



## **National Fisheries Development Board**

### **Guidelines for Technology Upgradation**

#### **1.0 Scope of Technology upgradation scheme**

During technology generation process, trials are carried out in laboratories and farms managed by research institutions. The results obtained from laboratories, yard experiments and limited on-station trials when disseminated as technology to farmers under different agro-climatic conditions, often have 'yield gaps'. It is known that either indigenous or alien technologies are available which are fully or partially being adopted by the farmers and also the technologies adopted by the fishers in marine sector. Hence, these technologies have to be upgraded for eventual adoption by testing them in farmer's farm conditions for refinement to suit the demands of the farming system and the farmer. The scope of the scheme for technology upgradation is to address the yield gap between on-station trials and farmers ponds; upgrade older technologies being currently adopted by farmers/fishers; and refine and adopt technologies which have not been widely disseminated. These projects would rely mainly on the effective functioning of feedback and feed forward systems taking into consideration the current expectations of users of technology and adaptive learning of technology generators and disseminators.

#### **2.0 Criteria for selecting technology up gradation projects**

The following criteria would be followed to select the projects for technology up-gradation:

- The proposed technology for up-gradation addresses a current problem in the field and would benefit a large number of farmers/fishers
- The potential for up-scaling and repeatability of the upgraded technology as given in the project proposal is possible
- The project clearly outlines the techno-economic viability and the expected enhanced profit and environmental impact if any
- The project focuses on-field demonstration and evaluation with minimum of testing in the laboratories and farms of the institutions
- Attention has been paid to increase income generation beyond the existing levels
- Linkages with ongoing research, development and dissemination programmes is clear

### **3.0 Criteria for selecting institution(s) applying for proposals**

- Contribution in terms of technology development or dissemination in the field of fisheries and aquaculture
- Expertise available in the proposed institution(s) for implementing the project
- Preliminary findings in the proposed field of technology upgradation would be desirable/feasible
- The lead institution or one of the partner institutions must have an established presence and the capacity to deploy its own staff in the geographic area where the project is to be taken up.
- The institutional and relationships if it is multi-institutional project is clear

### **4.0 Submission of Proposals**

Proposals shall be submitted to the NFDB for approval and release of funds in *FORM - TU-I*.

### **5.0 Submission of Utilization Certificate**

The Implementing Agencies shall submit utilization certificates in respect of the funds released to them by the Board. Such certificates shall be submitted in *Form TU - II* on half-yearly basis *i.e.* during July and January of each year. The utilization certificates can also be submitted in between if activities for which funds were released earlier have been completed and the next dose of equity share is required to complete the remaining works by the farmer.

### **6.0 Monitoring and Evaluation**

A dedicated monitoring and evaluation (M&E) cell shall be set up at NFDB head quarters to periodically monitor and evaluate the progress of activities implemented under NFDB funding. A project monitoring committee comprising of experts in the subject matter as well as finance and representative of financing organizations may be constituted to periodically review the progress of the activities including the achievements related to physical, financial and production targets.

**Proposal under the Technology upgradation scheme**

1. Project title
2. Project summary (500 words)
3. Specific objectives- Objectives to be specific, measurable, achievable, realistic and time bound
4. Is the project single institutional or multiple-institutional. If multi institutional the name of the lead institution.
5. Participating Institution(s) profile (to give separately for each institution)
  - 5.1 Address of each
  - 5.2 Affiliation of the institution (s) (Govt./ Non Govt./Others to Specify)
  - 5.3 Nature of the business (To indicate the total percentage of the institute effort in the following activities - Research/ Education/ Training/ Extension/others to specify)
  - 5.4 Major source of funding of the institution
  - 5.5 Connectivity of the participating institutions and investigators (in case of multi- institutional projects only)
6. Project duration
7. Manpower
8. Principal Investigator of lead institution: Name; Designation; Address; Area of work
9. Co-PIs: Name; Designation; Address; Area of work
10. Contractual staff: No of Senior Research Fellow or Research Associate and Filed assistant to be recruited for project duration
11. Target area and population (250 words)
  - 11.1 Project area- Suitable geographic area to be described for the purpose of adaptive or multi location trials (number of villages selected, with population)
  - 11.2 Number of farmers/ fishermen the project would adopt for the demonstration
- 12. Technical details (500 words)**
  - 12.1 Generic name of technology to be upgraded
  - 12.2 Farming system / fisheries in which the technology is to be applied e.g freshwater pond/ freshwater ornamental/ mariculture/ freshwater fisheries
  - 12.3 Description of the technology being upgraded (details of fisheries technology/ farming system, inputs and farming practices, no. of on-station and farm trials and the success stories) (200 words).

12.4 Rationale for up-gradation (need for intervention, indicating yield gaps/ need for refinement of certain components of technology/ need for field evaluation etc).(200 words).

12.5 Review of current status of research and development pertaining to the technology being up-graded including preliminary findings of your institution (300 words)

12.6 Methodology (tools to be used and mechanism to involve target population, design of demonstration ,statistical and economic analysis) (200 words)

13. Existing facilities/ equipment available in the in institution that would be utilized for the project

**14. Work plan**

14.1 Organization of work components and time schedule of activities

Work components		1 <sup>st</sup> year				2 <sup>nd</sup> year				3 <sup>rd</sup> year			
S.No	Activities	1.	2.	3.	4.	1.	2.	3.	4.	1.	2.	3.	4.

14.2 Important milestones

S.No	Milestone	Expected Completion (Month/Year)

15. Specify the outputs with achievable targets for each output

16. Projected economics of the upgraded technology at farmers ponds/ fishery technology (fixed costs, Operational costs, Gross returns, Net returns over operational costs, Benefit / Cost ratio, Pay back period)

17. Expected social and economical benefits due to adoption of the upgraded technology by the farmers/fishers participating in the project (300 words)

18. Include environmental impact (if any) of the upgraded technology in a scale of 1-5 with 1 having lowest adverse impact and 5 the maximum. Give reasons for your projection (100 words)

19. Linkage with other ongoing research projects, other development dissemination programmes (100 words)

20. Scalability and repeatability of upgraded technologies (100 words)

21. Plan for dissemination of the results within the project duration to extension agents(100 words)

22. Monitoring and evaluation parameters/indicators that will be reported yearly

**23. Budget details**

S.No	Item	Budget			
		1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total
<b>A.</b>	<b>Recurring</b>				
1.	Manpower				
	1.1 Senior Research Fellow or Research Associate				
	1.2 Filed assistant				
2.	Consumables				
3.	Travel				
4.	Contingencies				
	4.1 Operating the project				
	4.2 Input costs to farmers/ fishers				
	4.3 Capacity building of farmers/ fishers				
5.	Institutional Overheads				
	<b>Sub total</b>				
<b>B.</b>	<b>Non-recurring</b>				
1.	Permanent equipment				
2.	Works				
	<b>Sub total</b>				
<b>Grand Total (A+B)</b>					

*In case of multi-institutional project, the budget estimate to be given separately for each institution.*

Sl. No	Institution	Recurring	Non-recurring	Total
<b>Grand total</b>				

24. Justification to be given for each head and sub-head separately and worksheets to be attached for 4.2 and 4.3 mentioned in the above table)

**Signature of the Project Leader and date**

**25. Declaration/Certification**

It is certified that:

- a) the same project has not been submitted to any other agency/agencies for financial support/or already not completed with the financial support from other funding agencies.

- b) the Institute assumes to undertake the financial and other management responsibilities of the project.
- c) The institute welcomes participation of Dr./Shri/Smt./Km..... as the Principal Investigator and Dr./Shri/Smt./Km..... as the Co-Investigator for the project and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume responsibility of the fruitful completion of the project (with due intimation to NFDB)

**Signature of the Head of the Institution with seal and date**

**PROFORMA FOR BIO-DATA OF INVESTIGATORS**

1. Name \_\_\_\_\_  
 Date of Birth \_\_\_\_\_ Sex \_\_\_\_\_  
 Designation \_\_\_\_\_  
 Department \_\_\_\_\_  
 Institute/University \_\_\_\_\_  
 Address \_\_\_\_\_  
 \_\_\_\_\_ Pin \_\_\_\_\_  
 Telephone \_\_\_\_\_ E-mail \_\_\_\_\_

**2. Education (Post-graduation onwards) & Professional Career**

Sl. No	University/Institution	Degree Awarded	Year Award / Prize / Certificate

**3. Research/ extension experience in various institutions (if necessary, attach separate sheets).**

Sl No	Institution	Period	Brief details of work carried out

**4. Completed and ongoing projects(s) carried out**  
(State only major projects of last 3 years)

Sl. No.	Title of Project and objectives	Funding Agency	Duration From To	No. of personal working under this project	Total Approved Cost (Rs.)

**1. Publications (number only)**

Books	Research Papers/ Reports	General Articles	Patents	Others (Please specify)

**2. List maximum of five recent publications relevant to the proposed area of work.**

Place :

Date :

Signature of the Investigator

**Note : Principal Investigator and Co-Investigators from all participating institutions should provide their bio data in this format.**

**Guidelines to prepare project proposals**

**1. Budget**

- Senior research fellows or research associates with minimum of Masters' degree qualifications with existing monthly emoluments as on date
- Field assistants with minimum qualification of matriculation and existing monthly emoluments as on date
- Actual cost of non-recurring equipments / construction of pilot unit not to exceed ten percent of the project cost
- Calculation of inputs for farmers/fishers/fishermen. A maximum of 75% of the inputs that could be given in kind (like quality seed, feed, nets, etc.) for a farmer/fishermen for two consecutive crop/fishing season can be given. Detailed cost estimate to be attached.
- The training to be given under the project – the calculation to be based on the guidelines developed by NFDB

## 2. Description of the implementing agency(ies) in case they are NGOs

- Back ground of the agency, work being done. List of ongoing and completed projects, during the last 5 years with the granting agency, duration and quantum of funding.
- Expertise available the proposed institution for implementing the project.
- Please also enclose the paper regarding the Registration Certificate, MoA including By-laws and mandate, Audit statement of accounts for the last three years, Annual report including activity profile for last three years in case of NGOs.
- Clear cut commitment/letter of consent of other participating institution(s) to be enclosed.

3. **10 copies of the proposal may be submitted to:-** The Chief Executive, National Fisheries Development Board, Blocks 401-402, Maitri Vihar, HUDA Commercial Complex, Ameerpet, Hyderabad – 500038, Andhra Pradesh.

## 4. Details of the fund utilization

Sl No	Particulars	Fund released during the year	Expenditure incurred	Balance available	Remarks
A	<b>Recurring</b>				
1.	Manpower				
2.	Consumables				
3.	Travel				
4.	Contingencies				
5.	Institutional Overheads				
B	<b>Non-recurring</b>				
<b>Grand Total (A+B)</b>					

*In case of multi-institutional project, the budget estimate to be given separately for each institution.*



**National Fisheries Development Board**

Form for Submission of Utilization Certificate

Sl. No	Letter No and date	Amount

Certified that out of Rs. \_\_\_\_\_ sanctioned during the year \_\_\_\_\_ in favour of \_\_\_\_\_ under the National Fisheries Development Board's Letter No given in the margin and Rs. \_\_\_\_\_ on account of unspent balance of the previous sanction, a sum of Rs. \_\_\_\_\_ has been utilized for the purpose of \_\_\_\_\_ for which it was sanctioned and that the balance of Rs. \_\_\_\_\_ remains unutilized. The same will be adjusted towards the next installment payable during the period \_\_\_\_\_.

Physical progress:

Certified that I have satisfied myself that the conditions on which the funds were sanctioned by the National Fisheries Development Board have been duly 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.

Date:

Place:

Signature and seal of the authorized representative of the Implementing Agency