sector, guiding and helping the industry, encouraging exports and creating a conducive environment for healthy growth of the food processing industry.

### **II. Name of scheme(s)**

#### **Research & Development in Processed Food Sector**

##### **Objective(s)**

- Update processing, packaging and storage technologies for all major processed food products so that they meet International Standards.
- Standardization of various factors such as bacteriological standards, preservation standards, additives, pesticide residue etc., of meat and meat products, development of value added products of commercial importance.
- Development of processing technology for the production of intermediate and finished food product/production including design and building of prototype equipment/pilot plants.
- Fortification of cereals/cereal products for enhancing the nutritional level of our population, especially women and children.
- Traditional Foods of various regions of the country.
- Development of new cost effective technologies for preservation and packaging for food products based on traditional foods, common food grains, dairy products etc., for both domestic and export purposes. Development and design of equipment for manufacture of such products, development of new inexpensive packaging techniques and equipments, analysis of existing packaging methods, materials processes, quality control norms studies about improvement in the currently used systems, studies about newer packaging possibilities.
- Ministry may engage reputed research institutions/universities for directed research & development of low cost indigenous technology for preservation/processing, which will result in value addition to various foods

### **III. Areas of research support**

Proposals related to the areas mentioned under the “Objectives” will be considered for support.

#### **Contact Address**

The Joint Secretary , Ministry of Food Processing Industries ,Panchsheel Bhawan,  
August Kranti Marg , New Delhi – 110 049 , Tel. No: (011) 26492216, 26492174  
Fax. No: (011) 26493228 , E-mail: [mofpi@hub.nic.in](mailto:mofpi@hub.nic.in) , Website: [www.mofpi.nic.in](http://www.mofpi.nic.in)

## **(17) Ministry of Non-Conventional Energy Sources (MNES)**

### **I. Introduction**

The Ministry promotes renewable energy technologies and creates an environment conducive for their commercialization through innovative policy initiatives and strategies. The range of its activities covers renewable energy resource assessment, research and development, demonstration, extension and production in the areas of biomass energy, solar thermal and solar photovoltaics, wind energy and small hydro power. It also promotes and supports studies and research in new technology areas such as tidal energy, geothermal energy, alternate fuels for transportation, hydrogen energy and fuel cells. The programmes of the Ministry are implemented mainly through the state energy development agencies and state electricity boards. Greater thrust has been given to research and development through active involvement of research institutions, universities, industries and non-governmental organizations.

### **II. Name of scheme(s) (Under revision)**

#### **▪ Industry/Institution Participation in Research and Development Projects**

To encourage public as well as private industrial sector for research and development in NRSE sector on cost sharing basis.

### **III. Areas of research support**

- New Technologies
- Solar Thermal

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- Solar Photovoltaics
- Wind Energy
- Biomass Energy
- Small Hydro
- Others

### Contact Address

Director (R&D), R&D Division, Ministry of Non-Conventional Energy Sources  
Block No. 14, C.G.O. Complex, Lodi Road, New Delhi – 110003  
Tel. No: (011) 24361604, Fax. No: (011) 24367413,  
E-mail: [shuklaar@nic.in](mailto:shuklaar@nic.in), Website: [www.mnes.nic.in](http://www.mnes.nic.in)

### (18) Ministry of Power, Central Power Research Institute (CPRI)

#### I. Introduction

Ministry of Power, Government of India has entrusted the Central Power Research Institute to act as the nodal agency to manage the Research Scheme on Power [RSOP] including the funding for the Research programme. Techno-economic evaluation, monitoring and optimal utilization of resources are the major responsibilities of CPRI. This was earlier carried out by CBI&P and is now being managed by CPRI, since April 2001.

#### II. Name of scheme(s)

##### ▪ Research Scheme on Power (RSOP)

The scheme basically aims to provide fund for carrying out need based research projects in power sector including solving of power system operational problems in the country.

#### III. Areas of research support

The research areas include but not limited to:

- Power system planning, improvement, studies
- Diagnostic and condition monitoring of power system equipments.
- Reliability enhancement of power station equipment etc.

However, pertinent projects in the power sector on specific case will also be considered.

### Contact Address

Joint Director(R&D), Central Power Research Institute, Ministry of Power  
P B No.8066, Bangalore 560 080, Tel No: (080) 23605367, Fax No: (080) 23601213  
E-mail: [babu@powersearch.cpri.res.in](mailto:babu@powersearch.cpri.res.in), Website: <http://powersearch.cpri.res.in>

### (19) Ministry of Water Resources (MOWR)

#### I. Introduction

Ministry of Water Resources (MOWR) provides financial assistance to promote research work in the field of Water Resources Engineering. The assistance is provided by way of grants to academicians/experts in the Universities, IITs, recognised R&D laboratories, Water Resources/ Irrigation departments of the Central and State Governments and NGOs. Research proposals of applied nature as well as basic research are considered for MOWR support.

#### II. Name of scheme(s)

##### ▪ Research & Development for Water Resources Management

- To find practical solutions to the country's water resources related problems, to improve available technology and engineering methods and procedures.
- To maintain a lead in the latest technology so as to enable export of expertise from India, in competition with other developed nations, to countries that import such expertise, in order to earn foreign exchange, increase GDP and provide employment opportunities for Indians abroad.
- To review the state of the art in the country in different branches of the subject area by collecting relevant information from national and international organizations and publish

“State of the art Report”. To prepare and maintain a comprehensive documentation, preferably using IT, of R&D done so far at national as well as international level.

- To prepare, co-ordinate and recommend funding of research programmes to be taken up by the institutions in the country on basic and applied research, action research, and other areas related to research in the subject field.
- To review the R&D programme in the subject area: identify topics which need immediate attention and encourage the national institutions to take up research on these topics.
- To disseminate information and stimulate thinking related to the subject field by publishing journals, research news/digests; arranging and conducting seminars/ conferences/ workshops; supporting mass awareness programmes.
- To provide support for the infrastructure development of research institutions working in the water resources sector.
- To encourage indigenous industry to take up technology development in the subject area.
- To promote and co-ordinate effective participation of India in the International programmes related to the water resources.
- To promote educational, training and Human Resources Development programmes in the subject area

### III. Areas of research support

INC	Subject Domain
INCH	Management of Floods, Hydraulic Structures (including masonry and concrete structures), River and Estuarine Hydraulics, River Morphology, Ground Water Hydraulics, Instrumentation for Seismic and Geophysical Measurements, Open Channel Flow, Pipe Flow, Hydraulic Machinery, City Water Supply and Ports and Harbours
INCOH	Meteorology, Surface Water Hydrology, Evaporation Control, Ground Water Hydrology and Management, Instrumentation, Real Time Systems, Application of GIS and Remote Sensing
INCID	Irrigation, Drainage, Agronomy, Water Management, Environmental Impact and Socio-Economic Aspect of Water Resources Projects, Plasticulture Development, Geo-textiles
INCGE	Rock Mechanics & Tunneling Technology; Soil Mechanics & Foundation Engineering; and Instrumentation and Measurement Techniques
INCCMS	Construction Materials, Concrete Technology and Structures

#### Contact Address

Director , R&D Division, PP Wing , Ministry of Water Resources  
1st floor, Wing –4, West Block – 1 , R K Puram New Delhi-110066  
Tel. No: (011) 26104082 Fax. No: (011) 26104082 ,E-mail: watrnd-mowr@nic.in , Website:  
www.wrmin.nic.in

#### (20) Department of Education ( DOE)

The Deputy Education Adviser (T), Division TD, VI,  
Department of Education, Ministry of Human Resource Development,  
Shastri Bhawan, New Delhi.  
Fax: 011-2382365/23011097/2384093 , Tel: 011- 23782296/2381703

#### (21) Science and Technology Application for Rural Development (STARD)

##### Science and Society Related Programmes

The Head, Sci.& Society Division, Dept. of Sci. & Technology, Technology Bhavan, New Mehrauli Road, New Delhi – 110 016,  
e-mail: sunilag@alpha.nic.in ,web: www.scienceandtechnology-dst-org.  
Fax: 26864570, 26863847, 26862418 ,Tel: 011-26567373 Extn. 298

#### (22) Science & Technology for Weaker Sections (STAWS).

##### Science and Society Related Programmes

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The Head, Sci.& Society Division, Dept. of Sci. & Technology, Technology Bhavan, New Mehrauli Road, New Delhi – 110 016 ,  
e-mail: sunilag@alpha.nic.in ,web: www.scienceandsociety.dst.org.  
Fax:26864570, 26863847, 26862418 ,Tel:011-26567373 extn. 298

### **(23) Indian National Science Academy ( INSA)**

The Chairman, Indian National Science Academy, Bahadur Shah Zafar marg, New Delhi – 110002  
e-mail: insa@giasd101.vsnl.net .in , insa@delnet.ren.nic.in ,web: insa1@ndf.vsnl.net..in  
Fax: 91-11-23235648/23231095 ,Tel: EPBAX No. 23221931 to 23221950

## **INTERNATIONAL FUNDING AGENCIES**

### **(24) International Foundation for Science**

Director, International Foundation for Science, Grev Turegatan 19, S.114 38, STOCKHOLM, SWEDEN , WEB: www.ifs.se, e-mail: . info@ifs.se. , Tel: 46 545 81800

### **(25) Third World Academy of Sciences ( TWAS)**

Executive Director, Third World Academy of Sciences ( TWAS), c/o the Abdus Salam International Centre for Theoretical Physics, ( ICTP), P.O. Box 586 – Via Beirut 6 – 34100 Trieste – Italy.  
e-mail: info@twas.org., web: http://www.org/activities.html  
Fax:+39 040 224559 ,Tel: +39040 2240387

### **(26) Third World Network of Scientific Organizations**

The Third World Network of Scientific organizations, ( TWNSO), c/0 The Abdus Salam International Centre for Theoretical Physics ( ICTP). Strada Cpstoera 11- 340 14 Trieste – Italy :  
e-mail: info@twnso.org , web: www.twnso. Org ,  
Fax: . + 39 040 2240 689 ,Tel: +39 040 2240-683