

**GUIDELINES AND FORMAT
FOR
SUBMISSION OF PROJECT PROPOSALS
UNDER R&D FOR GREEN TECHNOLOGIES (RDGT) &
GREEN TECHNOLOGY AND INNOVATION
IMPLEMENTATION (GTII)**



Implemented by:

**ASSAM SCIENCE TECHNOLOGY AND ENVIRONMENT COUNCIL,
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PREAMBLE

This document provides guidance for preparation and submission of project proposals under the component R&D for Green Technologies (RDGT) & Green Technology and Innovation Implementation (GTII) of Green Innovation Fund

It consists of following parts: -

PART A: INTRODUCTION

PART B: PRESCRIBED FORMAT

Director
ASTECC
Guwahati – 5

PART-A: INTRODUCTION**R&D for Green Technologies (RDGT): R&D Specific Component**

As an important component of the Green Innovation Fund, R&D for Green Technologies (RDGT) is mainly focused on to strengthen and improvise the R&D ecosystem of the state based on green technologies. Under this scheme, a green or environment friendly approach to find solutions to the locality specific problems of the state have to be encouraged.

Focused areas:

The focused areas of research are listed as below:

- a) Addressing climate vulnerabilities and regional climate forecast
 - Climate-change risk reduction technologies
 - Climate-resilient infrastructures
- b) Traditional knowledge-based technologies
 - Traditional food technologies
 - Traditional and Herbal medicines
 - Traditional agricultural, piscicultural and sericultural techniques
- c) Use of disruptive technologies
 - Artificial intelligence (AI) for green technologies
 - Machine learning (ML) for green technologies
- d) Climate friendly agriculture techniques
 - Climate-resilient crop development
 - Soil quality and soil-health improvement techniques
- e) Eco-tourism related technologies
 - Virtual tourism
 - Sustainable tourism techniques
- f) Green energy-based technologies
 - Renewable energy technologies
 - Biofuel and bio-energy related technologies

Eligibility Criteria

- a) The Project proposals should be based on green technologies/innovations which are in their initial ideation stage.
- b) The Project should be original, novel and are relevant to the society.
- c) The final outcome of the project should be inclusive of development/upgradation of technology/product with the scope for industrial linkage.

Green Technology & Innovation Implementation (GTII): Innovation specific component:

Under this component, the existing green or environment friendly technologies of the state or country has to be applied in accordance to the needs of the state. The technologies should have a proof of concept (PoC) and be optimized through this component in accordance with their needs in order to be market-ready and fulfil market demand of Assam. The ASTE Council may assist in both the financial and technical aspects. These innovative pilot projects will be useful for the development of start-up culture of Assam through the upliftment of the STI ecosystem in the state.

The region-specific focused areas for the development of Green Technology & Innovation Implementation are,

- a) Waste-management and Waste-based products & technologies
 - Plastic and e-waste management technologies
 - Bio-waste based products
 - Non-polluting biodegradable disposals
- b) Renewable energy-based products & technologies
 - Renewable energy in transportation
 - Renewable energy in agriculture
- c) Green Infrastructure Development
 - Green terrace development
 - Green wall (innovative vertical gardening techniques)
 - Green building materials

Eligibility Criteria:

- a) The Project proposals should be based on green technologies/innovations which are in their Proof of Concept (PoC)/ Prototype/Proven stage.
- b) The Project should be original, novel and are relevant to the society.
- c) The product/technology to be developed/upgraded has to be of scalable nature.
- d) The product/technology has to be in accordance with the market demand and be able to capture their respective market share.

IMPORTANT NOTE:

1. Please confine your project to well-defined & specific aspects of a problem which can be studied in depth/completed within three years. However, with sufficient justification the period may be extended to another one year by the Council.
2. While writing a proposal, please ensure that scientific and technical details are clearly spelt out. Generalities may be avoided, as per as practicable.
3. The proposal should be prepared and submitted according to the Formats prescribed in this document.

TERMS & AND CONDITIONS:

1. The principal Institution is expected to assume financial and other administrative responsibilities of the project.
2. In case of multi- institutional project, the principal Investigator should obtain a formal and clear-cut agreement from the collaborating institutions/scientists. The agreement should be submitted with the proposal.
3. The manpower recruited for the project should be paid as per the rules of the institute and guidelines of ASTEC.
4. It is policy of the ASTEC to maximize the use of equipment, purchased by the grant. Keeping this in view Investigator shall permit the use of spare or idle capacities of equipment procured under the project by bonafide users including Research workers in other ASTEC funded projects. A record of such uses will be kept and submitted with final report by Principal investigator.

5. It is expected that the investigator completes the sanctioned project within time. In case the investigator wishes to discontinue his/her research work, he/she should intimate this with sufficient justification to the Director ASTEC through proper channel. Another research may be suggested by the applicant to continue the project.
6. The grant may be terminated at any time, if the fund has not been properly utilized or the progress is found unsatisfactory.
7. All equipment and store purchased from the grant shall remain with the institution where the research is carried on. However, the Council reserves the right to take over/transfer the equipment(s) & store purchased from the research grant for another research purpose or for any other purpose of the Council.
8. The result of the research work may be published by the investigator(s) duly acknowledging the financial assistance received from the Council. If the applicant/ investigator proposes to make commercial use of the results design, invention etc. based on the work, he/she may do so provided.
 - (i) he/she takes prior permission from the Council &
 - (ii) he/she sign a bond to deposited 15% of the revenue/royalty/income earned to the Council.
9. The Council may attach some other conditions in addition to the above or may keep at abeyance some of the above clauses if considered necessary.

DOCUMENTS / ENCLOSURES REQUIERD WITH THE PROPOSAL

- a) Endorsement from the Head of the Institution.....1 copy
(On letter head) page-7
- b) Certificate from the Principal Investigator(s)1 copy
Page-7
- c) Details of the proposals (in the prescribed format)3 copy
- d) Additional copies of the project summery3 copy
- e) Infrastructural facilities available in the Laboratory/Institution
- f) Biodata of the Investigator(s) page-11
- g) Name & Address of five experts working elsewhere in the similar areas.

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

PROJECT TITLE:

1. Certified that the basic facilities needed for undertaking the proposed project are available at our institution/organization and these will be extended to the investigators(s) together with such other administrative facilities required by the terms and conditions of the grants.
2. Institute assumes to undertake the financial and other management responsibilities of the project.

Name of the Investigator:

Designation:

Institution:

Date:

Name & Signature of Head of Institution

CERTIFICATE FROM THE PRINCIPAL INVESTIGATOR

PROJECT TITLE:

1. I/We agree to abide by the terms & conditions of the ASTEC research grant.
2. I/We did not submit the project proposal elsewhere for financial support.
3. I/We undertake that spare time on permanent equipment will be made available to other users.
4. I/We have enclosed the following materials:
 - (a) Endorsement from the Head of the Institution1 copy (on letter head)
 - (b) (This) certificate from Investigator(s) ...1 copy
 - (c) Details of the proposal from section 01 to 30..... 3 copy
 - (d) Additional copies of section 203 copy

Date:

Name & signature of Investigator

PART-B: PRESCRIBED FORMAT

Instructions for filling up the Proforma

1. Please use paper approximately of A-4 size.
2. Please type as per the layout given in the formats.
3. Please write NIL if you have no comments in a particular section.
4. For certain sections, specifically for sections 1 & 20 maximum length of the answers (no character) have been specified within brackets. Please restrict your answer to number of character/words.
5. Detach page number 11 use capital letters only for filling sections 01 to 19 with ball pen. Send this sheet filled along with 3 copies of the proposal.
6. Please read the section 01 to 30 before filling the format.

Section 01: Project Title

Project title should be within 100 characters.

Section 02: Duration

Expected total duration of the project in months

Section 03: Total cost

Give total cost of the project in rupees.

Section 07: Institution or Principal Institution is the institution where the major part of the whole project will be carried out.

Section 20: Project summery

Use separate sheet for section 20. Give an abstract of the project.

Section 21: Origin of the proposal

Give a brief overview.

Section 21.2: Definition of the problem

Please give precise technical statement of only the problem (s) which the project is expected to cover within the specified duration.

Section 21.3: Objectives

Objectives should be spelled out point by point in simple language keeping in view the problem outlined in section 21.2.

Section 22.1 to 22.2: State of knowledge

Please indicate the recent development in the proposed field of work, both in the country & in other parts of the world, as applicable.

Section 22.3: Importance of the project

The importance of the project should be brought out in this section in the light of International & National state of knowledge on the subject. This could be done in two parts:

- (a) Matter relating to scientific & technological advancement of knowledge.
- (b) Issues concerning application of the new knowledge to socioeconomic advancement of the country such as resource conservation, employment generation, development of women & weaker sections etc.
- (c) Whenever, possible/applicable a proper literature survey should be included.

Section 22.4: Details of expertise.

Details of the expertise available with the proposed project team.

Section 22.5: Justification of the subject area in the light of the objectives

Section 23.1: Methodology

The description should indicate precisely how the stated objectives will be achieved. Discuss different methods of approach in order of priority.

Section 23.2: Work Element

In this section the entire project activity is to be broken down to specific work elements in consonance with the objectives and methodology defined in section 21.3 & 23.1,

- (a) Technical work elements (design/model/observation etc)
- (b) Administrative work elements e.g., obtaining quotations, recruiting staff etc.

Section 23.3: Time Schedule

On the basis of work elements identified earlier, the time schedule should be drawn. PERT network/bar diagram should show the probable achievement in fixed time range.

Section 23.4: Utilization of research outcome

It is necessary to widely disseminate the research results & to facilitate their use by other teaching and research communities and industries. The intent of this section is to get an idea of how the interaction between researchers and potential users of research results could possibly be catalyzed, stimulated & maintained.

In this light the utilization plan is solicited.

Section 24: Budget

Summary of the budget may be prepared after filling section 25, 26, 27, 28 & 29. Give realistic estimates of the costs of different items involved. All costs are to be estimated in rupees only.

Section 30: Bio-data of investigator

Bio-data of the Principal Investigator & of the other team member.

FORMATS FOR SUBMISSION OF PROJECTS

(TO BE FILLED BY THE APPLICANT)

- 1) Project Title: _____ (within 100 characters)
- 2) Duration: : : : Months
- 3) Total cost Rs. : : : :
- 4) Principal investigator _____
- 5) Designation _____
- 6) Department _____
- 7) Institute Name _____
- 8) Address _____

- 9) Date of Birth : : : : Sex, (M/F): : :
- 10) Telephone/ Mobile No. _____
- 11) Email Id _____
- 12) Co-Investigator(s) _____
- 13) Designation _____
- 14) Department _____
- 15) Institute name _____
- 16) Address _____

- 17) Date of Birth : : : : Sex, (M/F): : :
- 18) Telephone/ Mobile No.: _____
- 19) Email Id: _____
- 20) Project Summary (within 150 words)

Technical details (Start from a new page)

21) Introduction (under the following heads)

- 21.1) origin of the proposal
- 21.2) definition of the problem
- 21.3) objectives

22. Review of status of Research and Development in the subject

- 22.1) International status
- 22.2) National status
- 22.3) Importance of the proposed project in the context of current status
- 22.4) Detail of expertise available with proposed investigation group/ institution in the end of the project.
- 22.5) Relevance of the project with reference to the objectives

23) Work Plan

- 23.1) Methodology
- 23.2) Organization of work elements
- 23.3) Time schedule of activities indicating probable achievement in half-yearly & yearly basis (also append to bar diagram and mark it as Section)
- 23.4) Suggested plan of action for utilization of research outcome expected from the project.

(24) BUDGET ESTIMATES: SUMMARY

(in Rupees)

Item	BUDGET			
	1 st Year	2 nd Year	3 rd year	Total
A. Recurring				
1. Salaries/Wages				
2. Consumables				
3. Travel				
4. Other costs				
B. Permanent equipment				
Grand Total (A+B)				

(25) BUDGET FOR SALARIES/WAGES

(in Rupees)

Designation (Number of persons)	Monthly Emoluments	BUDGET			
		1 st Year (m.m)	2 nd Year (m.m)	3 rd Year (m.m)	Total (m.m)
Full Time					
Part Time					
TOTAL					

m.m: Man months to be given within brackets before the budget amount.

(26) BUDGET FOR COSUMABLE MATERIALS

(in rupees)

Head *	BUDGET			
	1 st Year	2 nd Year	3 rd year	Total
Q				
B				
Total B				

* Q: Quantity/number, B: Budget,

(27) BUDGET FOR TRAVEL

(in Rupees)

Item	BUDGET			
	1 st Year	2 nd Year	3 rd Year	Total
Travel				

JUSTIFICATION FOR (27)

(28) BUDGET FOR OTHER COSTS

(in Rupees)

Item	BUDGET			
	1 st Year	2 nd Year	3 rd Year	Total
a. Contingencies				
Total				

(29) PERMANENT EQUIPMENT

(in Rupees)

Generic Name of equipment and accessories with make & model	Number	Imported/ indigenous	Estimated Cost	Spare time available for us by other (in%)
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1

2

Total

* Including Installation charge, inland transport etc.

JUSTIFICATION FOR (29)

30. BIO DATA OF THE INVESTIGATOR (S)

- Name:
- Date of Birth:
- Designation:
- Institution:
- Educational Qualification:
- Research Publication (s):
- Patent granted/filed:
- Award/Prize/Certificate etc. own by the Investigator:
- R/D work already completed in progress.

(Please enclosed a list with financial support received from ASTEC and other sources).

Request for Data

A request letter to be addressed to the Director, ASTE Council stating the requirement of data. Based on availability of data, a consent letter will be despatched to the sender stating terms and condition, price if arise. If data needs to be generated (in case of Remote Sensing and GIS data), a project proposal will be prepared by ASTEC on request giving details of deliverable data, time period, budget, terms and conditions etc. followed by signing of a MOU.

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