LOCAL GOVERNMENT ENGINEERING DEPARTMENT (LGED)

Participatory Small Scale Water Resources Sector Project (PSSWRSP)

SEMI ANNUAL ENVIRONMENTAL MONITORING REPORT

January, 2018

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1. INTRODUCTION

Background

Participatory Small Scale Water Resources Sector Project (PSSWRSP) is supported by ADB-IFAD and the estimated project cost is $1119.0 million. It is being implemented by LGED within the purview of Local Governments in accordance with the provisions of the National Water Policy. The Project is a follow up of the two previous SSWRD Sector Projects (SSW-I and II) that implemented 580 subprojects from 1995 to 2009. The PSSWRSP will implement 265 new Subproject in 46 districts of the country and to undertake performance enhancements of 148 subprojects of SSW-I and II in 61 districts of Bangladesh, excluding three districts of Chittagong Hill Tracts from 2010-2017. The subproject types are water conservation (WC), drainage improvement (Dr), flood management (FM), and command area development (CAD). The major physical interventions in respect of these four types of subprojects will be re-excavation of khals, rehabilitation/construction of embankments and construction of water management structures like sluices, regulators, water retention structures, rubber dam, weirs, etc.

Goal

The overall goal of the Project is to reduce the poverty level of the country by increasing sustainable agricultural and fishery production. The project's objective is to develop sustainable stakeholder-driven small-scale water resources management system with special attention to the poorer section of the population. The project will have three outputs: i) institutional strengthening of government agencies at all levels to support PSSWR development; ii) participatory subprojects, which will include poor and vulnerable groups, and which will enable WMCAs to plan, implement, operate, and maintain subprojects; and iii) construction and maintenance of up to 265 new PSSWR subprojects and performance enhancement up to 150 subprojects (from SSW-I and II).

As there is no change in subproject scope, no adjustment in the environmental safeguard measures has been considered at this point. The project scope has remained the same as that of the one outlined in the project document.

2. STATUS OF PROGRESS OF SUBPROJECT IMPLEMENTATION

Overall physical progress of new and enhancement subprojects has been documented in the Project 28th QPR. As reported, the overall progress of subprojects is estimated at 92.43% against the elapsed time of 94.30%. Of the total new 265 subprojects, a total of 200 subprojects has been implemented (handed over 151 and on-going for handed over-54), and implementation at works of 65 subprojects are under progress. 18 subprojects have been dropped from the candidate subproject list of 283 target as these are not viable due to social conflict. Of the total 150 performance enhancement subprojects, 140 subprojects have been completed, and works of 8 subprojects are in progress, and contract of 2 subprojects have been dropped due to social conflict. However, summarized Batch wise information on physical progresses of all new and enhancement subprojects is given hereunder.

New Subprojects

Batch/year	Total Target No. of Projects	Physical Progress (100%)	Physical Progress (on-going)	Total no. of Project (dropped)
Batch-1: FY: 2010-11	2	2	0	0
Batch-2: FY: 2011-12	20	18	0	2
Batch-3: FY: 2012-13	51	48	1	2
Batch-4: FY: 2013-14	70	55	9	6
Batch-5: FY: 2014-15	70	44	25	1
Batch-4: FY: 2015-16	70	33	30	7
Total	**283**	**200**	**65**	**18 (due to social conflict)**

Breakdown of Physical Progress

(For on-going subprojects): 24 Subprojects attained progress in the range of 80-99%
33 Subprojects attained progress in the range of 50-79%
03 Subprojects attained progress in the range of < 50%

Enhancement Subprojects

Batch/year	Total Target No. of Projects	Physical Progress (100%)	Physical Progress (on-going)	Total no. of Project (dropped)
Batch-1: FY: 2010-11	4	4	0	0
Batch-2: FY: 2011-12	25	25	0	0
Batch-3: FY: 2012-13	30	30	0	0
Batch-4: FY: 2013-14	30	30	0	0
Batch-5: FY: 2014-15	30	28	2	0
Batch-4: FY: 2015-16	31	23	6	2
Total	**150**	**140**	**8**	**2 (due to social conflict)**

Breakdown of Physical Progress

(For Enhancement subprojects): 2 Subprojects attained progress in the range of 80-99%
2 Subprojects attained progress in the range of 50-79%
4 Subprojects attained progress in the range of < 50%

3. STATUS OF SAFEGUARD COMPLIANCE WITH ADB LOAN COVENANTS

The ***s***tatus of safeguard compliance with ADB Loan Covenants and national safeguard regulations is found to be on track. Detail of status is shown in the following table:

Status of Compliance with ADB Loan Covenant (as of December, 2017): Environment

Covenants	Reference in the Loan Agreement	Timing for compliances	Status of Compliance
The Borrower, LGED shall ensure that a) the subprojects are designed, constructed, operated, and maintained in accordance with Borrower's Environmental Conservation Rules (1997), ADB's Safeguard Policy Statements (2009) and EARP prepared for the project and agreed between the Borrower and ADB;	LA Schedule-5 Para-14	Throughout the Project Implementation	Complied
b) the EMP and the mitigation measures included therein, as specified in the IEEs, are properly implemented;	LA Schedule-5 Para-14	Throughout the Project Implementation	Progressively complied with
c) any adverse impact on the environment that may arise from the project implementation is promptly mitigated or minimized in accordance with the EMPs:	LA Schedule-5 Para-14	Throughout the Project Implementation	Progressively complied with
d) implementation of the EMPs, including any safety breaches, violation of environmental standards, and corrective measures taken in respect thereof are reported semi-annually to ADB;	LA Schedule-5 Para-14	Throughout the Project Implementation	Complied
e) environmental requirements (as set out in the EMP) are incorporated into the bidding documents and civil works contracts	LA Schedule-5 Para-14	Throughout the Project Implementation	Complied (EMP cost included in the items of civil works contract)
f) all environmental permits, licenses, and clearances are obtained in a timely manner prior to commencement of Works	LA Schedule-5 Para-14	Throughout the Project Implementation	Complied (The clearance from DOE has been taken at the DPP stage at feasibility & implementation stage. Also during wrap-up meeting of Loan Review Mission. The representative of DoE discussed & apprised accordingly.)

4. ENVIRONMENTAL ASSESSMENT OF SUBPROJECTS

The PSSWRSP has undertaken implementation of 265 New and 148 Enhancement subprojects of different categories having benefited areas of 50-1000 ha each by rehabilitation and/or upgrading of existing water management systems. The policy of ADB is to promote environmentally sustainable economic development in developing countries those use ADB's assistance/support.

The SSWRSP has been classified as Category B. Summary and Initial Environmental Examinations (SIEE and IEEs) and environmental assessment and review procedures are done in accordance with the ADB Environmental Policy (2002) and Environmental Assessment Guidelines (2003), and the Bangladesh Government's environmental requirements.

The Initial Environmental Examination (IEE) is being prepared for each Subproject. The IEE identifies and highlights all beneficial and adverse impacts that may arise due to implementation of the project.

5. ENVIRONMENTAL IMPACT AND MANAGEMENT

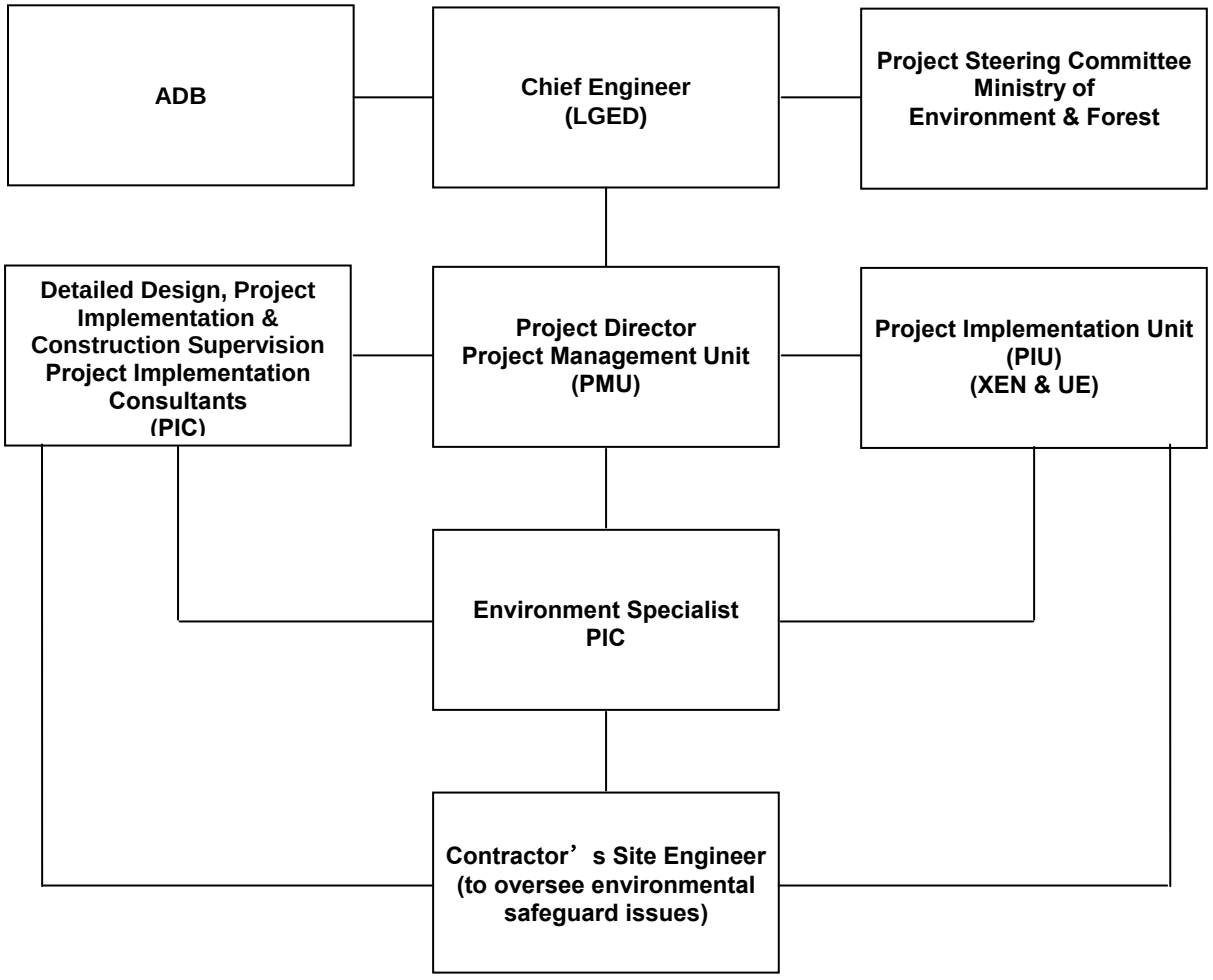
Considering the impacts as outlined in the IEE report, an Environmental Management and Monitoring Plan (EMMP) is being prepared for each subproject. The EMP defines how mitigation measures suggested in the IEE are being executed and monitored during the design, construction and O&M stages of the subproject.

A monitoring program for an important environmental indicator namely water quality of representative sample subprojects has been carried out on quarterly basis. A set of baseline data has been collected before starting operations of the of representative sample subprojects. This monitoring program is being covered by Environmental Lab Technician and Project Implementation Consultant. The results of monitoring are then analyzed and evaluated for designing the required appropriate protective measures against any adverse impacts. Besides water quality monitoring, close supervision and monitoring are undertaken to ensure that the PSSWRSP is being implemented in an environmentally sound and transparent manner.

6. ENVIRONMENTAL MONITORING

Institutional Arrangements: As regards the institutional arrangements, PMU takes overall responsibilities of the monitoring through the PIU at district and upazila levels and subproject WMCA. Project implementation consultants (PICs) extended all support to the PMU.

Institutional Arrangements for Environmental Monitoring & Supervision Framework



Selection of Monitoring Parameters: The Project (PSSWRSP) has been categorized as **'B'** in accordance with ADB's Safeguard Policy Statement (2009) and as Orange B using GOB criteria (ECR, 1995). These sub-projects are not located in or near any ecologically sensitive area (ECA) and will not have any significant impact. Further REA screening suggests that typical construction related impacts are associated with the civil works of the subprojects. These impacts are of limited intensity and short duration, and can be mitigated by appropriate measures (as proposed in the EMP) including adoption of good construction practices related to protection of community health and safety.

However, considering the above fact, qualitative/quantitative monitoring data of only water (surface and ground water) has been considered in the monitoring outcome. Monitoring data of soil, air, noise, biodiversity etc are excluded from monitoring program as these are expected to produce no notable impact due to the implementation of subprojects. Accordingly, the monitoring parameters/indicators considered for water are pH, electrical conductivity (Eh), dissolved oxygen (DO), nitrate-N (NO_3-N), phosphate-P (PO_4^{-3}), water hardness (as $CaCo_3$), total dissolved solids (TDS) and Temp (^OC), whereas indicators like particulate matters (PM), oxides of sulfur (SO_x), oxides of nitrogen (NO_x) for air quality has not been considered. Conventional portable water quality test kits are being used for measuring the values of test parameters.

Output 1: Subproject IEE Report Finalization with EMP incorporation

Up to December, 2017, the IEE of 283 subprojects with their respective **EMP template** have been finalized. The template, considering all possible impacts due to implementation activities and their mitigation measures, have been prepared to adapt to the specific requirement of the subproject **(Annex-A**).

Status of IEE of New Subprojects (as of December, 2017)

Batch/year	Total Target No. of Subprojects	Status of IEE (as of December, 2017)	Physical Progress (100%)	Physical Progress (on-going)	Total no. of Project (dropped)	Remarks
Batch-1: FY: 2010-11	2	Completed	2	0	0	Approved by ADB
Batch-2: FY: 2011-12	20	Completed	18	0	2	Approved by ADB
Batch-3: FY: 2012-13	51	Completed	48	1	2	Approved by ADB
Batch-4: FY: 2013-14	70	Completed	55	9	6	Approved by ADB
Batch-5: FY: 2014-15	70	Completed	44	25	1	Approved by ADB
Batch-4: FY: 2015-16	70	Completed	33	30	7	Approved by ADB
Total	**283**		**200**	**65**	**18 (due to social conflict)**	

Output 2: Environmental Field Monitoring and Supervision

Field monitoring is done to check and verify whether the subproject Contractor/LCS groups is properly implementing the Environmental Management Works as specified in the Contract Document and Bill of Quantities and adhering to the underlying principles of ADB's Environmental Safeguard Policies.

Compliance Reporting

In order to demonstrate compliance with the Contract Specifications and implementation of EMP, the CM & QC Specialists investigated the environmental management issues at the site using a reporting format prepared in the form of a checklist and keep records.

One of the main objectives of the Environmental Supervision and Monitoring is to ensure that the PSSWRSP is being implemented in an environmentally sound and transparent manner. By close supervision and monitoring at regular intervals, the prevention in erosion, land loss, water contamination in lands etc. could be averted. The benefits from such preventive measures are huge which is difficult to quantify.

Non-compliance Reporting

Where non-compliance is registered, then a Non-Compliance Report (NCR) is being prepared identifying details of the issue in question and re-medial action to be taken to

correct the problem. The Format of NCR are used to identify any Non-compliance and document major observations, conclusions and recommendations.

The CM & QC Specialists informed & trained the contractor/his representative by the NCR and request Corrective Action to implement the construction works by issuing Corrective Action Request (CAR). This CAR also noted either in English or in Bengali.

The subproject works involve earth works and construction of infrastructures; they normally produce construction-related impacts/issues on the immediate physical and social environment. These are mostly short-term impacts and these are:

- **Soil Erosion:** Rehabilitation/improvement works involve clearing and removal of plants and vegetation from the site. Such clearance induces runoff erosion, and this impact is subsequently removed by further growing of vegetation & trees.
- **Temporary interruption of natural drainage and local flooding:** Construction of temporary diversions for traffic/equipments movement contributes to the changes in the flow of surface water, which in turn causes temporary localized drainage congestion. This has been restored by removal of temporary diversion of the construction is completed.
- **Khal excavation/re-excavation spoils (earth):** Silts/spoils are deposited on nearby banks, crop lands from excavation/ re-excavation of khals. The spoils are taken by farmers to spread in the paddy field. This helps the fertility of crop field.
- **Pollution from construction materials, equipments and dust:** Accidental leakages of fuel, lubricant, oil, and grease from construction equipments/machineries might cause pollution to both surface and groundwater. In our subprojects activities there are quite minimal.
- **Increased traffic hazards:** Use of various types of construction equipments/materials may cause hazards to the local residents in terms of increased generation of noise and dust. But in our subproject construction these are very much insignificant and minimal.
- **Traffic disruption:** There is no disruption of normal traffic movement during construction of subproject works.
- **Work site safety:** Construction workers usually suffer health hazard due to lack of safe work environment in our subproject adequate measures are taken for the safety of workers by using helmet, First Aid etc. during construction of subproject works.

Output 3: Field Visit to verify the Implementation of EMP and Environmental Good Work Practices during Earth Work & Structure Construction

As a part of environmental monitoring and supervision of subproject works, a number of randomly selected subprojects under PSSWRSP have been visited at intervals to verify/examine the environmental issues and their compliances to mitigation measures.

However, a summary of noted observations from field visits is presented in **Annex-B.**

Further, compliances recorded in the field and non-compliance reporting in terms of inadequacy to mitigation measures is outlined in **Annex-C** and **Annex-D** respectively. If any non-compliance is registered, correcting action request (CAR) letter is issued to the contractor for correcting the inadequacy of subproject environmental works.

Implementing of Environmental Management Plan (EMP), more specifically environmental mitigation measures in different subprojects were taken by adding items of works in the work items. It was observed that by taking such measurement safety of the workers are ensured only working atmosphere improved.

Output 4: Follow-up Actions for Corrective Action Request (CAR)

As non-compliance issues are reported during monitoring of environmental management works, recommended measures for mitigation/follow-up actions against CAR are summarized below in a tabular form:

Follow up actions for suggested actions against registered non-compliances

Sl. No.	Name of Subproject (where non-compliances recorded)	District/Upazila	Issuing date of correcting action request (CAR)	Follow up status of compliances
1	Pukurdia-Naldugi	Sadar/ Laxmipur	06/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
2	Dighuli-Kathali	Sadar/ Laxmipur	06/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
3	Char Hazari	Companiganj/ Noakhali	07/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
4	Patanish-Noapara Khal	Chandpur/ Haziganj	07/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
5	Harabati Khal	Khetlal/ Joypurhat	09/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
6	Sikta-Madai Khal	Kalai/ Joypurhat	09/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
7	Adhaipur-Baikunthapur	Badalgachhi/ Naogaon	10/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
8	Krishnapur-Baromasi Khal	Sadar/ Naogaon	10/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
9	Jhanjhar-Par Bhabanipur	Sherpur/Bogra	11/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
10	Tulshiganga Khal	Birampur/ Dinajpur	12/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
11	Treemohani Khal	Nawabganj/ Dinajpur	12/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
12	Mohanganj	Babuganj/ Barisal	17/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied
13	Uttampur	Bakerganj/ Barisal	18/12/2017 (reported non-compliances to be rectified within 15 days of CAR)	Complied

Output 5: Water Quality Impact Monitoring

The impacts of project interventions are intended to be determined through monitoring of changes in water quality in sample subprojects. It has been planned to collect water samples on quarterly basis from 2 sites: one for surface water (from river/canal/beel/pond) and one for groundwater (hand tube well/shallow tube well/deep tube well). It has been planned that data collected during the first year will be used for establishing baseline conditions and then follow-up data of monitoring period will be compared for impact evaluation. Monitoring period should be for 5 years (from the year of implementation to the following 4 years).

The water quality parameters for this monitoring are pH, electrical conductivity (Eh), dissolved oxygen (DO), nitrate-N (NO_3-N), phosphate-P (PO_4^{-3}), water hardness (as $CaCo_3$), total dissolved solids (TDS) and Temp (^OC). The water quality test results of target sample subprojects presented in (**Annex-E**)

However, analysis of reported water quality test results from 24 subprojects has demonstrated largely no remarkable abnormalities with respect to the quality of surface and ground water. Values of all the tested parameters of water quality agree well with the recommended values of the Department of Environment. Only in few instances salinity

values of surface water and CaCO3 (Hardness) values demonstrated somewhat irregularities as compared to that of the recommended value of the department of environment. Nevertheless no plausible reason could be found to this. Presumably a systematic analytical error might have occurred or sampling error/contamination has taken place, and that have caused anomalies to these sample test results. However it will be clear from the test analysis of the successive quarters.

Output 6: Environmental Training/Capacity Building

In order to ensure effective and timely implementation of the EMP, in particular, and to enhance the environmental management capacity of Upazila Engineers, Sr. Sociologists, and Socio-economist of project districts, and WMCA members at subproject level, a training program has been developed and undertaken during project period. Once the Upazila Engineers, Sr. Sociologists, and Socio-economist staffs have received appropriate training and have gained adequate experience on environmental related matters, they are expected to train the WMCA members and contractor's staff, NGOs and other stakeholders.

The following aspects are considered in the environmental training programme:

- Integrating environmental management in O&M planning by preparing environmental management plan (EMP) for subprojects
- Strengthening the theoretical and practical knowledge of LGED Environmental Lab personnel in order to facilitate smooth operation of lab exercises
- Integrating environmental considerations into the effect monitoring environmental issues, impact and management
- Strengthening the understanding and environmental knowledge of WMCA members through training

In order to achieve the above aspects, a comprehensive environmental training program has been designed.

During the current reporting period (July-December, 2017), forty seven (47) course events for training on Environmental Awareness and Local Resources Management, three (3) events on Environmental Lab and Water Quality Testing and twelve (12) have been completed. A total of one thousand three hundred eighty six (1386) members participated in the training including five hundred forty (540) females (39%). The course events spread over one thousand three hundred eighty six (1386) trainee days.

Details of the training program have been outlined in **Annex-F.** Already a number of training programs has been conducted under the project during **FY 2012-17**, and these training details are given in **Annex-G**.

The training programs with respective course code are listed below:

Course Code Course Title

PSSW-92: Preparation & Monitoring of Environmental Mitigation Plan (EMP)
PSSW-93: Environmental Laboratory & Water Quality Testing
PSSW-167: Orientation on Environmental Awareness &l Resources management
PSSW-168: TOT Environmental Issues, Impact & Management

For the sake of brevity, the above Courses Handouts are not annexed here. However, these will be made available on request.

Additionally, in order to enhance the environmental management capacity of contractors and their staff members, training programs at subproject field level /work site are arranged and undertaken by CM & QCS (Construction Monitoring & Quality Control Supervision) and Environmental Specialist. These training consist of 2 sessions (**Session 1**: Environmental Awareness Building and Understanding of ECP for Good Work Practices, and **Session 2**: Contractor's Self Monitoring and Supervision of subproject environmental works.

7. PROBLEMS ENCOUNTERED IN IMPLEMENTING EMP AND ECP

Implementing of Environmental Management Plan (EMP), more specifically environmental mitigation measures in different subprojects were found to be more difficult than it was initially expected. One of the major reasons for this was apparent lack of interest on the part of many Engineers to the Contract and the Contractor in the implementation of EMP. Further most of the contractors had no trained work force to address the environmental issues or to implement the EMP/Environmental Specifications of Tender Document. It was though difficult but convinced the contractors to recruit trained manpower in order to be able to implement EMP/mitigation measures in subproject. It is worthwhile to point out here that in future sufficient funds must be allocated for environmental management works of subprojects.

As the subprojects spread over a vast rural area covering 62 districts, frequent field investigation in relation to environmental supervision and monitoring of subproject works has become a bit difficult.

During the contract award, it was decided that contactor's staff would conduct project environmental works with due diligence. Apparently, this did not work properly due to lack of experience and interest of contractor.

8. LESSONS LEARNT

One important lesson learnt during implementation of Environmental Management Plan (EMP) and Environmental Code of Practice (ECP) was that that no matter how many environmental consultations are made with contractors and field level staff, unless there is proper institutional setup for Environmental Management all these efforts will produce limited sustainable impact.

In order to make the environmental monitoring works more effective and transparent; an institutional set-up for environmental monitoring has been proposed for the project and outlined here below:

Institutional set-up for Environmental Monitoring: The environmental monitoring will lead to evaluate the physical performance and impact of the interventions inside and outside of the subproject area and to an understanding how the beneficiaries living in the subproject area responds technically, economically and socially to the environment to be created by flood control, drainage and water retention structures. PMO will take overall responsibilities of the monitoring through the PIU at district and upazila levels and subproject WMCA. Project implementation consultants (PICs) will support the PMO. The monitoring will identify environmental impacts during the following stages:

Construction stage: Monitoring activities in this stage will include a) compliance and b) non-compliance. A checklist as provided in Appendix-A for the compliance monitoring. If non-compliance is registered in the checklist as provided in Appendix-B corrective measures should be taken accordingly. In addition, PMO will periodically monitor water quality, and the selected indicators should include pH, electrical conductivity (Eh), dissolved oxygen (DO), nitrate-N (NO_3-N), phosphate-P (PO_4^{-3}-P), arsenic (As), water hardness ($CaCO_3$), total dissolved solids (TDS)/ total suspended solids (TSS) and Temperature (^{0}C) of water (surface & ground water) in the subproject area.

The test results should be explained to the WMCA Construction Monitoring Committee so that they are better able to understand what should be expected of the contractor by way of construction quality. The results should also be sent to the PMO through Project Implementation Unit (PIU) at LGED upazila and district offices.

Subproject operation: The subproject beneficiaries have agreed to form WMCA through which they will manage various subproject activities. These include monitoring of environmental issues which will help the beneficiaries to prepare subproject O&M plan to take

advantage of flood control and drainage improvement and water retention and formulate practical recommendations to solve subproject induced and related problems. Following the completion of the construction of infrastructure the WMCA will undertake the overall responsibilities of environmental monitoring in the subproject area. WMCA O&M, Agriculture and Fisheries subcommittees will support the Management Committee in the monitoring. The monitoring will contribute to create a basis for water resources management in the subproject area through better understanding of the real impacts of the subproject on agricultural and fisheries resources, environment and economic development. In cooperation with PIC, relevant Upazila Engineers, Agriculture and Fisheries officers, the PMO will organize field trainings for WMCA members on environmental monitoring as well as on O&M activities, on-farm water management, sustainable environment friendly agricultural and fisheries production and overall environment management of the subproject. The WMCA monitoring indicators will include depth and duration of water in khals and beels, sedimentation in khal water, water quality, fish migration to and from the subproject area, which reduces fish resources in the subproject area, encroachment of agriculture into beels, navigation and crop plantation and harvest time. These indicators will help to determine changes in water regime for the subproject construction. The O&M subcommittee should take responsibility of the monitoring activities.

Majority of contractors involved in implementation of PSSWRSP sub-projects have limited experience of Environmental Management of rural infrastructures. They have not recruited Environmental Scientists or Environmental Engineers to address the environmental issues. Contractors own environmental monitoring, records of non-compliances, corrective actions taken and reporting of assessment of Environmental Management activates are collected by CM&QCS & Environmental Specialist as the contractors do not have trained staffs to prepare these records.

9. CONCLUSION AND RECOMMENDATIONS

It has been observed that implementation of EMP though encountered problem due to inexperienced contractors bidding for projects. The same has been accomplished by Project consultants with the help of field staff. Normally the contractors are to make aware of importance to health and safety issues or providing better working conditions, construction of labor camps, stack yards etc. Contractors' contract labors are mostly from rural areas with less experience in construction work and on health and safety issues. These labors have made aware of Environmental Management, especially issues of health and work safety at work sites.

Environmental Management capacity both at field level of LGED and at HQ level needs to be strengthened. Institutional arrangement for Environmental Management of LGED project should be uniform for all the projects and environmental standard should be considered as important as ensuring standard of civil works.

Ensuring environmental standard should be considered as important as ensuring standard of civil works. However, this may require a long term planning. Short-term solutions are to encourage XENs/UEs to be more involved in Environmental Management of PSSWRSP sub-projects before they approve payment to contractors. XEN/UE being the Engineer to the contract should ensure proper implementation of EMP/ECP and Environmental Specification of Tender Documents.

After completion of civil works, tree plantation and tree caring should be monitored carefully. Trees are part of environmental program and used for slope stabilization and slope protection. Turfing is also an essential component of slope of protection and proper care should be ensured for its maintenance.

Annex-A

Participatory Small Scale Water Resources Sector Project (PSSWRSP)

ENVIRONMENTAL MITIGATION PLAN (EMP)

A. **Subproject Information** **Name** :
B. Type :
C. Upazilla :
District :

D. **Proposed Interventions**
Khal re-excavation/excavation
Construction/re-sectioning of embankment ….. km
Construction of Regulator/Sluice/ WRS …
Construction of Levee km
Construction of Culvert no
Irrigation canals: Open (pucca/earthen) ..... km
Buried Pipeline ..... km

E. **Subproject Implementation Schedule**

Name of the work/activities	Date Start	Date End
1. Re-excavation of Khal		
2. Construction of WRSs		

F. **Design Discussion Meeting including Environmental Mitigation Measures**

Place: .....

Date: .....

Number of Project Affected People (PAPs) present: ……

G. Signing of Environmental Mitigation Plan (at the time of signing Implementation Agreement)

Place of Signing: …….. Date of Signing: ……

LGED	**WMCA**
(……..……..)	(……..……..)
Executive Engineer, LGED	Chairperson …… Subproject WMCA

Steps for Preparing Environmental Mitigation Plan:

1. Finding of potential impacts and identification of adverse impact issues from environmental assessment study report (IEE/EIA).
2. Cross checking of identified adverse impact issues with PRA findings.
3. Identification of PAPs from both IEE/EIA and PRA reports.
4. Presentation of identified impacts and their best possible mitigation options in meeting with PAPs and collection of their opinion in implementing the program.
5. Finalization of EMP after detail discussion with PAPs and incorporation of recommended options in the engineering design.
6. Fixing of implementation schedule for finally accepted Mitigation Plan and endorsement of the document by the concerned LGED Executive Engineer, PAPs, and representatives from WMCAs.
7. **Note:** *All works/activities in the signed mitigation plan should be clearly mentioned in the Implementation Agreement of the concern subproject.*

Environmental Mitigation Plan

Name of the Subproject:
Union /Upazila/District:
Name of Village/Mouzas:
Gross Area of Subproject:

Sl.	Impact of Subproject Activities on IECs, Resources and Values	Mitigation Measures			Number of PAPs	Signature of PAP representative(s)	Responsible Entity / Party
		During design	During construction	During O&M			
Physical Environment							
1.	**Regional Flood Regime/Hydrology** ☐ Increase flood intensity ☐ Change in river/khal water flow and flooding pattern ☐ Enhanced flood risk in adjacent areas ☐ Fall of ground water table	☐ Design to ensure no induced flooding ☐ Incorporation of adequate flow in design of hydraulic structures ☐ More recharge by increasing inundation area and period ☐ Increase of surface water irrigation facilities	☐	☐ Proper and timely opening / closing of regulator gates, maintaining gates and hoisting gears/systems in good operable condition, etc			Design : FSDD Firm, PC Construction : - O&M : WMCA, UE
2.	**Drainage /Water-logging** ☐ Create/increase drainage congestion ☐ Cause excessive/unwanted drainage (reducing permanent water body/affecting soil moisture) ☐ Water logging in low lying areas ☐ Hindrance in natural flushing	☐ Design to avoid drainage congestion : in any lower area either inside or outside the subproject by draining upper / inside areas, inside subproject area due to inadequate drainage path/ diversion channel during construction; ☐ Design to ensure no excessive drainage reducing permanent water body significantly; ☐ Design to provide adequate drainage facilities ☐ Design to prevent significant seepage from irrigation canal	☐	☐ Maintaining drainage channels by clear bundhs, water weeds/hyacinths, ☐ Maintain Silt of gates property and close gates properly/timely to prevent loss of water required to be conserved,			Design : FSDD Firm, PC Construction : - O&M : WMCA, UE

Instructions to Complete the EMP format:1. Put Tick (✓) in appropriate Box/Measure to confirm the action to be taken.
2. Complete only the IECs that are identified in the IEE to have adverse impacts
3. Any action/measure to be taken other then the mentioned ones should be described against the empty boxes and the box should also be ticked (✓).

Sl.	Impact of Subproject Activities on IECs, Resources and Values	Mitigation Measures			Number of PAPs	Signature of PAP representative(s)	Responsible Entity / Party
		During design	During construction	During O&M			
3.	**Soil Characteristics / Soil Fertility** ☐ Degradation of soil fertility due to: removal of top soil, intensive/ diversified agriculture (increased use of inorganic fertilizers, pesticides), preventing nutrient rich sediment deposition on lands ☐ Loss of soil fertility due to hindrance in natural replenishment of flood plain soil by flood water inundation.	☐ Design for provision for natural replenishment of flood plain soil by flood water inundation	☐ Ensure no top soil removal from fertile agricultural land (top soil to be excavated and kept reserved at one place, take soil for construction in shallow cutting from the land and spread the preserved top soil on land again;	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Analysis of soil samples (base data) of subprojects cultivated land and use fertilizer application at SRDI/DAE recommended doses ☐ Enhance use of organic manure by farmers			Design : - Construction: Contractor, CS O&M : WMCA & Line Agency DAE
4.	**Erosion and Siltation** ☐ Increase sediment deposit on land outside embankment, ☐ Erosion of loose soil from new earthwork (embankment/spoil) and deposit ion on agricultural land ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, Rubber Dam, etc.	☐ Design to consider existing risk and cause no significant induced impact (provide close turf on top and side slopes of embankments, set sill levels of structures at lower levels or use other techniques to flush out most of sediment load;	☐ Adopt appropriate construction management to minimize erosion of soil from excavations, embankments/spoil deposits, etc during rains;	☐ Include in the O & M program special care taking of new earthwork structures under both routine and periodic for the initial 2-3 years to reduce erosion of soil during rain and deposition on nearby crop lands. ☐ Include in the O&M program removal of deposited silt from the channel bed upstream of weirs and elevated sill structures;			Design : FSDD Firm, PC Construction : - O&M : WMCA, UE
Biological/ Ecological Environment							
5.	**Terrestrial Habitat:** ☐ Removal /cutting of trees and vegetation	☐ Design considering minimum removal / clearance of trees and vegetation	☐ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site, etc)			Design : FSDD Firm, PC Construction: Contractor, CS, IWRMU O&M : WMCA, CO
6.	**Wetland Habitat:**	☐ Design to avoid complete		☐ Ensure compliance to the			Design : FSDD Firm, PC

Sl.	Impact of Subproject Activities on IECs, Resources and Values	Mitigation Measures			Number of PAPs	Signature of PAP representative(s)	Responsible Entity / Party
		During design	During construction	During O&M			
	☐ Drying up or drastic reduction of permanent water bodies/areas ☐ Significant reduction of seasonal floodplain area	drying up of water bodies ☐ Design to minimize reduction of seasonal floodplain area		timely operation of gates of hydraulic structures (meant for water conservation)			Construction : - O&M : WMCA, CO

Instructions to Complete the EMP format:1. Put Tick (✓) in appropriate Box/Measure to confirm the action to be taken.
2. Complete only the IECs that are identified in the IEE to have adverse impacts
3. Any action/measure to be taken other then the mentioned ones should be described against the empty boxes and the box should also be ticked (✓).

Sl.	Impact of Subproject Activities on IECs, Resources and Values	Mitigation Measures			Number of PAPs	Signature of PAP representative(s)	Responsible Entity / Party
		During design	During construction	During O&M			
7.	**Fisheries:** ☐ Decline in natural fisheries production ☐ Reduction of fish habitat ☐ Reduction of fish biodiversity	☐ Consider provision of fish-pass fish friendly operation to facilitate hatchling migration; ☐ Design for provision of fish shelter in khals, fish sanctuary in the Beels and fixing of fish net at the drainage structure to restrict out-migration of fish	☐	☐ Utilization of all subproject wetlands for fisheries production. ☐ Fish-friendly gate operation schedule to facilitate in-migration of fish for breeding and spawning ☐ Training on improved fisheries technology, community based culture fisheries in subproject water bodies including hatchery and restocking programme			Design : FSDD Firm, PC Construction : - O&M : WMCA, CO, line agency DoF
8.	**Biodiversity:** ☐ Loss of biodiversity (due to decrease of aquatic and terrestrial habitat)	☐ Design to consider no drastic reduction in permanent water bodies, plant and forest area	☐	☐ Include social afforestation program on available land (roadside, khal bank, structure site, etc)			Design : PC Construction: IWRMU O&M : WMCA, CO

Sl.	Impact of Subproject Activities on IECs, Resources and Values	Mitigation Measures			Number of PAPs	Signature of PAP representative(s)	Responsible Entity / Party
		During design	During construction	During O&M			
Social Environment							
9.	**Land Acquisition:** ☐ Loss of agricultural land/homestead area ☐ Dislocation of habitat ☐ Economic livelihood disruption	☐ Consider in the design avoidance/ minimization of land acquisition ☐ Provision for compensation and/or resettlement of dislocated persons (PAP's) ☐ Minimize disruption of livelihood and provide for compensation for alternate livelihood ☐ Borrow earth from non-cultivable land					Design : FSDD Firm, PC Construction: IWRMU O&M : -
10.	**Unemployment** ☐ Unemployment / reduction of scope of employment of professional community (i.e. fisher, boat men, etc.)	☐ Identification of affected professional group and incorporation of in-kind compensation for losses in the sub-project planning	☐ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities			Design : FSDD Firm, PC Construction: Contractor, CS O&M : WMCA, CO
11.	**Navigation / Boat Plying facilities** ☐ Hindrance/obstruction to boat plying ☐	☐ Consider in the design boat-pass facility in hydraulic structure s, as for as possible.	☐	☐ Ensure compliance to operation of hydraulic structures for boat pass			Design : FSDD Firm, PC Construction: IWRMU O&M : WMCA, CO

Instructions to Complete the EMP format:1. Put Tick (✓) in appropriate Box/Measure to confirm the action to be taken.
2. Complete only the IECs that are identified in the IEE to have adverse impacts
3. Any action/measure to be taken other then the mentioned ones should be described against the empty boxes and the box should also be ticked (✓).

Sl.	Impact of Subproject Activities on IECs, Resources and Values	Mitigation Measures			Number of PAPs	Signature of PAP representative(s)	Responsible Entity / Party
		During design	During construction	During O&M			
	Facilities for Workers: ☐ Water Supply and Sanitation Facilities for Workers ☐ Health and Safety Measures For Workers	☐	☐ Provide adequate water supply and sanitation/toilet facilities for workers ☐ Adopt appropriate safety measures at work, and provide first aid services ☐ Make workers aware of health risks and how to avoid these	☐			Design : - Construction: Contractor, CS O&M : WMCA, CO
Other Environmental Attributes							
12.	☐ Air pollution through dust generation due to subproject works	☐	☐ Spray water regularly on dry work surfaces creating dust problems	☐			Design : - Construction::Contractor, CS O&M : WMCA,CO
13.	☐ Noise pollution from construction activities ☐	☐	☐ Avoid unnecessary noise near the vicinity of homestead areas	☐			Design : - Construction::Contractor, CS O&M : WMCA,CO
14.	☐ Pollution of water from application of high doses of inorganic fertilizers/ pesticides. ☐	☐		☐ Periodic analysis of representative water samples (surface & groundwater) of subproject area			Design : - Construction: IWRMU/ Dist.XEN O&M : -

Sl.	Impact of Subproject Activities on IECs, Resources and Values	Mitigation Measures			Number of PAPs	Signature of PAP representative(s)	Responsible Entity / Party
		During design	During construction	During O&M			
15.	☐ Environmentally sensitive area, Archaeological / Historical Sites	☐ Avoid archaeological/ historical sites, environmentally sensitive areas (Ramsar Sites:Tanguar Haor and Hakaluki Haor; National Protected area: Laua Chhara Forest /other national reserve forest areas)	☐	☐			Design : FSDD Firm, PC Construction: IWRMU O&M : WMCA, UE

Instructions to Complete the EMP format:1. Put Tick (✓) in appropriate Box/Measure to confirm the action to be taken.
2. Complete only the IECs that are identified in the IEE to have adverse impacts
3. Any action/measure to be taken other then the mentioned ones should be described against the empty boxes and the box should also be ticked (✓).

Executive Engineer, LGED

WMCA Chairperson

Date of signing:.....

Place of signing:
.....

Annex-B

Field Visit Report

Dr. Nurul Islam (Environmental Specialist), and Mr. M.A Zinnah (Quality Control specialist)
(Site Visit in Districts Laxmipur, Noakhali, Chandpur, Joypurhat, Naogaon, Bogra, and Dinajpur from 06/12/2017 to 12/12/2017)

The main purpose of field visit was to check and verify whether the sub-project Contractor(s) is properly implementing the Environmental Management Works of subprojects and adhering to the underlying principles of ADB's Environmental Safeguard Policies. A short summary of field observations of visited subprojects are presented hereunder and Checklists (to confirm compliance to the environmental mitigation measures) of concerned subprojects are appended here to:

06/12/2017

1. Pukurdia-Naldugi (SP-) under Laxmipur district/Sadar Upazila

The Team visited this subproject on December 6, 2017. Major observations in relation to environmental management issues of the subproject are given below:

- During field visit, it has been observed that a significant portion of khal re-excavation is complete, only 35% re-excavation is yet to complete.
- Construction work of a pipe drain is yet to start.
- Construction of O&M shed has been complete, but furniture supply is yet to take effect.
- Water supply and sanitation facilities seem to be inadequate at construction site and contractor to improve these items.
- Improved labor shed for the workers at construction site was lacking. However, contractor's representative has agreed to make available the said facilities very soon.
- Proper stackyard was absent at the site. Construction materials have been kept haphazardly.
- Proper measure of dust suppression by spraying water on dry surfaces of construction site appears to be inadequate.
- Suitable health safety measures and first-aid facilities are found to be insufficient at the work site.
- No proper measure for management of generated wastes from labour camp and construction site.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

2. Dighuli-Kathalia Subproject (SP-44100) under Laxmipur district/Sadar Upazila

During site visit, the following observations were noted:

- Khal re-excavation work of 10.46km length has been complete.
- Construction of the O&M structure is almost complete and its roof truss has been complete, but other associated works remain unattended.
- Construction of a 3-V regulator type structure has been complete, Block placing & gate fitting is yet to complete
- No proper labor shed was found at the subproject worksite. However, the supervisor of the contractor was advised to improve the overall condition of the labor shed.

- No designated stackyard was found at the worksite. Construction materials/equipments are haphazardly placed at the roadside. These need to be kept at a safe distance from the roadside to ease the traffic movement.
- Noted poor dust suppression measure at construction site. Water need to be sprayed in and around the work site at regular intervals.
- Laborers were found to work using no safety gears (helmet, boots, hand gloves etc). Use of work safety gears should be ensured.
- Proper health safety measures and first-aid facilities were found inadequate.
- Water supply and sanitation facilities are very poor. These need to be improved.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

07/12/2017

3. Char Hazari Subproject (SP-) under Noakhali district/Companyganj Upazila

Noted major observations related to environmental management issues of the subproject are given below:

- Khal re-excavation work of 17.2 km length has been complete about 90%.
- Construction works of one 4-V and two 1-V WRS has made about 85% progress.
- Construction of O&M shed has been complete.
- Labor shed with environmental amenities like suitable water supply and sanitation facilities is found to be lacking. These need to be improved.
- Health safety measures and first-aid facilities at worksite were found inadequate. These need to be improved.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

07/12/2017

4. Patanish-Noapara Khal Subproject (SP-) under Chandpur District/Haziganj Upazila

During site visit, the following observations were noted:

- Khal re-excavation work has been completed.
- Construction of water retention structure is reported to achieve about 70% progress.
- Construction of O&M shed has been completed.
- 50% progress noted for LCS work
- Poor labor shed was found at work site.
- Found inadequate water supply and sanitation facilities at work/camp site, and these need to be improved.
- Noted no effective dust suppression measures at work site. Spray of water at regular intervals should be carried out to this effect.
- Proper health safety measures and first-aid facilities was found inadequate at the site. .
- No subproject signboard was found posted at the worksite. It should be posted with immediate effect.

09/12/2017

5. Harabati Khal Subproject (SP-) under Joypurhat District/ Khetlal Upazila

During site visit, the following observations were noted:

- Khal re-excavation work has been completed.
- Construction work of a water retention structure has achieved 90% progress.
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities was found absent.
- Health safety measures and first-aid facilities at worksite were found inadequate. These need improvement.
- Use of work safety gears (helmet, boots, hand gloves etc) at worksite was found almost absent. Usage of work safety gears need to be ensured.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

09/12/2017

6. Sikta Madai Khal Subproject (SP-) under Joypurhat District/ Kalai Upazila

During site visit, the following observations were noted:

- Khal re-excavation work has attained about 100% progress.
- Construction works of regulators/culverts have registered about 90% progress.
- Labor shed with environmental amenities like suitable water supply and sanitation facilities was found to be poor.
- Health safety measures and first-aid facilities at worksite were found inadequate. These need improvement.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

10/12/2017

7. Adhaipur-Baikunthapur Subproject (SP-) under Naogaon District/ Badalgachhi Upazila

During site visit, the following observations were noted:

- Khal re-excavation/LCS work has made no progress as there prevails social conflict and land problem
- Construction works of WRS have made about 85% progress.
- Construction of O&M shed has been completed, but supply of furniture and electric fans is lacking.
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities was found to be poor. These need to be improved.
- Health safety measures and first-aid facilities at worksite were found insufficient. These need to be improved.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

10/12/2017

8. Krishnapur-Baromasi Khal Subproject (SP-) under Naogaon District/ Sadar Upazila

During site visit, the following observations were noted:

- Khal re-excavation work of 15 km length has made about 80% progress.
- Construction of physical works has made about 50% progress.
- Construction of O&M shed has made noticeable progress. It will be complete very soon.
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities is found to be inadequate. These need to be improved. It will be complete very soon.
- Health safety measures and first-aid facilities at worksite were found insufficient. These need to be improved.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

11/12/2017

9. Jhanjhar-Par Bhabanipur Subproject (SP-) under Bogra District/ Sherpur Upazila

During site visit, the following observations were noted:

- Khal re-excavation work of 17.2 km length has been made 100%.
- Construction works of one 4-V and two 1-V WRS has made 100% progress, but construction of RCC U-drain is yet to take effect.
- Construction of O&M shed has been completed, but supply of furniture for the shed is lacking
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities is lacking. These need to be improved.
- Health safety measures and first-aid facilities at worksite were found insufficient. These need to be improved.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

12/12/2017

10. Tulshiganga Khal Subproject (SP-) under Dinajpur District/ Birampur Upazila

During site visit, the following observations were noted:

- Khal re-excavation (LCS work) has made about 80%.progress.
- Construction works of two WRS has made 100% progress.
- Construction of O&M shed is yet to start.
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities is lacking. These need to be improved.
- Health safety measures and first-aid facilities at worksite were found insufficient. These need to be improved.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

12/12/2017

11. Treemohani Khal Subproject (SP-) under Dinajpur District/ Nawabganj Upazila

During site visit, the following observations were noted:

- Khal re-excavation work has made 100% progress.
- Base casting of the 3-V WRS has been done, but construction works of 4-V WRS is yet to initiate.
- Construction of O&M shed is at its early stage, and complete upto lintel.
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities is lacking..
- Health safety measures and first-aid facilities at worksite were found insufficient.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

17/12/2017

12. Mohanganj Subproject (SP-) under Barisal District/ Babuganj Upazila

During site visit, the following observations were noted:

- Khal re-excavation (LCS work) has made 100% progress
- Construction work of 2 box culvert and pucca drain has noted 100% progress.
- Construction of O&M shed has just started, and has made 60% progress.
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities is lacking. These need to be improved.
- Health safety measures and first-aid facilities at worksite were found insufficient. These need to be improved.
- Poor waste management at camp/work site
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

18/12/2017

13. Uttampur Subproject (SP-) under Barisal District/ Bakerganj Upazila

During site visit, the following observations were noted:

- Khal re-excavation (LCS work) has made 100% progress.
- Construction of O&M shed is almost complete, but tin fixing to the shed is pending.
- Appropriate Labor shed with environmental amenities like suitable water supply and sanitation facilities is lacking. These need to be improved.
- Health safety measures and first-aid facilities at worksite were found insufficient. These need to be improved.
- Poor waste management at camp site.
- Construction material (brick/stone chips and sand) was found to keep at the roadside. These need to be shifted immediately to a designated place.
- Subproject site was found to have no signboard. This needs to be posted at the site without delay.

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Pukuria - Naldugi SP
Location: Vill: *Union:* *Upazila:* Sadar *District:* Laxmipur

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		1) Poor construction management at work site. Need improvement 2) Poor management in removal of excavated spoil
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Poor Labor Shed facilities. Require improvement

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		Inadequate water supply & sanitation facilities Need improvement
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☐ Make workers aware of health risks and how to avoid these		Insufficient health and safety measures, and first-aid facilities. Needs improvement
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		Poor waste disposal facilities; requires sufficient garbage bins at camp site Poor measures for safe disposal of waste water Inadequate measures to prevent spills of oils/lubricants

Inspection by: **Name:** Md. Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 06/12/2017

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Dighuli- Kakali SP.
Location: Vill: *Union:* *Upazila:* Sadar *District:* Laxmipur

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management. Needs improvement Inadequate measure for removal of khal excavated spoils.
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Poor labor camp facilities. Needs improvement

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		Inadequate water supply & sanitation facilities
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☒ Make workers aware of health risks and how to avoid these		Poor safety measure at work & first aid services Health risk awareness among workers are poor
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		Insufficient garbage bins at camp site & adequate numbers need to be installed Inadequate measures to discharge waste water from Labor camp Poor measure to prevent spills of oil/ lubricant from machineries

Inspection by: ***Name:*** Md. Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 06/12/2017

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Char Hazari
Location: Vill: *Union:* *Upazila:* Companiganj *District:* Noakhali

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management, needs improvement Poor arrangement for removal of khal excavated spoils
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Labor camp facility appears to be not proper hygienic, needs improvement

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		Water Supply and Sanitation facility for workers are found inadequate
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☒ Make workers aware of health risks and how to avoid these		Poor work safety measures; inadequate first-aid services; poor awareness about health risks – these need to be improve
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		Inadequate waste management at camp/work site Poor measure to discharge waste water from camp Inadequate measure to prevent spill of oily lubricants from machineries — all these need improvement

Inspection by: **Name:** Md. Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 07/12/2017

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Patanish - Noapara Khal SP
Location: Vill: *Union:* *Upazila:* Hajiganj *District:* Chandpur

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management Poor arrangement for removal of khal excavated spoil
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Poor hygienic labor camp facility

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		Inadequate water Supply and sanitation facility. Need improved facility
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☒ Make workers aware of health risks and how to avoid these		Lacking proper safety measure at work. Inadequate awareness of health risks. Needs improved training
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		Inadequate garbage bins at camp site. Sufficient bins need to be installed at camp site Improper discharge of waste water form Labor Camps. Poor measure to prevent spills of oil/ lubricants from machineries.

Inspection by: ***Name:*** Md. Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 07/12/2017

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Harabati Khal SP
Location: Vill: *Union:* *Upazila:* Khetlal *District:* Joypurhat

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management Poor arrangements for disposal of khal excavated spoils. - all these need improvement
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Poor hygienic labor camp facility to worker – needs to be improved

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		Inadequate Supply of water and Sanitation – needs improvement
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☒ Make workers aware of health risks and how to avoid these		Adequate safety measures at work is unavailable Poor awareness of health risks among workers
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		Poor waste management at camp site Discharge of wesk water from camp is improper Measure to prevent spills of oil/lubricant is poor – all these require improvement

Inspection by: **Name:** Md Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 09/12/2017

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Sikla – Madai Khal SP
Location: Vill: *Union:* *Upazila:* Kalai *District:* Jaypurhat

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management – needs improvement Improper measure for disposal of excavated khal Spoils – require improvement
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Poor hygienic labor camp – need to provide hygienic one

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		Poor water Supply and Sanitation facilities – requires improvement
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☒ Make workers aware of health risks and how to avoid these		Poor safety measures at work, and inadequate first-aid facilities – require improvement
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		Poor waste management facilities – need to install adequate number of garbage bins. Waste Water discharge from labor camp is not proper Measure to prevent spills of oil/lubricant from machineries is poor – it needs to be improved

Inspection by: **Name:** Md. Nurul Islam **Date of Inspection:** 09/12/2017
Signature:
Designation Environmental Specialist

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Adhaipur – Baikunthapur SP
Location: Vill: *Union:* *Upazila:* Badalgachhi *District:* Naogaon

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Lacking appropriate construction management Prior arrangements for removal of khal excavated spoils
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Lacking hygienic labor camp facilities for workers

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Adhaipur – Baikunthapur SP
Location: Vill: *Union:* *Upazila:* Badalgachhi *District:* Naogaon

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Lacking appropriate construction management Prov arrangements for removal of khal excavated spoils
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Lacking hygienic labor camp facilities for workers

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Bisha - Udaypur SP
Location: Vill: *Union:* *Upazila:* Atrai *District:* Naogaon

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management – require improvement Poor measure for removal of excavated khal spoils – require improved measure
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Poor hygienic labor camp for workers – require improved one

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		Poor water supply and sanitation & it must be improved
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☒ Make workers aware of health risks and how to avoid these		Poor safety measures at work, and inadequate first-aid facilities — these require improvement
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		Inadequate garbage bins at camp site — require installation of sufficient number of bins Adequate measures need to be taken to prevent discharge of waste water from camp, and spills of oils/ lubricants from machineries

Inspection by: **Name:** Md. Nurul Islam **Date of Inspection:** 10/12/2017
Signature:
Designation Environmental Specialist

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Jhanjhar – Par Bhabanipur SP
Location: Vill: *Union:* *Upazila:* Sherpur *District:* Bogra

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management – need to adopt improved measure Inadequate measure for removal of excavated spoil – require improved measure
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		Poor hygienic labor camp – requires improvement

☐ Water Supply and Sanitation Facilities for Workers		☒ Provide adequate water supply and sanitation/toilet facilities to workers		To provide adequate water supply and sanitation facilities
☐ Health and Safety Measures For Workers		☒ Adopt appropriate safety measures at work, and provide first aid services ☒ Make workers aware of health risks and how to avoid these		To provide adequate Safety measures and first-aid facilities at camp/work site
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		☒ Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal ☒ Prevent discharge of waste water from labor camps ☒ Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		To install sufficient garbage bins for waste disposal To take measures for preventing discharge of waste water from camp To take improved measure in preventing spills of oil/lubricants

Inspection by: ***Name:*** Md Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 11/12/2017

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Tulshiganga Khal SP
Location: Vill: *Union:* *Upazila:* Biranpur *District:* Dinajpur

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		Poor construction management, needs improvement Unorganized disposal of excavated spoil, needs proper arrangement
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		To provide hygienic labor camp facility

☐ Water Supply and Sanitation Facilities for Workers		X Provide adequate water supply and sanitation/toilet facilities to workers		Poor supply of water & sanitation facilities – needs improvement
☐ Health and Safety Measures For Workers		X Adopt appropriate safety measures at work, and provide first aid services X Make workers aware of health risks and how to avoid these		To ensure proper safety measures and first aid facilities
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		X Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal X Prevent discharge of waste water from labor camps X Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		To ensure adequate number of garbage bins to ensure proper waste management. To ensure proper measure to discharge Waste water from labor camp

Inspection by: **Name:** Md. Nurul Islam **Date of Inspection:** 12/12/2017

Signature:

Designation Environmental Specialist

ANNEX-C

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

[Put Tick (✓) in appropriate Box to confirm compliance to the measure, and (x) for unsatisfactory or non-compliance]

Contractor's Name:
Subproject's ID &Name: Treemohani Khal SP
Location: Vill: *Union:* *Upazila:* Nawabgonj *District:* Dinajpur

Possible Impact	Mitigation during Design	Mitigation during Construction	Mitigation during Maintenance	Specific observation, if any
Soil Fertility ☐ Degradation of soil fertility due to removal of top soil		☑ No topsoil removal. Stockpile the topsoil of 15 cm depth from areas of construction campus site /stack Yards , and spread back the stockpiled topsoil on the land once the camp and the other installation is no longer required.	☐ Training to farmers on IPM / ICM through DAE/SRDI support ☐ Enhance use of organic manure by farmers	
Erosion and Siltation ☐ Erosion of loose soil from new earthwork ☐ Increased siltation of river/khal bed due to construction of WRS, Weir, and Rubber Dam etc. ☐ Spoils from khal excavation		☒ Adopt appropriate construction management to minimize erosion of soil from earthworks ☒ Organize appropriate arrangements for removal /deposit of excavation spoils		To ensure proper Construction management To ensure organized removal/disposal of excavated Spoils
Terrestrial Habitat ☐ Removal /cutting of trees and vegetation		☑ Do not undertake unnecessary clearance of vegetation/felling trees during construction	☐ Include social afforestation program on available land (roadside, khal bank, structure site,etc)	
Unemployment ☐ Reduction of scope of employment of professional community (i.e. fisher, boatman, etc.)		☑ Employ local people, especially women in construction works.	☐ Employ local people, especially women in O&M activities	
Facilities for Workers ☐ Labor Camp Facility for Workers		☒ Provide hygienic labor camp facility to workers		To provide proper hygienic labor camp facility to workers

jhgj

☐ Water Supply and Sanitation Facilities for Workers		X Provide adequate water supply and sanitation/toilet facilities to workers		To provide adequate supply of water & Sanitation facilities
☐ Health and Safety Measures For Workers		X Adopt appropriate safety measures at work, and provide first aid services X Make workers aware of health risks and how to avoid these		To ensure proper safety measure & first-aid facilities To build-up proper awareness of health risks
☐ Management of wastes generated from labor camps to avoid pollution of surrounding water quality		X Maintain camp site waste disposal facilities by installing adequate garbage bins, and regular collections for safe disposal X Prevent discharge of waste water from labor camps X Prevent spills of oil and lubricants from equipments, machineries, vehicles, etc.		To ensure installation of adequate number of garbage bins To ensure proper arrangements for waste water disposal To ensure proper arrangements to prevent spills of oils Lubricants

Inspection by: **Name:** Md. Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 12/12/2017

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Pukuria- Naldugi SP
Location: Vill: *Union:* *Upazila:* Sadar *District:* Laxmipur

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam *Date of Inspection:* 06/12/2017
Signature:
Designation Environmental specialist

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Pakurdia- Naldugi SP.

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Sadar জেলাঃ Laxmipur

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি -15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ☑ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ☑ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ☑ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ☑ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 06/12/2017

পদবিঃ Environmental Specialist

সাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Dighuli - Kathali SP
Location: Vill: *Union:* *Upazila:* Sadar *District:* Laxmipur

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam *Date of Inspection:* 06/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Dighuli- Kathali SP.

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Sadar জেলাঃ Laxmipur

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পারিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি ----- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ☑ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ☑ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ☑ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ☑ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 06/12/2017

পদবিঃ Environmental Specialist

সাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Char Hazari SP.
Location: Vill: *Union:* *Upazila:* Companygonj *District:* Noakhali

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam
Signature:
Designation Environmental Specialist
Date of Inspection: 07/12/2017

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Char Hazari SP

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Companyganj জেলাঃ Noakhali

উপ-প্রকল্পের কাজ পারিদর্শনকালে প্রতাক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পারিবেশ ব্যবস্থাপনা পারিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি -15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ☑ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ☑ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ☑ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ☑ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 07/12/2017
পদবিঃ Environmental Specialist
সাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Patarish - Noapara Khal SP
Location: Vill: *Union:* *Upazila:* Hazigonj *District:* Chandpur

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam *Date of Inspection:* 07/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Patanish - Noapara Khal SP

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Hazigonj জেলাঃ Chandpur

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি -15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ☑ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ☑ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ☑ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ☑ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 07/12/2017
পদবিঃ Environmental Specialist
স্বাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Harabati Khal SP
Location: Vill: *Union:* *Upazila:* Khetlal *District:* Joypurhat

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nowaj Islam *Date of Inspection:* 09/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Harabati Khal SP

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Khetlal জেলাঃ Joypurhat

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি --15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ☑ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ☑ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ☑ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ☑ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 09/12/2017
পদবিঃ Environmental Specialist
সাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Sikta - Madai Khal SP
Location: Vill: *Union:* *Upazila:* Kalai *District:* Joypurhat

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam *Date of Inspection:* 09/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Sikta - Madai Khal SP

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Kalai জেলাঃ Joypurhat

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি --15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ✓ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ✓ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ✓ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ✓ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 09/12/2017

পদবিঃ Environmental Specialist

স্বাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Adhaipur – Baikunthapur SP
Location: Vill: *Union:* *Upazila:* Badalgachhi *District:* Naogaon

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam *Date of Inspection:* 10/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Adhaipur - Baikunthapur SP

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Badalgachhi জেলাঃ Naogaon

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি -15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ✓ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ✓ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ✓ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ✓ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 10/12/2017

পদবিঃ Environmental Specialist

স্বাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Bisla – Udaypur SP
Location: Vill: *Union:* *Upazila:* Atrai *District:* Naogaon

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nowjul Islam *Date of Inspection:* 10/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র

Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Bisha - Udaypur SP

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Atrai জেলাঃ Naogaon

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি --15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ✓ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ।
- ✓ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ✓ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ।
- ✓ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ।
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 10/12/2017

পদবিঃ Environmental Specialist

সাক্ষরঃ

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Jhanjhar – Par Bhabanipur
Location: Vill: *Union:* *Upazila:* Sherpur *District:* Bogra

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam *Date of Inspection:* 11/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র

Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Jhanjhar – Par Bhabanipur

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Sherpur জেলাঃ Bogra

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি --15 দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ✓ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ✓ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ✓ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ✓ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ✓ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 11/12/2017

পদবিঃ Environmental Specialist

স্বাক্ষরঃ

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নাম:

উপ-প্রকল্পের আইডি ও নাম: Tulshiganga Khal SP

উপ-প্রকল্পের অবস্থান

গ্রাম: ইউনিয়ন: উপজেলা: Birampur জেলা: Dinajpur

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি ----- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ☑ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ☑ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ☑ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ☑ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নাম: Md. Nurul Islam পরিবীক্ষণের তারিখ: 12/12/2017
পদবি: Environmental Specialist
স্বাক্ষর:

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name:
Subproject's ID &Name: Tulshiganga Khal SP
Location: Vill: *Union:* *Upazila:* Birempur *District:* Dinajpur

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam
Signature:
Designation Environmental Specialist

Date of Inspection: 12/12/2017

Annex-D

Corrective-Action Request

(Non - compliance Reporting)

Contractor's Name: Tremohani Khal SP
Subproject's ID &Name:
Location: Vill: *Union:* *Upazila:* Nawabganj *District:* Dinajpur

Inspection of the subproject work was found to demonstrate non-compliance to some of the items of the contract Specification and Implementation of EMP.

The contractor is hereby requested to rectify the below tick (√) marked non-compliant works within 15 ---days:

Non-compliant works detail

- ☑ Construct environment friendly labor shed or workforce camp
- ☑ Provide sanitation facilities by installing sanitary latrine, urinal and bathroom (at least 1 no. of each separately for women and men).
- ☑ Provide adequate supply of arsenic-free water for drinking and other purposes by installing tube wells in workforce camp (at least 1 no. for women and 1 for men).
- ☑ Provide adequate first-aid facilities at workforce camp and construction site.
- ☑ Provide health safety gears like hand gloves, helmet and gumboots to the workforce to avoid health risk.
- ☑ Provide sufficient garbage bins for collection and safe disposal of wastes generated at camp site.
- ☑ Suppress dust pollution at camp site/construction area by spraying water at regular intervals.

Inspection by: *Name:* Md. Nurul Islam *Date of Inspection:* 12/12/2017
Signature:
Designation Environmental Specialist

সংশোধনী কাজের জন্য অনুরোধপত্র
Corrective-Action-Request Letter

ঠিকাদারের নামঃ

উপ-প্রকল্পের আইডি ও নামঃ Treemohani Khd SP

উপ-প্রকল্পের অবস্থান

গ্রামঃ ইউনিয়নঃ উপজেলাঃ Nawabganj জেলাঃ Dinajpur

উপ-প্রকল্পের কাজ পরিদর্শনকালে প্রত্যক্ষ করা গেছে যে চুক্তিপত্র অনুযায়ী পরিবেশ ব্যবস্থাপনা পরিকল্পনা বাস্তবায়নে কিছু বিষয়াদি যথাযথ বা পুরোপুরিভাবে মানা বা সম্পাদিত হয়নি। এমতাবস্থায় নিম্নে টিক(√)চিহ্নিত "না-মানা" বিষয়গুলি -15- দিনের মধ্যে সংশোধন/বাস্তবায়ন করার জন্য নির্দেশ দেয়া হলো।

"না-মানা" বা "অসম্পাদিত" বিষয়গুলি

- ☑ শ্রমিকদের জন্য স্বাস্থ্যসম্মত বাসস্থান/ক্যাম্প নির্মাণ ।
- ☑ স্বাস্থ্যসম্মত পায়খানা, প্রস্রাবখানা এবং গোসলখানা নির্মাণ ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্পে আর্সেনিকমুক্ত বিশুদ্ধ পানীয়জল সরবরাহের জন্য নলকূপ স্থাপন ।
  (কমপক্ষে ১টি করে মহিলা ও পুরুষদের জন্য পৃথক পৃথক ব্যবস্থা নিশ্চিত করা)
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় প্রাথমিক চিকিৎসা ব্যবস্থা ।
  (প্রয়োজনীয় ঔষধপত্রসহ First-aid box এর সরবরাহ নিশ্চিত করা)
- ☑ ঝুঁকিপূর্ণ কাজে হ্যান্ডগ্লোভস, হেলমেট এবং বুটজুতার সরবরাহ ।
- ☑ শ্রমিকদের ক্যাম্প এলাকার ময়লা আবর্জনার ব্যবস্থাপনার জন্য পর্যাপ্ত সংখ্যক ডাস্টবিন সরবরাহ ।
- ☑ শ্রমিক ক্যাম্প এবং নির্মাণধীন এলাকায় পানি ছিটাইয়া ধূলা দমনের ব্যবস্থা।

পরিবীক্ষকের নামঃ Md. Nurul Islam পরিবীক্ষণের তারিখঃ 12/12/2017

পদবিঃ Environmental Specialist

স্বাক্ষরঃ N Islam

Annex- E

Participatory Small Scale Water Resources Sector Project
Water Quality Impact Monitoring Report

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
1. SP44078, Dhankundi Subproject							
Bogra, Sherpur							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, *oC*	27.5	29.0	27.5 ~ 29.0	20~30
			pH	7.3	7.1	7.1 ~ 7.3	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	362	285	285 ~ 362	<2000
			Temperature, oC	28.0	29.0	28.0 ~ 29.0	20~30
			Salinity, ppm	197	185	185 ~ 197	300~1000
			Phosphate (Ph4), mg/L	4.2	3.7	3.7 ~ 4.2	<6
			pH	7.1	7	7.0 ~ 7.1	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	471	350	350 ~ 471	400~1000
			Dissolved Oxygen, mg/L	5.5	4.5	4.5 ~ 5.5	4~6
			CaCo3(Hardness), mg/L	148	110	110 ~ 148	80~120
2. SP44107, Amail-Indail Subproject							
Bogra, Adamdighi							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	29.5	28.0	28.0 ~ 29.5	20~30
			pH	7.0	7.1	7.0 ~ 7.1	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	310	415	310 ~ 415	<2000
			Temperature, oC	28.5	29.7	28.5 ~ 30.5	20~30
			Salinity, ppm	139	153	139 ~ 153	300~1000
			Phosphate (Ph4), mg/L	3.8	4.5	3.8 ~ 4.5	<6
			pH	6.9	7.0	6.9 ~ 7.2	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	412	463	412 ~ 463	400~1000
			Dissolved Oxygen, mg/L	5.1	4.8	4.8 ~ 5.1	4~6
			CaCo3(Hardness), mg/L	152	113	113 ~ 152	80~120

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
3. SP44108, Tiloch Iramoti Subproject							
Bogra, Adamdighi							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	30.5	29.0	29.0 ~ 30.5	20~30
			pH	7.3	7.1	7.1 ~ 7.3	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	129	417	112 ~ 129	<2000
			Temperature, oC	30.5	30.5	30.5 ~ 31	20~30
			Salinity, ppm	61	153	53 ~ 61	300~1000
			Phosphate (Ph4), mg/L	3.5	4.5	3.8 ~ 4.5	<6
			pH	7.8	7.5	6.2 ~ 7.8	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	293	463	239 ~ 293	400~1000
			Dissolved Oxygen, mg/L	61	5.7	4.3 ~ 61	4~6
			CaCo3(Hardness), mg/L	97	83	83 ~ 97	80~120
4. SP44123, Kamarpur-Adamdighi Subproject							
Bogra, Adamdighi							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	29.4	28.7	29.5 ~ 30.0	20~30
			pH	7.5	7.5	6.3 ~ 7.5	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	179	210	154 ~ 179	<2000
			Temperature, oC	29.5	30.5	29.5 ~ 31	20~30
			Salinity, ppm	196	175	53 ~ 196	300~1000
			Phosphate (Ph4), mg/L	4.0	4.8	4.0 ~ 4.8	<6
			pH	7.6	7.6	6.5 ~ 7.6	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	321	321	239 ~ 321	400~1000
			Dissolved Oxygen, mg/L	5.3	5.3	4.3 ~ 5.3	4~6
			CaCo3(Hardness), mg/L	107	107	83 ~ 107	80~120
5. SP44139, Bhadraboti-Tilkatala Subproject							
Bogra, Sherpur							

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	28.9	29.7	28.9~ 30.5	20~30
			pH	7.6	7.5	7.5 ~ 7.6	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	417	310	310 ~ 417	<2000
			Temperature, oC	29.5	30	29.5 ~ 30.5	20~30
			Salinity, ppm	153	185	153 ~ 153	300~1000
			Phosphate (Ph4), mg/L	4.0	5.0	4.0 ~ 5.0	<6
			pH	7.5	7.3	7.3 ~ 7.5	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	463	380	380 ~ 463	400~1000
			Dissolved Oxygen, mg/L	5.7	5.3	5.0 ~ 5.7	4~6
			CaCo3(Hardness), mg/L	113	90	90~ 113	80~120
6. SP43056, Latifpur- Etbarpur Khal Subproject							
Comilla, Chandina							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	168	185	147 ~ 210	<2000
			Temperature, oC	29	27	25 ~ 29	20~30
			Salinity, ppm	120	120	80 ~ 120	300~1000
			Phosphate (Ph4), mg/L	3.8	4.6	4.0 ~ 5.0	<6
			pH	7.3	7.0	6.7 ~ 7.3	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	252	350	221 ~ 275	400~1000
			Dissolved Oxygen, mg/L	3.6	4.5	3.6 ~ 6.4	4~6
			CaCo3(Hardness), mg/L	60	110	60 ~ 110	80~120
7. SP43059, Kedarpur-Gobindapur Subproject							
Comilla, Chandina							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	165	205	165 ~ 205	<2000
			Temperature, oC	28.9	27.5	27.5 ~ 28.9	20~30
			Salinity, ppm	119	147	119 ~ 147	300~1000
			Phosphate (Ph4), mg/L	4.0	4.5	4.0 ~ 4.5	<6
			pH	7.0	7.3	7.0 ~ 7.3	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	248	308	248 ~ 308	400~1000
			Dissolved Oxygen, mg/L	3.3	4.2	3.3 ~ 4.2	4~6

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
			CaCo3(Hardness), mg/L	60	130	60 ~ 130	80~120
8. SP45147, Barkarai-Derpar Kaduti Subproject							
Comilla, Chandina							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	140	330	140 ~ 330	<2000
			Temperature, oC	28.9	25.9	25.9 ~ 28.9	20~30
			Salinity, ppm	85	95	85 ~ 237	300~1000
			Phosphate (Ph4), mg/L	4.0	4.6	4.0 ~ 4.6	<6
			pH	7.0	6.9	6.9 ~ 7.7	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	245	290	245 ~ 290	400~1000
			Dissolved Oxygen, mg/L	3.5	4.9	3.5 ~ 4.9	4~6
			CaCo3(Hardness), mg/L	60	90	60 ~ 150	80~120
9. SP45154, Harina Changagachia Sub-Project							
Comilla, Chandina							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	135	140	135 ~ 140	<2000
			Temperature, oC	29	29	24.8 ~ 29.2	20~30
			Salinity, ppm	110	180	101 ~ 180	300~1000
			Phosphate (Ph4), mg/L	4.0	3.5	3.5 ~ 4.6	<6
			pH	6.9	7.5	6.9 ~ 7.8	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	200	280	200 ~ 460	400~1000
			Dissolved Oxygen, mg/L	3.4	4.4	3.4 ~ 6.5	4~6
			CaCo3(Hardness), mg/L	60	75	60 ~ 106	80~120
10.SP45156, Orain Golicho Noagaon Subproject							
Comilla, Chandina							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	133	250	133 ~ 344	<2000
			Temperature, oC	28.7	27.8	24.9 ~ 28.9	20~30
			Salinity, ppm	96	190	96 ~ 248	300~1000
			Phosphate (Ph4), mg/L	4.0	4.5	3.5 ~ 4.6	<6
			pH	6.5	6.9	6.5 ~ 7.5	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	200	310	200 ~ 520	400~1000
			Dissolved Oxygen, mg/L	3.3	3.3	3.3 ~ 4.4	4~6

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
			CaCo3(Hardness), mg/L	90	165	90 ~ 165	80~120
11. SP45176, Deowra CAD Subproject							
Comilla, Muradnagar							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	99	140	99 ~ 134	<2000
			Temperature, oC	29.2	28.3	24.3 ~ 29.2	20~30
			Salinity, ppm	71	80	71 ~ 96	300~1000
			Phosphate (Ph4), mg/L	3.4	4.4	3.4 ~ 6.5	4~6
			pH	7.7	7.7	6.9 ~ 7.7	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	147	1857	147 ~ 201	400~1000
			Dissolved Oxygen, mg/L	4.5	3.8	3.8 ~ 4.5	4~6
			CaCo3(Hardness), mg/L	30	50	30 ~ 80	80~120
12. SP45177, Dhakshin Trish CAD Subproject							
Comilla, Muradnagar							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	103	126	103 ~ 136	<2000
			Temperature, oC	28.8	27.6	23.6 ~ 28.8	20~30
			Salinity, ppm	74	95	74 ~ 97	300~1000
			Phosphate (Ph4), mg/L	3.5	4.8	3.4 ~ 6.5	4~6
			pH	7.5	7.3	6.6 ~ 7.5	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	155	196	155 ~ 204	400~1000
			Dissolved Oxygen, mg/L	5.3	4.7	3.1 ~ 5.3	4~6
			CaCo3(Hardness), mg/L	45	82	45 ~ 160	80~120
13.SP45190, Nababpur- Kaliarchar Subproject							
Comilla, Chandina							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	109	210	109 ~ 226	<2000
			Temperature, oC	28.8	29.8	24.8 ~ 29	20~30
			Salinity, ppm	78	98	78 ~ 162	300~1000
			Phosphate (Ph4), mg/L	5.5	4.8	3.4 ~ 6.5	4~6
			pH	7.2	7.4	7.2 ~ 7.4	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	164	164	164 ~ 340	400~1000
			Dissolved Oxygen, mg/L	4.7	5.4	4.7 ~ 5.9	4~6
			CaCo3(Hardness), mg/L	45	90	45 ~ 150	80~120

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
14. SP41001, Nimai Khari Subproject							
Dinajpur, Sadar							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	25	24	24 ~ 25	20~30
			pH	7	6.9	6.9 ~ 7.0	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	280	395	395 ~ 680	<2000
			Temperature, oC	27	26	26 ~ 27	20~30
			Salinity, ppm	85	80	80 ~ 85	300~1000
			Phosphate (Ph4), mg/L	5.5	5.8	5.5 ~ 6	<6
			pH	7.4	7.2	6.9 ~ 7.2	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	375	460	460 ~ 540	400~1000
			Dissolved Oxygen, mg/L	5.2	5.6	5.6 ~ 5.8	4~6
			CaCo3(Hardness), mg/L	110	100	95 ~ 100	80~120
15. SP43063, Kuthurakandi Khal Subproject							
Jessore, Bagharpara							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	27	28	26 ~ 28	20~30
			pH	5.8	6.08	5.8 ~ 6.08	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	269	325	269 ~ 325	<2000
			Temperature, oC	28	27	27 ~ 28	20~30
			Phosphate (Ph4), mg/L	4.8	5.4	4.8 ~ 6.0	<6
			pH	6.38	6.46	6.38 ~ 6.46	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	404	465	404 ~ 465	400~1000
			Dissolved Oxygen, mg/L	4.5	4.8	4.5 ~ 4.8	4~6
			CaCo3(Hardness), mg/L	338	432	338 ~ 432	80~120
16. SP44074, Swarupdaha Dhunar Khal Subproject							
Jessore, Chowgacha							

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	27	28	26 ~ 28	20~30
			pH	6.8	6.5	6.5 ~ 6.8	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	308	410	308 ~ 410	<2000
			Temperature, oC	28	29	28 ~ 29	20~30
			Phosphate (Ph4), mg/L	4.5	5.2	4.5 ~ 6.0	<6
			pH	6.7	6.4	6.4 ~ 6.7	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	463		463 ~ 463	400~1000
			Dissolved Oxygen, mg/L	4.8	4.5	4.5 ~ 4.8	4~6
			CaCo3(Hardness), mg/L	284	210	210 ~ 284	80~120
17. SP46265, Khal Ghat Basundia Subproject							
Jessore, Sadar							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	28	27	27 ~ 28	20~30
			pH	6.8	6.7	6.7 ~ 6.8	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	322	325	322 ~ 425	<2000
			Temperature, oC	29	28	26 ~ 29	20~30
			Phosphate (Ph4), mg/L	4.6	4.8	4.5 ~ 6.0	<6
			pH	6.6	6.4	6.6 ~ 6.8	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	484	380	385 ~ 484	400~1000
			Dissolved Oxygen, mg/L	3.9	4.5	3.9 ~ 4.2	4~6
			CaCo3(Hardness), mg/L	318	210	210 ~ 318	80~120
18. SP41005, Kanakdia FMD Subproject							
Patuakhali, Bauphal							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	210	275	210 ~ 275	<2000
			Temperature, oC	29.4	27.6	23.2 ~ 29.4	20~30
			Salinity, ppm	127	215	127 ~ 215	300~1000
			Phosphate (Ph4), mg/L	4.6	5.0	1 ~ 1	<6

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
			pH	7.1	7	7.0 ~ 7.1	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	267	350	267 ~ 350	400~1000
			Dissolved Oxygen, mg/L	4.8	5.5	4.8 ~ 5.5	4~6
			CaCo3(Hardness), mg/L	105	118	85 ~ 118	80~120
19. SP43050, Moddah-Purba Rajapur Subproject							
Patuakhali, Bauphal							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	240	315	240 ~ 315	<2000
			Temperature, oC	29.1	27.8	24.1 ~ 29.1	20~30
			Salinity, ppm	110	280	110 ~ 280	300~1000
			Phosphate (Ph4), mg/L	4.6	5.0	4.5 ~ 5.0	<6
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	230	310	230 ~ 310	400~1000
			Dissolved Oxygen, mg/L	5	4.7	4.7 ~ 5.0	4~6
			CaCo3(Hardness), mg/L	60	85	60 ~ 85	80~120
20. SP43057, Adabaria Subproject							
Patuakhali, Bauphal							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	230	280	230 ~ 280	<2000
			Temperature, oC	27.0	25.0	25.0 ~ 27.0	20~30
			Salinity, ppm	210	250	210 ~ 250	300~1000
			Phosphate (Ph4), mg/L	3.8	4.8	3.8 ~ 4.8	<6
			pH	7.2	7.1	7.1 ~ 7.2	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	240	340	240 ~ 340	400~1000
			Dissolved Oxygen, mg/L	4.4	5.2	4.4 ~ 5.4	4~6
			CaCo3(Hardness), mg/L	45	75	45 ~ 75	80~120
21. SP43058, Shabupura Khal Subproject							
Patuakhali, Bauphal							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	26.0	28.0	26~ 28	20~30
			pH	7.4	7.1	7.1 ~ 7.4	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water:	Total Dissolved solids (TDS), mg/L	170	140	140 ~ 170	<2000

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
		Subproject khal, and is used for crop irrigation and/or fisheries.	Temperature, oC	29.4	28	28 ~ 29.4	20~30
			Salinity, ppm	109	185	109 ~ 109	300~1000
			Phosphate (Ph4), mg/L	4	4.5	4 ~ 4.5	<6
			pH	7.5	7.6	7.5 ~ 7.6	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	< 10 ~ <10	<10
			Electrical Conductivity (EC), µs/cm	230	350	230 ~ 350	400~1000
			Dissolved Oxygen, mg/L	5.8	5.4	5.4 ~ 5.8	4~6
			CaCo3(Hardness), mg/L	45	108	45 ~ 45	80~120
22. SP43060, Ponahura Subproject							
Patuakhali, Bauphal							
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	175	250	175 ~ 175	<2000
			Temperature, oC	29.3	28	24.3 ~ 29.3	20~30
			Salinity, ppm	98	185	98 ~ 98	300~1000
			Phosphate (Ph4), mg/L	4	4.5	4 ~ 4	<6
			pH	7.4	7.6	7.4 ~ 7.6	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	215	310	215 ~ 310	400~1000
			Dissolved Oxygen, mg/L	4.9	5.2	4.9 ~ 5.2	4~6
			CaCo3(Hardness), mg/L	60	90	60 ~ 60	80~120
23. SP43071, Bokrabari Subproject							
Rangpur, Mithapukur							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.					
			Temperature, oC	26	28	26~ 28	20~30
			pH	6.9	7.1	6.9 ~ 7.4	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	140	150	140 ~ 150	<2000
			Temperature, oC	28	26	24 ~ 28	20~30
			Salinity, ppm	185	220	174 ~ 275	300~1000
			Phosphate (Ph4), mg/L	4.5	5.6	4.5 ~ 5.6	<6
			pH	7.0	7.2	7.0 ~ 7.6	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	160	200	158 ~ 200	400~1000
			Dissolved Oxygen, mg/L	5.4	5.2	5.2 ~ 5.4	4~6

Subproject ID, Name & Location	Year	Water Type & Use	Parameter	July-Sept (Q-3)	Oct-Dec (Q-4)	Base / Observed Range	Environment Department Standard
			CaCo3(Hardness), mg/L	108	108	108 ~ 110	80~120
24. SP44092, Faridpur Badurerjan Subproject							
Rangpur, Mithapukur							
	2017	Ground Water: From a tubewell of SP area, it is used for drinking/ domestic purpose.	Temperature, oC	26	28	26 ~ 28	20~30
			pH	7.4	7.1	7.1 ~ 7.4	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Arsenic, mg/L	<0.01	<0.01	<.01 ~ <.01	0.050
	2017	Surface Water: Subproject khal, and is used for crop irrigation and/or fisheries.	Total Dissolved solids (TDS), mg/L	142	140	135 ~ 142	<2000
			Temperature, oC	26	28	26 ~ 28	20~30
			Salinity, ppm	174	220	174 ~ 275	300~1000
			Phosphate (Ph4), mg/L	4.6	5.6	4.6 ~ 5.0	<6
			pH	7.5	7.2	7.2 ~ 7.5	6.5 ~ 8.5
			Nitrate, mg/L	<10	<10	<10 ~ <10	10
			Electrical Conductivity (EC), µs/cm	170	185	170 ~ 215	400~1000
			Dissolved Oxygen, mg/L	5.5	5.0	5.0 ~ 5.5	4~6
			CaCo3(Hardness), mg/L	110	112	110 ~ 112	80~120

Annex- F

ENVIRONMENTAL TRAINING PLANED FOR FY 2016-17

Sl. No.	Course Code	Course Title	Category of Participants	No. of events	Duration (days)	Participants per course	Total Participants	Total Trainee days	Budget (BDT Lakh)	Tentative Venue	Remarks
1	2	3	4	5		6	7	8	9	10	11
1	PSSWR-92	Preparation Monitoring of Environmental Mitigation Plan (EMP)	Field Engr. Socio Economist, CO, CA Mem. of WMCA/MC.	10	1	25	250	250	6.50	RTC/ District	
2	PSSWR-93	Environmental Laboratory and Water Quality Testing: Course-1	Selected LGED Lab Technicians, Lab Asstt. & Agri/Fish Facilitator.	3	3	20	60	180	3.00	RTC/ District	
3	PSSWR-167	Orientation on Environmental Awareness and Local Resources Management	WMCA members and general beneficiaries, including women	10	1	30	300	300	3.30	Field Level (WMCA Office)	
	Sub Total						3420	4100	65.76		

Annex- G

STATUS OF TRAINING PROGRESS ACHIEVED (during July - December 2017)

Training Course Codes	Course Titles	Category of Participants	Total No. of Training Events	Duration (day)	Participants		Trainee Days		
					Male	Female	Male	Female	Total
PSSW-167	Environmental Awareness and Local Resources Management	WMCA members and general beneficiaries, including women	32	1	480	480	480	480	960
PSSW-93	Environmental Laboratory and Water Quality Testing	Lab Tech/Assists, Agril/Fish/Gen Facilitators	3	1	66	0	66	0	66
PSSW-92	Training on Preparation and Monitoring of EMP	Upazila Engineers, Socio- Economist, Socioogist	12	1	300	60	300	60	360
		Total	**47**		**846**	**540**	**846**	**540**	**1386**

Date and District wise imparted training coverage are given in the following table:

Date and Districtwise training coverage

Course Code	Training Date	Training District/SP site
PSSWR-92 Preparation Monitoring of Environmental Mitigation Plan (EMP)	30/10/2017	UP Companiganj
	31/10/2017	UP Companiganj
	03/11/2017	XEN Office, Dinajpur
	04/11/2017	XEN Office, Dinajpur
	05/11/2017 to 07/11/2017	XEN Office, Gaibandha
	08/11/2017 to 10/11/2017	XEN Office, Faridpur
	11/11/2017 to 12/11/2017	XEN Office, Naogaon
PSSWR-93 Environmental Laboratory and Water Quality Testing: Course-1	25/11/2017	XEN Office, Faridpur
	02/12/2017	XEN Office, Feni
	23/12/2017	XEN Office, Dinajpur
PSSWR-167 Orientation on Environmental Awareness and Local Resources Management	18/10/2017 to 22/10/2017	At different SP sites of districts Noakhali, Bhola & Barisal
	22/10/2017 to 28/10/2017	At different SP sites of districts Faridpur & Barisal.
	29/10/2017 to 01/11/2017	At different SP sites of district Munshiganj.
	02/11/2017 to 04/11/2017	At different SP sites of district Feni.
	10/11/2017 to 16/11/2017	At different SP sites of district Gaibandha.

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