



Government of India
Ministry of Agriculture & Farmers' Welfare
Department of Agriculture, Cooperation & Farmers' Welfare

Mahalanobis National Crop Forecast Centre

Near Krishi Vistar Sadan
Pusa Campus, New Delhi-110012

Request for Proposal
for Evaluation of FASAL project

File No. 3/5(3)/Results/2017-MNCFC (Pt I)

(September 2019)

(Visit us at <http://www.ncfc.gov.in>; <http://agricoop.nic.in>)

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NOTICE INVITING RFP

Government of India Ministry of Agriculture & Farmers' Welfare Department of Agriculture, Cooperation & Farmers' Welfare MAHALANOBIS NATIONAL CROP FORECAST CENTRE Near Krishi Vistar Sadan, Pusa Campus, New Delhi-110012	
NOTICE for RFP (For publishing in the Website)	
File No. 3/5(3)/Results/2017-MNCFC (Pt I)	
Office of issue	Mahalanobis National Crop Forecast Centre (MNCFC), DAC&FW, Nr Krishi Vistar Sadan, Pusa Campus, New Delhi-110012
File No.	File No. 3/5(3)/Results/2017-MNCFC (Pt I)
RFP Notice Available at Website	http://www.ncfc.gov.in http://agricoop.nic.in
Date of Issue/Publishing	1st October, 2019
Proposal submission last date	15th October, 2019
Date of Technical Presentation of Proposal	18th October, 2019
Place of Presentation of RFP	Committee Room, MNCFC, Nr. Krishi Vistar Sadan, Pusa Campus, New Delhi-110012.

On behalf of President of India, Request for Proposal is invited from experienced agencies (government/autonomous/private) for Evaluation of FASAL (Forecasting Agricultural output using Space, Agrometeorology & Land based observations) project which is a part of "Integrated scheme on Agriculture Census, Economics and Statistics" of Directorate of Economics & Statistics, Ministry of Agriculture & Farmer's Welfare.

RFP document can be downloaded from MNCFC website www.ncfc.gov.in and, DAC&FW website www.agricoop.nic.in. It will be also sent by email to 20-25 concerned agencies.

The RFP can be uploaded online (facility will be available soon) on www.ncfc.gov.in and copies can be sent through email to [ncfc\[at\]gov\[dot\]in](mailto:ncfc[at]gov[dot]in) or [neetu\[dot\]ncfc\[at\]gov\[dot\]in](mailto:neetu[dot]ncfc[at]gov[dot]in).

Sd/-
HEAD OF OFFICE, MNCFC
011-25843224

GENERAL ASPECTS OF RFP

1. NATURE OF RFP

This RFP is for obtaining professional services of reputed technical/research agencies for the evaluation of FASAL (Forecasting Agricultural output using Space, Agro-Meteorology and Land based observation) project. There is requirement to do the evaluation study of FASAL - a Centrally Sponsored Scheme of Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmer's Welfare, operational since 2012 in the Ministry of Agriculture Cooperation and Farmers Welfare.

2. ELIGIBLE AGENCIES

All reputed technical/research agency (government/autonomous/private) having experience of providing similar professional of Project Evaluation for the Ministries/Departments, Central/State government Bodies, and fulfilling the following conditions are eligible for submitting proposals:

- 1) experience of successfully completing at least 3 evaluation studies of Government/Government aided Schemes in last 5 years ending 31.03.2019
- 2) minimum annual turnover of Rs. 10 crore during the last 3 Financial Years (However, the Govt./Autonomous Research Institutions are exempted from this eligibility condition), and
- 3) Having qualified and experienced key personnel (doctorate experience of minimum five years in agriculture and / or allied subjects / statistics / economics / mathematics).

3. TERMS OF REFERENCE /SCOPE OF WORK

The Agency will carry out critical evaluation of the FASAL scheme, which includes NADAMS (National Agricultural Drought Assessment and Monitoring System) under five broad categories. **This evaluation will be for the project period of May, 2012- June, 2019.**

- Accuracy of the Estimates or Forecasts generated under FASAL and NADAMS Project: Various statistical tests should be carried out to check the accuracy of FASAL project for crop area and production forecasts at State/District/Sub-District level Plans and the NADAMS project for its drought assessment at district/sub-district level
- Value for Money: Whether the expenditure incurred for FASAL project is economically more efficient compared to conventional or other methods of estimates.

- Technology Used: Whether the technology used for crop forecasting and drought assessment is state of the art or there is scope of improvement.
- Project formulation: How efficient is the collaboration and partnerships in the FASAL project
- Utilization Potential/Impact Analysis: Whether the estimates or forecasts generated under FASAL project and the drought assessment generated under NADAMS project is utilized by the User agency(ise)

4. Methodology:

The selected agency/ organization/institution would finalize evaluation methodology, questionnaire etc. in consultation with MNCFC for the above-mentioned 5 broad categories.

5. Deliverables: The Assessment Study shall be completed within a period of 3 months from the date of release of the first instalment. There will be two reports, viz, First Interim Report outlining the detailed procedure, expected results, data to be used, questionnaires, if any, and initial analysis based on various available literature on FASAL and NADAMS project.

The second/final report would include all analysis, results, interpretations and suggestions for improvement. It should contain tables, figures, statistical analysis, etc. **The Final report should as per the attached Template.**

The tentative timeline for submission of Reports from the date of release of First instalment would be First Report -within 1.5 months; Second Report - within 3 months;

6. Budget/ payment Schedule:

The terms of payment for assignment under this Scheme will be as under:

- (i) First instalment: 25 per cent of the contract amount on signing of the agreement shall be made as mobilization advance
- (ii) Second Instalment: 25 per cent of the budget on submission of first report
- (iii) Third Instalment: The remaining 50 per cent i.e. final instalment for payment will be released upon acceptance of the reports submitted by the agency.

7. Method of selection of the evaluation agency:

7.1 Submission of RFP

The RFP should be submitted online at <https://ncfc.gov.in/> in two separate sealed envelopes for (Envelope-1 for Technical Proposal and Envelope-2 for Financial Proposal) by the prescribed closing date/ time (as mentioned in RPF Notice). In case, any bidder submits more than one bid his bid will be summarily rejected without assigning any reason.

7.2 The Technical Proposal shall contain:

- (i) Details of the methodology to be used for evaluation of the Scheme like study design, methodology of collection of data, work plan, etc. for each component of the scheme

separately; and

- (ii) Details of the experience of the applicant institution including— a. Name & Short C.V. of Principal Officers/Team Leader including his educational qualification & experience etc. in years etc.
- (iii) Ownership details & organizational Structure
- (iv) Audited Financial Statement for the last three years with year-wise turnover and Net Profit/Loss (PAT) (for private agencies)
- (v) List of major completed assignments undertaken in previous years, along with documentary evidence for having done so including acceptance of the Reports
- (vi) Location of branches through the country
- (vii) C.V. of all the Consultants/Subject Experts to be engaged from outside on study
- (viii) Detailed methodology to be adopted
- (ix) Any other information to highlight their strength and the claim to undertake the Consultancy.

Along with the above information, details regarding agency's credentials, research team's composition, infrastructure, qualitative and quantitative research skills and experience of the organization/institution in undertaking similar evaluation studies, names and addresses of at least three clients from whom the experience/ competency of the applicant can be ascertained, is also required to be provided. The organization should also provide evidence in support of their experience in evaluation of Government programmes and schemes.

Technical proposal should be given as per **Annexure - II** in addition to the details in the project documents.

7.3 The Financial Proposal shall contain:

- i. Detailed break-up of the cost of the study; giving unit-wise break-up of the estimate under the following broad heads:
 - a) Analysis Cost;
 - b) Travel cost;
 - c) Report preparation cost;
 - d) Salary/Consultation fee
 - e) Other overhead costs, etc.;
 - f) Institutional Fee, etc.
- (ii) The financial proposal should include all liabilities including GST etc. The cost Proposal should be given with a covering letter as per **Annexure - III**

7.4 Selection process:

- a) Opening of Technical Proposal (Envelope-1) will be done on the prescribed / intimated date and time in the Department of Agriculture Cooperation and Farmers Welfare in presence of the Agency.
- b) Evaluation of technical Proposals will be done by the Technical Evaluation Committee formed by the Mahalanobis National Crop Forecast Centre, Department of Agriculture Cooperation and Farmers Welfare within one week.

c) Financial Proposals of only the technically qualified agencies / organizations / institutions will be opened in their presence on the prescribed / intimated date and time.

8. Proposal Evaluation

8.1 Evaluation of Quality Technical Proposals will be evaluated by awarding marks for the following parameters –

- (i) Past experience including number of assignments handled by the firm similar to the area of assignment **(25 marks)**.
- (ii) Methodology, work plan and understanding of TOR **(50 marks)**
- (iii) Educational qualifications and experience of the key professionals **(25 marks)**.

8.2 Financial Proposals should not have any negotiation clause or condition else, it shall be summarily rejected. However, other terms and conditions viz. discount etc. must be specifically indicated in clear terms, if any.

8.3 Mahalanobis National Crop Forecast Centre (MNCFC), Department of Agriculture Cooperation and Farmers Welfare reserves the right to accept/reject any offer in part or full received without assigning any reason whatsoever.

8.4 The agency/organization/institution would also give the undertaking that the information collected in respect of the FASAL scheme of Department of Agriculture Cooperation and Farmers Welfare will not be disclosed / presented anywhere without obtaining prior permission of the Ministry. The report, material etc. generated/collected during the study shall be the property of MNCFC, Department of Agriculture Cooperation and Farmers Welfare who will have proprietary rights.

OTHER TERMS & CONDITIONS OF RFP

9. Penalty

If the agency/organization/institution is not able to complete the evaluation in time and/or is unable to furnish the reports in time the agency would be liable to be penalized as follows:

For delay: 1% of the fee (excluding taxes) per week or part of it subject to maximum of 10% of contract value.

10. Saving Clause

Mahalanobis National Crop Forecast Centre (MNCFC), Department of Agriculture, Cooperation & Farmers Welfare has the right to terminate the contract at any time if it comes to know that the contract has been procured fraudulently or misrepresented and corrupt practices and forfeit the security / bank guarantee etc.

11. Court Jurisdiction

In case of any dispute, this shall be subject to the exclusive jurisdiction of Court at Delhi/New Delhi.

12. Data, Services and Facilities to be provided by Mahalanobis National Crop Forecast

Centre (MNCFC), Department of Agriculture, Cooperation and Farmers Welfare. To facilitate undertaking of the study, Mahalanobis National Crop Forecast Centre (MNCFC), Department of Agriculture Cooperation and Farmers Welfare will provide all the available relevant documents/information to the Evaluating Team.

15. Earnest Money Deposit

The Earnest Money Deposit (EMD) amounting to Rs. 20,000/- (Rupees twenty thousand) in the form of Demand Draft/Bankers cheque drawn in favour of PAY & ACCOUNT OFFICER (PAO) (Extension) Shastri Bhavan, Department of Agriculture Cooperation and Farmers Welfare, and payable at New Delhi should be deposited to the Office of MNCFC, New Delhi by 5:00 P.M. of the prescribed closing date for submission of the technical Proposal. **EMD is required only for private agencies.** The EMD would be forfeited if the agency withdraws his/her Proposal during the validity period. RFP/Proposal received from private agencies without EMD shall not be considered. **Autonomous Institutes, State/Central Government organizations are exempted from furnishing EMD.** EMD of unsuccessful agency will be returned immediately, but not later than one month, after process of selection is over.

16. Payment Terms and conditions (Please see section 6)- All payment will be made in INR.

17. Submission of Bank Guarantee

The selected agency shall be required to furnish a performance bank guarantee equivalent to 10% of the contract value rounded off to the nearest thousand Indian Rupees in the form of an unconditional and irrevocable bank guarantee from a scheduled commercial bank in India in favour of PAO (Extension), Department of Agriculture, Cooperation & Farmers Welfare payable at New Delhi for the period of contract with 60 days claim period beyond the completion of all contractual obligations. **Bank Guarantee is required only for private agencies. Autonomous Institutes, State/Central Government organizations are exempted from furnishing Bank Guarantee.** The guarantee must be submitted after award of contract but before signing of the consultancy bank contract. The successful agency has to renew the bank guarantee on same terms and conditions for the period up to contract including extension period, if any. Performance Guarantee would be returned only after successful completion of tasks assigned to them and only after adjusting/recovering any dues recoverable / payable from / by the Agency on any account under the contract. On submission of performance guarantee and after signing of the contract, EMD would be returned.

Annexure I

ABOUT THE PROJECT

1. About FASAL Project:

In order to enhance capabilities of the existing system of crop forecasts and crop estimation, the Department of Agriculture, Cooperation & Farmer's Welfare (DAC&FW) considered introduction of technological advancements and adoption of emerging technologies such as Remote Sensing (RS), Geographic Information System (GIS) etc. Thus, an approach which integrates inputs from these diverse sources is needed to make forecasts of desired coverage, accuracy and timeliness and the concept of "Forecasting Agricultural output using Space, Agro-meteorology and Land based observations" or FASAL was emerged.

After the validation of the approach for FASAL the technology was transferred to the centre under DAC&FW, Mahalanobis National Crop Forecast Centre (MNCFC), which was established in 2012 to operationalize the FASAL project. Since 2012, the project is successfully providing National/State/District level forecast of Rice (Kharif and Rabi), Jute, Sugarcane, Cotton, Rapeseed & Mustard, Wheat, Rabi Sorghum and Rabi Pulses in their major growing regions, in the country.

2. Methodology and Approach adopted under Crop Production Forecasting (FASAL)

The FASAL system integrates various approaches and organizations for creating a hierarchical information system, related to crop condition and crop production at any time of the season from sowing to harvest. Thus, multiple forecasts of 11 major crops namely Rice(Kharif & Rabi), Jowar (Kharif & Rabi), Maize, Bajra, Jute, Ragi, Cotton, Sugarcane, Groundnut(Kharif& Rabi), Rapeseed & Mustard and Wheat were envisaged at National/State/District level depending on the status of technology available.

In the FASAL concept, use of econometric and weather-based models is envisaged for forecasting the total crop production, early in the season, before it becomes amenable to remote sensing data. Mid-season assessments are supplemented with multi-temporal, coarse resolution remote sensing data. In the latter half of crop growth, direct use of remote sensing data to estimate the acreage and forecast the yield is done by integrating remote sensing and meteorological data. In addition, use of field information and weather inputs at various stages increases the accuracy of forecasts. The flow of information under FASAL can be conceptually depicted in the following diagram (Figure 1).

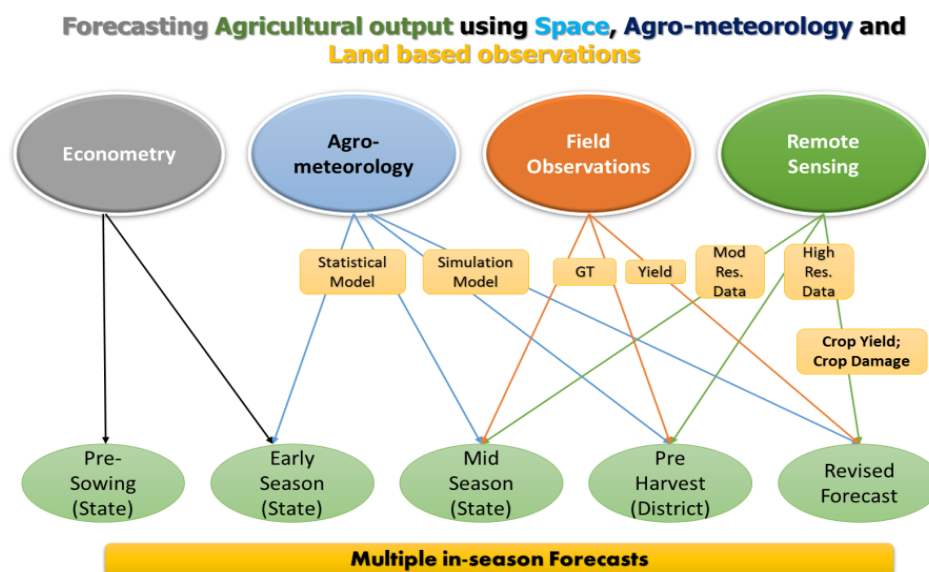


Figure 1: Approach of Crop Production Forecasting under FASAL project

The main objectives of the FASAL scheme are as under -

- Implementation of methodologies developed by ISRO on crop forecasts and drought assessment as part of FASAL and NADAMS project.
- Maintenance of database comprising all data generated/used as part of the FASAL and NADAMS project, forecasts from India Meteorological Department (IMD), Institute of Economic Growth (IEG) etc for making operational forecast of selected crops and provide it regularly to decision makers and identified users.
- Assimilate the results of crop forecasts information from other projects / programmes such as flood and drought monitoring etc. and generate the required information.
- Coordinate use of geomatics in other fields of agriculture such as cropping system, horticulture, soil health, etc.

The Scheme has two major components: Crop Production Forecasting and Drought Assessment

3. Drought Assessment: NADAMS Project

In India, National Agricultural Drought Assessment and Monitoring System (NADAMS) was initiated in 1986 by National Remote Sensing Centre, Dept. of Space, Government of India. NADAMS was made operational in 1990 and since then the system has been providing agricultural drought information in terms of prevalence, severity and persistence at state, district and sub-district level. Over a period of time, NADAMS Project has undergone many methodological improvements such as use of moderate spatial resolution data for disaggregated level assessment, use of multiple indices for drought assessment, augmentation of ground data bases, achieving synergy between ground observations and satellite based interpretation, providing user friendly information, enhanced frequency of

information etc. In 2012, with establishment off Mahalanobis National Crop Forecast Centre, the technology was transferred to MNCFC and since then MNCFC is providing drought assessments under NADAMS project.

Originally, the project covered 14 agriculturally important and drought vulnerable states of the country. Monitoring of agricultural drought is restricted to kharif season (June-October), since this season is agriculturally more important and rainfall dependent. Since drought declaration by the State Government involves the use of a large number of drought indicators, many of which are not amenable to satellite sensing, the emphasis of NADAMS is on agricultural drought conditions. Agricultural areas are monitored at state/district level using daily observed coarse resolution (1.1 km) NOAA AVHRR data for 14 states. Moderate resolution data from Advanced Wide Field Sensor (AWiFS) sensor of Resourcesat 2 (IRS P6) of 56m resolution are being used for detailed assessment of agricultural drought at sub district level in six states namely, Andhra Pradesh, Karnataka, Maharashtra, Odisha, Telangana and Haryana.

Currently, under NADAMS project 17 major agriculturally states are covered viz. Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal. *Assam, Punjab and West Bengal* were included during 2017.

The New Drought Manual has described objective approach for Drought Assessment. Following are the parameters described in Drought Manual for Drought Declaration. At first level, Rainfall/SPI and Dry Spell is checked for Trigger 1, wherever the trigger 1 is on, 3 out of 4 impact indicators (Remote Sensing, Crop Situation, Soil Moisture, and Hydrological parameters) are selected and assessed for the occurrence of a drought situation which is further confirmed by ground truthing.

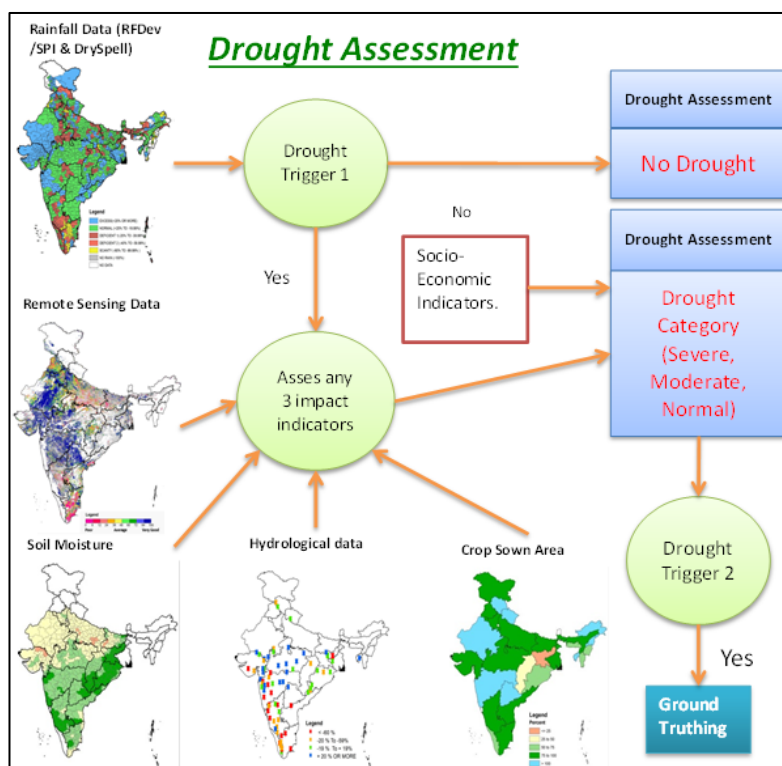


Figure 2: Methodology for Agricultural Condition Assessment as per New Drought Manual

3. Collaborating Agencies

The FASAL Scheme is being implemented by the Mahalanobis National Crop Forecasts Centre, an attached office of the Department of Agriculture, Cooperation and Farmers' Welfare. The Centre is headed by a Director. Other large number of organizations is involved in the FASAL project. Their role is given below.

SN	Name of the Organization	Role
1	Directorate of Economics & Statistics*: CFCC	Coordination and Budget Management
2	Mahalanobis National Crop Forecast Centre (MNCFC)	Generation of Operational Crop Forecasts
3.	Space Applications Centre (ISRO)	Development of Approaches for New Crops and Remote Sensing based yield modeling
4.	Institute of Economic Growth	Econometric Modeling and Crop Forecasts
5.	India Meteorological Department	Agro-meteorological modeling for crop yield
6.	State Agriculture Departments	Field Data Collection and Feedback on Results
7.	State Remote Sensing Centres	Support to MNCFC in Image Processing and Classification Verification
8.	State Agricultural Universities	Support to IMD for yield model development and Field Experiments for yield estimation.

* As per the new FASAL EFC document, MNCFC has been identified the implementing agency of FASAL project

Crops, Study States and Districts Covered under FASAL Project for Crop Forecasting

Crop	States	No. of Districts	Month of Forecast/Target Month
Jute	Assam, Bihar and West Bengal	24	July End
Kharif Rice	Andhra Pradesh, Assam, Bihar, Chhattisgarh, Haryana, Karnataka, Jharkhand, Madhya Pradesh, Odisha, Punjab, Uttar Pradesh, West Bengal Kerala and Tamil Nadu	288	Sep. End Nov. End March End
Rabi Rice	Andhra Pradesh, Telangana, Karnataka, Odisha and West Bengal	64	April End
Cotton	Andhra Pradesh, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Punjab, Rajasthan	87	Mid Nov March End
Sugarcane	Gujarat Haryana, Maharashtra and Uttar Pradesh	55	Mid Sep February End
Rabi Sorghum	Karnataka and Maharashtra	20	March End
Rapeseed-Mustard	Gujarat, Haryana, Madhya Pradesh, Rajasthan, Uttar Pradesh	79	December End January End April Mid
Wheat	Bihar, Gujarat, Haryana, Himachal Pradesh, Madhya Pradesh, Punjab, Uttar Pradesh and Uttarakhand	258	January End February End April End
Pulses (Rabi)	Andhra Pradesh, Karnataka, Maharashtra, Madhya Pradesh, Rajasthan and Uttar Pradesh	82	Feb End April End
Total		957	18 Forecasts

Annexure II- Letter for Technical Proposal Submission

Location:

Date:

To,

Director MNCFC,
Ministry of Agriculture & Farmers Welfare,
Pusa Campus, New Delhi -110012

Dear Sir,

We the undersigned, offer to provide the Consultancy assignment/job for Evaluation of FASAL - a Centrally Sponsored Scheme of Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmer's Welfare, from the year 2012-13 to 2018-19 in accordance with your Request for Proposal dated . We have uploaded our proposal online and are hereby submitting hard copies of the same, which includes this technical Proposal, and a Financial Proposal sealed under a separate envelope, and requisite EMD (if required). We hereby declare that all the information and statements made in this Proposal are true and we understand that any misinterpretation contained in it may lead to our disqualification.

We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Authorized signature (in full and details):

Name and Title of Signatory:

Name of Organization:

Annexure III- Financial Proposal Submission Letter

Location:

Date:

To,

Director MNCFC,
Ministry of Agriculture & Farmers Welfare,
Pusa Campus, New Delhi -110012

Dear Sir,

We the undersigned, offer to provide the Consultancy assignment/job for Evaluation of FASAL - a Centrally Sponsored Scheme of Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmer's Welfare, from the year 2012-13 to 2018-19 in accordance with your Request for Proposal dated . Our attached Financial Proposal is for the sum of [Insert amount(s) in words and figures]. This amount is inclusive of all taxes and duties. We hereby confirm that the financial proposal is unconditional and we acknowledge that any condition attached to financial proposal shall result in rejection of our financial proposal.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal.

We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Authorized signature (in full and details):

Name and Title of Signatory:

Name of Organization/Entity: