

Government of the People's Republic of Bangladesh
Ministry of Fisheries and Livestock (MoFL)
"Livestock and Dairy Development Project (LDDP)"
Project Management Unit (PMU)
Department of Livestock Services (DLS), KrishiKhamar Sarak,
Farmgate, Dhaka- 1215, Bangladesh

Indicative Terms of Reference
For Hiring a Consulting Firm

For
**Development and Maintenance of Computerized/Web-based Project Management
Information System (PMIS) and Accounting Software**

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|---------------------|--|
| Assignment Title | Development and Maintenance of Computerized/Web-based Project Management Information System (PMIS) and Accounting Software |
| Package Number | SD-72 |
| Assignment Duration | Software Development: 1. Project Management Information System (PMIS) : 6 Months 2. Project Accounting Software : 6 Months Maintenance Service: Upto 31 December, 2023 or Upto project period |
| Assignment location | Dhaka |
| Funding source (s) | IDA |
| Contracting entity | Project Director, Livestock and Dairy Development Project . |



1 CONTEXT OF THE PROJECT

Bangladesh lies within the Ganges-Brahmaputra-Meghna Delta—the world’s largest, most densely populated delta and one of the richest in aquatic resources. In 2014, Bangladesh crossed the threshold to become a low middle-income country (LMIC), and per-capita income reached US\$ 1,602 in 2017. Bangladesh’s remarkable development achievements notwithstanding, high levels of poverty and population density remain pressing development challenges.

Given increasing population pressure on land, the Government of Bangladesh (GOB) has recognized that the expansion of dairy and meat production, processing, value addition, marketing and consumption can offer an important pathway to sustainable economic development and future poverty reduction opportunities for Bangladesh. The livestock and poultry (dairy and meat) sector is taking an increasingly major role in this performance, accounting for approximately 16% the agricultural GDP and emerging as a major growth driver in the last two decades showing an incremental GDP growth rate as compared to the fisheries or crops sectors. The livestock and poultry sector also play an important role in the food supply, food security, and livelihood security of the country’s millions of smallholder livestock farmers and other stakeholders. Milk, meat and egg provide 50% of all animal protein consumed in Bangladesh. Livestock and poultry also play a major role in employment: about 50% indirectly and 20% directly (of the total population) are associated with the livestock sector. Bangladesh is being popular for milk, meat and egg-based solutions to address malnutrition and hidden hunger, particularly among poor women and children in rural areas.

The GOB recognizes the potential for the country to increase the value of its dairy and meat productions and processing through more sustainable management and in doing so, improve the lives of poor, subsistence farmers. Several key sector-wide challenges necessitate government intervention and investments to enable responsible private-sector-driven growth. These include (i) the absence of an effective regulatory framework for managing post-harvest dairy and meat sector; (ii) limitations in the basic public infrastructure necessary to enable private sector investment; and (iii) limitations in both public and private sector capacity for improved livestock management and optimal productivity.

To overcome these challenges and enable private sector investment, Bangladesh can learn from both regional and global experience and good practices for investing in post-harvest dairy and meat governance reforms. Global experience highlights the need to first establish a core public sector governance framework, including an agreed sector vision, coherent policy, and enabling legal framework, to enable the design, piloting, and implementation of post-harvest dairy and meat activities supported by adequate institutional capacity building. The latter entails first and foremost building the DLS capacity to implement an effective management system to address the de facto uncontrolled, open access system for private entrepreneurs.

2 PROJECT DESCRIPTION

The LDDP project seeks to promote climate resilient productivity growth, enhance market access, and improve risk management among smallholder farmers and Agro-entrepreneurs, by providing support for climate smart production systems, farmer empowerment and commercialization.

The project will foster a market-led transformation of livestock production, while ensuring that the supply response to growing demand is sustainable, inclusive, safe, and environmentally conscious. To this end, the project will improve the ecosystem for value chain development by



financing key infrastructures including markets, and access to market, insurance and financial products and services, capacity building and knowledge.

Climate resilient livestock production systems will be developed through the promotion of appropriate climate smart agriculture (CSA) practices addressing feeding strategies, animal health and welfare, animal husbandry and breeding, as well as manure and waste management (including production of energy), improved storage and processing. The project will build on existing experience to foster the generation of renewable energy from solar and livestock manure sources.

The project is designed and will be implemented taking into consideration the different gender roles. The project will actively pursue the participation of women across all project components.

3 PROJECT OBJECTIVES:

The project development objective is to improve productivity, market access, and resilience of small-holder farmers and agro-entrepreneurs operating in selected livestock systems and value chains in target areas.

4 PROJECT COMPONENTS:

- Productivity Improvement
- Market Linkages and Value Chain Development
- Improving Risk Management and Resilience of Livestock Production Systems
- Project Management

5 OBJECTIVE OF THE ASSIGNMENT:

The objective of the assignment is to develop Development and Maintenance of Computerized/Web-based Project Management Information System (PMIS) and Accounting Software for project, which will:

1. Ensure Project Management Information system for LDDP to manage countrywide monitoring, analyze and evaluation based database information through online.
2. Facilitate easy and timely access to Computerized accounting management system and strengthen PMU & PIUs for managing all financial transactions and reporting to ensure transparent, integrity and accountability information.
3. Ensure authentic email account for project staffs.

6 GEOGRAPHICAL AND ORGANIZATIONAL SCOPE:

The scope of this project to the implementation of PMIS software at:

- PMU
- PIUs
- Field office

The Accounting Software of this project is limited to the implementation at:

- Project Management Unit.(PMU)
- Project Implementation Unit PIUs



7 AREA OF THE ASSIGNMENT:

The Consulting Firm will develop appropriate software which will ensure to generate day to day financial transaction, monthly, quarterly, annual financial reports of GoB system and IDA/WB credit funded project as required by:

- Ministry of Fisheries & Livestock
- Department of Livestock Services
- World Bank (WB)
- Ministry of Finance (MoF)
- Controller General of Accounts.
- FAPAD
- IMED
- ERD

8 RESPONSIBILITIES THE ASSIGNMENT:

The selected Consulting Firm will responsible to complete the following tasks:

- Ensure authentic software platform to customized software for PIMS & Accounting database.
- Establish a mail domain for LDDP and ensure Project staffs individual e-mail account.
- Provide Justification about software platform is the best to develop PIMS & Accounting customized software.
- Design and develop outlets/modules on day to day accounting transaction entry system for project and demonstrate to the PD and his team before finalized.
- Design and develop outlets/modules on day to day field level database information system for project and demonstrate to the PD and his team before finalized.
- Develop all project related reporting templates both for PIMS & Accounting software and take approval from the PD and Management before integrated with software.
- Computerized/Web-based PMIS and Accounting Software should be user friendly and easy to installation.
- Ensure daily backup (Web based and Rental Disaster Recovery Site) system on project document archive and ensure easy recover system if any problem arise.
- Ensure quick support to the project when required to improve and update software or any problem arise during the Maintenance Service Contract period.
- Ensure annual maintenance for the software during the project period.
- Provide strategic direction for the project and Coordinate activities to ensure timely dissemination of project
- Develop user friendly PMIS and accounting software management user manual.
- Prepare presentation, training curriculum and materials on the PIMS & accounting software management user manual for the project staff.
- Provide functional users with formal training of pertinent functions before performing user acceptance testing.



9 SCOPE OF THE WORK

Part – A (Project Management Information System (PMIS) Software)

1. Review project DPP and others documents and prepare a work plan with user requirement specification for project Information System software.
2. The consultant/Firm will develop computerized data entry and reporting system software which reflects Project Program/Activities/ event/ training based activities of the project.
3. The software will impute all day to day field level program based activities through monitoring and evaluation tools and delivers accurate indicator/outputs of the project.
4. Last mile users will have access to proposed platform from any where in Bangladesh though a mobile application (Mobile Apps) using a smart phone or tablet.
5. PMU representatives will work closely with consultant/Firm to develop PMIS during the contract period.
6. Based on field level activities project management information systems tools will be introduce and modules should be considered.

The details of each module are provided below:

4.1. Union/ Upazilla/ District/PIUs Level Data Entry tools.

- Develop different types of data entry tools/templates based on project activities.
- Group or individual Location based activities of the project will be visualized through different chart or report.
- Due to wider range of activities in upazilla /District/ PIUs different data entry tools/templates need to introduce.
- Reporting, Monitoring & analyzing tools will be developed focused on project requirement.
- Keep supervisor review and edit option.
- Introduce online approval option in different stage on data entry system.

4.2. PMU Level Data Entry tools & Review process.

- Develop different types of data entry tools/templates based on PMU activities.
- Activities of the project will be visualized through different chart or report.
- Reporting, Monitoring & analyzing tools will be developed based on PMU requirement.
- Review and edit option.
- Introduce online approval option in different stage on data entry system.

Part –B (Accounting Software)

1. Review project DPP and others documents and prepare a work plan with user requirement specification for project accounting software.
2. The consultant/Firm will develop computerized / web-based accounting and reporting system software as per Bangladesh/ International Accounting Standards.
3. The software will imputes all day to day accounting/transactions and delivers all accurate accounting records and reporting system for PMU, which will facilitate easy and timely access to financial information of PIUs and PMU and its consolidation. It will ensure clear



practices harmonized access on the project including all relevant parts of FM operations, Donor's compliance and financial disclosure.

4. Accounts & finance, Inventory management, stock management and human resource modules should be considered.

The details of each module are provided below:

4.1. Project Setup:

- Project Information and Defaults
- Chart of Accounts
- Account Settings
- Financial Year
- Currency

4.2. Contract/ Procurement Management

- Contract Package No. & Approval from WB
- Budget Allocation & Economic Code
- Estimated Cost
- Category allocation (Goods/ works / Non consulting/ Consulting/ Grants/ Operating cost)
- Component allocation
- Prior/ Post Review
- Advertisement upload process
- Tendered document & upload process
- Bid/Tender Security & upload process (date, amount & refund date)
- Evolution document & upload process
- Notification Award & upload process
- Performance /Security Deposit & upload process (date, amount & refund date)
- Contract Value & Date/Contract period/ document & upload process
- Amendment of Contract/ Value /Date/document & upload process
- Contract Entry register/ List of Contracts with view all data & document.

4.3. Bill/Invoice Enter:

- Nature of Expenditure (Contract or non contract)
- Budget allocation and Economic code
- Source of fund (GoB or IDA)
- Category allocation (Goods/works/ Non consulting/ Consulting/Grants/Operating cost)
- Component allocation
- Prior/ Post Review
- Estimated Price
- NOA date
- Agreement date/ MOU date/Non-contract (Operating Exp)
- Contract/Package number and date/ Contract amendment & date
- Contract value and duration of work
- Invoice no. & Date and invoice amount.
- Payment Mode (Bank or Cash)
- Over Budget invoice alert projection



4.4. Data Entry

- Bank Payment Entries
- Cash Payment Entry
- Receipt Entries
- Contra Entries
- Advance Payments
- Journal Entries

4.5. Banking and Payments

- Bank Reconciliation and Statements (GoB & IDA)
- Bank/Cheque Clearance/Authorization letter

4.6. Books of Accounts:

- General Ledger as per budget heads/ Economic code
- Contract Package/Party-wise Ledger
- Advance register
- Cash book (GoB & IDA)
- Bank Book (GoB & IDA)
- Bill Entry Register
- VAT Register
- Accounts Payable
- Accounts Receivable
- TAX Register
- CD/VAT Register
- Payroll/salary/Fees register (Monthly Salary Statement, Individual employee register, Employee TDS Certificates, Pay slip)

4.7. Taxes and Registers

- IT & VAT Calculation calculator (with customized option if any change arise by the tax authorities)
- TDS and VAT Challan prepare
- Package/Contract wise Challan report
- VAT & IT Certificate for vendor
- Employee TDS Certificates

4.8. Budget and Cost Centers

- Budget Re-appropriation Tool and Report: Total Project budget analysis and year wise Budget allocation (ADP) & Revision Budgeting (RADP)
- Budget Supplementary Tool and Report: Year wise Budget Variance Report (ADP & RADP)
- Committed Budget Report: Budget Fund tracking (Yearly and Cumulative)
- Budget Consumption Report
- Cost centre based Project Budgeting Vs. Expenditure and Budget variance.
- Over Budget payment alert system

4.9. Statements & Reports (day, Month, quarterly, Yearly and Cumulatively)

4.8.1 Accounting (All report have 3 Colum Total, GoB & IDA)

- Statement of Trial Balance
- Financial Statement
- Receipt & Payment
- Bank Reconciliation

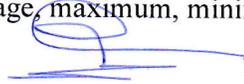


- 4.8.2 **World Bank**
 - IUFR (Interim Unaudited Financial Report)
 - Withdrawal Application/SOE
- 4.8.3 **IMED**
 - Monthly
 - Quarterly.
- 4.8.4 **Planning Ministry, ERD and MoFL**
 - ADP/RADP
 - Fund release for development Project Reports for MoF (as per template Sonlongni)
 - AG report
 - ERD Budget allocation report
- 4.8.5 **Material Management Stock**
 - Stock Entry
 - Stock Ledger
 - Physical stock verification
 - Issue entry by project personal
 - Overall, location-wise, project-wise Stock Balance Report
 - Stock Report
- 4.8.6 **Asset Management**
 - Asset Entry
 - Asset Register
 - Asset Custodian Reports
 - Asset Identification No.
 - Asset Movements
 - Item wise Asset inventory report (Asset name, date of purchase, Inventory no. Present condition, Value etc)
- 4.8.7 **Human Resources**
 - Employee data
 - Attendance and attendance report
 - Leave Allocation, Leave Application and reports
 - Payroll Processing (Salary Structure, Increments etc.)
 - Employee TDS Certificates
 - Travel Authorization and claim
 - Vehicle Requisition
 - Employee Training
- 4.8.8 **Office Order/ Circular (related to Finance & Admin)**
 - Govt. (VAT, IT, CD VAT, MoF, FAPAD, etc.)
 - Official (Procurement Committee, Goods Received Committee etc)
 - Others

10 Features of reports

Reports form an important part of this project. Following are some of the key features of reports that we will build in the system.

- Summary and detail reports - there will be summary as well as detailed reports. Summaries shall include grouping, totaling, average, maximum, minimum or count

options. Detail reports will have details of all transactions and records saved in the system.

- Provision to export reports to MS Excel and PDF - all the reports generated in the system shall be exported to MS Excel and PDF.
- Provision to control organization wide/department level/section level reports – a user shall be limited to view reports pertaining to his/her own department, section or given privilege to view organization wide reports.
- Easily change filter parameters/report format while viewing a report – the report interface will provide access to change parameters and change format of a report while viewing a report. The list in the parameters will be based on access privileges of the user.

11 USER AND GROUPS MANAGEMENT

Every application provides separate role based users and groups management. This feature permits the system administrator to grant or revoke privileges to/from any registered user. The group management control users in a group.

12 LOGGING

The proposed system is provided with a sophisticated logging system.

13 CHOICE OF TECHNOLOGY

The technology selection should consider the target network infrastructure, user interaction actions, data backup and recovery, load balancing, security, light weight, finally the technology trends etc. So consider above terminology following technologies can be use for the proposed dynamic application software: The network and operating system level protections keeps the application safe from external attackers whereas the application level security scheme protects from both external attackers and misuse from internal users. Include multilayer protection architecture in application security

14 BASIC ACCESS SECURITY

The software will be a web-based application, it relies on Network and Web server security to control access first. The firewall maintains the first level of security for accessing the server port and the web-server permits accesses from defined locations (addresses).

The web server also maintains secured socket connection via secured http protocol (https) in order to maintain point to point secured connection to the application.

15 TECHNICAL APPROACH AND METHODOLOGY

The consulting firm should explain its understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, outcomes and the degree of detail of such outcome. The firm should explain the methodologies that it proposes to adopt and highlight the compatibility of those methodologies with the proposed approach.



16 EXPECTED DELIVERABLES

At the end of the assignment, the consulting firm shall deliver the following:

- System Implementation: Successfully implement the application modules.
- Facilitate knowledge transfer to the designated users so they shall be better equipped to:
 - Work Flow Diagram connecting all modules;
 - Provide application support;
 - Conduct acceptance testing;
 - Serve to provide training to the employees;
 - Knowledge transfer process will encourage the Institution to become more self-reliant.
 - Software user manual
 - E-mail Account for staffs
 - Date back up management process.
 - Logging Accesses & Security
 - Online approval option in different stage/Matrix.

17 QUALIFICATION AND EXPERIENCES OF THE KEY AND NON KEY EXPERTS

| Designation | Qualification | Experiences |
|-----------------|--|--|
| Team Leader | M.Sc in Computer Science and Engineering from any reputed university | <ul style="list-style-type: none"> • At least Master in Computer Science and Engineering or equivalent degree • Minimum 12 years' experience in Software Solution Development, Implementation and Software Development Management. • Proposed personnel must have the portfolio of 15+ software projects. • Proposed personnel must have working experience with Server side programming frameworks, client side frameworks, database administration • Proven knowledge in application security architecture along with security implementation experience • Must have working experience with Agile and Scrum methodology |
| Project Manager | M.Sc in Computer Science and Engineering/ICT/ITE or equivalent subject from any reputed university | <ul style="list-style-type: none"> • At least Master in Computer Science and Engineering/ICT/ITE or equivalent subject from any reputed university • Minimum 10 years' experience in Software Solution Development, Implementation and Software Development Management. • Proposed personnel must have the portfolio of 15+ software projects. |

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| | | <ul style="list-style-type: none"> Proposed personnel must have solid understanding of complete Software Development Life Cycle (SDLC) Must have hands on experience in using Project Management tools Must have working experience with Agile and Scrum methodology. |
| Solution Architect | B.sc in Computer Science/Engineering from any reputed university | <ul style="list-style-type: none"> At least Bachelor in Computer Science and Engineering or equivalent degree Minimum 10 years' experience in Software Solution Development, Implementation and Software Development Management. Proposed personnel must have the portfolio of 10+ software projects. Proposed personnel must have the experience of writing Micro service applications Proposed personnel must have working experience with Server side programming frameworks, client side frameworks, database administration Proposed personnel must have the experience of using tools for automated deployment, automated testing, continuous integration, continuous delivery etc Proposed personnel must have minimum 3 years experience as a solution architect . |
| Software Engineer | B.sc in Computer Science/Engineering/ICT/ICE or Equivalent from any reputed university | <ul style="list-style-type: none"> B.sc in Computer Science/Engineering/ICT/ICE or Equivalent from any reputed university Experience in Software Design and Development in C++, Java, Javascript or any OOP language Must have minimum 5 years working experience with Relational and Non-Relational databases Must have experience of developing at least 5 web based software |
| System Engineer | B.sc in Computer Science/Engineering/ICT/ICE or Equivalent from any reputed university | <ul style="list-style-type: none"> B.sc in Computer Science/Engineering/ICT/ICE or Equivalent from any reputed university Experience in Software Design and Development Proposed personnel must have the experience of Continuous, Continuous |

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| | | <p>Integration, Continuous Delivery (CI/CD pipeline), Automated Testing, Load testing, Integration testing etc</p> <ul style="list-style-type: none"> • Must have experience with Relational and Non-Relational database administration • Must have experience of maintaining and administrating SQL and NoSQL replica set cluster administration |
| Charter Accountant | FCA | <ul style="list-style-type: none"> • Having experience to provide direction in development of Accounting software in similar field • Having knowledge on GoB & IDA related reporting and accounting documentation. • Sound knowledge on IAS & BSA, IT & VAT issue. • Experience to provide direction to development software in the platform of Oracle, Tally and others platform. |
| Monitoring and Evaluation Expert | Masters in Statistic/ Social Science / Social Welfare | <ul style="list-style-type: none"> • As Monitoring & Evaluation Expert at least 10 years of experience to work in Development sector out of which minimum 5 years of experience in international NGO. • Experience as team leader to conduct Survey estimated sample size of 3,500 citizens in the livestock/ fisheries sector. • He/ She has experience to (1) develop the survey instrument; (2) field test the instrument; (3) conduct the survey nation-wide; (4) design and enter survey results in a computer database; and (5) complete basic statistical analysis of survey data. (6) Analysis of resulting data. |

18 REPORTING

Consulting firm will be directly reporting to Project Director, LDDP and work in close coordination with the CTO, DPD & Senior Financial Management Specialist of the project on regular basis. The project will ensure the necessary technical linkages between the employee and key stakeholders and will also provide required information and other materials to facilitate the process.

All produced materials would be the property of the project. By no way, without authorized permission from PD, LDDP can any of these be handed over OR reported to other person and/or organization OR be presented/published anywhere else - nor even after the completion of the contract.




19 ELIGIBILITY OF THE FIRM

The consulting firm should fulfill the following requirements:

1. Valid up-to-date trade licence
1. Valid TIN and VAT registration certificate
2. Tax clearance certificate
3. Bank solvency certificate having 30 lacs taka
4. 5 Years proven experience in software development in similar field.
5. Experience in Project management and accounting software development with government organization will be added value.
6. Basis membership certificate

20 SELECTION CRITERIA:

The Consulting Firm shall be through "Selection Based on the Consultants' Qualifications (CQS)" method of the World Bank's Guidelines-Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers January 2011. Main criteria for the selection will be relevant work experience and qualification.

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