

Rajiv Gandhi Science & Technology Commission

Government of Maharashtra

Scheme "Assistance for S & T Applications Through University System"

Preamble :-

Government of Maharashtra has set up Rajiv Gandhi Science and Technology Commission as a Statutory Body under Maharashtra Act No. XV 2004 for advancement, propagation and promotion of applications of Science and Technology for benefit of the people. The objectives of the Commission include –

1. to be an agent for change, development or advancement through inputs of Science and Technology;
2. to propagate application of science and technology through studies, adaptation of technology, formulating projects, using the technology, field demonstration, imparting necessary training, publications and consultancy;
3. to act as catalyst or facilitator for transfer of technology from laboratories and other research efforts to application of science and technology on a larger scale.

The emphasis is clearly on applications of Science and Technology for socio-economic development. These activities need to be undertaken in a project mode to set clear targets and time frames for implementation. These activities are expected to be undertaken through the existing institutions depending upon their expertise, capabilities, facilities and interest. Obviously, such institutions would include laboratories, universities, science and engineering institutions, NGOs and various field agencies of the Government.

The Commission is already implementing a scheme "Assistance for S&T Applications" to support innovative applications of Science and Technology for socio-economic development. These applications could be linked to the material resources, specific problems, specific skills and potential for development. The activities could also be area specific or sector specific. The Commission therefore invites specific project proposals for consideration. Under the peer review system if the proposals are found to be useful, the Commission provides necessary financial and logistic support for implementation of such projects. General guidelines are given for formulation of project proposals. A project format is also prescribed for submission of proposals.

This scheme has got a good response from the institutions and a number of projects have been provided financial support by the Commission. These are major projects, involving sizeable financial requirements and primarily confined to institutions with major research facilities and well trained manpower.

Need for Decentralization:

Besides major projects at prominent research institutions, which are being handled at the Commission level, short term projects of localized nature need to be encouraged at the large number of institutions with a potential to participate in activities of S&T Applications. These institutions may include University Departments, Science Colleges, Engineering Colleges, Polytechnics etc. Such projects may be related to innovative technology applications linked to local resources/problems/skills/potential, specific studies/surveys, field trials of local innovations etc.

Besides, limited extent of project work is done by students in some of these institutions. Some of these projects may be based on important ideas/innovation and could constitute significant benefit to industry/society and more importantly make significant positive impact on the learning experience of students. It is thus important that the best among such projects are carried forward to their logical end. We thus need a scheme where Universities can support a few such projects.

A key objective of such a scheme would be to facilitate greater interaction between colleges and institutions and potential users of their research and innovation. Projects with specific objectives could be submitted by researchers, college teachers, group of research students etc through head of the institution who will be responsible for receiving financial support and proper utilization of funds for the project. Such activity could be of local relevance and help in creating a culture of research and innovation linked to local development needs.

Handling large number of small and short term projects would be quite difficult for the Commission and would be time consuming. As a matter of fact such over centralization may even be counterproductive. Therefore, it is proposed to decentralize the process by utilizing the University System to handle this process. The Commission has decided to provide funds to the Universities in Maharashtra to operate this scheme in the areas of their jurisdiction. Guidelines and procedures to be followed by Universities are given here. A MoU would be signed with each University to implement the Scheme. This will speed up decision making on small projects, facilitate monitoring and help in encouraging researchers to undertake useful projects.

Projects Through University System

Universities have a direct link with the affiliated colleges and the area under jurisdiction is normally 2-4 districts. These include university departments, science colleges and engineering institutions. There are also a large number of medical institutions, polytechnics, IITs, management institutions etc which have the benefits of students and faculty with S&T skills useful for field activity and local innovations. Reaching out to the end-users may also become possible through the University System. Rajiv Gandhi Science and Technology Commission has, therefore, decided to decentralize project funding by providing funds to Universities for taking up small and short-term projects at the above mentioned institutions in the region of their jurisdiction.

1. NATURE OF PROJECTS FOR SUPPORT UNDER S&T APPLICATIONS PROGRAMME

(i) S&T Studies & Surveys :

This includes support for carrying out S&T studies/surveys including techno-economic analysis, technology assessment etc; development of State databases on S&T resources; S&T policy issues; specific status reports on technology gaps etc. The activities under this head should lead to specific action plan for generation of field projects.

(ii) Location specific research & innovative technology development/application :

Identify and formulate projects linked to specific local needs, material resources, skills and potential of development with S&T inputs/applications. Utility in the local conditions should be the primary focus.

(iii) Pilot scale demonstration projects :

Pilot scale demonstration projects, including field trials, based on technologies developed by Central S&T Agencies/Labs/Institutions etc. relevant to the needs of the State. These may involve appropriate collaborations within institutions.

(iv) Replication of successful models :

Replication of innovative S&T projects/programmes based on successful experiences elsewhere. These could be linked to their relevance to local situation.

(v) Joint Programmes :

To evolve and support certain joint programmes focusing on multi-sectoral area based approach to rural/regional development in cooperation with multiple State & Central Institutions, NGOs and field agencies. These locations should be so identified that S&T intervention could significantly improve the existing socio-economic conditions.

(vi) Awareness and Training:

Awareness and Training on specific innovative technologies, scientific information and skill development requiring special S&T inputs and also on specific topics/themes such as nutrition, water, hygiene, superstitions, local trades, science education etc.

(vii) Projects with Students participation:

Science and Engineering students could form teams and take up specific field projects of local relevance. Such projects may include monitoring of water quality, energy conservation, data collection on biodiversity, campaigns on health/hygiene, data collection on local innovations, formation of science clubs, data on local skills/trades etc.

2. GUIDELINES FOR FORMULATING PROPOSALS

1. The proposal should clearly establish linkage of S&T application to overall development of the State.
2. The proposal may be formulated through consultative process among collaborators and potential users to improve viability. Actual participation of users with substantive contribution would be a welcome feature.
3. The Proposal should have specific quantifiable objectives.
4. Scientific and technical details are clearly spelt out.
5. The proposal should specify time targets for specific outputs/deliverables.
6. The proposal should be based on innovative technologies/ideas. Routine programmes of extension based on proven technologies are not considered.
7. The training programmes should be on specific technologies/themes. Routine training programmes are not entertained.

Mechanism to be followed by the Universities

Universities participating in the Scheme would adopt the following review and monitoring mechanism for generating and implementing right kind projects.

1. **Inviting Pre-Proposals (project ideas/concepts):** The Universities would receive pre-proposals, in the prescribed format, from the institutions throughout the year. A Committee of Peers to be set up at the University would meet periodically to assess these pre-proposals. The Committee would select those pre-proposals (project ideas/concepts) which meet the objectives of the Scheme and could be pursued further for consideration. Composition of the Committee of Peers would be as follows.

| | |
|---|-------------|
| - Vice Chancellor of the University | Chairman |
| - Dean of Science Faculty | Co-Chairman |
| - Dean of Engineering Faculty | Co-Chairman |
| - Two senior Professors of the University with track record | |

- ii. On completion, the institution should submit detailed Project Completion Report giving impact of the project.
- iii. The Project Appraisal Committee would also work as Review and Monitoring Committee on the projects supported under the Scheme. It would take periodic review of progress of the projects.

3. GENERAL TERMS AND CONDITIONS

- 1. The Principal Investigator assumes financial and other administrative responsibilities of the project. Funds would be released to the Head of the Institution undertaking the project.
- 2. In case of multi-institutional project, formal agreement between the collaborating institutions/scientists should be submitted with the proposal.
- 3. International travel is not permissible under the project.
- 4. The manpower recruited for the project should be paid as per the rules of the Institute and guidelines of the Government, if any.
- 5. The proposals are considered for approval/rejection by the Project Appraisal Committee. The Committee may seek expert opinion, wherever required.
- 6. The institute is expected to have core facilities for the project

4. DOCUMENTS/ENCLOSURES REQUIRED WITH THE PROPOSAL:

- (a) Endorsement from the Head of the Institution (on letter head)
- (b) Certificate from Investigator(s)
- (c) Details of the proposals (15 copies)
- (d) Names and addresses of Experts/Institutions who may be interested in the subject/outcome of the project (circulation list).
- (e) Registration Certificate, Memorandum of Association and Rules and Regulations of the Institutions (for NGOs).
- (f) Balance Sheet, Audited Statement of accounts and the annual report (pertaining to the last two financial years) (for NGOs).

5. INSTRUCTIONS FOR FILLING UP THE PROFORMA

- 1. Please use papers of A-4 size (21 cms x 29 cms).

| | |
|---|------------------|
| in the area of industry/institute collaboration | Members |
| - One Principal of the Affiliated College with track record of industry linkage | Member |
| - One Representative of RGSTC | Member |
| - One outside expert from national institutions | Member |
| - Two representatives of industry in the region | Member |
| - Coordinator of the Scheme at the University | Member Secretary |

2. **Inviting Detailed Project Proposals:** The pre-proposals (the project ideas/concepts) approved by the Committee of Peers would be pursued further by inviting Detailed Project Proposals from the concerned institutions, in the prescribed format. The Coordinator would take following steps on these proposals.

- i. Preliminary scrutiny of the proposals received.
- ii. Obtain comments of at least two domain experts on proposals.

Detailed Project Proposals processed by the Coordinator would be placed before the Project Appraisal Committee (PAC) to be constituted for the Scheme. Composition of this Committee would be as follows.

| | |
|---|------------------|
| - Vice Chancellor of the University | Chairman |
| - Dean of Science Faculty | Co-Chairman |
| - Dean of Engineering Faculty | Co-Chairman |
| - One senior Professor of the University | Member |
| - One Representative of RGSTC | Member |
| - One outside expert from national institutions | Member |
| - Coordinator of the Scheme at the University | Member Secretary |

The Coordinator would ensure release of funds to the Institutions; in annual installments on the basis of monitoring report and budget utilization certificate, for implementation of the approved projects. PAC would also monitor progress of the project work.

All correspondence, including pre-proposals may be sent to the Coordinator of the Scheme in each University.

3. **Monitoring the Progress of Approved Projects:** University would follow the following review mechanism for the projects supported under the scheme.

- i. Institution implementing the project should set up a small internal monitoring group (IMC) chaired by the head of the institution or a senior member with principal investigator and a representative from the potential user group as members and would submit half-yearly and annual progress reports duly vetted by the IMC to the University along with Utilization Certificate and Statement of Expenditure at the end of the Financial Year.

2. Please type as per the layout given in the format on both sides.
3. Please do not skip reproduction of any section even if the answer is "nil" or given elsewhere.
4. Project title should be precise and should not exceed normally 20 words within two lines.
5. Expected total duration of the project should normally be less than 24 months. Short term projects with clear applications would be preferred.
6. Use telegraphic language to the maximum extent possible for objectives, work plan, methodology, expected outcome etc.

FORMAT FOR SUBMISSION OF PROPOSALS UNDER THE SCHEME
"ASSISTANCE FOR S&T APPLICATIONS THROUGH UNIVERSITY SYSTEM" OF
RAJIV GANDHI SCIENCE AND TECHNOLOGY COMMISSION, GOVERNMENT
OF MAHARASHTRA.

(TO BE FILLED BY APPLICANT)

A. IDENTIFICATION

1. Project title

.....
.....

KeyWords

.....

2. Broad Area

- (i) S&T Studies/Surveys. (St)
- (ii) Location Specific Research & Technology Development. (LSR)
- (iii) S&T Demonstration Projects. (DP)
- (iv) Replication of Successful Models. (RP)
- (v) Joint S&T Programmes on specific theme. (please specify) (JP)
- (vi) Awareness & Training on specific topic. (Please specify) (TRG)

4. Duration: (number of months)

5. Total Cost:

6. Principal Investigator:

6.1 Name:

6.2 Department:

6.3 Designation:

6.4 Organisation/Institution Name:

6.5 Address (Including Telephone (official & residence), E-mail, Fax) :

7. Co-Investigator:

7.1 Name:

7.2 Designation:

7.3 Department:

7.4 Organisation/Inst. Name:

7.5 Address : (Including Telephone (official & residence), E-mail, Fax):

8. Capability of the Organisation:

(a) Major Facilities

(b) Expertise available

(c) List of on-going and completed projects giving the following details.

| Project Title | Start date | Completion date | Project cost | Sponsoring organisation. |
|---------------|------------|-----------------|--------------|--------------------------|
| | | | | |

B.

TECHNICAL DETAILS

1. Background

1.1 Description of problem

1.2 Review of work already done

1.3 Rational for taking up the project

1.4 Relevance to State priorities

2. Challenge and Constraints

Please identify strengths and weaknesses of the implementers vis-à-vis current project in terms of technical expertise, team building, past record etc. Also list the perceived opportunities and threats and describe how PI/Organisation proposes to capitalise on them or avert them.

3. Description of Proposal

3.1 Objectives of the project. (Brief and to the point)

3.2 Preliminary Investigations done by organisation. (if any)

3.3 S&T component in the project.

3.4 Linkage with S&T Institutions / NGOs / resource persons / R&D organization / Industry for technical backup.

3.5 Other organisations working in this area.

3.6 Methodology detailing stepwise activities and sub-activities.

4. Work Plan

Phase-wise plan of action upto post project activities detailing time schedule. Milestones may clearly be indicated. PERT/GANTT chart may be attached.

5. Output of the Project

Attempt may be made to quantify output in measurable parameters.

6. Likely Impact (Please attempt to quantify)

7. Parameters for monitoring effectiveness of project

8. Suggested Post Project Activities

C.

BUDGET ESTIMATES : SUMMARY

(In Rupees)

| Item | BUDGET | | |
|---------------------|----------------------|----------------------|-------|
| | 1 st Year | 2 nd Year | Total |
| A. Recurring | | | |
| 1. Salaries/Wages | | | |
| 2. Consumables | | | |
| 3. Travel | | | |
| 4. Other Costs | | | |
| B. Non-Recurring | | | |
| Permanent Equipment | | | |
| Grand Total (A+B) | | | |

BUDGET FOR SALARIES/WAGES

(In Rupees)

| Designation (number of persons) | Monthly Emoluments | BUDGET | | |
|---------------------------------------|-----------------------|-------------------------------|--------------------------------|-------|
| | | 1 st yr. (m.m.) | 2 nd yr. (m.m.)* | Total |
| Full time | | | | |
| i) | | | | |
| ii) | | | | |
| Part time | | | | |
| i) | | | | |
| ii) | | | | |
| Total | | | | |

* m.m.- man months to be given within brackets before the budget amount.

BUDGET FOR PERMANENT EQUIPMENT

(In Rupees)

| Sr.No. | Name of equipment * | Estimated cost |
|--------|---------------------|----------------|
| 1. | | |
| 2. | | |
| Total | | |

* Please give justification for each equipment.

D. PROFORMA FOR BIODATA OF INVESTIGATORS

- A. Name :
- B. Date of Birth:
- C. Institution:
- D. Academic career:
Professional career:
- E. Award/prize/certificate etc. won by the investigator:

F. Publication (Numbers only):

Books

Research Paper, report

General articles

Patents

Others (please specify)

G. List of completed and ongoing projects

| Sr.No. | Title of project | Duration | | Total cost | Funding |
|--------|------------------|----------|----|------------|---------|
| | | From | To | | |

H. Projects submitted

| Sr.No. | Title of project | Name of Organisation | Status |
|--------|------------------|----------------------|--------|
|--------|------------------|----------------------|--------|

(Name & Signature)

Date :

Place.....

Annexure - I

ENDORSEMENT FROM THE HEAD OF INSTITUTION
(TO BE GIVEN ON LETTER HEAD)

PROJECT TITLE:

1. Certified that the Institute welcomes participation of Dr./Shri/Smt/Kum as the Principal Investigator and Dr./Shri/Smt./Kum as the Co-Investigator for the project and that in the unforeseen discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project (with due intimation to the University).
2. Certified that the equipment, other basic facilities and such other administrative facilities as per terms and conditions of the grant, will be extended to investigator(s) throughout the duration of the project.
3. Institute assumes to undertake the financial and other management responsibilities of the project.

Name and Signature of Head of Institution

Date:.....

Place:.....

REMARKS

In regard to research proposals emanating from scientific institutions/laboratories under various scientific departments, the Head of the Institution is required to provide a justification indicating clearly whether the research proposal falls in line with the normal research activities of the institution or not and if not, the scientific reasons which merit its consideration by the University.

Annexure – II

CERTIFICATE FROM THE INVESTIGATOR

PROJECT TITLE

1. I/We agree to abide by the terms and conditions of the RGSTC grant.
2. I/We did not submit this or a similar project proposal elsewhere for financial support.
3. I/We have explored and ensured that equipment and basic facilities will actually be available as and when required for the purpose of the project. I/We shall not require financial support under this project, for procurement of these items.
4. I/We undertake that spare time on permanent equipment will be made available to other users.
5. I/We enclose the following materials.

ITEMS

NUMBER OF COPIES

- | | |
|--|-----|
| (a) Endorsement from the Head of the Institution (on letter head) | One |
| (b) Details of the proposals | 15 |
| (c) Registration Certificate, Memorandum of Association, rules and regulations of the Institution, audited Balance sheet and Annual Report of previous two years. (applicable only for NGOs, field groups, registered societies) | |
| d) Any other (Please specify) | |

Name & Signature of Investigator

Date :

Place