

TERMS OF REFERENCE

Selection of Consulting Services for:

Design Review, Construction Supervision, Quality Control, Contract Management and Safeguard Monitoring for Implementation of MoRJKIS Phase 2

Client: Department of Irrigation, Rani Jamara Kulariya Irrigation Project

Location: Tikapur, Kailali, Nepal

Project: Modernization of Rani Jamara Kulariya Irrigation Scheme (MoRJKIS) – Phase 2

Loan No.: IDA 61940

LIST OF ACRONYMS AND ABBREVIATIONS

Agricultural Component Implementation Unit	ACIU
Bank Procedures	BP
Citizen Engagement.....	CE
Command Area	CA
Command Area Development	CAD
Command Area Protection	CAP
Community Based Organization	CBO
Community Forest Users Group	CFUG
Department of Agriculture	DOA
Department of Irrigation	DOI
Deputy Team Leader.....	DTL
Environmental Assessment	EA
Environment, Health and Safety	EHS
Environmental Impact Assessment.....	EIA
Environmental Management Action Plan.....	EMAP
Local Environment Management and Monitoring Committee	LEMC
Environmental and Social Management Plan	ESMP
Environment Protection Act	EPA
Environment Protection Rules	EPR
Environmental Specialist	ES
Environmental and Social Assessment	ESA
Environmental Unit.....	EU
Farmers Field School	FFS
Farmers Management Irrigation System	FMIS
Geographic Information System.....	GIS
Gender Action Plan.....	GAP

Gender Equality and Social Inclusion	GESI
Government of Nepal	GoN
International Development Association.....	IDA
Initial Environmental Examination	IEE
Nepali Rupees	NR
Project Implementing Unit	PIU
Rani, Jamara and Kulariya Irrigation Project.....	RJKIP
Rani Jamara Kulariya Irrigation Scheme	RJKIS
Team Leader	TL
United States Dollar	USD
Village Development Committee.....	VDC
World Bank	WB
Water User Association	WUA
Water User Groups	WUG

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A. Background of Assignment with introduction of project

1. The GON has received a Loan from International Development Association (IDA) for the Modernization of Rani Jamara Kulariya Irrigation Scheme – Phase 2. The Executing Agency for the Project is Department of Irrigation. The Rani Jamara Kulariya Irrigation Project located in Kailali district of Nepal is the Project Implementation Unit (PIU).
2. The Phase 2 focus on modernization of the lower-order irrigation system (sub branches, tertiary canals, and watercourses) so that irrigation water can reach farmer fields with the optimal flows, continuation of the WUA support program, and implementation of a comprehensive agricultural improvement program. Considering the diverse and multidisciplinary nature of activities to be implemented under Phase 2, the consulting service aims at providing overall technical backstopping to the Project Implementation Unit (PIU). It is expected that the consulting team will highly contribute for achieving all the indicators of the Project Development Objectives.
3. The Project Implementation Unit (PIU) has prepared the Detailed Project Report of Command Area Development Study of Rani, Jamara and Kulariya Irrigation Systems Phase – 2. The preparation of detailed project report was carried out by CMS Engineering Consult Pvt. Limited in Joint venture with Full Bright Consultancy Pvt. Limited, Kathmandu Limited. The report was submitted by the consulting firm on August, 2017. Major aspects of the detailed project report was presented/shared in the Department of Irrigation and The World Bank for feedbacks and comments. Additionally, discussion was also held with the representative from the Water User's Association (WUA) particularly on the proposed water distribution and control structures. The detail design report, design review reports and project completion report of the Modernization of Rani Jamara Kulariya Irrigation Scheme Phase I will be provided by the PIU.
4. The consulting team is expected to be on board before the construction contractor are mobilized in the field. The foremost issue to be resolved by the consultant will be the verification of the detailed project report of the command area development study of RJKIS phase -2. The consultant shall assess the proposed scope of work under phase-2 and suggest the PIU, DoI and the World Bank if any alteration of the scope is mandatory for achieving the PDO's. The consultant will be responsible for critical review of the proposed hydraulic structures and suggest necessary modification based on the actual ground condition in coordination with project's technical team and members of WUA's.
5. The payment of the consultant shall be done by the PIU based on the actual inputs. The PIU will use the part of the loan received from the International Development Association (IDA) for the Modernization of Rani Jamara Kulariya Irrigation Scheme – Phase 2.
6. The Consultant shall provide a Project Organization Chart, identifying lines of communications between the Consultant and the Employer. The PIU will have the prime authority of the monitoring and supervision of the activities of the consultant. Additionally, frequent monitoring of the consultant's performance shall

be done by the Department of Irrigation, Ministry of Energy, Water Resources and Irrigation, Ministry of Finance and the World Bank.

7. The consulting service for design review, construction supervision, quality control, contract management and safeguard monitoring for implementation of MoRJKIS consists of (i) International Team Leader/Irrigation Engineer, recruited separately as an individual consultant; and (ii) the main team of experts, recruited as a firm or association of firms/joint venture.

B. Objectives of the Consultancy Services

8. The objectives of the consulting service is to provide overall assistance to the executing agencies for the implementation and management of MoRJKIS Phase 2 within the stipulated time and cost. The consulting team will assist RJKIP and ACIU in implementation of MoRJKIS Phase 2 activities. The consultant shall build on the experience gained during the implementation of MoRJKIS Phase 1. The consultant shall provide advice, assistance to the project institutions regarding all aspects of implementation so that the project achieves its objectives.

C. Scope of Services

9. The scope of services of the Consultancy services will include but not necessarily be limited to the following:
 - i. Review and verification of the detail project report for the command area development of Rani Jamara and Kulariya Irrigation Scheme Phase -2.
 - ii. Review of the relevant project documents Such as PAD, PIM, and Safeguard documents etc and suggest any modification required to achieve the PDO.
 - iii. Review the Project completion report (PCR) of Phase I including the assessment of the hydraulic performance of the structures constructed under Phase I and suggest if any further interventions/modifications deemed necessary with due attention to the socio-environmental aspect of the project area.
 - iv. Assist the RJKIP design review and implementation of the infrastructural development works in accordance with the procures and arrangement acceptable to the Bank and Government of Nepal and propose further improvements if needed;
 - v. Project management through supervision, monitoring and quality control of both institutional processes and technical works for irrigation infrastructures, environmental mitigations and protection, agriculture and social development;
 - vi. Assist, as required by the PIU in preparation of the periodic progress report on Project Implementation activities including social and environmental mitigations and management.
 - vii. Assist in conducting trainings, seminars, workshop, field demonstration etc. for capacity building and strengthening of WUAs.

- viii. To technically review and suggest necessary modification in the engineering design and drawing of the infrastructure development works under component 1.
- ix. Construction supervision and quality control of civil works executed under Phase 2.
- x. Contract management of all the contracts (ICB's and NCB's) under Phase 2.
- xi. Preparation of monthly, quarterly and annual progress reports.
- xii. Documentation of design, drawings, reports and as built drawings.
- xiii. assist the RJKIP in developing, maintaining, updating and effective use of the Management Information System (MIS).
- xiv. prepare inception, trimester, annual, detailed mid-term review, end of assignment, Project completion report as per IDA requirement and other reports, as required by the World Bank and other project institutions.
- xv. provide guidance and supervision in implementing social and environmental mitigations as stipulated in the EA/EMP, BIA, IPMP, SA and VCDP and check compliance with social and environmental requirements; and ensure contractor implements social and environmental mitigation measures in timely and effective manner, and advise and assist in implementation and monitoring of the Environmental and Social Safeguards mitigation measures including Gender Action Plan.
- xvi. Overall Monitoring and evaluation of the project activities.
- xvii. Assist in capacity building and preparation of training plans and manuals for necessary training programs for WUAs.
- xviii. Assist project implementation and technical capability of project personnel.
- xix. Provide the administrative support to the Project Manager for the implementation of Phase 2 activities.
- xx. Assist PIU during the review missions by preparing project progress report at least 15 days prior to kick-off of mission;
- xxi. Based on lessons learned during implementation, review and modify as appropriate the existing procedures and guidelines for the capacity building of WUAs
- xxii. Conduct closer coordination and exchange of experience and lessons learned between other world bank funded irrigation sector projects.
- xxiii. Assist PIU in preparing annual training plan and implementing the programs to effectively meet the needs of the WUAs;
- xxiv. Facilitate, Monitor and supervise the activities of ACIU and individual experts for achieving the target/objective of subcomponent 2b.

The activities to be carried out by the consultant shall include the followings:

1. Design review

10. The Consultant shall review the previous design of the canal system and associated hydraulic structures which has formed the basis of the approved estimate and contract documents. The aim of the review would be to test the adequacy of the designs in terms of hydraulic, and structural requirements and shall submit in writing to the Client any changes, which the Consultant finds appropriate. These

recommendations, after approval of the Client, should be incorporated in the drawings to be issued to the Contractor as supplementary design drawings for preparing detailed working drawings. The Consultant shall perform duties but not limited as mentioned below:

- i. Compulsorily visit the sites for hydraulic structure before reviewing the design and initiation of the construction activities.
- ii. Review the design report of the proposed structures and suggest necessary measures to make the structures of sound and safe design
- iii. Conduct a site visit to understand the actual site conditions, morphology of rivers and drains to be crossed by the canal, structural strength of the canal structures, etc.
- iv. The Consultant shall check the following aspects of the design:
 - a. Hydrological analysis and sediment characteristics of the rivers/drains;
 - b. Surface and subsurface hydraulic conditions;
 - c. Afflux, retrogression considerations;
 - d. Overall structural stability with due consideration to undermining of the structure
 - e. Energy dissipation devices, etc;
 - f. Measures taken for managing the obstructed sheet flow due to construction of main canal.
 - g. River bank protection works;
- v. Investigate and help resolve drainage related issues in the command area
- vi. Critically review the design of road bridges, culverts etc. and suggest corrective measures in close coordination with the hydraulic design engineer and structural engineer.

2. Contract Management

11. The Consultant shall have overall responsibility to assist smooth execution of the project works for the timely and successful completion of the project. The Consultants shall be fully aware of prevailing rules and regulations of the government and provisions of international practices that foresee contractor's claims, and therefore suggest the project management to avoid such causes well in advance so that the unreasonable claims may not be established. The Consultant shall perform duties but not limited as mentioned below:

- i. Develop Work Program and Schedules for Specific Activities (Design and Construction Supervision stages)
- ii. Assist in the administration of the contract for the construction of works;
- iii. Review the contractor's proposed work Programme, construction methods, drawings, source of materials, quality assurance plan, safety plan, etc;

- iv. Carry out regular inspections, including sample testing where required, of all materials and workmanship to ensure compliance with the design specifications.
- v. Assist the project in the issuance of instructions and additional or modified drawings to the Contractor which may be necessary for the execution of the works and remedying of any defects;
- vi. Check the measurements of quantities and recommend the Contractor's payment statements;
- vii. Recommend to the Project on any changes in the plans and specifications, if required
- viii. Check cost estimates including cash flow on a regular basis;
- ix. Assess, examine and recommend to the Project for necessary actions to be taken on claims from the Contractor (e.g. for extensions of time, cost compensation, payment of extra work and all other similar matters);
- x. Assist the Project in negotiation of rates for unscheduled items of works, if required;
- xi. Prepare certificate of acceptance of each part of the work completed, according to the Contract Document for the Construction works;
- xii. Prepare the "Taking Over Certificates" for works, which are substantially completed and also notify the Contractor of any defects in the work before the "Defects Liability Period" starts;
- xiii. Check "As built drawings" of all the activities carried out during the course of construction; and
- xiv. Prepare "Contract Completion Report" after completion of the "Defects Liability Period."

3. Construction Supervision and Quality Control

12. The Consultant shall carry out the functions but not limited to as mentioned below:

- i. Prepare Construction Supervision and Quality Control Manual describing roles and responsibilities of the supervision and quality control staff, procedure of variation orders, reporting procedure, steps in completion in part of whole (substantial completion), role in defect liability period, and process in taking over and issuing completion certificate and Final Payment etc
- ii. Supervising construction works with regard to layout/setting out and design and in examining the quality control measures with full responsibility;
- iii. Suggest appropriate solutions to the project management in time on problems encountered during construction;
- iv. Monitor the progress of works routinely and compare it to the anticipated work Programme and instruct the Contractor to submit corrective measures;
- v. Survey of each of the construction items to evaluate physical and financial progress of each item;
- vi. Indicate the actual progress in a detailed bar chart and CPM network whichever is applicable;
- vii. Plot an overall progress in the "S" curve against the time period;
- viii. Carry out earned value analysis to determine actual earned value achievement;
- ix. Identify the constraints and hindrances that attribute to delay works;
- x. Instruct the Contractor to submit corrective measures or a revised Programme to keep pace with the anticipated progress and inform the Project on measures adopted;

- xi. Prepare monthly progress report highlighting the current progress, problems encountered, tests conducted, adopted corrective measures and estimate of likely completion time;
- xii. Appraise the project and other stakeholders of progress and issues in regular progress review meetings;
- xiii. Audit all aspects of the quality assurance system;
- xiv. Expedite the progress and complete within the time for completion, in case of slow progress of construction works by the Contractor.
- xv. Responsible to ensure that effective implementation, monitoring and supervision tools are developed and implemented.
- xvi. Ensure all technical inputs related to the construction components are accurate
- xvii. Identify and manage risks and initiate corrective action where necessary, so that maximum benefit to client and stakeholders is achieved.
- xviii. Suggest appropriate solutions to the project management in time on problems encountered during construction
- xix. Overall responsibility to assist smooth execution of the project works in a smooth manner for the timely and successful completion of the project
- xx. Check the layout of the structures and its components, reinforcement-bar placing, positioning, detailing, etc.
- xxi. Be aware of contractor's claims and take necessary measures to avoid such causes well in advance so that the unreasonable claims may not be established.
- xxii. Ensure that adequate quantity and quality recording is made at the field level
- xxiii. Assist in the design of concrete mix
- xxiv. Conduct site investigations of foundation materials, construction materials, and geotechnical investigations including laboratory testing and analyze investigation results
- xxv. Review the material and plant purchased, source, quality vis-à-vis the quality assurance plan of the Contractor and the technical specifications
- xxvi. Locate possible materials spoil areas during construction
- xxvii. Evaluate the finished Works, witness and record tests, analyse and interpret the test results and recommend for the improvement, if found necessary.
- xxviii. Ensure that contractor has submitted QAP and workplan including updating and endorse them by reviewing.
- xxix. Prepare a simple and diagrammatic quality control manual in close coordination Project Director
- xxx. Ensure the quality test reports are included in the Interim payment certificates (IPC)
- xxxi. Develop training materials to be used in the quality control training of WUA and provide training on the best construction practices to Project officials
- xxxii. Participate and facilitate test run of the completed works/structures and ensure implementation of recommended corrective measures;

4. Documentation of Design Drawings, Reports, As-built Drawings and Correspondence

13. The Consultant shall be responsible for documenting all the design drawings, reports, as-built drawings and correspondence between the Project, the Contractors and the Consultants. The Consultant shall develop an appropriate documentation plan for this purpose. Based on the documentation plan, Consultant shall also carry out the actual documentation and filing of the design drawings, reports, any events, as built drawings and quality monitoring certificates.

5. Safeguard Supervision, Monitoring and Compliance

14. The Consultant shall be responsible for ensuring timely and effective implementation of mitigation measures identified in the project's safeguard documents (Environmental Assessment, Biodiversity Impact Assessment, Integrated Pest Management Plan, Social Assessment and Vulnerable Community Development Plan, and Social safeguard plans including Gender Action Plan). The consultant shall provide technical support in detailing /preparing detailed implementation plans including site plans/ programs for the implementation of measures recommended in EA/EMP, BIA/BMP, IPMP, SA, VCDP etc. Consultant shall guide and supervise the contractor in implementing the social and environmental mitigations measures, supervise their implementation including quality, and check contractor's compliance with the environmental and social requirements as well as periodically monitor and report the implementation status of safeguard measures. The consultant shall assist the client in planning and implementing environmental and social awareness raising activities, in working with other stakeholders such as Forest Users Groups/ Forest offices, NGOs etc; supporting/ operationalizing Local Environmental Monitoring Committee; and in disseminating safeguard documents/ information. The consultant shall have the sole responsibility for preparation of quarterly and annual environmental and social safeguard status and compliance report. The consultant shall be responsible for drafting Training Needs Assessment Report showing the Required Training Modules based on factual evaluation etc. The Consultant shall perform duties but not limited as mentioned below:

- i. Undertake the safeguard monitoring and reporting activities in accordance with the provision of GoN and IDA and Safeguard documents.
- ii. Critically review the Environmental Management Plan (EMP), Biodiversity Management Plan (BMP) and Integrated Pest Management Plan (IPM) by conducting field verification and suggest any modification if required.
- iii. Work closely and transfer knowledge to the staff of Environment and Social section of the PIU and ACIU while undertaking all safeguard activities in the project
- iv. Actively participate in the LEMC meeting, prepare minutes of the meeting and facilitate for

implementation of the agreed actions

- v. Develop a field monitoring checklist and a template of safeguards reporting in periodic progress reports and train quality control engineers and ACIU staffs in routine compliance monitoring
- vi. Prepare annual safeguard compliance monitoring report
- vii. Prepare annual plan for afforestation in the project command area
- viii. Prepare training manuals and act as a resource person in awareness training to the Water Users, Farmers groups and affected people.
- ix. Ensure that EMP/BDP/IPM recommended activities are all implemented in the project.
- x. Ensure required cost for implementation of EMP are included as BOQ item. Attach copy of EMP to the contract agreement document of the contractor.
- xi. Periodically orient contractor's staff in complying to the EMP requirements.
- xii. Periodically orient ACIU staff and individual experts in complying with the IPM mitigation measures.
- xiii. Support the PIU in re-networking with the WUAs/WUCs and develop customized WUA Institutional development and capacity strengthening program
- xiv. Prepare and publish impact stories of best performing WUCs
- xv. Prepare training module for the institutional Strengthening of WUAs and support PIU in conducting relevant trainings
- xvi. Keep a record of all WUCs and ensure that all water users are entitled with the membership cards
- xvii. Suggest approaches for improving the rate of collection of Irrigation Service Fee (ISFs)
- xviii. With the aid of social mobilizers maintain the detailed socio-economic profile of all beneficiary in the command area
- xix. Train and supervise Social Mobilizers in carrying out their responsibilities as per the TOR ;
- xx. Support ACIU in in the implementation of agriculture extension related trainings and services
- xxi. Collection and analyze socioeconomic data from ACIU and PIU for inclusion in the progress reports
- xxii. Ensure active participation of women and other vulnerable/disadvantaged groups such as marginal farmers, female headed households etc in project activities
- xxiii. Encourage WUCs for organization of monthly meetings and annual assembly
- xxiv. Ensure enhanced coordination between WUAs, Farmer Groups, ACIU and PIU.
- xxv. Assist TL in preparation of relevant reports
- xxvi. Assist in establishing the institutional linkage between the PIU and local government and elected

authorities.

- xxvii. Technical assistance in crafting bye-laws, water distribution plan; O& M plan; ISF collection strategy etc.
- xxviii. Supervision of capacity building programs of farmer group and agriculture cooperative implemented under ACIU.
- xxix. Train and supervise JT/JTA's from ACIU for implementation of activities under subcomponent 2a.
- xxx. Encourage women's participation in the farmers groups and cooperatives formed for implementation of subcomponent 2a.
- xxxi. Supervision and monitoring of the Farmers Field School conducted by ACIU
- xxxii. Critically review the Social Impact Assessment (SIA), Resettlement Planning Framework (RPF) and Vulnerable Community Development Plan (VCDP) and suggest any improvement in the mitigation measures based on the actual site condition during the project implementation.
- xxxiii. Ensure that the necessary social mitigation measures including labor influx management are incorporated in the civil works contract documents.
- xxxiv. Take lead for the establishment of fully functional Grievance Redress Mechanism (GRM) in the project
- xxxv. Responsible for ensuring effective local community engagement and participation throughout life of the project.
- xxxvi. Devise effective mechanism for information dissemination and consultation within the local community and project beneficiaries and ensure that effective communication mechanism is in place throughout the project period.
- xxxvii. Organize period workshop to aware and orient project official issues of vulnerable community and other social concerns which are integral part of the project
- xxxviii. Take the lead role on making aware on social issues and possible mitigating measures to all the stakeholders
- xxxix. Responsible for the implementation and periodic monitoring of the Vulnerable Community Development Action Plan (VCDP)
 - xl. Undertake an assessment of resettlement and land acquisition needs for each project activity planned under phase-II of the project, institutional assessment of project to formulate and execute the plan in accordance with RPF.
 - xli. Assist PIU and ACIU in overall planning and budgeting for implementation of social safeguard measures
 - xlii. Preparation of quarterly/annual social safeguard compliance report
 - xliii. Work closely and transfer knowledge to the staff of Environment and Social section of the ACIU and PIU while undertaking all safeguard activities in the project

- xliv. Develop a field monitoring checklist and a template of social safeguards reporting in periodic progress reports and train quality social mobilizer in routine compliance monitoring
- xliv. Develop field monitoring checklist and template of social safeguard reporting of agriculture component in periodic progress reports and train JT/JTAs in routine compliance monitoring
- xlvi. Periodically orient PIU and ACIU staffs in implementation of social safeguard mitigation measures
- xlvii. Periodically orient contractor's staff in complying to the social safeguard requirements
- xlviii. Prepare training manuals and act as a resource person in awareness training to the Water Users, Farmer Group and affected people
- xlix. Assess the presence and vulnerability of indigenous people and ethnic minority groups in the concerned areas of the project.

6. Coordination with other Experts

15. To achieve the PDO, in addition to the Design review, construction supervision, quality control, contract management and safeguard monitoring the PIU and ACIU will procure individual expert like procurement specialist, financial management specialist, Monitoring and Evaluation experts and agriculture related specialists. The consultant shall have the responsibility of coordination with all the Individual experts to achieve the project objectives. The consultant shall take necessary inputs from the individual experts as required for the preparation of the progress reports and Implementation Completion Report (ICR).

D. Reports and Schedule of deliverables

16. The following type of reports/manuals in language specified by the Project in metric units, in specified number of copies and within the specified time shall be prepared and submitted by the consulting firm during the course of the consulting service contract. The key contents of the deliverables are illustrated below. The consultant shall include the table of contents of all the deliverables in the inception report.

SN	Reports	Language	No. of Copies	Submission Period
1.	Inception Report	English	Four copies	Six weeks after signing of Contract
2.	Monthly Progress Report	English	Four copies	By first week of every month
3.	Planning, design, layout, design, drawings of each component of the Project	English	Five copies	As per the job requirements and at the end of consulting services
4.	Implementation Completion Report (ICR)	English	Seven copies	By the end of Project
5.	Consulting Services Completion Report	English	Five copies	By the end of consulting services contract
6.	Reports on any reason which affecting the schedule of the construction works	English	Five copies	As and when necessary
7.	Trimester and Annual Progress Report	English	Five copies	By the first week of reporting period
8	Quarterly and annual safeguard compliance and status reports	English	Five copies	By the first week of the end of reporting period
9	Mid- Term review report	English	Five copies	In accordance with the mid term review mission

17. **Inception Report:** The Consultants shall prepare the Inception Report and submit it at the end of 6 weeks after the commencement of their services. The report shall describe the consultants' overall understanding of the project implementation procedures and arrangements and detailed plan to effectively deliver the required consulting services.
18. **Trimester Progress Reports:** The reports shall briefly describe and include the project activities undertaken during the report period, financial situation, progress of implementation of physical infrastructures, any changes in the implementation schedule, problems and constraints associated with project implementation and suggested remedial measures, planned activities and expenditure forecast for the next four-month period. The third four-monthly progress report will be an annual report covering the entire one-year period. The reports shall be submitted within two weeks after the end of the reporting period

19. **The Mid-term Review Report:** The consultants shall prepare and submit a Mid-term Review Report at the end of 36 months of project implementation period or at the time of mid term evaluation by the World Bank. The report will update the overall progress of implementation of various project components and will include the description of problems encountered in achieving the objectives, remedial measures adopted to address the problems, financial status of the Project, and suggestions for improvement of procedures/guidelines. The report will also make recommendation, if so deemed necessary, for the extension of project period. The Mid-term Review Report should provide a clear picture of the project status, which will guide the Bank and GON to take corrective and appropriate steps for achieving the desired objectives of the Project in the remaining project period.
20. **Implementation Completion Report (ICR):** At the end of project period, the consultants shall prepare a Implementation Completion Report (ICR). The ICR will summarize, or accumulate as appropriate, the records of the four-monthly and annual reports. In addition, the ICR will analyze the constraints met in project implementation, measures adopted to resolve such constraints, document the achievements made by the Project, and suggest ways to improve implementation of such projects in the future. In short, the ICR will provide a brief but a complete picture of issues involved in project implementation. The ICR shall be submitted within two months of the end of the project period.
21. **Quarterly and Annual Environmental and social compliance and implementation status reports:** The consultant shall prepare consolidated report covering implementation status/ progress and compliance of all environment and social Safeguard measures stipulated/ required under the project's safeguard documents (EA/EMP, BIA/ BMP, IPMP, SA, RPF, VCDP and GAP), safeguard training activities, construction supervision, quality control and other relevant activities covered/implemented during the period of assignment.

The consultants shall submit Five copies of each report to the PIU. The consultant should develop reporting format acceptable to project and the World Bank.

E. Consultant's Team composition and staffing requirement (Tentative)

The PIU (Project Implementation Unit) will select an experienced consulting firm (the Consultant) tentatively starting from July 2018 to December 2023 through Quality and Cost Based Selection (QCBS) method. The tentative composition of the Consultant's Project team is set out below however consulting firms are free to propose team and skill compositions appropriate to their proposed work plan.

Table 1: Summary of consulting services inputs

S.No	Details	Duty Station	Unit	Quantity
Key Expert				
1	Senior Irrigation Engineer/Deputy Team Leader (DTL)	PIU, Tikapur	Pm	56
2	Construction Supervision/Management Engineer (3 nos)	PIU, Tikapur	Pm	141
4	Structural Design Engineer	PIU, Tikapur	Pm	16
5	Hydraulics Design Engineer	PIU, Tikapur	Pm	16
6	Quality Control Engineer (3 nos)	PIU, Tikapur	Pm	141
7	Environmental Expert (Engineer Level)	PIU, Tikapur	Pm	47
8	Senior Institutional Development Specialist	PIU, Tikapur	Pm	47
9	Social Development Specialist	PIU, Tikapur	Pm	47
10	GESI Expert	PIU, Tikapur	Pm	24
11	Road/Transportation Engineer	PIU, Tikapur	Pm	13
12	Senior Surveyor	PIU, Tikapur	Pm	168
13	Unallocated	PIU, Tikapur	Pm	10
Sub Total Key Staff				716
Support Staff				
1	Sub Engineer (6 pos, 2 for each system)	PIU, Tikapur	Pm	282
2	AutoCAD Expert	PIU, Tikapur	Pm	147
3	Lab- Technician	PIU, Tikapur	Pm	141
4	Social Mobilizers (9 position, three for each system)	PIU, Tikapur	Pm	423
5	Assistant/Accountant	PIU, Tikapur	Pm	66
6	Computer Operator	PIU, Tikapur	Pm	66
7	Office Manager	PIU, Tikapur	Pm	66
Sub Total Support Staff				1191
Total A				1907

F. Data, Services, Personnel and Facilities to be provided by the Client

22. The Client will provide all relevant existing reports and available data relating to the project to the Consultant at the commencement of the consultancy contract. The client will facilitate access of the Consultant to project site, and other Government's agencies for communications, collection of relevant information, data, documents, etc. and other activities related to the Consultant's assignment.

The client will provide required office space for the consultant in PIU, Tikapur. No cost of rental charge of office space shall be included in the financial proposal. The client will also provide vehicular facilities to the consultant's staff (at the most three four wheel vehicles and three motorbikes).

G. Duration and Commencement of the contract

23. The estimated duration of the assignment is 67 calendar months and expected to commence on or about November 2018.