Volume -2

# Study

*On*

# Developing Indicators for Measuring Success of Research Projects

*Supported & Catalyzed by:*

## GOVERNMENT OF INDIA

**Ministry of Science & Technology**
**Department of Science & Technology**
**National Science & Technology Management Information System (NSTMIS)**

*Conducted by:*

**National Foundation of Indian Engineers**
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# Volume - 2

# VOLUME -2

## MONITORING & EVALUATION SYSTEM

**INTRODUCTION**

**HIERARCHY OF VARIOUS STAGES OF RESEARCH PROJECT LIFE CYCLE**

**FLOW DIAGRAM OF RESEARCH PROJECT**

**DOCUMENTS FOR PI**

- **ANNEXURE -1, ANNEXURE -1A & 1B**
- **FORMAT -A, FORM 01 TO 03, FORMAT -B, FORMAT -C, FORMAT -D, FORM 04 & 05**

**DOCUMENTS FOR FUNDING AGENCY**

- **FORM 06, FORMAT – E, APPENDIX, FORMAT –F, FORMAT –G, FORM 07 & 08**

# MONITORING & EVALUATION SYSTEM

## 1.0 INTRODUCTION

Continuous Monitoring & Evaluation is very important for the success of any research project. A close watch has to be kept at all stages to ensure that the committed objectives are achieved and that the research project is a success. With this objective in view, as a part of this study, we held 1:1 meetings with leading R&D experts in the country from different organizations and also organized five Brain Storming Sessions (BSSs). As a result study of various secondary literature and these discussions the main *thrust points,* which emerged for the various stages of research project life cycle are explained in the **form of a hierarchy *(Table -1 below) and also flow diagram of research project—various dimensions (Diagram-1 below)*.** This mechanism would effectively assess research efforts against well-defined goals and avoid duplication of efforts. Hierarchy has been designed to evaluate and monitor various activities of research projects in terms of **committed targets, achieved or not, if not, the reasons and the steps taken by the PI to achieve the committed targets**. It has been designed to monitor and evaluate information on continuous basis during the entire research project life cycle i.e. mid term and upto the completion of the project. This hierarchy encompasses monitoring and evaluation as an important activity and it provides scope for mid term corrections for the ultimate success of the research project. Evaluation on the other hand, in particular, is useful for future planning also by the decision makers. Hierarchy also outlines the entire process of moving downstream along the research continuum from the research component to the final destination of a useful outcome and its impacts & benefits particularly Scientific and Technological.

## 2.0 HIERARCHY OF VARIOUS STAGES OF RESEARCH PROJECT LIFE CYCLE

| COMPONENT | | MEANS | FOCUS |
|---|---|---|---|
| *A.* | ***RESEARCH PROJECT PROPOSAL SUBMISSION STAGE*** | | |
| 1. | Submission of research proposal | Summary Proposal, Proposal & Researchers Qualifications & Experience format **Form 01, 02 & 03** | ☞ Clarity of Objectives<br>☞ Deliverables<br>☞ End User Identification<br>☞ Identification of Risks /<br>☞ Uncertainties by P I<br>☞ Research Plan (PERT/ CPM)<br>☞ Achievable Milestones<br>☞ Beneficiary of Research<br>☞ Outcome |
| 2 | Evaluation of proposal by Funding Agency Experts / Peers | Expert review format **Form 06** | ☞ Clarity of objectives<br>☞ Clarity of deliverables<br>☞ Evaluation of Risks/ uncertainties<br>☞ Skills & Capabilities of P I, Co.P.I & Institute<br>☞ Grading of Proposal |
| 3. | Presentation by P I before PAC (Project Advisory Committee) | Discussions by PAC members | ☞ How well defined are the objectives?<br>☞ Is there any industry participation?<br>☞ Is methodology sharp & Clear?<br>☞ Is Budget justified? |
| 4. | Sanction by Funding Agency | Release of Funds | ☞ Start of work by PI |

*Table –1 contd.*

| | | | |
|---|---|---|---|
| ***B.*** | ***RESEARCH PROJECT IMPLEMENTATION STAGE*** | | |
| 5. | Mid Term Progress reviews | Self - assessment by PI **Form 04** and reviews by Funding Agency Experts **Form 07** | ☞ Meeting the committed Objectives<br>☞ Responsibility of Institute head<br>☞ Monitoring by PERT/CPM<br>☞ Log books<br>☞ Visit by experts to place of work<br>☞ Assessing extent of success at this stage<br>☞ How effectively PI put in his efforts?<br>☞ Deviations –Why / Alternate plan of action |
| ***C.*** | ***RESEARCH PROJECT COMPLETION STAGE*** | | |
| 6. | Final Completion Report | Final Self - assessment by PI **Form 05 and** Review by Funding Agency Experts **Form 08** | ☞ Meeting the committed objectives fully<br>☞ Assessing extent of success<br>☞ How effectively PI put in his efforts?<br>☞ Deviations –Why?<br>☞ Indicators of success & measurement of research outcome (S&T).<br>☞ Measurement of efforts put in by PI<br>☞ Grading of final R&D outcome by funding agency |

***Table –1***

## 3.0 FLOW DIAGRAM OF RESEARCH PROJECT (MONITORING & EVALUATION—VARIOUS DIMENSIONS)

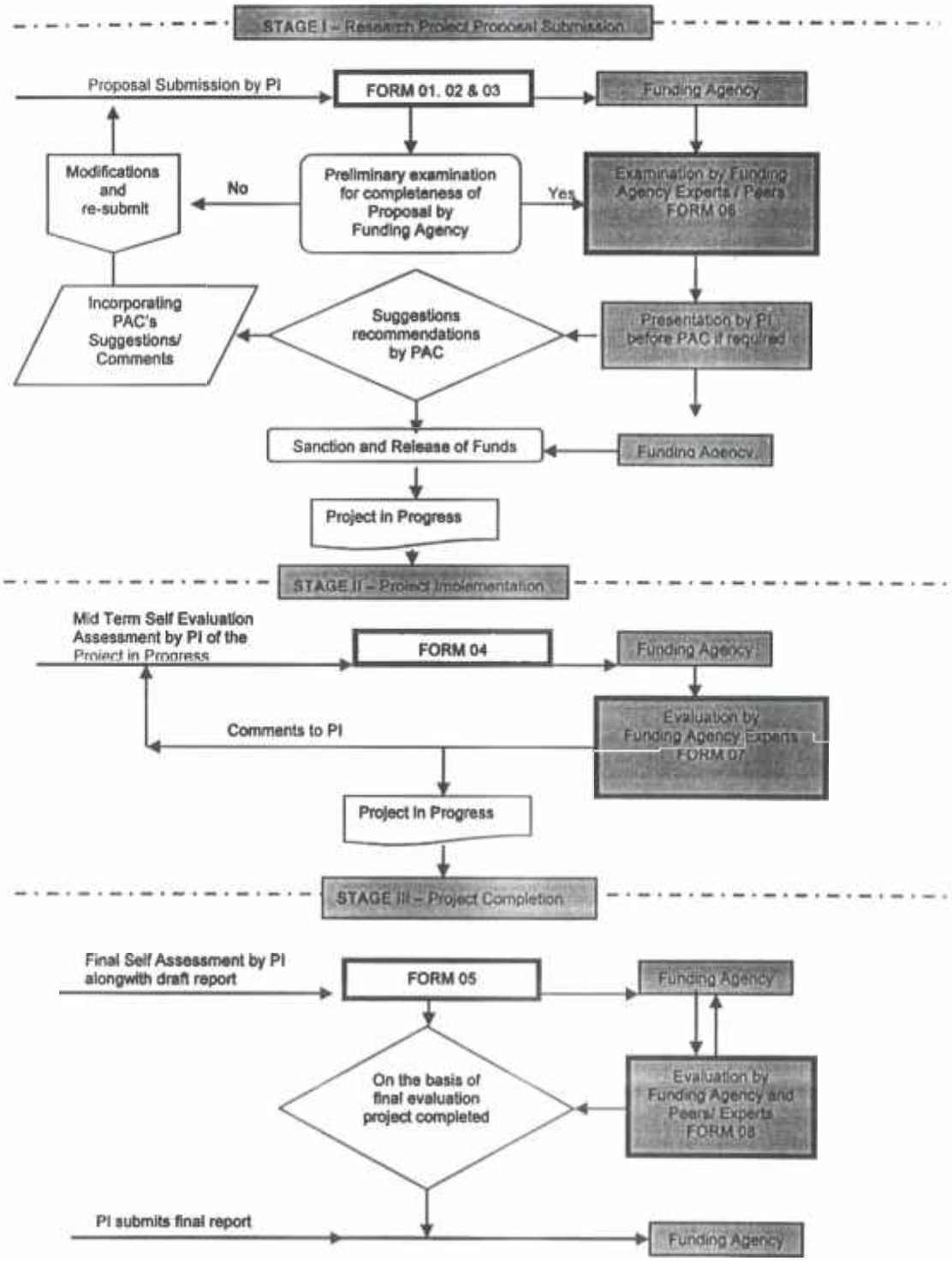



**Diagram-1**

## 4.0 DOCUMENTS / FORMATS

Various documents / formats have been designed and developed to ensure smooth implementation of the research project and to monitor various activities in terms of the committed targets and targets achieved.

List of various documents / forms developed is given below and annexed in this volume:-

### A. Documents for Project Investigator (PI)

**Annexure -1 : Important Instructions to the applicants**

**Annexure –1A :** PERT Chart for an illustrative network for 52 weeks work plan

**Annexure – 1B :** Format of Log-book

| | | |
|---|---|---|
| **Format –A** | : | Proposal Covering Letter to be given by the P I along with the proposal |
| **Form 01** | : | Project Summary |
| **Form 02** | : | Research Proposal |
| **Form 03** | : | Researchers Background & Qualifications |
| **Format –B** | : | Certificate from the head of the institution |
| **Format –C** | : | Check List |
| **Format –D** | : | Acknowledgement to be issued by the Funding Agency on receipt of the proposal from PI |
| **Form 04** | : | Mid Term Evaluation of Research Project ***--- Self assessment by PI*** |
| **Form 05** | : | Final Evaluation of Research Project ***--- Self assessment by PI*** |

### B. Documents for Funding Agency

| | | |
|---|---|---|
| **Form 06** | : | Project Proposal Evaluation by Funding Agency Experts |
| **Format –E** | : | Project Sanction Letter alongwith terms & conditions of grant (Appendix) to be issued by Funding Agency |
| **Format –F** | : | Bond |
| **Format –G** | : | Grant Utilization Certificate |
| **Form 07** | : | Mid Term Evaluation of Research Project by Funding Agency Experts |
| **Form 08** | : | Final Evaluation of Research Project by Funding Agency Experts |

# DOCUMENTS FOR PROJECT INVESTIGATOR (PI)

**ANNEXURE -1, ANNEXURE -1A & 1B**
**FORMAT -A, FORM 01 TO 03, FORMAT -B,**
**FORMAT -C, FORMAT -D, FORM 04 & 05**

**Annexure -1**

# IMPORTANT INSTRUCTIONS TO APPLICANTS

*[Full Compliance with these instructions is essential. If it is observed at any stage that these are not complied with, the project will be cancelled]*

**Note:** ***Applicants must read the instructions given below very carefully before submitting the proposal.***

## A. GENERAL

- **Copies of Research Proposal etc.**: Please send _____ copies of the research proposal in the prescribed formats (**FORM 01 to 03**) along with the covering letter to the funding agency. Also send three copies of the Acknowledgement letter and _____ copies of the certificate from the Head of the Institution / organization of the Project Investigator (PI) and Co-Project Investigator (Co-PI).

- **Completeness of the proposal**: The application for the research proposal should be typed and complete in all respects. Incomplete proposals will not be accepted.

- **Procedure in case PI leaves the original Institute:** For smooth implementation of the sanctioned project, funding agency insists that the project, in addition to the PI, should also have a Co-PI from the same Department / Institution. The Co-PI is expected to ensure that the project work is carried out even when the PI is on leave / deputation. In case of long leave / deputation, PI must inform funding agency sufficiently in advance so that correspondence can be addressed to the Co-PI directly.

  - *Institute head must first assess that the Co-PI identified in the original proposal is competent to take over as PI. If yes, a new Co-PI may be identified and his details submitted to the funding agency as per **FORM 03** for their approval. Otherwise following procedure may be followed:-*

    - *The new institute Head must agree that the research work will continue and agree for the transfer. New Institute Head must sign the same certificate which was signed by the original institute head at the time of submission of the research proposal to the funding agency. This certificate must be submitted to the funding agency while seeking approval of change along with the profile of the new institute as per original performa **(Form 3, B1 or B2 as applicable).***

    - *Original institute head must also agree for transfer of funds to the new institute*

    - *Funding Agency must agree to the transfer; but it will first assess the new institutes' track record in meeting the requirements of the research project.*

- **Multi Centre Studies:** Funding agency can consider projects based on multi-center studies also. For such research project proposals, the Co-PI can be drawn from a institution other than that of the PI. In such cases, funds required by the Co-PI should be shown separately using the same format. If the project is approved, funding agency will sanction funds to PI and Co-PI separately and send the grants to their respective institutions.

- **IPR Indemnification** PI / Co-PI / Institute Head will keep the funding agency *indemnified* all the time against any IPR infringements and all other related IPR issues.
- **Processing of Applications:** All applications received will be processed. Based on the comments form the experts / referees, the short listed candidates may be invited for a presentation before a Project Advisory Committee (PAC) meeting. Based on the recommendations of the PAC, the proposal may be recommended for sanction.
- **Release of Funds:** Suitable funds are released along with the issue of initial sanction. For the subsequent period, PI is requested to submit progress reports in the prescribed format **[FORM 04]** and final completion report **[FORM 05]**. For evaluation of progress of project, PI may also be called for a presentation along with the photocopies of the log-books showing the progress of work and if the progress is found satisfactory, a sanction letter renewing the project will be issued. Audited **"Statement of Accounts"** along with **"Utilization Certificate"** etc. in respect of the funds received in the previous period and to claim the sanctioned funds for the next period be submitted alongwith the request for release of next installment of payment.
- **Local Project Advisory Committee:** After the approval of the project, PI may propose eight to ten names of the experts as the members of the Local Project Advisory Committee **(LPAC)**. These experts will guide him from time to time. They should be renowned experts from the relevant fields of proposed research project.

## B. INSTRUCTIONS FOR FILLING THE RESEARCH PROPOSAL FORM

| S.No. of the instructions | Form No. | | Description |
|---|---|---|---|
| | Sr. No. of the research proposal form | Page No. of the research proposal form | |
| 01. | FORM -01 | | **Project Summary Form** |
| | 01 – 08 | 27 | Project Summary should reflect the complete information of the project in a concise format. It should be filled, preferably, only after completing all other sections of the proposal. |
| | | | **Key words** |
| | | | Maximum _____ words may be used for indexing the project |
| 02. | FORM -02 | | **Project Research Proposal Form** |
| | 01-03 | 28 - 29 | **Objective(s)** must be clearly defined. It should be target oriented, realistic, time bound, achievable, measurable, identifiable and in terms of deliverables. Any industry / marketing tie-up / end user identification and research outcome potential in terms of commercial / marketing / technological advancements may be highlighted in the proposal. |
| 03. | 04 – 05 | 30 - 31 | **State of the Art – National/ International** |
| | | | National / International status of the proposed research in the chosen area / similar area should be highlighted in the proposal referring to various refereed national / international journals and other printed literature. |

| S.No. of the instructions | Form No. | | Description |
|---|---|---|---|
| | Sr. No. of the research proposal form | Page No. of the research proposal form | |
| 04. | 06 | 32 | **Motivation of the PI**<br><br>PI must highlight the source of his inspiration, which motivated him to submit the research project proposal. |
| 05. | 07 | 32 - 33 | **Novelty of project**<br><br>PI must clearly state the novelty of the project in terms of differentiation from similar research being undertaken elsewhere nationally and internationally. PI must highlight any industry/ marketing tie-ups at the proposal stage. |
| 06. | 08 – 09 | 33 - 34 | **Weakest link and identification of Risks / Uncertainties during all the stages of Research Project LIfe Cycle.**<br><br>PI must clearly bring out in the proposal, the risks / uncertainties anticipated by him in executing the research project. Each risk should be given a risk rating **as H- (High Risk), S – (Substantial Risk), M-(Moderest) and N-(No Risk).** Further for each risk factor, PI must propose his strategy / action plan to minimize the risk i.e. risk minimization measures. In the end, the overall risk rating of the research proposal should also be given.(H/S/M/N) |
| 07. | 10 | 35 | **Reasons for Accepting the Research Project Proposal**<br><br>PI must clearly bring out the *core competencies* of his research proposal highlighting various reasons why funding agency should accept the proposal. |
| 08. | 11 | 35 | **Research Outcome**<br><br>In case the research outcome is resulting in more than one impact factors, the resultant impact factors must be *prioritized* as I, II and III. In order to make the objectives focused, more than 3 priorities are not permitted. |
| 09. | 12 | 36 | **Methodology**<br><br>It should be sharp and well defined and should highlight the various steps in details which would be undertaken to meet the objectives. Simply do not just give a list of points |
| 10. | 13 | 37 | **Yearly Research Plan**<br><br>Describe research work plan in details with deliverables, atleat quarter wise for each year of the project life cycle.<br><br>Work Plan should be in a network form i.e. inter relation of various activities must be shown. This will facilitate effective scheduling and monitoring. Various Milestones and Critical Path to be clearly identified. An illustrative **network for 52 weeks** work plan is given in **Annexure –A.** |
| 11. | 14 | 38 | **Referees**<br><br>PI is encouraged to provide name and affiliation of not more than 5 potential referees for your research project. PI may also provide name(s) of experts / referees to whom PI would not prefer project to be referred for evaluation for example, conflict of interest reasons. However, the choice of final referees in all cases; will be made by the funding agency. |

| S.No. of the instructions | Sr. No. of the research proposal form | Page No. of the research proposal form | Description |
|---|---|---|---|
| 12. | 15 - 17 | 39 - 41 | **List of Current & Previous Projects**<br><br>A complete list of all the current & previous research projects being handled by PI and Co-PI is required. It is not enough to give the list of the projects being handled by the institute of the PI /Co-PI. Funding agency needs the list of all projects in which each of the PI / Co-PI are directly involved. Also give details of all the other on going research projects being executed at your institute. |
| 13. | 18 - 19 | 42 - 44 | **Budget**<br><br>Consolidated amounts need to be furnished under overall budget summary. Budget details like Manpower, Equipment Purchases, and Recurring Expenses etc. along with budget justifications are to be furnished separately in the relevant columns provided. After the financial sanction is issued, it may be noted that transfer of funds from one head of a/c to another is normally not permitted.<br><br>**Manpower**<br><br>Wherever an institute / organization have its own norms for recruitment of manpower, it may follow them. In such a case, PI should enclose a copy of the norms along with the project proposal.<br><br>**Equipment**<br><br>Brief specifications of the equipment to be procured, possible suppliers and documents in support of the estimated cost (e.g. quotations, performa-invoice etc.) are required to be furnished. This will facilitate early decision making.<br><br>**Travel**<br><br>The entitlement of mode (Rail/Air) and class of travel will be governed by the rules of the institution to which the PI and Co-PI belong. In such a case, PI should enclose a copy of the norms along with the project proposal.<br><br>**Contingencies**<br><br>The amount that can be sanctioned under this "Head" will vary depending on the type of project. Under the Head 'Contingency', the funds can be utilized to meet the expenditure towards advertisement and selection related expenses for the staff etc. This can also be used for purchase of urgently required laboratory equipment or for buying books, but books so purchased should be deposited in the library of the Institute / Organization and issued as per the rules of the library.<br><br>**Overheads**<br><br>These are meant to cover the cost of infrastructure utilities such as water, electricity, communication and administrative services provided by the University / Institute/ Organization. Each institute can use its discretion to form regulations to use the funds under this head. |

| S.No. of the instructions | Form No. | | Description |
|---|---|---|---|
| | Sr. No. of the research proposal form | Page No. of the research proposal form | |
| 14. | 20 | 45 - 46 | **Log-Books**<br><br>PI shall maintain log-books of each activity. Log-books should be bound and each page serially numbered. On weekly basis, it should be signed by PI / Co-PI and by the Institute Head. First page of the log book should read as follows:-<br><br>*"Certificate*<br><br>*This is certified that the work reported in this log-book embodies faithful records of original research work carried at the institute under our guidance and supervision. This Log-book contains ___ pages and is for the period _____ to _____. No page is removed from the Log-book".*<br><br>*Signature of PI* *Signature of Institute Head*<br><br>*Place: .....* *Date....."*<br><br>Detailed formats for recording various activities under the research project are enclosed as **Annexure – B** |
| 15. | 21 | 47 | **In-house Monitoring System**<br><br>PI must give in the research proposal, a detailed in-house monitoring system that shall be in place during the project life cycle. The system must clearly outline the responsibilities of the Institute Head and Co-PI. Further for each Key Performance Indicators (deliverables), a detailed monitoring and evaluation system with critical assumptions details is given in the research proposal. |
| 16. | 22 | 48 | **Infrastructure Facilities**<br><br>Details of all the infrastructure facilities must be given in the proposal, highlighting their usefulness / applicability for the proposed research project. |
| 17. | **FORM -03 A, B-1 & B-2** | | **Researchers Background & Qualifications** |
| | All | 49 - 54 | All the necessary details in terms of skills / capabilities and previous track records of the PI / Co-PI/ Institute/ R&D Organization should be highlighted, that will be useful and relevant to the proposed research project. Under publications, only high quality important publications that are relevant to the area of the proposed research project should be indicated. |
| 18. | **FORM 04 & 05** | | **Monitoring & Evaluation (M&E)** |
| | All | 58 - 67 & 68 - 77 | M&E has been designed on **self assessment** basis to evaluate and monitor various activities of research project in terms of **committed targets, achieved or not, if not, the reasons and the steps taken by the PI to achieve the committed targets**. It has been designed to monitor and evaluate information on continuous basis during the entire research project life cycle i.e., quarterly, mid term and annual basis upto the completion of the project. This encompasses monitoring and evaluation as an important activity and it provides scope for mid term corrections for the ultimate success of the research project. M&E also outlines the entire process of moving downstream along the research continuum from the research component to the final destination of a useful outcome and its impacts & benefits particularly Scientific and Technological. |

# (PERT CHART)

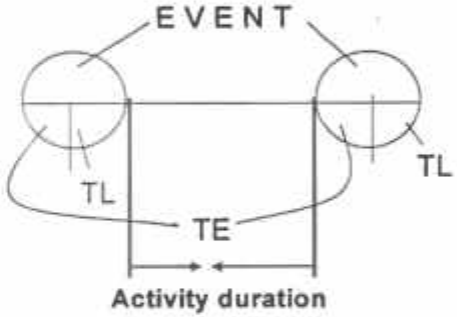
# TYPICAL NETWORK FOR 52 WEEK'S RESEARCH PROJECT

*Nomenclature used:-*

TE –Earliest Time – Forward  TL – Latest Time – Backward  TE-TL = Float / Slack  HP – Hold Point (Milestones)

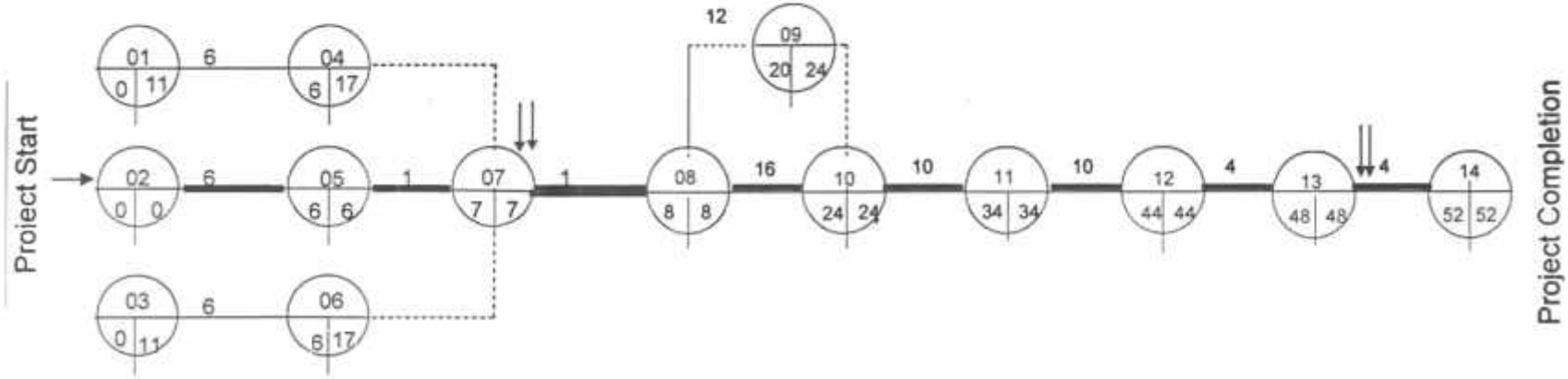
---------- Interlinkages

Critical Path




TE = (a + 4 b + c) / 6

Where a = optimum time
b = must likely time
c = pessimistic time



| S.No. | Activity Number | Activity Duration in Weeks | Activities | Remarks |
|---|---|---|---|---|
| 1. | 01 - 04 | 6 | Finalization of Universe | Deliverable 1 |
| 2. | 02 – 05 | 6 | Identification and Finalization of Sample | |
| 3. | 03 – 06 | 6 | Preparation of Questionnaire | |
| 4. | 05 – 07 | 1 | 1st Meeting of LPAC (H.P.) | |
| 5. | 07 – 08 | 1 | Mailing of Questionnaire | Deliverable 2 |
| 6. | 08 – 10 | 16 | Field Visits for Data Collection | Deliverable 3 |
| 7. | 08 – 09 | 12 | Experiments & Tests | ----- |
| 8. | 10 – 11 | 10 | Final Tests & Experiments based on field data. | Deliverable 4 |
| 9. | 11 – 12 | 10 | Completion of Data Feeding & Analysis | Deliverable 5 |
| 10. | 12 – 13 | 4 | Checking & Draft Report | Deliverable 6 |
| 11. | | | 2nd Meeting of LPAC (H.P.) | |
| 12. | 13 – 14 | 4 | Final Report | Deliverable 7 |

# FORMAT OF LOG BOOK

*[To be filled in by the PI and sent along with the quarterly/ mid term / annual / final progress reports.]*

Week No. _____ Date from _____ to _____

Project Name : _____

Name of the Project Investigator : _____

Name of the Institute/ organization : _____

## (A) Experiments / Tests to be conducted

| S.No. | Activity* (Give brief details) | Number* of hours planned | Number of hours actually utilized | | | Remarks | Signature |
|---|---|---|---|---|---|---|---|
| | | | Start Time | End Time | Actual hours used | | |
| 1. | Experiments | | | | | | |
| 2. | Tests | | | | | | |

* *This should be same as given in the research project proposal, S.No. 20.*

**Performed by & date** **Verified by & date** **Reviewed by & date**

## (B) Equipment Usage

| S. No. | *Brief Description of the Equipment Used | *Purpose | *Hrs. Planned | Hrs. Actually Used |
|---|---|---|---|---|
| | | | | |

** This should be same as per details given in the research proposal Sr. No. 20.*

**Used by & date** **Verified by & date** **Reviewed by & date**

## (C) Visits

| S. No. | * Number of Visits Planned | Visits actually undertaken |
|---|---|---|
| 1. | Data Collection | |
| 2. | Meetings | |

** This should be same as per details given in the research proposal Sr. No. 20*

Undertaken by & date Verified by & date Reviewed by & date

Format -A

# PROJECT PROPOSAL COVERING LETTER

*[To be filled in by the Project Investigator on the Institute/ organization letter head]*

*Ref No.* *Date:*

To

**Dear Sir,**

We submit herewith _____ hard copies and a CD (PDF Format) of the Research Proposal entitled .....

for your kind consideration for funding. We also enclose herewith the requisite certificate from the head of the institution/ organization in the format specified. We confirm that if the Research Proposal is accepted, we shall abide by all the **"terms, conditions and instructions"** stipulated and shall execute the project accordingly.

| **Project Investigator** | **Co-Project Investigator** | **Head of the Institute/ Organisation** |
|---|---|---|
| Signature | Signature | Signature |

FORM 01

# PROJECT SUMMARY FORM

*[To be filled in by the Project Investigator]*

Research area: **Applied / Up-scaling**

*[Please see instruction – Sr. No. 01 Page No. 17]*

*[Please tick mark (✓) the appropriate]*

1. **Project Title:**

2. **Project Key Words:**

3. **Institute:**
   [Where the work will be carried out.]
   (With name, address, telephone, fax, e-mail etc.)

4. **Head of the Institute:**
   (With name, designation, address, telephone, fax, e-mail etc.)

5. **Project Investigator (PI) :**
   (With name, designation, address, telephone, fax, e-mail etc.)

6. **Co-Project Investigator (Co-PI):**
   (With full name, designation, address, phone, fax, e-mail etc.)

7. **Total Project Cost:**
   (In Indian Rupees)

8. **Total Project Duration:**
   (In months)

| **Project Investigator** | **Co-Project Investigator** | **Head of the Institution/ Organisation** |
|---|---|---|
| Signature | Signature | Signature |

***Place:***

***Date:***

# PROJECT RESEARCH PROPOSAL FORM

*[To be filled in by the Project Investigator]*

**Research area:** ***Applied / Up-scaling***

***[Please tick mark (✓) the appropriate]***

## Please give detailed Research Proposal description under the following heads:-

***[Attach extra sheets wherever required]***

**01. Objective(s) of the project:** *[Please see instruction – Sr. No. 02 Page No. 17]*

**02. Identify the deliverables:** *[Please see instruction – Sr. No. 02 Page No. 17]*

**03. What are the potential applications of the research outcome? Identify end user:**

*[Please see instruction – Sr. No. 02 Page No. 17]*

| Potential of the Research Outcome | End User |
|---|---|
| ○ Commercial & Marketing | |
| ○ Technological Advancements | |

| Potential of the Research Outcome | End User |
|---|---|
| ○ Others (Please specify) | |

**04. State of the Art (With relevant references from major national journals) – National status including details of cost & time.**

*[Please see instruction – Sr. No. 03 Page No. 17]*

* Directly in the chosen area

* In the similar area

**05. State of the Art (with relevant references from major International journals) – International status including details of cost & time.**

*[Please see instruction – Sr. No. 03 Page No. 17]*

* Directly in the chosen area

* In the similar area

06. **What is the source of motivation of the PI for submitting the research proposal?**

*[Please see instruction – Sr. No. 04 Page No. 18]*

07. **What is the Novelty of the Project?** *[Please see instruction – Sr. No. 05 Page No. 18]*

**List FOUR Strengths of the research proposal :-**

a.

b.

c.

d.

List FOUR Weaknesses of the proposal :-

a.

b.

c.

d.

**08. Please bring out the weakest link of the research proposal.**

*[Please see instruction –Sr. No. 06 Page No. 18]*

09. **Identify the risks / uncertainties during all stages of the research project life cycle in the following format and rate them as High Risk (H), Substantial Risk (S), Moderest Risk (M) and No Risk (N).**

*[Please see instruction – Sr. No. 06 Page No. 18]*

| Risk | Risk Rating | Risk Minimization Measures |
|---|---|---|
| | | |
| Overall Risk Rating (H/S/M/N) | | |

10. **Give reasons why your research proposal should be accepted?**

*[Please see instruction – Sr. No. 07 Page No. 18]*

11. **The Research outcome will result in: -** *[Please see instruction – Sr. No. 08 Page No. 18]*

*[Please tick mark ( ✓) the appropriate box; but not more than three areas (Impact Factors) in any case and **prioritize them as I, II & III**]*

- ☐ Commerlization & Marketing
- ☐ Consultancy
- ☐ Cost Saving
- ☐ H R Development like Ph.D. Generated, New Teaching Methodologies
- ☐ Import Substitution
- ☐ Improvement in any existing Process
- ☐ Industrial Application / Industrial tie up
- ☐ Innovation & Creativity
- ☐ Laboratory Development
- ☐ Linkages with national Priorities, Societal Applications / Socio Economic Benefits
- ☐ New e-Applications
- ☐ Patents
- ☐ Process Development
- ☐ Product Development-
- ☐ Publications / Citations / Technical reports
- ☐ Technology Development
- ☐ Technology Transfer
- ☐ Any others (Please specify.....)

**12. Methodology:** *[Please see instruction – Sr. No. 09 Page No. 18]*

Provide sufficient detailed description of your methodology. Please do not simply make a list of activities:

**13. Yearly Research Plan:** *[Please see instruction – Sr. No. 10 Page No. 18]*

(a) Duration of the Project: _____ Months

(b) Please indicate the approximate number of man-months during a year that will be devoted in the research project by Project Investigator and Co-Project Investigator.

| | Man –months | | |
|---|---|---|---|
| | I yr | II yr | III yr |
| Project Investigator | | | |
| Co-Project Investigator | | | |

(c) Outline various activities of research project life cycle giving duration of each activity (Attach a Network). Indicate on the net work, mile stones, identifiable / tangible outputs at the conclusion of each activity in line with the objective (s) of the research proposal.

| S.No. | Activities (e.g. questionnaire preparation) | Duration of activities in weeks (e.g. weeks 2-4) |
|---|---|---|
| | | |

14. **Please propose ____ referees to whom your research proposal should be sent for evaluation (Do not propose more than five referees) with their complete contact details including e-mail. Please also give name(s) and contact details of five referees to whom you would *not like* that the research proposal should be sent, in your opinion, for reasons of conflict of interest etc. :**

*[Please see instruction – Sr. No. 11 Page No. 18]*

- **Research proposal should be sent**

- **Research proposal should not be sent**

15. **List all projects that are supported by this funding agency or any other funding agency in which PI is actively participating:**

*[Please see instruction – Sr. No. 12 Page No. 19]*

a. **Pervious Projects**

| S.No. | Title of the project | Total cost | %age of time spent by PI on the project | Funding Agency | Present status |
|---|---|---|---|---|---|
| | | | | | |

b. **Projects in the current financial year**

| S.No. | Title of the project | Total cost | %age of time spent by PI on the project | Funding Agency | Present status |
|---|---|---|---|---|---|
| | | | | | |

16. **List all projects that are supported by this funding agency or any other funding agency in which Co-PI is actively participating:**

*[Please see instruction – Sr. No. 12 Page No. 19]*

a. **Pervious Projects**

| S.No. | Title of the project | Total cost | %age of time spent by Co-PI on the project | Funding Agency | Present status |
|---|---|---|---|---|---|
| | | | | | |

b. **Projects in the current financial year**

| S.No. | Title of the project | Total cost | %age of time spent by Co-PI on the project | Funding Agency | Present status |
|---|---|---|---|---|---|
| | | | | | |

17. **Describe with details other ongoing projects at your institution related to the area of this research project proposal:**

*[Please see instruction – Sr. No. 12 Page No. 19]*

| S.No. | Title of the project | Total cost (Rupees) | Funding Agency | Present status | Name & Designation of Project Investigator |
|---|---|---|---|---|---|
| | | | | | |

**18. Overall Budget Summary (Rupees)** *[Please see instruction – Sr. No. 13 Page No. 19]*

| Description | 1st year | 2nd year | 3rd year | Total |
|---|---|---|---|---|
| a) Manpower | | | | |
| b) Equipment | | | | |
| c) Recurring Expenses | | | | |
| d) Sub-Total (a+b+c) | | | | |
| e) Contingency & Overheads (%age of d) | | | | |
| f) Sub-Total (d + e) | | | | |
| g) Grand Total (f & g) | | | | |

**19. Detailed Budget Estimates:**

*[Please see instruction – Sr. No. 13 Page No 19]*

**a) Manpower--Salaries**

| Designation | Nos. | Rate per month (Rs) | 1st Year (Rs.) | 2nd Year (Rs.) | 3rd Year (Rs.) | Detailed Justification |
|---|---|---|---|---|---|---|
| | | | | | | |
| **Sub Total (a) – Year wise** | | | | | | |
| **Total Manpower** | | | **Rs.** | | | |

b) Purchase of Equipment (Give details year wise)

| S.No. | Description of equipment | Nos. | Estimated cost | | | Detailed justification |
|---|---|---|---|---|---|---|
| | | | In foreign* Currency | Exchange* Rate | Cost in Rs. | |
| 1st Year | | | | | | |
| | | | | | | |
| Sub Total – 1st year | | | | | | |
| 2nd Year | | | | | | |
| | | | | | | |
| Sub Total – 2nd year | | | | | | |
| 3rd Year | | | | | | |
| | | | | | | |
| Sub Total – 3rd year | | | | | | |
| Total Purchase of Equipment (in Rupees) | | | | | | |

* To be given only for imported equipment if any.

c) Recurring Expenses

| S.No. | Details | 1st Year (Rs.) | 2nd Year (Rs.) | 3rd Year (Rs.) | Detailed Justification |
|---|---|---|---|---|---|
| 1. | Cost of consumables (Pl. specify) | | | | |
| 2. | Cost of outstation travel, boarding & lodging | | | | |
| 3. | Other miscellaneous expenses (Please state what is included) | | | | |
| Sub Total (c) | | | | | |
| Total Recurring Expenses | | Rs. | | | |

20. Give below the details which would facilitate the recording of various activities in the log books during the implementation of the research project.

*(These details should be given separately for each year and tick ✓ the appropriate year i.e. 1st Year / 2nd Year / 3rd Year)*

*[Please see instruction – Sr. No. 14 Page No. 20]*

| S.No. | Activity | Quarter | | | |
|---|---|---|---|---|---|
| | | 1st | 2nd | 3rd | 4th |
| | | Nos. of hrs. required | Nos. of hrs. required | Nos. of hrs. required | Nos. of hrs. required |
| 1. | **Experiments to be conducted**<br>-- Brief details of experiment along with the name of researcher(s).<br>(i)<br>(ii)<br>(iii). | | | | |
| 2. | **Tests to be conducted**<br>-- Brief details of test along with the name of researcher(s).<br>(i)<br>(ii)<br>(iii) | | | | |

| S.No. | Activity | Quarter | | | |
|---|---|---|---|---|---|
| | | 1st | 2nd | 3rd | 4th |
| | | Nos. of hrs. required | Nos. of hrs. required | Nos. of hrs. required | Nos. of hrs. required |
| 3. | **Equipment Usage Plan**<br>– Give brief details of the equipment to be used along with the purpose & name of the researcher<br><br>(i)<br><br>(ii)<br><br>(iii) | | | | |
| 4. | **Number of Visits for:** | **Quarter** | | | |
| | | 1st | 2nd | 3rd | 4th |
| | i. **Data collection**<br><br>ii. **Meetings** | | | | |

**21. In-house Monitoring System** *[Please see instruction – Sr. No. 15 Page No. 20]*

**(a) Give a detailed In-house monitoring system that shall be followed by the PI for the execution of the project:-**

**(b) Over all details of the In House Monitoring System**

| S.No | Objectives | Key Performance Indicators (Deliverables) | Monitoring & Evaluation System | Critical Assumptions |
|---|---|---|---|---|
| | | | | |

**22. Infrastructure facilities** *[Please see instruction – Sr. No. 16 Page No. 20]*

**List below the details of existing infrastructure facilities of the institute that shall be used for this project.**

a. **Office Space** _____ sq.ft.

b. **Office automation set-up like:** **Nos.**

- Photocopier ☐☐
- Electrical Generator ☐☐
- Computers ☐☐
- Printers ☐☐
- UPS ☐☐
- Scanner ☐☐

c. **Communication System like:** **Nos.**

- Land line Phones ☐☐
- EPABX ☐☐
- Fax ☐☐
- Modem ☐☐
- LAN / Networking Yes ☐ No ☐
- Internet Yes ☐ No ☐

d. **Laboratory details where experiments / tests will be conducted**

| |
|---|
| |

e. **Details of other existing equipment to be used for the Project**

| |
|---|
| |

f. **Any other details (Pl. Specify):-**

| |
|---|
| |

FORM 03

# RESEARCHERS BACKGROUND & QUALIFICATIONS FORM

*[To be filled in by the Project Investigator and Co-Project Investigator separately]*

*[Attach extra sheets wherever required]*

## A. Project Investigator / Co- Project Investigator

*[Please see instruction – Sr. No. 17 Page No. 20]*

| | | |
|---|---|---|
| 01. | Name | |
| 02. | Sex | Male ❑ Female ❑ |
| 03. | Date of Birth | (Date) (Month) (Year) |
| 04. | Highest Qualifications Achieved | |
| 05. | Name of Institution/ Organization | |
| 06. | Present Designation | |
| 07. | Residential Address | Phone: With code (O) (R)<br>Mobile:<br>Fax: With code<br>E-mail: |
| 08. | Areas of specialization | a.<br>b.<br>c. |

| 09. | Give an up-to-date summary of your scholarly knowledge in the field of the research proposal. |
|---|---|
| | |

| | | | | |
|---|---|---|---|---|
| 10. | **PI/Co-PI achievements during the last 3 years.** (Attach details of best five in each category, which are relevant to the present research area) | I | **Awards** | |
| | | | a. Indian | b. Foreign |
| | | II | **Publications** | **Numbers** |
| | | | | National / International |
| | | | a. Books | |
| | | | b. Journals | |
| | | | c. Conference proceedings | |
| | | | d. Technical reports | |
| | | | e. Citations | |
| | | III | **Patents** | |
| | | | a. Applied for | |
| | | | b. Patents obtained | |
| 11. | **Any other details which you may like to give related with the present research field to highlight your skills & capabilities** | | | |

## B-1. Academic Institution Profile

*[Please see instruction – Sr. No. 17 Page No. 20]*

| | | |
|---|---|---|
| 01. | **Institution Name** | |
| 02. | **Name of the Head of the institute** | |
| 03. | **Designation** | |
| 04. | **Address** | |

| | | |
|---|---|---|
| Phone: With code | (O) | (R) |
| Fax: With code | | |
| E-mail: | | |
| Website: | | |

| | | |
|---|---|---|
| 05. | **Year of establishment** | |
| 06. | **Affiliation** (Please tick ✓ mark) | Government ❑ University ❑<br>Deemed University ❑ Privately Funded ❑ |
| 07. | **Present Academic strength** | Professor/ PSO/Eqvt. ☐☐☐<br>Associate Prof. / Reader/ SSO/ Eqvt. ☐☐☐<br>Asst. Prof. / Lecturer/ SO/ Eqvt. ☐☐☐ |

| 08. | Educational Strength | | | | | |
|---|---|---|---|---|---|---|
| | S.No. | Discipline | Year in which started | Current sanctioned in-take of students (Nos.) | | |
| | | | | U.G. | P.G. | Ph.D. |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | |
|---|---|
| 09. | **Institution's achievements during the last 3 years.** (Attach details of best five in each category, which are relevant to the present research area) |

| | | | |
|---|---|---|---|
| I. | **Awards** | | |
| | a. Indian | b. Foreign | |
| II. | **Publications** | **Numbers** | |
| | | National | International |
| | a. Books | | |
| | b. Journals | | |
| | c. Conference proceedings | | |
| | d. Technical reports | | |
| | e. Citations | | |
| III. | **Patents** | | |
| | a. Applied | | |
| | b. Patents obtained | | |
| IV. | **Consultancy Assignments** | | |

| | |
|---|---|
| 10. | **Give details of the department where PI is working like Discipline, Academic Strength, Laboratory Facilities etc.** |
| 11. | **Give details of the department where Co-PI is working like Discipline, Academic Strength, Laboratory Facilities etc.** |

## B-2. R&D Organization Profile

*[Please see instruction – Sr. No. 17 Page No. 20]*

| | | |
|---|---|---|
| 01. | **Name of the Organization** | |
| 02. | **Name of the Head of the organization** | |
| 03. | **Designation** | |
| 04. | **Address** | |

| | | |
|---|---|---|
| Phone: With code | (O) | (R) |
| Fax: With code | | |
| E-mail: | | |
| Website: | | |

| | | |
|---|---|---|
| 05. | **Year of establishment** | |
| 06. | **Nature** (Please tick ✓ mark) | Government ❑ Public Sector ❑ Private Sector ❑<br>Laboratory ❑ NGO ❑ Any other ❑<br>Pl. specify---------- |

| | |
|---|---|
| 7. | **Category of the organization** [tick ✓ the appropriate box against each item] :- |

| | | |
|---|---|---|
| a. | Joint Venture | ☐ |
| b. | Subsidiary of a Foreign Company | ☐ |
| c. | Foreigner or NRI Owned | ☐ |
| d. | Any other (Pl. specify)._____ | |

| | | |
|---|---|---|
| 8. | **Present R&D Manpower Strength** | PhD ☐☐☐ M E/ Eqvt. ☐☐☐<br>BE/ Eqvt. ☐☐☐ Others ☐☐☐ |

| | | |
|---|---|---|
| 9. | **Main field of operations of R&D activities of the organization** | |

| | | | | |
|---|---|---|---|---|
| 11. | **Gross Turnover in Rupees** ***(in million)*** | | | |

[Give Total Turnover for last three years]

| | | | | |
|---|---|---|---|---|
| 12. | **Expenditure on R&D activities in Rupees** ***(in million)*** | | | |

[Give only R&D expenditure for last three years]

| | | | |
|---|---|---|---|
| 13. | **Organization's R&D Achievements during the last 3 years.** (Attach details of best five in each category, which are relevant to the present research area) | | |
| I. | **Awards** | a. Indian | b. Foreign |
| II. | **Publications** | **Numbers** National | **Numbers** International |
| | a. Books | | |
| | b. Journals | | |
| | c. Conference proceedings | | |
| | d. Technical reports | | |
| | e. Citations | | |
| III. | **Patents** | | |
| | a. Applied for (Pending) | | |
| | b. Patents obtained | | |
| IV | **Consultancy Assignments** | | |
| V. | **Industrial Applications** | | |

| | | |
|---|---|---|
| 14. | **Give details of the department where PI is working like Nomenclature of the Department, R&D Personnel Strength, Laboratory Facilities etc.** | |
| 15. | **Give details of the department where Co-PI is working like Nomenclature of the Department, R&D Personnel Strength, Laboratory Facilities etc.** | |

Format -B

# CERTIFICATE FROM THE HEAD OF THE INSTITUTION

*[To be filled in by the Head of the Institute/ Organisation on the letter head]*

**Project Title:**

1. It is certified that this institution nominates the participation of _____ _____(Name) _____(Designation) as **Project Investigator** and _____(Name) _____(Designation) as **Project Co-Investigator** of this Institution for the above project which is being submitted for funding.

2. It is further certified that all requisite infrastructural facilities for the successful completion of the project being submitted for funding are available in this institution including equipment, manpower and other facilities, as well as necessary administrative support which will be extended to the Project Investigator for the project, except for the manpower and equipment specifically asked for in the proposal.

3. This institution shall undertake all the financial and other managerial responsibilities of the project, which shall be executed in this Institution. It is further confirmed that the Institute shall be responsible for the submission of audited accounts at each stage and also the other details e.g., Utilization Certificate, Staff engaged for the project & equipment purchased etc.

4. Certified that staff salaries proposed in the project proposal is in accordance with the approved norms of the institution.

Date:

Place:

**Head of the Institution**
Name & Signature and Seal

Format -C

# CHECK LIST

(To be enclosed duly filled in along with the Research Project Proposal)

Given below is a check list in order to facilitate researchers to submit proposal complete in all respects. Research Project Proposal with duly filled in check list shall only be considered for funding by the department. (Carefully tick the following check list).

1. Registration Certificate ☐
2. Memorandum of Institution/ Organisation ☐
3. Rules and Regulations of the Institution/ Organisation ☐
4. Audited statement of Accounts for the last three years. ☐
5. C.V. of Principal Investigator as per format ☐
6. C.V. of Co-PI as per format ☐
7. Whether Principal Investigator would retire during the currency of the research project. ☐
8. Whether Principal Investigator is having any ongoing research project, if so, when it is to be completed ☐
9. Whether Principal Investigator has completed any research project, if so
   a. equipment purchased under the research project and ☐
   b. whether A/Cs have been settled. ☐
10. Whether Principal Investigator would avail sabbatical leave for more than 6 months during the project. If so the name of the Co-PI. ☐
11. Whether Principal Investigator is a retired scientist; if so, amount of honorarium proposed alongwith last pay certificate/ pension drawn by PI. ☐
12. Whether staff salary are as per funding agency norms. If salary as per norms of host institution/ organisation, certificate from host institution/ organisation to be attached. ☐
13. Whether quotations for equipment received. ☐
14. List of equipment already available with the host institution/ organisation. ☐
15. If funded institution / organisation is privately owned; agreement/ bond will be signed by the head of the institution/ organisation. ☐
16. All Certificates on official letterhead of the institution/ organisation duly signed by head of the institute, PI and Co-PI and stamp of the institution / organisation. ☐

Checked by: Signature of the PI.

Date:

Place:

Format -D

# ACKNOWLEDGEMENT

*(Please Submit Two Copies dully filled in by the PI)*

F.No.: .....

Date:.....

**Government of India**
**Ministry of** .....
**Department of** .....

Address of Funding Agency with Phone, Fax and E-mail

_____

_____

_____

_____

Title of the Project: _____

_____

Name & Address of the
Principal Investigator (PI): _____

_____

_____

---------- (Do not write below this line) .....

Application No. _____ Received on: _____

Dear _____

This is to acknowledge the receipt of your above research proposal for grant of financial assistance by ..... (Funding Agency). Your application is under scrutiny and processing.

Kindly quote the above F. No. and date in all your future queries.

Thanking you,

Yours sincerely,

Authorized signatory
Funding Agency

## CRITERIA FOR MID TERM RESEARCH PROJECT EVALUATION

*(FOR PI/CO-PI/INSTITUTE HEAD)*

The purpose of mid term research project evaluation is to track the progress and to be able to apply course correction as needed to achieve the committed results. Also to assess what timely actions could be taken, if any of the activities are not progressing satisfactorily, towards achieving the committed goals? PI/Co-PI/ Institute Head are requested to keep the following salient points in view while evaluating the mid term progress of the project: -----

* Is the project on track to meet its objectives? If yes to what extent. If No what are the reasons.

* What activities were supported by the project during the reporting period? Were they all part of the original project plan?

* Approach or the methodology followed? Was it same as originally stipulated in the research proposal or was it changed? If changed, was funding agency prior approval taken by PI.

* Is the project progress on time? If not what are the reasons.

* What are the important research findings and outputs coming out of the project at this stage?

* Is the project helping build up the research capacity of the institution or of the individuals involved?

* What adjustments are needed to improve future performance?

* What are the activities planned for the next period and until the end of the project?

* In sum, the report should be an opportunity to reflect on the management of the project from various perspectives: --- technical, administrative, financial & managerial.

FORM 04

# RESEARCH PROJECT MID TERM EVALUATION FORM -SELF ASSESSMENT

*[To be filled in by the P.I. Attach extra sheets wherever required]*

*[Please see instruction – Sr. No. 17 Page No. 20]*

Report for the period from ..... To .....

## I – GENERAL

Project No: _____

Project Title: _____

Project Investigator Name: _____

Date of Commencement of Project: _____

Date of Completion of Project: _____

---

## I – WORK REPORT

**A. Brief summary of the work achieved on the project till date**

**(Please bring out deviations made, if any, from the originally proposed objectives, methodology and work plan, while implementing the project and reasons thereof. Is there any course correction necessary? Give details):-**

B. **Plan of work for the remaining period of the project**

**(Please mention variations, if any, for further implementation of the research project, with reasons, from the originally proposed objectives, methodology and schedules)**

## II – PERSONNEL

A. **Details of Research & Other Staff of the Project Investigator's Institution working on this project.**

| |
|---|
| **(Details should include name, designation, qualifications, experience, date and duration of appointment for each person)** |

B. **Details of any additional Research staff specially appointed for this Research Project.**

| |
|---|
| **(Details should include name, designation, qualifications, experience, date and duration of appointment for each person)** |

## III – EQUIPMENT PROCUREMENT

(SPECIFICALLY BOUGHT FOR THIS RESEARCH PROJECT)

(Give list of equipment specifically purchased along with value and date of receipt of the equipment)

| S. No. | Details of the equipment | Value (Rs.) | Date of receipt |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## IV – FINANCIAL DETAILS

| Details | Approved budget | | | Amount as spent | | | Remarks |
|---|---|---|---|---|---|---|---|
| | 1st Year Rs. | 2nd Year Rs. | 3rd Year Rs. | 1st Year Rs. | 2nd Year Rs. | 3rd Year Rs. | |
| Manpower | | | | | | | |
| Equipment | | | | | | | |
| Recurring Expenses | | | | | | | |
| Overheads | | | | | | | |
| TOTAL | | | | | | | |

## V – OVERALL PROGRESS OF WORK—DETAILS FROM LOG BOOK

| S.No. | Item | Commitments given in the proposal S.No. 20 Page No. 45 | Actual Achievements (As per log-books filled in) | | Deviations | Reasons for Deviations | Revised Plan of action to meet the commitments under (3) |
|---|---|---|---|---|---|---|---|
| 1. | 2. | 3. | 4. | | 5. | 6. | 7. |
| 1. | | **Experiments conducted** | Nos. of hrs. Planned | Nos. of hrs. Actually used | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |
| | iv. | | | | | | |
| | v. | | | | | | |
| 2. | | **Tests conducted** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |
| | iv. | | | | | | |
| | v. | | | | | | |

| S.No. | Item | Commitments given in the proposal S.No. 20 Page No. 46 | Actual Achievements (As per log-books filled in) | | Deviations | Reasons for Deviations | Revised Plan of action to meet the commitments under (3) |
|---|---|---|---|---|---|---|---|
| 1. | 2. | 3. | 4. | | 5. | 6. | 7. |
| | | | Nos. of hrs. Planned | Nos. of hrs. Actually used | | | |
| 3. | | **Equipment usage** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |
| 4. | | **Number of Visits For:** **a) Data Collection** | Planned | Actual | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |
| | | **b) Meetings** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii | | | | | | |

## VI - CRITERIA FOR SUCCESS

The sole criteria for assessing the **"success"** of the research project at this reporting period is that the committed objectives are fully met without any deviations. To enable the funding agency to evaluate the success of the project at this point of time, give below the following details: --

a. **Status of the implementation of the suggestions given by the experts during their reviews?**

b. **What new action(s) were taken by P I to resolve the problem (s)?**

c. **Details of experts / agencies / stake holders consulted / met nationally / internationally to resolve the problem(s)?**

d. **Details of any seminars / workshops / exhibitions organized / attended on the subject to resolve the problem(s)? What were the results?**

e. **Outline the key lessons learnt so far from this project.**

f. **How the experience gained so far will be useful in implementing successfully the project further in order to meet the committed objectives.**

g. **Can the experience gained so far be used somewhere else?**

## VII – OVERALL SELF ASSESSMENT

**Please give your own overall assessment about the progress / achievements of the research project at this stage.**

**Rate the overall progress of the research project at this stage:-**
*(Please tick ✓ as appropriate box given below)*

- Excellent ☐
- Very Good ☐
- Good ☐
- Fair ☐
- Unsatisfactory ☐

**Project Investigator**
Signature

**Co-Project Investigator**
Signature

**Head of the Institution**
Signature

**Date:**

**Place:**

# CRITERIA FOR FINAL EVALUATION OF THE RESEARCH PROJECT

*(FOR PI / CO-PI / INSTITUTE HEAD)*

PI/Co-PI/ Institute Head are requested to keep the following salient points in view while evaluating the final progress of the project: -----

- Did the project fully meet its objectives/ deliverables committed in the proposal?
- What were the most important research findings and outputs of the project?
- Who are the users of the research outcome?
- What contribution to research development in India did the project make?
- Did the project help build up the research capacity of the institution or of the individuals involved?
- What lessons can be derived that would be useful in improving future performance of similar projects? In sum, the report should be an opportunity to synthesize and assess the main results of the project, while reflecting on the project's management, limitations and achievements.
- Has the research outcome / results shown to some industry/ user? What are their comments?

FORM 05

# RESEARCH PROJECT FINAL EVALUATION - SELF ASSESSMENT FORM

*[To be filled in by the Project Investigator]*

*[Please see instruction – Sr. No. 17 Page No. 20]*

Project No. : _____

Actual Commencement date: ..... Project Completion date: .....

Report Submission date: .....

Project Title: _____

**Project Investigator**

Surname : _____ First name: _____ Middle name: _____

Address : _____ Phone: _____

_____ Fax : _____

_____ E-mail : _____

**Co-Project Investigator**

Surname : _____ First name: _____ Middle name: _____

Address : _____ Phone: _____

_____ Fax : _____

_____ E-mail : _____

**Name of the Institute:**

Address : _____ Phone: _____

_____ Fax : _____

_____ E-mail : _____

**Name & Designation of the Head of the Institute:** _____

_____

*[Please attach extra sheet wherever required]*

**01. Give detailed description of the research project. This should be strictly in line with the description given in the research proposal. In case there are any deviations, they must be clearly brought along with the reasons for the deviations:**

02. **Details of equipment / items purchased from the research grant**

| Description of Equipment/Item (s) | Date of Purchase | Amount (Rupees) |
|---|---|---|
| | | |
| | TOTAL | |

03. **Major results achieved:**

| S.No. | Impact Factors identified in the research proposal. *(Ref. Sr. No. 11 Page No. 35 of Research Proposal)* | Priority given in the research proposal | Priority of the Impact Factors as obtained at the end of the research project | Remarks |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |
| a) | | | | |
| b) | | | | |
| c) | | | | |

***Note**: In case of any variations between col. 3 & 4. above, please give detailed reasons under Col. 5 "Remarks"*

04. **Please list any other benefits achieved due to working on this research project :**

05. **List three main challenges experienced during implementaiton of the project.**

a.

b.

c.

06. **What were the weekest links you observed during the project?**

07. **Overall progress of work**

| S.No. | Item | Commitments given in the proposal S.No. 20 Page No. 45 | Actual Achievements (As per log-books) | | Deviations | Reasons for Deviations | Remarks |
|---|---|---|---|---|---|---|---|
| 1. | 2. | 3. | 4. | | 5. | 6. | 7. |
| | | | Nos. of hrs. Planned | Nos. of hrs. Actually used | | | |
| A. | | **Experiments conducted** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |
| B. | | **Tests conducted** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |

| S.No. | Item | Commitments given in the proposal S.No. 20 Page No. 46 | Actual Achievements (As per log-books) | | Deviations | Reasons for Deviations | Remarks |
|---|---|---|---|---|---|---|---|
| 1. | 2. | 3. | 4. | | 5. | 6. | 7. |
| | | | Nos. of hrs. Planned | Nos. of hrs. Actually used | | | |
| C. | | **Equipment usage** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |
| D. | | **Visits** | Number. of Visits Planned | Number of Visits. Actually Undertaken | | | |
| | | **a) Data Collection** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |
| | | **b) Meetings** | | | | | |
| | i. | | | | | | |
| | ii. | | | | | | |
| | iii. | | | | | | |

**09. Self assessment:**

The sole criteria for grading the project ***"as success"*** is that the ***objective(s) / deliverables*** committed in the research proposal have been ***fully met*** In order to evaluate success, following details must be given in this report :----

**a. Outline the status of the implementation of various suggestions given by the experts at different stages of the project life cycle**

**b. What new action(s) were taken by P I to resolve the problem (s)?**

**c. Details of experts / agencies / stakeholders consulted / met nationally / internationally during project life cycle to resolve the problem(s)?**

d. **Details of seminars / workshops / exhibitions organized attended on the subject to resolve the problem(s) during the project life cycle?**

e. **Outline the key lessons learnt from this project**

f. **Can the experience gained from this project be used somewhere else?**

g. **Summarize from the Log Books the details of utilization of equipment during project life cycle**

| h. Summarize from the log books details of utilization of manpower during project life cycle |
| --- |
| |

| Project Investigator (PI) | Co-Project Investigator | Institute Head |
| --- | --- | --- |
| Signature | Signature | Signature |

**Date:**

Place:

# DOCUMENTS FOR FUNDING AGENCY

**FORM 06, FORMAT – E, APPENDIX, FORMAT –F, FORMAT –G, FORM 07 & 08**

# CRITERIA FOR INTIAL ASSESSMENT OF RESEARCH PROJECT PROPOSAL

*(FOR EXPERTS)*

Following are some of the important criteria upon which the proposal should be assessed and evaluated.

- ☐ Is there a clear statement of research objectives in the proposal?
- ☐ Are the Deliverables identified?
- ☐ Is there an explanation in the proposal as to how the completion of the research would contribute to overall research in the area in India?
- ☐ Are all the relevant details of the methodology that will be used given?
- ☐ Is an explanation given in the proposal as how these outputs are linked to the present day Indian context?
- ☐ Is a strategy given in the proposal for disseminating research results and facilitating the application of research output in the industry—who will be the users?
- ☐ Details on the background and expertise of the researchers (PI & Co-PI) and their institute—their previous track record. Do the researchers and the institute have the skills to undertake this project and fit in with the proposed research area?
- ☐ Is the work innovative?
- ☐ Is the institute infrastructure adequate for the proposed project?
- ☐ Is there an adequate implementation work plan including milestones to track progress?
- ☐ Are the resources provided or requested adequate and realistic?
- ☐ Overall assessment: Briefly provide your own views on the value and importance of the project.

FORM 06

# RESEARCH PROJECT PROPOSAL EVALUATION FORM

*[☐ This page to be filled in by funding agency]*
*[☐ Copy of the Research Project Proposal enclosed.]*

**Proposal No. :**

**Title of Research Project :**

**Project Investigator : Name & Communication address**

**Name and Address of the Expert with communication details**

*[This page onwards to be filled in by the expert]*

**A. Brief Summary of the Research Project Proposal:**
( Please provide your own views on the Value and Importance of the Research Project)

**B. Overall Assessment of the Research Project Proposal :**

**C. Detailed Evaluation :**

**How would you characterize the project?** *[Please tick mark ( ✓ ) the appropriate box below]*

1. **New or emerging subject** ☐
2. **A topic on which considerable work has been done in India; but the approach in the present proposal is innovative & creative & different than earlier approaches.** ☐
3. **A subject wherein considerable data is already available and further work may, at best, provide marginal additional data** ☐
4. **A rather trivial problem identified** ☐
5. **Rating of Research Proposal :** ☐

**Technically sound and of high international quality :**

(A) Yes ☐

(B) No ☐

Give details

6. **Has the PI furnished sufficient and accurate information required for proper evaluation of the research proposal?**

| | | |
|---|---|---|
| (A) Yes | ☐ | Give details |
| (B) No | ☐ | |

7. **Is the Research Project aimed at achieving specific deliverables?**

| | | |
|---|---|---|
| (A) Yes | ☐ | Give details |
| (B) No | ☐ | |

8. **Are the objectives of the Research Project realistic and achievable?**

| | | |
|---|---|---|
| (A) Yes | ☐ | Give details |
| (B) No | ☐ | |

9. **Is methodology to achieve the objectives and the work plan given in the proposal appropriate and adequate?**

| | | |
|---|---|---|
| (A) Yes | ☐ | Give details |
| (B) No | ☐ | |

10. **In case the methodology & work plan are not appropriate, please suggest necessary modifications that may help in achieving the objectives?**

11. **Give your specific comments on the risk / uncertainties identified by the PI in the research project proposal vide S.No. 09, Page No. 34**

| S.No. | Risk identified by PI in the research proposal | Risk rating given by PI in the proposal | Experts' risk rating | Comments of the expert on the risk minimization measures proposed by the PI in the research proposal |
|---|---|---|---|---|
| | | | | |

**12. List Four Strengths of the Proposal**

a.

b.

c.

d.

**13. Do you find any week links in the proposal?**

a.

b.

c.

d

14. Is the In house monitoring system proposed by the PI adequate?

15. Is the P I capable of executing the project successfully?

16. Is the Co-PI capable of executing the project successfully?

17. Is the Institution capable of executing the project successfully?

18. **Are the details given by the PI for maintaining the log-books adequate?**

19. **Research Project Rating:**

i. **Proposed Project is :**

| | |
|---|---|
| (a) Excellent | ☐ |
| (b) Good | ☐ |
| (c) Average | ☐ |
| (d) Requires major revision and reconsideration | ☐ |
| (e) Not acceptable | ☐ |

Please explain

ii. **Institutional and Laboratory Facilities available are :**

| | |
|---|---|
| (a) Excellent | ☐ |
| (b) Good | ☐ |
| (c) Fair | ☐ |
| (d) Inadequate | ☐ |

Please explain

20. **Evaluation of the Proposed Budget :**

21. **Evaluation of Equipment proposed :**

22. **Evaluation of Manpower proposed :**

**Place:**

**Signature of the Expert**

**Date:**

Format -E

## FORMAT OF SANCTION LETTER

**[To be given by the funding agency on their letterhead]**

To,

Subject: _____

1. I am directed to convey the approval of the President to the above mentioned research study at a total cost of Rs. _____ (Rs. In words) for a duration of _____ months.

   The item of expenditure for which the total allocation of Rs. _____ (Rs. in words_____ has been approved are given below:

| S.No. | Item | Approved allocation |
|---|---|---|
| A.<br>1. | **Recurring**<br>**Salaries/ wages**<br>i. Manpower A<br>ii. Manpower B<br>iii.Manpower C .....etc. | <br><br>Rs. _____<br>Rs. _____<br>Rs. _____<br>Rs. _____ |
| 2. | **Travel** | Rs. _____ |
| 3. | **Other Costs (including Consumables)** | Rs. _____ |
| 4. | **Contingency & other Institutional Charges -- ( ..... % of the above** | Rs. _____ |
| 5. | **Overheads** | |
| 6. | **Grand Total** | Rs. _____ |

2. The sanction of the President is also accorded to the payment of Rs. _____(Rs. in words) as the first installment of the grant for the implementation of the said project.

3. The amount of Rs. _____ (Rs. in words) will be drawn by the account division of the funding agency and disbursed to The Head, _____(institution name & address.

4. The expenditure involved is dubitable to Demand No. _____ funding agency major related heads of expenditure accounts. The above release is made under funding agency scheme _____.

5. As per rule (150)(1) of GFR's the accounts of the grantee institution shall be open to inspection by the sanctioning authority/ audit whenever the institution is called upon to do so.

6. The institute furnished to the funding agency, Utilisation Certificate as per agency format and audited statement of accounts pertaining to the grant immediately after the end of each financial year.

7. The institute will maintain separate audited accounts for the research project. If it is found expedient to keep a part or whole of the grant in a bank account earning interest, the interest earned should be reported to the grantee institution. The interest thus earned will be treated as a credit to the Institute to be adjusted towards further installment of the grant.

8. The sanction has been issued with the concurrence of IFD of funding agency vide sanction No. _____ dated _____.

Signature of the authorized person
by the funding agency.

**Copy forwarded for information and necessary action to:**

1. Account Officer
2. Cash Section
3. The Head, Grantee Institution. Sanction of the grant is subject to the terms and conditions as detailed in enclosed ***Appendix***. A format for submitting statement of expenditure and utilization certificate is also enclosed. Progress report on quarterly basis should be sent to this department. Sample size as stipulated in the proposal should be adhered to.
4. Concerned Officers in connection of the research project.
5. Sanction Folder/ File as office copy.

Signature of the authorized person
by the funding agency

# TERMS & CONDITIONS OF GRANT

**[Full Compliance with these terms & conditions are essential. If it is observed at any stage that these are not followed, the project will be cancelled]**

## 1.0 GENERAL

1.1 Research Proposal & grant approval by funding agency is for the specific project and no diversion / receipt of funds allowed for and from any other project. Unspent funds to be returned to funding agency along with "Statement of Expenditure" & "Utilization Certificate" in the format given at Appendix – at the end of every financial year (31st March) or earlier, as and when payment are clamed.

1.2 For permanent / semi-permanent assets i.e. immovable property / movable capital nature property valuing above Rs. ..... purchased from the grant to be recorded and funding agency informed of the same. Normal infrastructure e.g. accommodation, water, electricity and communication etc., however, needs to be with the institute.

1.3 The expenditure for each head should be within limits of sanctioned amount.

1.4 Yearly annual progress reports (.....copies) of the project to be submitted to funding agency. Agency may designate scientists / specialists / experts to institution periodically for progress review. All expenses of visiting personnel to be included in the budget estimates

1.5 Request for utilization of unspent grant to next financial year to be submitted separately along with all details.

1.6 Separate audited a/c for project to be maintained. Any interest earning on grant to be informed to the department.

1.7 No sub-contracting of the project allowed. Inability to complete the project in time to be notified to the funding agency alongwith return of grant.

1.8 The research project approved for funding shall be sanctioned for a specified period.

1.9 If during execution of the project, it is observed that the progress of work is unsatisfactory/ any instructions and terms & conditions are violated, PI/Co-PI/ Institute Head after giving full justification, will return the unspent amount to the funding agency and project will be deemed to be closed with immediate effect.

1.10 Under no circumstances, the PI/Co-PI/ Institute Head will divert funds for any other use. If it is observed that the funds are diverted, the project will be closed with immediate effect.

## 2.0 STAFF

2.1. Personnel employed on project shall be governed as per their administrative rules.

2.2 In case, PI wishes to leave the institution, funding agency & institute to decide on steps for completion of project before relieving PI.

2.3 The qualification, emoluments and general service rules for the staff should be as per the sanction.

2.4 The procedure for selection and appointment of staff sanctioned for the project shall be as per normal procedure of temporary recruitment of the institute.

2.5 The staff appointed on the research project shall be under the administrative control of the PI.

## 3.0 EQUIPMENT GRANT

3.1 All major equipment required will be indicated in the sanction letter. Grant for equipment, if any sanctioned, for the project will be strictly limited to the amount and items of equipment as indicated in the sanction letter.

3.2 In case of escalation in prices or changes in specification / type of equipment, prior permission of the funding agency shall be obtained.

3.3. Only equipment specially sanctioned for the project shall be allowed to be purchased and no purchase of items like air conditioners, refrigerators, exhaust fans, furniture etc., shall be allowed from the sanctioned amount of the project.

3.4 The institution / PI must maintain proper and separate stock register of all items of equipment purchased for the project.

3.5 Any asset acquired by grant shall be disposed off exclusively as per the decision of the funding agency at the conclusion of project, including gifting the same.

## 4.0 PUBLICATIONS & INTELLECTUAL PROPERTY RIGHT'S (IPR) SAFEGUARD

Guidelines for publication and safeguard of intellectual property rights shall be as follows:-:

4.1 Publication of any paper, based on research conducted; by the R&D institution shall be subject to prior approval of funding agency.

4.2 Project Investigator is not allowed to enter into any agreement for publication with a foreign partner without prior approval of the funding agency.

4.3 Project Investigators should resort to publish the research papers of the project work in "high-end" Indian / international journals only after approval of the funding agency.

4.4 Wherever funding agency decides that the results of research should be legally protected, the results should be published only after legal protection for the research results is obtained.

4.5 As per latest National and International Scenario, the Intellectual Property Rights (IPR) has assumed greater significance. Following guidelines should be adhered to by the PI and the implementing institutions with regard to IPR.

a) Institutions / PI need to seek protection of Intellectual Property Rights to the results of research on R&D projects. IPR include patents, registered designs, copyrights and layout design of integrated circuits (IC).

b) IPR generated by publicly funded R&D institutions / academic institutions, through projects funded by the Government Departments, be owned by the institutions and they will be required to file patent applications at their cost.

c) The Institutions can approach the Patent Facilitating Cell (PFC) set up by this department to assist them for patent search, obtaining a list of patent attorneys, filing of patent application(s) in India and abroad. These institutions will be free to retain exclusively the benefits and earnings arising out of these IPR.

d) If the patent is taken by the Institute at its own cost, it is free to transfer the innovation to industry for commercialization, after concluding an agreement, as per its laid down procedures. However, the details of the agreement, amounts received annual sales turnover of the product shall be intimated periodically to the funding agency.

e) The institution and industry may transfer the technology to another industry for commercialization, on terms and conditions as may be mutually agreed upon, on non-exclusive basis. Any earnings accruing from such a transfer and commercialization shall be shared between the institution and the industry as may be mutually agreed to. The details of the agreement, amounts received annual sales turnover of the product shall be intimated periodically to the funding agency.

f) The Government shall have a royalty-free license for the use of the Intellectual Property for the purposes of the Government of India and this Department reserves the right to require the institution and the industry to license others and requires that anyone exclusively licensed to market the innovation in India must manufacture the product in India.

g) For further information/ clarification on this subject, please contact funding agency.

## 5.0 SPECIAL TERMS & CONDITIONS OF GRANT

Funding Agency at his sole discretion may stipulate any other terms & conditions as deemed necessary for the implementation of the research project.

Format -F

# BOND

**[To be filled up by the Head of the Institution on Rs. 100/- Indian Non Judicial Bond Paper]**

KNOW ALL MEN BY these presents that we the _____ **(Name of the Institution/ Organisation)** registered under _____ having its office at _____ (hereinafter called the obligors which terms shall unless exclude by or repugnant to the context be deemed to include its successors, permitted assigns and all persons entitled to and capable of disposing of the assets and properties of the obligors) are held and firmly bond to the funding agency (herein after called the "_____" which terms shall exclude by or repugnant to the context to be deemed to include his successors and assigns) in the sum of **Rs.** _____ **(Rs. in words)** well and truly to be paid to the Government on demand and without a demur for which payment we firmly bind ourselves by these presents.

SIGNED THIS ____ day of _____ in the year _____..

WHEREAS on the obligors request the Government has as letter No._____ _____ dated _____ (hereinafter referred to as the "Letter of Sanction" which forms an integral part of these presents and a copy where of is annexed here to marked with the letter "A") agreed to make in favour of the obligors for the purpose of incurring an expenditure of **Rs.** _____ **(Rs. In words)** for the_____ **(purpose of the sanction), out of which Rs.** _____ **(Rs. In words) (First installment been paid to the obligors)** and the balance amount will be paid to the obligors (the receipt of which sum the obligors do hereby admit and acknowledged), as work proceeds, on condition of the obligors executing a bond in the terms and manner contained after which the obligors have agreed to do.

Now the condition of the above written obligation is such that if the obligors duly fulfill and comply with all the terms and conditions mentioned in the letter of sanction, than the above written bond or obligation shall be void and of no effect, but otherwise it shall remain in full force, effect and virtue. And these presents further witness as under:

1. The decision on the question whether there has been break or violation of any of the terms and conditions mentioned in the letter of sanction shall be final and binding on the Obligors.

2. The Funding Agency has agreed to bear the stamp duty, if any chargeable on these presents.

In witness whereof these presents have been executed on behalf of the obligors pursuant to the resolution No. _____ dated _____ by the Board of the Management of the Institution/ Organisation the Obligors.

Signed for and on Behalf of :

Obliges in the presence of
Witness with name and address.

1.

2. Signature of the Grantee Institution

***(FOR OFFICE USE ONLY)***

Accepted for and on behalf of the
Funding Agency

Witness..... Name and Designation

Name and Address:

## FORMAT OF UTILISATION CERTIFICATE
### FOR THE FINANCIAL YEAR 1ST (ENDING 31ST MARCH)

| | |
|---|---|
| 1. Title of the Project / Scheme | |
| 2. Name of the Institution | |
| 3. Name of the Project Investigator | |
| 4. (a) Funding Agency Sanction Letter No. | |
| (b) Date of Project Sanction | |
| 5. Head of account given in the original sanction letter | |
| 6. (a) Amount brought forward from the previous financial year. | i. Amount |
| (b) Funding Agency Letter No. and date in which the carry forward of amount was authorized | ii. Letter No.<br>iii. Date |
| 7. Amount received during the financial year (please give no. & date of sanction letter of funding agency for the amount) | i. Amount<br>ii. Letter No.<br>iii. Date |
| 8. Total amount that was available for expenditure (excluding commitments) during the financial year (S.No. 6+7) | Rs. |
| 9. Actual expenditure (excluding commitments) incurred during the financial year (upto 31st March) | Rs. |
| 10. Balance amount available at the end of the financial year | Rs. |
| 11. Unspent balance refunded if any (Please give details of Cheque No. etc.) | Rs. |
| 12. Amount to be carried forward to the next financial year | Rs. |

## STATEMENT OF EXPENDITURE

1. Sanction Letter No : _____

2. Project Sanction Date : _____

3. Total Project Cost : _____

4. Sanctioned/ Revised Project Cast (if applicable) Rs. : _____

5. Date of Commencement of the Project : _____

6. Grants received each year

   a) 1st year : _____

   b) 2nd year : _____

   c) 3rd year : _____

   d) Interests, if any : _____

   e) Total : _____

6. Statement of Expenditure:

   Total Expenditure Rs. _____ (out of which Rs. _____ yet to be received and excess expenditure; if any of Rs. _____ over sanctioned amount is borne by the institution/ organisation.

## UTILISATION CERTIFICATE ISSUED BY AUDITOR

*(To be filled by the accounts Deptt. of funding agency duly authorized signed by CA in presence of Head of the Institution/Organisation & Project Investigator)*

Certified that out of Rs_____ of grant-in-aid sanctioned during the year _____ in favour of _____ **the funding agency,** under the sanction Letter No._____ dated 31st March, _____ and Rs. _____ on account of unspent balance of the previous year, a sum of Rs. _____ (Rupees in words) has been utilized for the purpose of _____ for which it was sanctioned and that the balance of Rs._____ remaining unutilized at the end of the year has been surrendered to the funding agency (vide Challan No. _____ dated _____.).

**Project Investigator**
Signature

**Head of the Institution**
Signature

**Chartered Accountants**
with Membership No.
Signature

Place : _____

Dated : _____

**(TO BE FILLED IN BY FUNDING AGENCY)**

Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been fulfilled/are being fulfilled / and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned :

1.

2.

3.

4.

5.

Signature of Funding Agency Financial Authority
with Date and rubber stamp

Signature of Funding Agency Head
with date and rubber stamp

# CRITERIA FOR MID TERM EVALUATION OF THE RESEARCH PROJECT

*(FOR FUNDING AGENCY EXPERTS)*

The purpose of mid term research project evaluation report is to track the progress and to be able to apply course corrections as needed to achieve the committed results. Also to assess what timely actions could be taken if any of the activities are not progressing towards achieving the goals? Each Expert Member of the Monitoring Group is requested to keep the following salient points in view while evaluating the mid term progress of the project.

- Is the project on track to meet its objectives? If yes to what extent. If No what are the reasons?
- What activities were supported by the project during the reporting period? Were they all part of the original project plan?
- Approach or the methodology followed? Was it same as originally stipulated in the research proposal or was it changed? If changed, was funding agency prior approval taken.
- Is the project progress on time? If not what are the reasons.
- What are the important research findings and outputs coming out of the project at this stage? What are they?
- Is the project helping build up the research capacity of the institution or of the individuals involved in India?
- What adjustments are needed to improve future performance?
- What are the activities planned for the next period and until the end of the project?
- Details given in the log-books—do they justify satisfactory progress of work?
- Please evaluate the efforts put in by P I. Are they adequate and in the right direction.
- In sum, the report should be an opportunity to reflect on the management of the project from various perspectives: -- technical, administrative and financial.

# MID TERM EVALUATION FORM OF THE RESEARCH PROJECT

[To be filled in separately by the each expert of the funding agency after actually verifying the progress of work]

***[To be filled in by the funding agency]***

*[Copy of the mid term self-assessment report filled in by the PI along with the original research project proposal enclosed]*

Report for the period from _____ to _____

Project No: _____

Project Title: _____

Project Investigator Name: _____

Name of the Expert _____

*[Onwards to be filled in by the expert]*

**Dates of visit to the institution of the PI to verify the Research work for the period under review:** _____

1. **Give brief summary of the progress of work. Please bring out clearly any deviations from the research proposal:** *(To what extent objectives have been met).*

2. **Log Book Verification**

*Please give your comments on the revised plan of action given by PI to meet the commitments vide S. No. V Page No.63- 64 of the self assessment report submitted by PI (FORM 04)*

A. **Experiments conducted** .

B. **Tests Conducted**

C. **Equipment Usage**

D. **Visits Undertaken**

***[Note: Details of Sr. No. 2 above should be verified from the log books maintained by PI]***

3. **Success of the Project at this stage**

The sole criterion for assessing the success of the project at any stage of the project life cycle is that the committed objectives are fully met without any deviations. Monitoring committee must examine whether the *suggestions* given by them at any stage have been implemented by the P I or not. They must also examine as to what new action(s) PI took to resolve the problem(s).These must be highlighted by the expert in the report. This is to *evaluate the extent of success and the efforts* put in by the P I to achieve the committed results.

a. **If there is any problem faced by the PI, have you given any suggestions to over come the problem(s)? Give details of your suggestions.**

b. **What action (s) PI took on the various measures suggested by the expert at any stage of the project life cycle?**

c. **Was the action on the suggestions given by the expert, implemented by the PI immediately?**

d. **Has "*action taken*" reflected by the PI in his progress report?**

e. **Which experts/ stakeholders PI consulted / met nationally / internationally to resolve the problems?**

f. **Which other agencies PI consulted / met to resolve the problems?**

g. Did PI organize/ attend any seminars / workshops/ exhibitions to solve the problems? What were the results?

h. Did PI take any other measures so far to meet the committed objectives?

i. How effectively the equipment had been utilized by the P I?—Details from Log Books

j. How effectively the manpower had been utilized by the PI?—Details from the Log Books

4. **Evaluation**

## Measuring Efforts put in by PI

**Stage(s) of Review:** Mid Term *Period under Review* ---------- *to* ----------

***Note:*** - ***Funding Agency experts and PI should first jointly identify the following details in the beginning of the project keeping in view the nature and type of the research project under review:-***

- ***Impact factors / indicators which are applicable***
- ***Weightage and Priority to be allocated to each selected indicator/ impact factor***
- ***Type (Fixed or Sliding) and Range of scale to be used for giving e score to each indicator/ impact factor***

| S.No. (1) | Tick (✓) applicable Impact Factor / Indicator for the project under review (2) | Weightage / Priority (3) | Score given by Funding Agency Expert (4) |
|---|---|---|---|
| 1. | Visits for Data Collection | | |
| 2. | Meetings / Consultations held with experts/ stakeholders—Nationally / Internationally | | |
| 3. | Tests / Experiments Conducted | | |
| 4. | Implemented various suggestions given by the experts in their reviews. | | |
| 5. | New initiatives to resolve the problem(s) | | |
| 6. | Seminars / Workshop organized | | |
| 7. | Display in Exhibitions | | |
| 8. | Any other indicator(s) –PI. specify ---------- | | |

**(a) Total Score** .....

**(b) Score obtained by P I** .....

**(c) % Score obtained *{b/a}*** .....

In case review is undertaken by more than one expert, then the *average* of % score given by each expert can be taken as the final score both for efforts put in by PI or S&T output and judged as follows:-

| Score (%) | Rating |
|---|---|
| 0-40 | Unsatisfactory |
| 41-50 | Fair |
| 51-70 | Good |
| 71-80 | Very Good |
| 81-100 | Excellent |

If at the time of mid term review, the score is **<41%,** the project needs critical examination by the funding agency for continuation of the support. The %age range for **"each rating"** can be modified by the funding agency, if desired.

5. **Any other comments**

| |
|---|
| |

**Name & Signature of the Expert**

**Date:**

**Place:**

# CRITERIA FOR FINAL EVALUATION OF THE RESEARCH PROJECT

*(FOR FUNDING AGENCY EXPERTS)*

Funding Agency Monitoring Group Experts are requested to keep the following salient points in view while evaluating the final progress of the project: ---

- Did the project meet its objectives?
- What were the most important research findings and outputs of the project?
- Who are the users of the research outcome
- What contribution to research development in India did the project make?
- Did the project help build up the research capacity of the institution or of the individuals involved?
- What lessons can be derived that would be useful in improving future performance of similar projects? In sum, the report should be an opportunity to synthesize and assess the main results of the project, while reflecting on the project's management, limitations and achievements.
- Has the research outcome / results shown to some industry/ user? What are their comments?
- There should be a clear mention in the report ***as to what extent the objectives have been met***. Experts should clearly bring out in the review, the action which PI took on the various corrective measures suggested by the experts during the previous reviews.
- Meeting the committed objectives is the *sole criteria of success*. If the objectives are *partially met or not met at all*, experts would assess the extent of success and also evaluate the efforts put in by the PI.

# FINAL EVALUATION FORM OF THE RESEARCH PROJECT

*[Copies of research proposal, mid term review, & PI's final self assessment report enclosed]*

***[This page to be filled in by the Funding Agency]***

Project No. : _____

Actual Project Commencement Date: _____ Actual Project Completion Date: _____

Project Title: _____

Name of the PI: _____

**Name of the expert with address and other communication details:**

*(This page onwards to be filled in by the expert. Attach extra sheet wherever required)*

**A. Project Description**

**B. Details of major results obtained**

*Please also give following details:*

| S.No. | Impact Factors identified by the PI in the research proposal. *(Ref. Sr. No. 11 Page No. 35 of Research Proposal)* | Priority given by the PI in the research proposal | Priority of the Impact Factors as obtained at the end of the research project | Remarks of the funding agency expert on col. 4 |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |
| a) | | | | |
| b) | | | | |
| c) | | | | |

C. **What were the weekest links you observed in the project during execution:**

D. **Final measurement and evaluation of the S&T research outcome**

Systematic analysis and evaluation of the performance against committed goals is very essential. Indicators are part of performance measurement. It is necessary to know the factors, which influenced the results. Both quantitative and qualitative indicators have to be selected for measuring the research outcome. Process of moving downstream along the research continuum from the research component to the final destination of a useful outcome and its impacts & benefits particularly scientific and technological have to be evaluated.

***Note:*** ***- As was done at the time of mid term review, Funding Agency experts and PI should first jointly identify the following details in the beginning of the project keeping in view the nature and type of the research project under review:-***

- ***Impact factors / indicators which are applicable***
- ***Weightage and Priority to be allocated to each selected indicator/ impact factor***
- ***Type (fixed or sliding) and Range of Scale to be used for giving score to each indicator / impact factor***
- ***These should be same as identified in the mid term review***

| S.No | Impact Factors (Research Output leading to:------ ) Tick (✓) the applicable impact factor(s) for the project under review | Weightage / Priority | Score given by Funding Agency Expert |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| A. | ***I. QUANTITATIVE S&T INDICATORS*** | | |
| | **RESEARCH PUBLICATIONS** | | |
| | 1 Citations | | |
| | 2 International Refereed Journals | | |
| | 3 National Refereed Journals | | |
| | 4 Papers presented in Conferences/ Seminars | | |
| | 5 Technical Reports | | |
| B. | **TECHNOLOGY** | | |
| | 6 Demonstrated/ Awareness Created | | |
| | 7 New Materials | | |
| | 8 Products | | |
| | 9 Processes | | |
| | 10 Prototypes | | |
| | 11 Scale of Development | | |
| | 12 Transferred | | |

| S.No<br><br>(1) | Impact Factors<br>(Research Output leading to:------- )<br>Tick (✓) the applicable impact factor(s) for the project under review<br>(2) | Weightage/ Priority<br><br>(3) | Score given by Funding Agency Expert<br><br>(4) |
|---|---|---|---|
| C. | OTHER INDICTORS | | |
| | * **Patents** | | |
| | *a. Applied* | | |
| | 13 National | | |
| | 14 International | | |
| | *b. Granted* | | |
| | 15 National | | |
| | 16 International | | |
| | * **Awards** | | |
| | 17 National | | |
| | 18 International | | |
| | 19 Commercial & Marketing Potential | | |
| | 20 Cost Cutting/ Savings achieved | | |
| | 21 Experts Trained at National Level | | |
| | 22 Experts Trained at International Level | | |
| | 23 Industrial Queries Generated | | |
| | 24 Import Substitution | | |
| | 25 Industrial Tie-ups | | |
| | 26 Any other Infrastructure Development which has relevance to R&D (Established/ Upgraded) | | |
| | 27 New e-applications | | |
| | 28 New Teaching Methods Developed | | |
| | 29 Ph.D. Awarded | | |
| | 30 Any other indicator(s) –Pl. specify<br>---------- | | |

| S.No<br><br>(1) | Impact Factors<br>(Research Output leading to:-------- )<br>Tick (✓) the applicable impact factor(s) for the project under review<br><br>(2) | Weightage/ Priority<br><br>(3) | Score given by Funding Agency Expert<br><br>(4) |
|---|---|---|---|
| | *II.* ***QUALITATIVE S&T INDICATORS*** | | |
| | 31 Experience Gained useful for further R&D | | |
| | 32 Linkages with National Priorities | | |
| | 33 Socio-Economic & Societal Benefits | | |
| | 34 Any other indicator(s) –Pl. specify<br><br>---------- | | |

**(a) Total Score** .....

**(b) Score Obtained by P I** .....

**(c) % Score obtained *{b/c}*** .....

In case review is undertaken by more than one expert, then the *average* of % score given by each expert can be taken as the final score for S&T output and judged as follows: -

| SCORE (%) | RATING |
|---|---|
| 0-40 | Unsatisfactory |
| 41-50 | Fair |
| 51-70 | Good |
| 71-80 | Very Good |
| 81-100 | Excellent |

*The %age range for **"each rating"** can be modified by the funding agency, if desired.*

In case the above score is **<41%** i.e. success of S&T research outcome has been rated as Unsatisfactory, funding agency has to critically examine the efforts put in by PI as follows:-

**E. Final Measurement & Evaluation of Efforts put in by PI**

**Stage(s) of Review:** Completion / Final Stage *Period under Review* ---------- *to* ----------

*Note:* - ***As was done at the time of mid term review,Funding Agency experts and PI should first jointly identify the following details in the beginning of the project keeping in view the nature and type of the research project under review:-***

- ***Impact factors / indicators which are applicable***
- ***Weightage and Priority to be allocated to each selected indicator/ impact factor***
- ***Type (fixed or Sliding) and Range of Scale to be used for giving score to each indicator / impact factor***
- ***These should be same as identified in the mid term review***

| S.No. (1) | Tick (✓) applicable Impact Factor / Indicator for the project under review (2) | Weightage / Priority (3) | Score given by Funding Agency Expert (4) |
|---|---|---|---|
| 1. | Display in Exhibitions | | |
| 2. | Implemented various suggestions given by the experts in their reviews. | | |
| 3. | Meetings / Consultations held with experts/ stakeholders—Nationally / Internationally | | |
| 4. | New initiatives to resolve the problem(s) | | |
| 5. | Seminars / Workshop organized | | |
| 6. | Tests / Experiments Conducted | | |
| 7. | Visits for Data Collection | | |
| 8. | Any other indicator(s) –Pl. specify ---------- | | |

**(a) Total Score** .....

**(b) Score obtained by P I** .....

**(c) % Score obtained *(b/a)*** .....

In case review is undertaken by more than one expert, then the *average* of % score given by each expert can be taken as the final score for efforts put in by PI and judged as follows: -

| SCORE (%) | RATING |
|---|---|
| 0-40 | Unsatisfactory |
| 41-50 | Fair |
| 51-70 | Good |
| 71-80 | Very Good |
| 81-100 | Excellent |

*The %age range for **"each rating"** can be modified by the funding agency, if desired.*

**If the above score is < 41%, the funding agency may take appropriate decision re: release of final payment for this project as well as for funding of new projects in future.**

| E. Any other comments |
|---|
| |

**Signature of expert with name**

**Place:**

**Date:**