Dhading Package 1

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Shanti Nirwan Sewa Pvt Ltd

1.6 Project District: Dhading

1.7 Contract Package No: 1

1.8 Location of Site/Name of School: Shree Jyamire chaur P . School , Salyantar-03,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 1,36,48,590.90

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

The project entitled Emergency School Reconstruction Program (ESRP),Dhading is going well till date. The work was started on December 22,2016.The targeted works such as site mobilization, relocation of TLC building, dismantling of existing building earthwork in excavation, boulder soling, PCC has been completed. The footing works are on steady progress till date. Up to this month 21.5% work has been completed.

The contractor's personnel, one site engineer is constantly working at site. Both skilled and unskilled manpower are working at site for steady progress of work. Construction materials such as brick, aggregate, sand, steel are sufficiently stored at site.

Certain changes were made on proposed site plan. The proposed site plan has shifted towards west side. The access road is passing in middle of the land plot so the SMC and DLPIU took decision to shift road to east side of the plot. The minutes of meeting and revised site plan for relocation of site has already been recorded.

## 4. Test Metrics

Sampling of construction materials was done in presence of DLPIU, consultant and contractor representative to ensure their suitability for the proposed construction elements. It was done by selecting the materials in random manner. No testing are done so far at site because the lab has not been set up. The test report of construction materials such as brick, sand, cement, aggregate has been submitted.

## 5. Change in Design

There has not been any changes in design and drawings. The proposed site plan has shifted towards west side. The access road is passing in middle of the land plot so the SMC and DLPIU took decision to shift road to east side of the plot.

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 1,36,48,590.90 |
| Value of Work Till Date | NPR 92,056 |
| Financial Progress (%) | 0.67% |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 21.5% |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Work schedule for contract package 1 and 2 has been submitted by the contractor. However, the schedule still needs to be resubmitted by considering the comments and review from resident engineer. The test report of construction materials i.e. cement, sand, brick, aggregate has been submitted till date. Test report of steel has not been submitted.

## 9. Issues and Problems Facing at Site and Resolution

The same manpower is working at two sites namely Awagaman and Jyamire which is not sufficient. This will definitely hampers in work progress. The contractor has been asked to provide separate manpower for each sites.

## 10. Photographs of Site and Buildings

Photo 1: Layout

Photo 2: Earthwork Excavation

Photo 3: Boulder Soling on compacted earth

Photo 4: PCC on soling

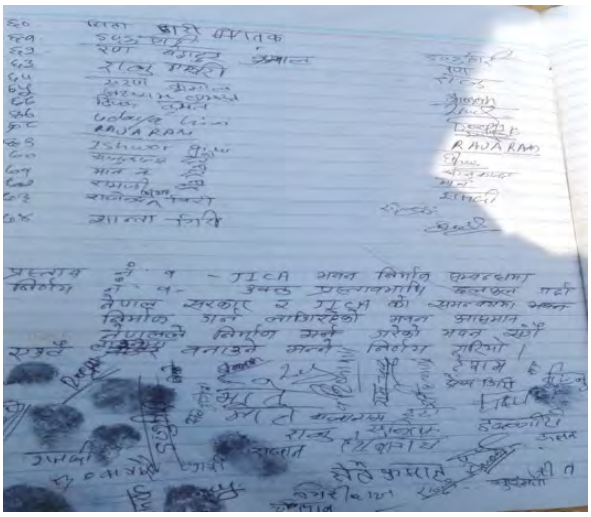


Photo 5: Minutes of meeting for site relocation

## 11. Management Summary

The actual work progress is well ahead of program chart to complete the targeted tasks at this site. However, the progress should be at the same level for remaining sites and should run side by side for completion of whole project in time. Reinforcement in both skilled and unskilled manpower as well as tools and plants will help to keep the project in schedule. This is possible by the improvement in overall management aspects from contractor side. Similarly, construction safety is of utmost importance so it needs to be followed seriously at every sites.

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Shanti Nirwan Sewa Pvt Ltd

1.6 Project District: Dhading

1.7 Contract Package No: 1

1.8 Location of Site/Name of School: Shree Awagaman P . School , Salyantar-06,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 1,80,71,786

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

The project entitled Emergency School Reconstruction Program (ESRP), Dhading is going well till date. The work was started on December 22,2016.The targeted works such as site mobilization, relocation of TLC building, dismantling of existing building earthwork in excavation, boulder soling, PCC has been completed. The footing works are on steady progress till date. Up to this month 21.5% work has been completed.

The contractor's personnel, one site engineer is constantly working at site. Both skilled and unskilled manpower are working at site for steady progress of work. Construction materials such as brick, aggregate, sand, steel are sufficiently stored at site.

Certain changes were made on proposed site plan. The setback and space between two buildings was discussed to be reduced appropriately. This is to take into account the minimum width for access road.

## 4. Test Metrics

Sampling of construction materials was done in presence of DLPIU, consultant and contractor representative to ensure their suitability for the proposed construction elements. It was done by selecting the materials in random manner. No testing are done so far at site because the lab has not been set up. The test report of construction materials such as brick, sand, cement, aggregate has been submitted.

## 5. Change in Design

There has not been any changes in design and drawings. However, the setback and the space between two buildings has been revised in order to provide more width for access road. The setback was reduced from 3.857 m to 1.425 m at western property line and from 3 m to 1.835 m at southern side.

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 1,80,71,786 |
| Value of Work Till Date | NPR 401440 |
| Financial Progress (%) | 2.22 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 21.5% |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Work schedule for contract package 1 and 2 has been submitted by the contractor. However, the schedule still needs to be resubmitted by considering the comments and review from resident engineer. The test report of construction materials i.e. cement, sand, brick, aggregate has been submitted till date. Test report of steel has not been submitted.

The pipeline of water supply passes through footing D-D grid of 4-C(S) block which needs to be diverted from its position. Similarly, the top of building gets disturbed by electric wire so the electric pole should be shifted accordingly. The School Management Committee and local Community has already been requested. Regarding the electric wire, Nepal Electricity Authority has been requested through DLPIU.

## 9. Issues and Problems Facing at Site and Resolution

## 10. Photographs of Site and Buildings

Photo 1: Layout

Photo 2: Earthwork Excavation

Photo 3: Boulder Soling on compacted earth

Photo 4: PCC on soling

## 11. Management Summary

The actual work progress is well ahead of program chart to complete the targeted tasks at this site. However, the progress should be at the same level for remaining sites and should run side by side for completion of whole project in time. Reinforcement in both skilled and unskilled manpower as well as tools and plants will help to keep the project in schedule. This is possible by the improvement in overall management aspects from contractor side. Similarly, construction safety is of utmost importance so it needs to be followed seriously at every sites.

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Shanti Nirwan Sewa Pvt. Ltd.

1.6 Project District: Dhading

1.7 Contract Package No: 1

1.8 Location of Site/Name of School: Shree Jaleshowri P.S . School , Aginchowk-07,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 18,593,650.40

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

| |
|---|
| There is no presence of contractor and the work has not started till date at this site. |

## 4. Test Metrics

| |
|---|
| No Sampling and testing of construction materials was done till date. |

## 5. Change in Design

| |
|---|
| The design and site layout remained unchanged. |

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 18,593,650.40 |
| Value of Work Till Date | NPR 0 |
| Financial Progress (%) | 0 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 0 % |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Only the program chart has been submitted till now.

## 9. Issues and Problems Facing at Site and Resolution

The construction activities were not started till date. The preliminary activities such as mobilization, relocation of TLC and dismantling must had been completed till now.

## 10. Photographs of Site and Buildings

The photo is not available because the site was inaccessible because of extreme condition of road.

**Management Summary**

| |
|---|
| As there is no presence of contractor till date the progress is zero. This is due to ineffective management from contractor. There is need of improvement in planning and management. |

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Shanti Nirwan Sewa Pvt. Ltd.

1.6 Project District: Dhading

1.7 Contract Package No: 1

1.8 Location of Site/Name of School: Shree Annapurna P.S . School , Baseri-01,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 24,013,222.40

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

| |
|---|
| There is no presence of contractor and the work has not started till date at this site. |

## 4. Test Metrics

| |
|---|
| No Sampling and testing of construction materials was done till date. |

## 5. Change in Design

| |
|---|
| The design and site layout remained unchanged. |

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 24,013,222.40 |
| Value of Work Till Date | NPR 0 |
| Financial Progress (%) | 0 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 0 % |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Only the program chart has been submitted till now.

## 9. Issues and Problems Facing at Site and Resolution

The construction activities were not started till date. The preliminary activities such as mobilization, relocation of TLC and dismantling must had been completed till now.

## 10. Photographs of Site and Buildings

Photo 1: Existing site and TLC

## 11. Management Summary

| |
|---|
| As there is no presence of contractor till date the progress is zero. This is due to ineffective management from contractor. The improvement in planning and management needs to be improved. |

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Shanti Nirwan Sewa Pvt. Ltd.

1.6 Project District: Dhading

1.7 Contract Package No: 1

1.8 Location of Site/Name of School: Shree Shivalaya S.S . School , Baseri-08,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 33,390,655.62

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

There is no presence of contractor and the work has not started till date at this site.

## 4. Test Metrics

No Sampling and testing of construction materials was done till date.

## 5. Change in Design

The design and site layout remained unchanged.

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 33,390,655.62 |
| Value of Work Till Date | NPR 0 |
| Financial Progress (%) | 0 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 0 % |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Only the program chart has been submitted till now.

## 9. Issues and Problems Facing at Site and Resolution

The construction activities were not started till date. The preliminary activities such as mobilization, relocation of TLC and dismantling must had been completed till now.

## 10. Photographs of Site and Buildings

Photo 1: Existing site

## 11. Management Summary

| |
|---|
| As there is no presence of contractor till date the progress is zero. This is due to ineffective management from contractor. The improvement in planning and management needs to be improved. |

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

Dhading Package 2

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Rajendra-Shanti J/V

1.6 Project District: Dhading

1.7 Contract Package No: 2

1.8 Location of Site/Name of School: Shree Bedbyas P . School , Salyankot-05,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 24,837,145.60

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

| |
|---|
| The work has not started till date at this site. |

## 4. Test Metrics

| |
|---|
| No Sampling and testing of construction materials was done till date. |

## 5. Change in Design

| |
|---|
| The design and site layout remained unchanged. |

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 24,837,145.60 |
| Value of Work Till Date | NPR 0 |
| Financial Progress (%) | 0 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 0 % |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Only the program chart has been submitted till now.

## 9. Issues and Problems Facing at Site and Resolution

The construction activities were not started till date. The preliminary activities such as mobilization, relocation of TLC and dismantling must had been completed till now.

## 10. Photographs of Site and Buildings

Photo 1: Existing site

## 11. Management Summary

| |
|---|
| The construction activities needs to be started very soon at this site. The immediate start of work is required from contractor. |

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Rajendra-Shanti J/V

1.6 Project District: Dhading

1.7 Contract Package No: 2

1.8 Location of Site/Name of School: Shree Thanichnadi P . School , Salyankot-07,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 18,148,438.20

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

The contract package 2 of project entitled Emergency School Reconstruction Program (ESRP),Dhading has just started with site mobilization and layout. The major wok performed was dismantling of existing building. The construction activities were zero till February.

## 4. Test Metrics

No Sampling and testing of construction materials was done till date.

## 5. Change in Design

The design and site layout remained unchanged.

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 18,148,438.20 |
| Value of Work Till Date | NPR 20,489.00 (Site clearance and mobilization) |
| Financial Progress (%) | 0.11 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 14.94% (Site mobilization, relocation of TLC and Dismantling) |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Only the program chart has been submitted till now.

Only unskilled manpower are present at this site. Skilled manpower were not present at site.

## 9. Issues and Problems Facing at Site and Resolution

## 10. Photographs of Site and Buildings

Photo: Dismantling of existing building

## 11. Management Summary

| |
|---|
| The actual work progress and scheduled progress is same for this site which shows the work in under schedule. The construction activities needs to be started very soon at this site. |

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Rajendra -Shanti J/V

1.6 Project District: Dhading

1.7 Contract Package No: 2

1.8 Location of Site/Name of School: Shree Mahendrodaya H.S . School , Mulpani-08,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 65,413,914.72

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

| |
|---|
| There is no presence of contractor and the work has not started till date at this site. |

## 4. Test Metrics

| |
|---|
| No Sampling and testing of construction materials was done till date. |

## 5. Change in Design

| |
|---|
| The design and site layout remained unchanged. |

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 65,413,914.72 |
| Value of Work Till Date | NPR 0 |
| Financial Progress (%) | 0 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 0 % |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Only the program chart has been submitted till now.

## 9. Issues and Problems Facing at Site and Resolution

The construction activities were not started till date. The preliminary activities such as mobilization, relocation of TLC and dismantling must had been completed till now.

## 10. Photographs of Site and Buildings

No

## 11. Management Summary

| |
|---|
| As there is no presence of contractor till date the progress is zero. This is due to ineffective management from contractor. There is need of improvement in planning and management. |

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION**

**UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MOHRI & EWES

1.5 Name of Contractor: M/S Rajendra -Shanti J/V

1.6 Project District: Dhading

1.7 Contract Package No: 2

1.8 Location of Site/Name of School: Shree Kamaladevi L.S . School , Mulpani-02,Dhading,Nepal

1.9 Contract Signed Date: 08/12/2016

1.10 Contract Duration: 15 months

1.11 Date of the Start of Work: 18 January 2017

1.12 Scheduled Date of Completion: 3rd March 2018

1.13 Total Contract Value: NPR 37,919,039.60

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th March,2017

## 3. Progress and Deviation from Plan at this Report Date

| |
|---|
| There is no presence of contractor and the work has not started till date at this site. |

## 4. Test Metrics

| |
|---|
| No Sampling and testing of construction materials was done till date. |

## 5. Change in Design

| |
|---|
| The design and site layout remained unchanged. |

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR 37,919,039.60 |
| Value of Work Till Date | NPR 0 |
| Financial Progress (%) | 0 % |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | 14.94% |
| Actual Progress (%) | 0 % |
| Scheduled Time of Construction | 455 Days |
| Total Time Consumed | 68 Days |
| Time Elapsed (%) | 14.94% |

## 8. Contractor's Submittal

Only the program chart has been submitted till now.

## 9. Issues and Problems Facing at Site and Resolution

The construction activities were not started till date. The preliminary activities such as mobilization, relocation of TLC and dismantling must had been completed till now.

## 10. Photographs of Site and Buildings

Photo 1: Damaged building at Kamaladevi L.S School

## 11. Management Summary

| |
|---|
| As there is no presence of contractor till date ,the progress is zero. This is due to ineffective management from contractor. There must improvement in planning and management. |

Reported by: Rakesh Kumar Mishra

Designation: Resident Engineer

Date: March 9,2017

# Nuwakot Package 1

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project (Construction of 6 School Building Complex in Nuwakot)
1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)
1.3 Development Partner: Japan International Cooperation Agency (JICA)
1.4 Name of the Consultant: OCG in association with MORI & EWES
1.5 Name of Contractor: M/S Shyam Sundhar/Himdhung & Thokar J/V, Dhapashi, KTM
1.6 Project District: Nuwakot
1.7 Contract Package No.: ESRP/MOE/CLPIU/073/74- Nuwakot - 01
1.8 Location of Site/Name of School:

| SN | Name of School | Grade of School | VDC- Ward No | Status of works as of 28th February, 2017 |
|---|---|---|---|---|
| 1 | Shree Deurali SS, | SS | Deurali-4 | Dismantle works 90% |
| 2 | Shree Sanukimtang SS | SS | Kimtang-4 | Foundation Excavation Started |
| 3 | Shree Chandradevi LSS | LSS | Kintang-7 | Foundation Excavation Started |
| 4 | Shree Mangaladevi LSS | LSS | Lachyang-2 | Foundation Excavation Started |
| 5 | Shree Sulakshana SS | SS | Bidur-9 | Layout Done |
| 6 | Shree Kanyadevi LSS | LSS | Kalyanpur-1 | Site preparation ongoing |

1.9 Contract Signed Date: 16th. January 2017
1.10 Contract Duration: 15 (months)
1.11 Date of the Start of Work: 23rd. January 2017
1.12 Scheduled Date of Completion: 22nd. April 2018
1.13 Total Contract Value NRs: 254,004,221.46
1.14 Contract Type: NCB

## 2. Report Date: 9th February, 2017

## 3. Progress and Deviation from Plan at this Report Date

*Contractor has just mobilized at site (9th February, 2017) due to shifting of TLC building & starting dismantle works of existing structures are ongoing & layout of structures are started. Jointly sample collection of local materials has been done and send to lab for necessary testing some local materials are tested.*

*Earned Value Assessment Chart: Not Available*

## 4. Test Metrics

*Factory test report of non - local materials are collected & Smalling of local materials for lab test was done jointly & send to lab.*

## 5. Change in Design

*No change in design & site layout.*

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR. 254,004,221.46 |
| Value of Work till Date | NPR |
| Financial Progress (%) | |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | Not Available |
| Actual Progress (%) | |
| Scheduled Time of Construction | |
| Total Time Consumed | |
| Time Elapsed (%) | |

## 8. Contractor's Submittal

*Contractor has submitted: a. Work Schedule, QAP, Insurance, Test Report, Site Organization chart.*

## 9. Issues and Problems Facing at Site and Resolution

- Contractor has mobilized few numbers of labours at site which cannot achieved scheduled progress.
- Till date no construction materials are transported at site.
- There contract manager Mr. Prakash Jung Shah and site engineer are at sites.

## 10. Photographs of Site and Buildings

*Please take and include the sufficient site photographs and include in this report. Photographs shall cover all site vie, view of the building under construction for reflecting the progress f each building separately.*

| | |
|---|---|
| Building – 1 | Building – 2 |
| Building – 3 | Buindling - 4 |
| Building – 5 | Building – 6 |

## 11. Management Summary

*As 10 % time is elapsed & physical progress is zero in such a way progress cannot be achieved the project as pertarget. In some site vesicles, cannot ply in rani seasons so contractor should transport non-local materials before rani seasons.*

Reported by: ……..
Designation: ……..
Date: …….

# Nuwakot Package 2

**STATUS REPORT OF EMERGENCY SCHOOL RECONSTRUCTION UNDER JICA - TPIS**

## 1. Project Details

1.1 Name of Project: Emergency School Reconstruction Project

1.2 Client: Ministry of Education, Central Level Project Implementation Unit (CLPIU)

1.3 Development Partner: Japan International Cooperation Agency (JICA)

1.4 Name of the Consultant: OCG in association with MORI & EWES

1.5 Name of Contractor: M/S Lumbini Koshi & Neupane JV

1.6 Project District: Nuwakot

1.7 Contract Package No.: ESRP/DOE/NCB/02 - Nuwakot

1.8 Location of Site/Name of School:

| SN | Name of School | Grade of School | VDC- Ward No | Status of works as of 28th February, 2017 |
|---|---|---|---|---|
| 1 | Shree Khaniyakharka LSS | LSS | Kumri-9 | Layout Done |
| 2 | Shree Tilakeshwor LSS | LSS | Duipipal-5 | Adjustment to be done in Plan |
| 3 | Shree Devisthan PS | PS | Madanpur-7 | Dismantle works 80% |
| 4 | Shree Dangsing SS | SS | Dangsing-4 | Foundation Excavation Started |
| 5 | Shree Bageshwory LSS | LSS | Khadga-2 | Site preparation ongoing |
| 6 | Shree Rastriya SS | SS | Thanshing-9 | Layout Done |

1.9 Contract Signed Date: **30th January, 2017**

1.10 Contract Duration: **15 (months)**

1.11 Date of the Start of Work: 30th January, 2017

1.12 Scheduled Date of Completion: 30th April, 2018

1.13 Total Contract Value: **NPR 234,559,110.45 (Including VAT @ 13%)**

1.14 Contract Type: Unit Rate Contract

## 2. Report Date: 9th February, 2017

## 3. Progress and Deviation from Plan at this Report Date

*Contractor has just mobilized at site (29th January, 2017). Worksfor dismantle of existing structures are ongoing & layout of structures are started. Jointly sample collection of local materials has been done and send to lab for necessary testing.*

*Earned Value Assessment Chart: Not Available*

## 4. Test Metrics

| |
|---|
| *Factory test report of non-local materials are collected &Smalling of local materials for lab test was done jointly & send to lab.* |

## 5. Change in Design

| |
|---|
| *No change in design & site layout.* |

## 6. Financial Progress

| | |
|---|---|
| Total Contract Value | NPR |
| Value of Work till Date | NPR |
| Financial Progress (%) | |

## 7. Physical Progress

| | |
|---|---|
| Scheduled Progress (%) | Not Available |
| Actual Progress (%) | |
| Scheduled Time of Construction | |
| Total Time Consumed | |
| Time Elapsed (%) | |

## 8. Contractor's Submittal

| |
|---|
| *Contractor has not submitted any documents till date.* |

## 9. Issues and Problems Facing at Site and Resolution

- Contractor has mobilized few numbers of labor at site which cannot achieved scheduled progress.
- Till date no construction materials are transported at site.
- There is no permeant contract manager and permeant site engineer.

## 10. Photographs of Site and Buildings

*Please take and include the sufficient site photographs and include in this report. Photographs shall cover all site vie, view of the building under construction for reflecting the progress f each building separately.*

| | |
|---|---|
| Site | Building – 1 |
| Building – 2 | Buindling - 3 |
| Building – 4 | Building - N |

## 11. Management Summary

*As 10 % time is elapsed & physical progress is zero in such a way progress cannot be achieved the project as pertarget. In some site vesicles, cannot ply in rani seasons so contractor should transport non-local materials before rani seasons.*

Reported by: Tula Bahadur Lama

Designation: Authorized Representative

Date: March 09, 2017

# Attachment 4
# A letter of “Health and Safety at Construction Site”

Government of Nepal
Ministry of Education
**Central Level Project Implementation Unit**
Gyaneshwor, Kathmandu

Phone : 01-4420565
014420106
01-4421349
Fax : 01-4420521
Website : www.moepiu.gov.np
Email : info@moepiu.gov.np

Ref. No.:- 293/073/074

Date: Dec 04, 2016

To:

M/S Swechchhanda-Khani-Baniya J/v
Contract No. ESRP/DOE/NCB/09- Makawanpur-01

Kind Attention: Mr./Ms.

Reference: Emergency School Reconstruction Project – Health and Safety at Construction Site.

Dear Sir/Madam

During our site visit in ongoing construction site and safety audit report from JICA it has been noticed that the health and safety at construction site has not been maintained as required by the contract document, hence you are hereby instructed for maintaining the health and safety at construction site as required by the Contract Specification Division – 1 "GENERAL REQUIREMENTS" Article 8 (c) – Building Working Areas Safety Procedures and Article 43 – HEALTH AND SAFETY.

In addition to above, the followings are the prerequisite and advised you for implementing the same without any delay:

1. The construction area shall be completely closed with temporary fence with proper materials such as CGI sheet, wooden panel and so on in order to prevent students enter the construction area easily. The fence with only wooden frame or rope is not acceptable. "No entry" sign with Nepali and English shall be installed.
2. Entry to School area and construction sites must be maintained separately. If required by site condition, Contractor shall develop a temporary access to school.
3. Safety railing (Guard Rail) must be erected around the floor openings measuring 30 cm or more in least dimension through which a person may fall.
4. Guard rail must be erected along an exposed edge from first floor and above for preventing the fall of person.
5. Railing or other protective guarding shall be provided on all roof edges to prevent workmen falling.
6. Properly constructed platform with guardrail shall be used while working at height.
7. Fall arrest equipment shall be used, which can be achieved by using safety net.

8. When height of the structure reaches above 3 meter, sufficiently strong scaffolding/staging equipped with plank shall be provided. The workers must not work directly on the steel pipe or bamboo. Safety net in scaffolding must be provided towards the public movement and student movement area for preventing accident from falling objects.
9. Safety belts must be used while working at height where there is chance of fall.
10. All workers and Contractor's personnel must use PPE (Personal Protection Equipment – safety helmets (hard hats,) goggles, gloves and safety boots) while they are at work.
11. As far as possible outsiders must be restricted to enter the construction area. If not avoidable, they shall be provided with PPE when they are at construction area.
12. Electrical cables shall be managed properly and all outlets must be watertight. Proper outlet plug and sockets must be used. Bare connection and hooking should not be allowed.
13. While working in slope roof, workers shall be provided with catch-ropes and safety belts.
14. Demolition Works
    a. If the structure damaged by earthquake, necessary measures such as bracing or shoring shall be taken for preventing accidental collapse.
    b. Worker should not be allowed to walk along the wall.
    c. Safe distance to be kept by the public/students to ensure their safety and clear signage shall be installed.
    d. Warning sign shall be installed in the area for warning workers and public.
    e. Debris must be managed properly.
15. Construction site must be kept clean and construction materials and equipment shall be organized properly.

Your early and prompt action on aforementioned subject matter shall be appreciated.

Thanks

Sincerely Yours'

**Ima Narayan Shrestha**
Project Director

Cc: DLPIU

M/S Oriental Consultants Global JV Mohri

# Attachment 5
# Maintenance Manual (Draft)

DRAFT

# Maintenance Manual for School Facilities

## (Improvement of Sanitation and Hygiene Condition)

## Emergency School Construction Project (ESRP)

February, 2017

**TPIS-ERP**

## Abbreviations

| | |
|---|---|
| MOE | Ministry of Education |
| DOE | Department of Education |
| DEO | District Education Office |
| CL-PIU | Central Level Project Implementation Unit |
| DL-PIU | District Level Project Implementation Unit |
| VDC | Village Development Committee |
| SMC | School Management Committee |
| JICA | Japan International Cooperation Agency |
| TPIS-ERP | Transitional Project Implementation Support for Emergency Reconstruction Projects |
| ESRP | Emergency School Reconstruction Project |

## CONTENTS

# Introduction

A Japan's loan project "Emergency School Reconstruction Project (ESRP)" is planned for the reconstruction of the primary, lower secondary, secondary and higher secondary schools damaged by the Nepal Earthquake occurred on April 25, 2015, under the bilateral cooperation between two Governments of Japan and Nepal. In view of its urgency, JICA has implemented "Transitional Project Implementation Support for Earthquake Reconstruction Project (TPIS-ERP)" for a provisional period until the ESRP loan consultant is decided, and this manual was created under TPIS-ERP.

This manual is aimed to enhance all the people related to this Project including MOE, DEOs, SMCs and school staff and students understandings of the facility maintenance and the sanitation & hygiene condition on the ground in the school properties, in order to make the school facilities' life longer and the school environment healthier and safer.

# Chapter 1: Understanding the system of management / monitoring and maintenance

## I. The importance of facility maintenance:

### A. General maintenance of the facility:

There are several reasons why the facility environment should be kept healthy and clean.

Needless to say, without maintenance:

- Walls get cracked
- Doors would not close properly
- The roofs break down
- Furniture gets broken
- Water pipe leaks
- Light bulb runs out

Very quickly, our facility loses its functionality. The working condition gets bad. Serious accidents may then occur. The students' health may be threatened. It will then require a lot of work and money to get the facility back into the situation which allows proper operation.

Furthermore, the existence of the facility should not contribute to the degradation of the environment, with soil drifting, water stains or any other environmental issues resulting from an improper garbage disposal.

### B. Particular maintenance: the sanitary facilities

Specifically, toilets need regular, efficient and organized maintenance.

Without maintenance:

- The toilets get dirty and sewer pipes get clogged ;
- The flushing system breaks down;
- The water pipes may leak;
- The septic tank may discharge stinking and dirty water at the yard and in the vicinity of the facility;
- The fecal matter may become a real danger for the health of the students and teachers / non-teaching staff.

Regular maintenance of sanitary facilities is easy and it will keep the healthy environment for school facilities as a whole.

### C. Some hygiene and environmental problems, and recommended solutions

The following table summarizes the different types of sanitary and health problems that may occur in a place of rather high human concentration and use, including the schools. It also

presents the causes, effects and recommended solutions.

**Table 1 : Hygiene and Environmental Problems and Solutions**

| PROBLEMS | CAUSES | EFFECTS | SOLUTIONS |
|---|---|---|---|
| **Garbage** | Lack of garbage bins ;<br>Irregular collection;<br>Improper disposal.<br>No plan of proper utilization of wastes | Bad smells;<br>Mosquitoes;<br>Flies;<br>Diseases. | Garbage containers, incineration; Garbage bins, extend the collecting; Garbage collection system of the entire neighborhood;<br>Sensitization / raising awareness of users.<br>Separation of Garbage (Wastes) promoting 3 R ( Reduce, Recycle and Re-use) concept |
| **Waste water** | Absence or obstruction of pipeline | Parasites ;<br>Bad smells;<br>Mosquitoes;<br>Flies;<br>Diseases. | Create pipes ;<br>Clear obstruction areas ;<br>Disinfection. |
| **Urine near walls and fences** | Lack of toilets;<br>Lack of hygiene education;<br>Non-separated toilets or non-functional ones. | Degradation of walls;<br>Bad smells. | Install functional toilets;<br>Separate toilets for males and females. |
| **Feces of animal or human origin** | Unsecured fence;<br>Non-functional toilets;<br>Lack of education. | Bad smells;<br>Mosquitoes;<br>Flies;<br>Diseases. | Repair the fence;<br>Toilets / latrines; education / sensitization / awareness. |
| **Dirty class rooms and offices** | Dust;<br>Lack of hygiene education;<br>Weariness of students, teaching/non-teaching staff; Non hermetic buckets; Lack of water source. | All kinds of respiratory disease;<br>Environment not conducive to mental concentration / intellectual work | Daily maintenance / cleaning of classrooms and offices<br>Mobilization of students (Child Clubs, classroom monitor) |
| **Stagnant waters** | Discharge due to water leaks;<br>Excessive water use;<br>Poor drainage of rainwater. | Degradation of the pavement;<br>Mosquitoes;<br>Waste water;<br>High water bills. | Regular maintenance of pipelines;<br>Sensitization of students and teaching / non-teaching staff in the proper use of water and the risk of stagnant water. |
| **Posting and graffiti on the walls** | Lack of space reserved for posting;<br>Indiscipline of students and teaching/non-teaching staff. | Anarchy;<br>Degrading decor of the environment. | Provide posting space;<br>Set up vigilance teams. |
| **Aggression in the immediate environment** | Irregular collection<br>Improper filling of garbage by the community members;<br>Poor sewage pipes and bad drainage of rainwater;<br>Lack of education;<br>Breach of public affairs. | Pollution and proliferation of diseases;<br>Noise pollution. | Install garbage containers;<br>Installation of sumps;<br>Set up garbage dumps;<br>Sensitization of stakeholders - students, teachers, school personnel and parents |
| **Misuse of facilities** | Lack of hygiene education; No control over individual and collective hygiene;<br>Non respect of public affairs. | Non-functional toilets. | Education, information and sensitization through different activities (i.e. cleaning campaign, street drama, posters, pamplate and audio-vidual aids), School code of conduct and reward and punishment system for promoting proper use |
| **Harmful effects on the environment** | Deposit or unauthorized removal of garbage and waste;<br>Poor sewage pipes and bad drainage of rainwater. | Degradation of the environment around the facility. | Education, information and sensitization |

**D. Planning and organization of maintenance activities:**

There is a need for a comprehensive problem resolution approach, along with the identification of maintenance issues as follows:

- a diagnosis conducted by all actors involved; and
- a planning; which will highlight the planned activities, their nature, actors in charge of their implementation, in compliance with the level of complexity of each task, the human, material and financial resources as well as the implementation schedule.

It is therefore desirable for the facility to undertake a preventive and planned maintenance program. The latter consists in intervening, on the basis of a prior planning, before problems occur, or as soon as problems happen, so that they do not get worse.

**Maintenance is not expensive. It is easy. It allows the facility to last longer. It allows us to save our properties, keep our environment beautiful and lead us a healthy academic lives.**

**1） Actors in charge of maintenance :**

In general, the School Management Committee (SMC), in collaboration with the VDC and DEO, is in charge of organizing and conducting maintenance activities for primary, lower secondary, secondary and higher secondary schools.

Certainly, it is not possible for the SMC to handle all the problems. There may be issues that require professional work, for instance, emptying a septic tank and fixing complex plumbing and electrical works.

However, prevention, day-to-day monitoring, and minor repairs which are feasible for the school to handle on its own, are some of the matters that should be everyone's concern and responsibility.

For the effective implementation of the maintenance activities, it is necessary to secure a commitment and leadership of the SMC chairman and school principal.

**2） The Maintenance Procedure: Actions to be undertaken**

The following actions should be undertaken:

- Sensitization of students, teachers, and all actors of the school on the importance of daily monitoring and maintenance of the facilities, and behavioral rules is needed
- Regular and systematic monitoring of the condition of all buildings, equipment / furniture and space of the school
- Regular maintenance of infrastructure, equipment / furniture, and space of the entire facility
- Minor repairs
- Sending a request letter to DEO for major repairs in a timely manner and following it up (it may require involvement of the VDC and specialists (if applicable)).

**3） Recommended tools for proper maintenance :**

- The programme for regular maintenance tasks (see Annex 1)
- The monitoring and maintenance action plan: tasks, frequency, identification of actors in charge and mobilization of resources (see Annex 2 and 3)
- Monitoring sheet for building and furniture, exterior space, sanitary and electric facilities (see Annex 4, 5 and 6)

## II. Useful instruction for regular maintenance activities

### A. Maintenance of building, equipment and furniture

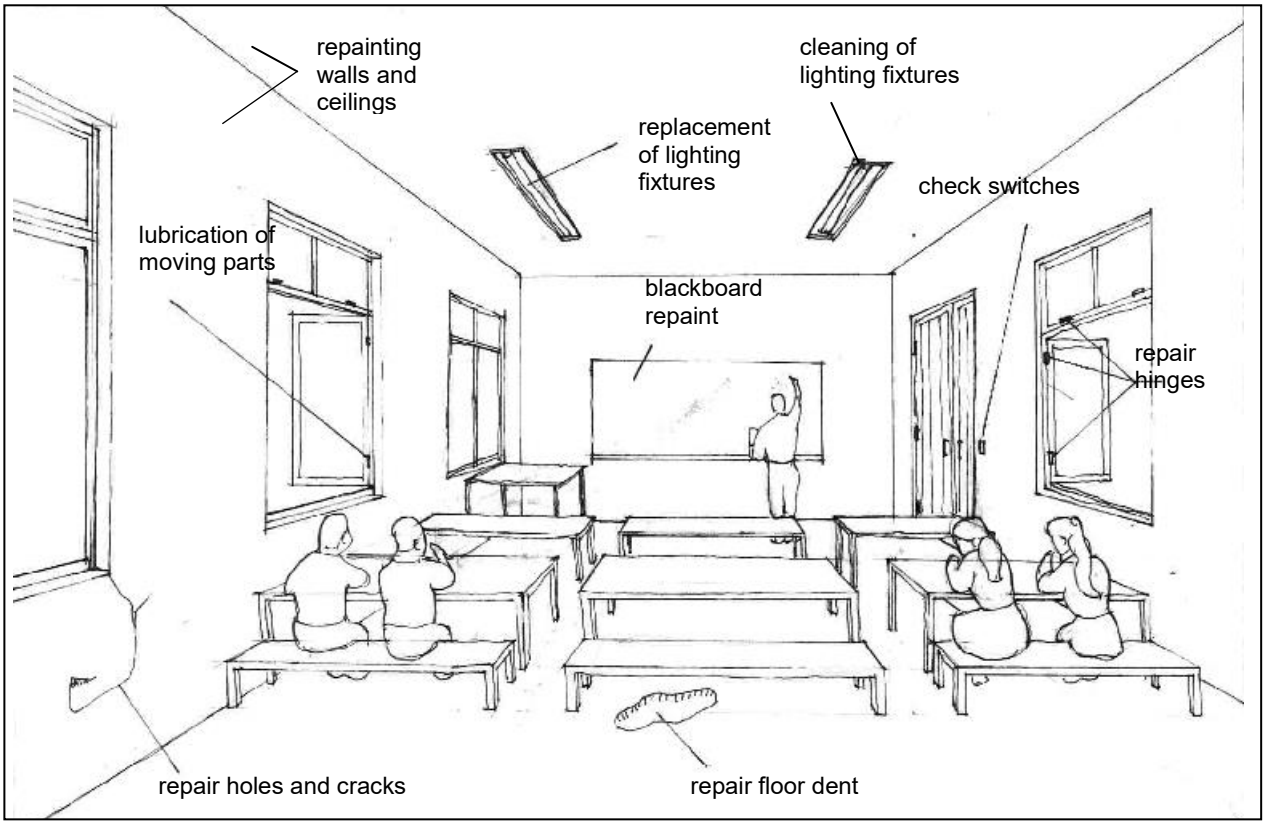



**Figure 1 : Regular Maintenance of Classroom**

**1） Daily Cleaning of the classrooms, office, equipment and furniture**

On a daily basis, with a clean wiping tissue, the surface of the equipment / furniture of each classroom and office be cleaned to remove the dust, and to be swept each classroom and office. These will contribute to the creation of nice and clean environment favorable to the pedagogical and administrative activities.

**2） Garbage collection**

The garbage produced daily at the facility must be treated properly and regularly which will lead a healthy environment.

**3） Cleaning the roof**

The leaves, branches and stones that could fall on the roofs of the buildings can deteriorate them. It is, therefore, necessary to clean the roof regularly and prune overhanging branches.
Further, the solar power panels installed on the roof shall be periodically cleaned in order to secure stable power supply.

**4） Lubrication of moving parts (hinges, door locks, windows, shutters, etc.)**

This task, which is to be performed once every six months, is simple to carry out, but very important. It should, therefore, not be neglected. Just put a few drops of drainage oil / mineral oil on the moving parts (door, shutter hinge or movable blade…), and then move the item for the oil to enter and spread.

**CAUTION***: Vegetable oil is not suitable because it degrades.*

Tools and materials needed: Mineral-based oil / oil bottle.

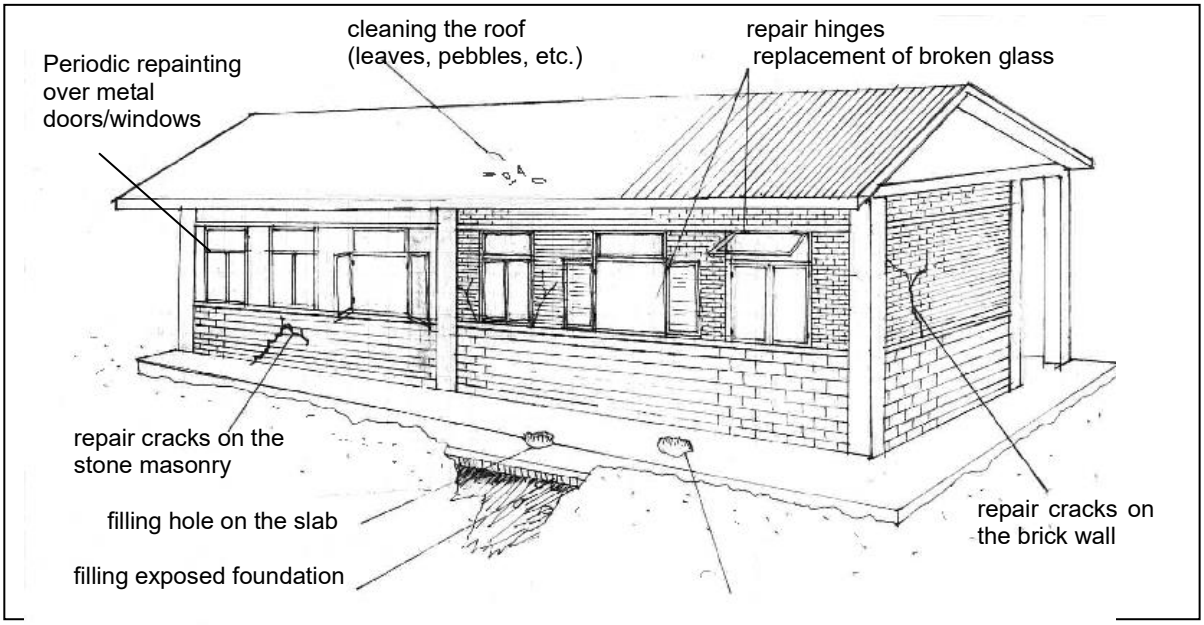



**Figure 2 : Regular Maintenance of Exterior**

### 5） Re-painting

Periodic re-painting is very important for the preventive maintenance of the facility. It protects the materials and gives a clean and pleasant atmosphere. There is no universal type of the paint that is suitable for all the materials. For the schools build by ESRP, we generally need five types of paintings:

**Table 2 : Painting Type of the Project**

| TYPE OF PAINT | USE |
|---|---|
| Distemper paint | Interior walls, beams, columns and ceilings |
| Exterior weather coat paint (100% acrylic) | Exterior walls, beams and columns |
| Clear silicon water-repellant coating | Exterior brick surface |
| Enamel paint | Wood and metal parts: doors, shutters, windows, hand rails , wire fences, painted metal structures |
| Blackboard paint | Blackboard |

## B. Maintenance of outdoor space

### 1） Daily cleaning of outdoor space

Throwing garbage (empty water bags, packaging papers, etc.) anywhere attracts insects and small animals, rats, in particular, which ultimately cause diseases and damage buildings. To avoid these, it is recommended to:

- collect garbage in the yard every day;
- then proceed to sort out some waste to be incinerated, buried or just disposed in a dump, taking into account the degrading nature of those wastes for the environment while paying attention to the wind and fire risks.

Never leave any garbage in pile because this would attract animals and insects. We must remember that it is important for us not to throw paper or garbage on the yard so that the facility can be kept clean and nice.

### 2） Maintenance of trees, shrubs and plants

It is important to respect the maintenance of trees, shrubs and plants. They prevent soil erosion caused by the wind and trickling of rainwater. The roots of trees and other plants hold the soil and

their leaves provide shade to users of the school facility.

Given this importance, it is therefore necessary to protect them against animals (mainly cows and goats), by setting up wire fences, wood or metal barriers, concrete facilities, etc. In addition to that, watering them to ensure their survival.

Maintenance also involves putting new plants. However, it is recommended to put these new plantings far enough from buildings considering their roots and branches, when they are too close, it could damage foundations and cause other deteriorations. Besides, pruning trees is necessary to protect buildings against harmful branches or to just rejuvenate them.

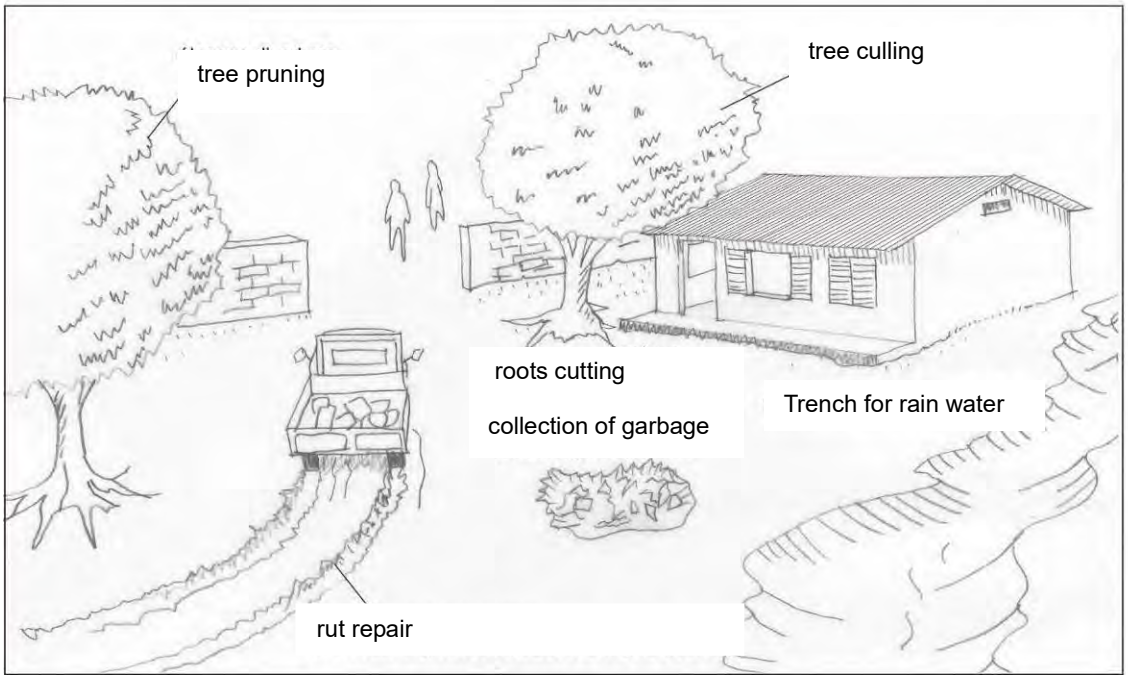



**Figure 3 : Maintenance of Exterior Space**

## C. Maintenance of sanitary facilities

### 1) Daily cleaning of sanitary facilities

It is very important to keep the toilets clean and sanitize them every day.

- Pour water in the toilet and all around, after each use.
- Brush vigorously to remove all dirt, especially in the interior of the bowl.
- Rinse with clean water.
- Dry any water puddles.
- Conduct regular removal of cobwebs

In addition to this cleaning, once a week, scrub with a clean brush all surfaces of bowls with soap, powder or liquid detergent, bleach or other disinfectant, mainly the disinfectant soap / detergent.

### 2) Unclogging toilets

It may happen that the water in the toilet does not drain. This is the case when drainage system is blocked (see Figure 4).

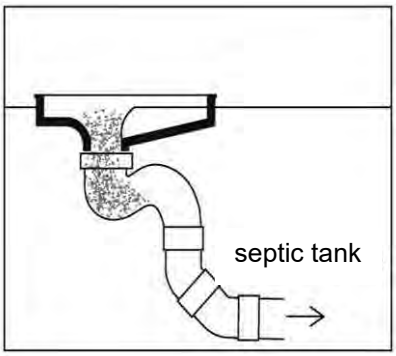



**Figure 4 : Clogged Toilet Bowl**

How to remove the cluster:
a. Quickly pour a bucket of water down the toilet or pull the flush, to ensure that the cluster that clogs the drain can be removed by the water wave.
b. If the bowl is always full of water, take an iron wire of 2m long that is firmly enough. Twist its end into a loosened spring of at least 10cm.
c. Insert this twisted end of the wire into the bowl and shake it vigorously back and forth.
d. Continue until the cluster is removed and the water level drops.
e. Pour water again or pull the flush. If the toilet is still blocked, call a plumber without further delay.

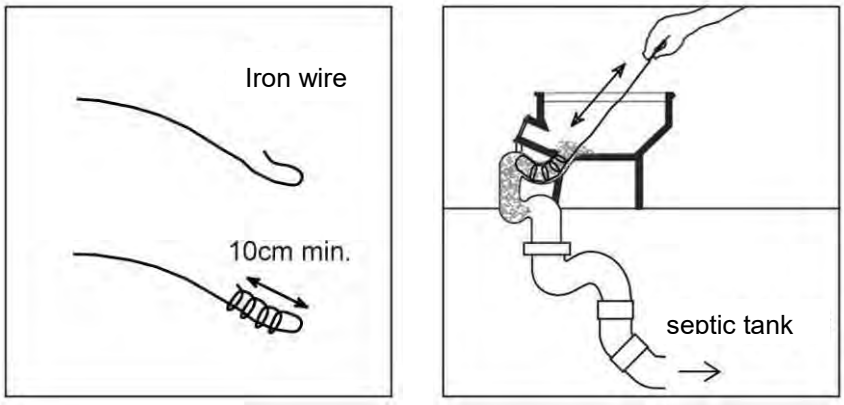



**Figure 5 : Clearing of Clogged Bowl**

Required tools and materials: Iron wire

**3） Disinfection of toilets**
The most common operations:

a. Wash down with running water all surfaces inside and in the immediate vicinity of the sanitary facilities.
b. Dry any puddle of water caused.
c. Scrub the seats or steps and their immediate surroundings with the following products:

- Soap, liquid or powdered detergent
- Bleach
- Disinfectant soap/detergent

d. Periodically spray inside and the immediate vicinity of the sanitary facilities with insecticide to prevent outbreaks of mosquito larvae and the proliferation of cockroaches.

# Chapter 2: Conducting monitoring and maintenance at school

## I. Guidelines for organizing and conducting the internal monitoring

### A. Monitoring of buildings, furniture and outdoor space

It is necessary to monitor the entire facility of the school, at least once a month. This regular monitoring allows identifying problems at early stage so as to solve them more easily.

When monitoring, examining each room (equipment and furniture), and each building and outdoor space.
Record all observations and actions to be undertaken in a monitoring form elaborated for each facility.

The filled monitoring forms should be filed in a folder and kept at SMC or principal's office. This folder will allow assessing the action of everyone and following the good maintenance practices as a whole.

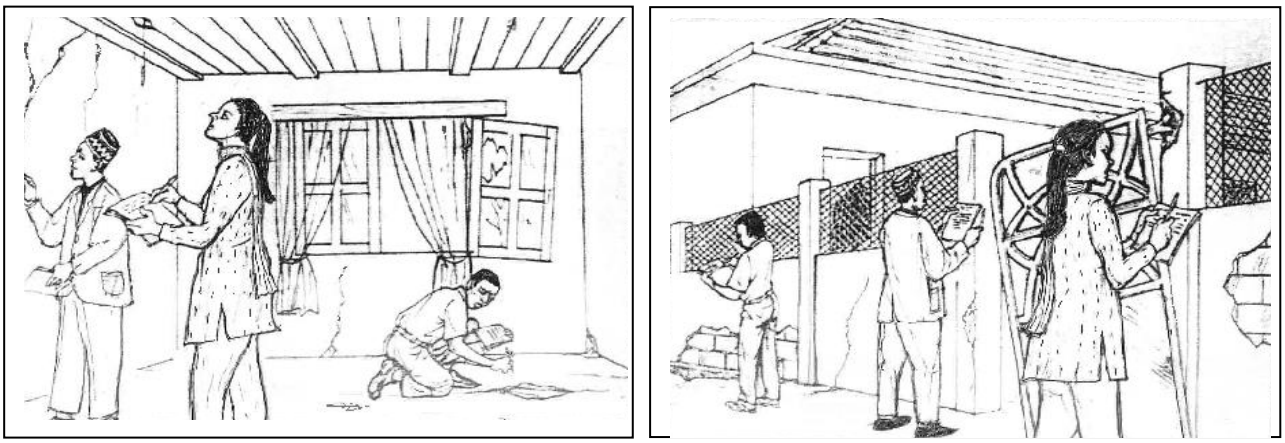


**Figure 6 : Monitoring Activity**

Those in charge of the facility monitoring conduct the monitoring of all buildings, equipment, furniture and outdoor space, using the sample of the monitoring forms in the Annex.

Inspection forms in the Annex are to be duplicated either by handwriting or by photocopying so as to obtain the following distribution:

- one monitoring form for infrastructure and furniture (Annex 4);
- one monitoring form for the sanitary and electric facilities (Annex 5);
- one monitoring form for outdoor space (Annex 6).

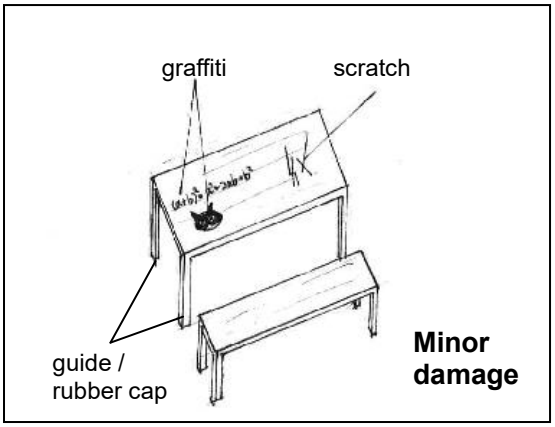
The aim is to identify any minor or/and major damage of the facility, including the outdoor space, to be repaired.

**1） Minor damages**

On the one hand, for minor damages we may consider all the problems found, SMC may be able to fix by themselves with the participation of the students, teachers, non-teaching staff and sometimes with some contribution from the local artisans.

**2） Major damages**

On the other hand, damages that require major intervention cannot be settled locally. Either because they are too complicated and require professional services, or they require a lot of materials, and / or costs that exceeds the capabilities of SMC.



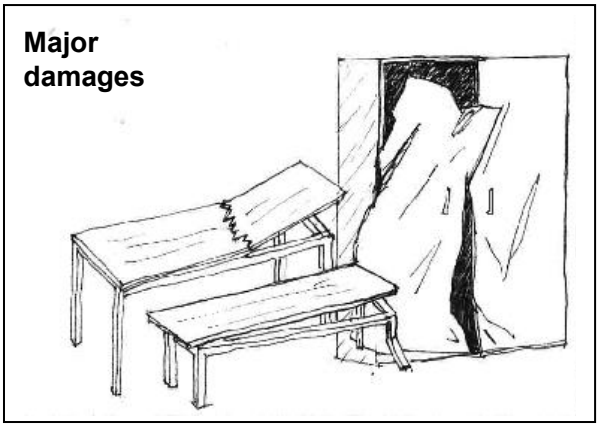




**Figure 7 : Minor and Major Damage of Furniture**

### 3） Types of minor and major damages

**Table 3 : Example of Minor and Major Damages**

| Minor damages | Major damages |
|---|---|
| Loose screw for doors and windows, broken glass | Crushing trees, or tree roots under the slab |
| Clogged toilets | Excessive rust on doors and windows |
| Deterioration of paint and the presence of holes in the walls | Large cracks on the walls |
| Leaking roof | Breaking out roof, rusty frame |
| Little damages of furniture | Faulty electrical system |
| Failure lighting fixtures or fuse, etc. | Floor settlement, etc. |

## B. Regular monitoring of sanitary facilities:

In order to prevent any damage or significant maintenance problem that can have a negative impact on the functioning of the toilets, it is useful to conduct a regular and systematic monitoring of all sanitary facilities.

- The cleanliness in and around the sanitary facilities: What can we observe or detect? Do we have any garbage? Do we see puddles of water from leakage or wastage from the taps?
- Are the toilet booths clean and functional?
- Do the faucets operate properly? Do we observe leakage or an early stage of leakage?
- Do the toilet flushing systems for handicap toilet work? What kind of problems do we observe?
- Are the water supply pipes functional? Do we observe degradations? What is their nature?
- Is the septic tank full? Is the leak-tightness confirmed? Do we observe any leakage?
- Is the sewer pipe from the toilet to the septic tank and from the septic tank to the soak pit clogged or leaking?

**It is important to regularly inspect, at least twice a year the septic tank as follows:**

Tools and materials required: a stick of at least 3m, cloth

**Steps :**

1. Wrap a 3m-long stick to two thirds of its length with light colored cloth (attach well).
2. Remove the lid of the tank and push the stick down to the bottom, taking into account the depth of the pit with regards to the length of the stick.
3. Remove the stick and check the level of sedimented slag, that is to say the level of dark spots on the cloth.
4. If the depth of the sedimented slag is superior to one third of the depth of the pit, it must be cleared by the specialists by using sump pump or vacuum vehicle.

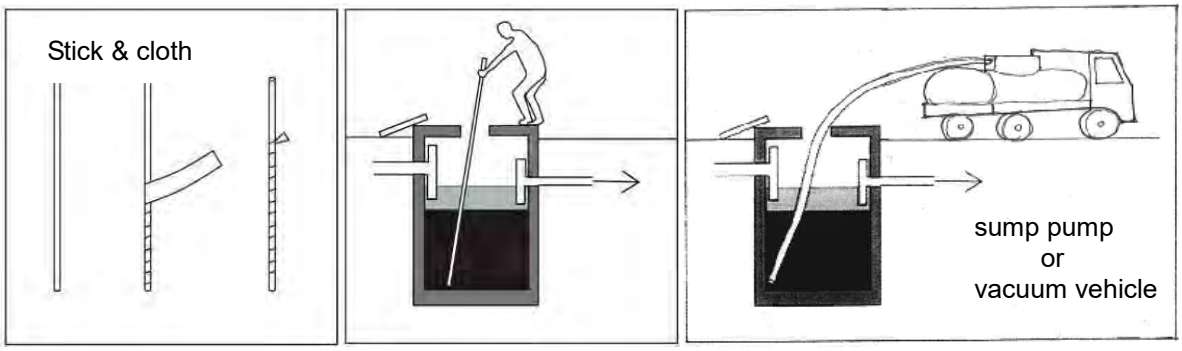



**Figure 8 : Maintenance of Septic Tank**

## II. What to do in case of damages?

From the analysis of monitoring results recorded in the Monitoring Sheets, there are three possible cases:

- aspects that need no special action other than the regular maintenance;
- those requiring minor repair,
- and those requiring major repair.

In the case of major repairs, it is essential to report these issues to DEO as quickly as possible through the SMC or school principal.

## III. Mobilization of resources necessary for maintenance:

Beyond commitments of all the stakeholders of SMC and schools for the proper maintenance of the facility, it is necessary to secure minimum resources to enable the implementation of planned maintenance actions. These resources may consist in human resources (physical input), material resources (donations of equipment and materials) or financial resources (money supply) which can be mobilized in several ways;

- Financing from the SMC fund;
- Financial provision from the VDC/DDC/I/NGOs;
- Financial or material contribution from the parents / community;
- Physical contribution of artisans within the parents / community;
- Donations from people of good will;
- Human resources of the students, teachers and non-teaching staff;
- Organization of recreational activities for fund raising;
- etc.

## IV. Annual maintenance cost for regular maintenance

The following table shows the roughly estimated annual maintenance cost for regular maintenance which should be outsourced to the professionals, when the floor area of all the school facilities is 5,000m2.

**Table 3: Annual Maintenance Cost for School (5,000m2)**

| Itenm | | Cost NPR | Frequency | Cost per year |
|---|---|---|---|---|
| Painting | Distemper paint (Interior walls, beams, columns and ceilings) | 225,000 | Once every 5 years | 45,000 |
| | Exterior weather coat paint (Exterior walls, beams and columns) | 85,000 | Once every 8 years | 10,625 |
| | Clear silicon water-repellant coating (Exterior brick surface) | 165,000 | Once every 8 years | 20,625 |
| | Enamel paint (Wood and metal parts: doors, shutters, windows, hand rails , wire fences, painted metal structures) | 80,000 | Once every 2 years | 40,000 |
| | Blackboard paint (Blackboard) | 26,000 | Once a year | 26,000 |
| Emptying septic tank | | 50,000 | Once every 5 years | 10,000 |
| Renewal of battery for solar power system | | 60,000 | Once every 4 years | 15,000 |
| Recharge of fire extinguisher | | 24,000 | Once every 2 years | 12,000 |
| | | | Total (NPR/year) | 179,250 |

# Conclusion

The prevention and maintenance actions enhance the life time of the facilities and they may also be able to ensure the security and the health of users.

In addition to regular maintenance activities, monitoring and sanitation of infrastructure are key elements for a good maintenance approach. It is therefore recommended to schedule the monitoring by setting up a plan in advance with specific date and people in charge.

Some common tasks of maintenance of infrastructure do not require high technical skills, and are accessible by any well organized SMC, determined to engage in the management of the facility maintenance activities.

But the tasks of greater complexity must be planned and carried out by real professionals of building, plumbing (for sanitary facilities) and electricity (for electric facilities). For that, fund-raising should be undertaken as soon as possible to respond to the maintenance efficiently and effectively. It will thus be important for the SMC to implement a fund raising plan to be used for maintenance activities, while involving the VDCs.

Finally, the maintenance of the facility of the schools should be a concern of all stakeholders, with the support of local authorities. This could be a new source of motivation to increase the momentum of the SMC in charge of school maintenance activity.

# ANNEX

## Annex 1 : Programme for Regular Maintenance Tasks

| TASK | | FREQUENCY | | | | MATERIALS REQUIRED |
|---|---|---|---|---|---|---|
| | | daily/several times a week | mid-term | long term | explanation | |
| Cleaning of classrooms,equipment and furniture | | ● | | | more than once a week with water and soap | Equipment for cleaning (cloths, broom, brushes, bucket), water, disinfectants (soap, bleach and others) |
| Cleaning of offices | | ● | | | more than once a week with water and soap | Cleaning equipment, disinfectants |
| Cleaning toilets / latrines | | ● | | | | Cleaning equipment, disinfectants |
| Cleaning outdoor area | | ● | | | | Cleaning equipment (broom) |
| Collection and disposal of garbage | | ● | | | | Trash bin |
| Cleaning solar power panels | | ● | | | once a monh | Ladder, safety belt, cloths, water |
| Cleaning roofs | | | ● | | once a year | Ladder, safety belt, stool, broom |
| Greasing moving parts of windows and doors | | | ● | | twice a year | Mineral based oil |
| Pruning and felling of trees, shrubs and plants | | | ● | | once a month | Machete, stool |
| Monitoring of septic tank | | | ● | | twice a year | Iron rod, stick at least 4 m long, cloths |
| Emptying of septic tanks | | | ● | | if necessary after monitoring of septic tank | Shovels, wheelbarrows, rakes, vacuum vihecle |
| Painting | exterior wall | | | ● | 1 time every 8 years | Brushes, buckets, brushes, whitewash / acrylic weather coat paint |
| | exterior exposed brick wall | | | ● | 1 time every 8 years | Clear silicon water-repellant coating |
| | interior wall | | | ● | 1 time every 5 years | Buckets, brushes, paint brushes, step ladder / distemper paint |
| | blackboard | | ● | | 1 time per year | Buckets, brushes, blackboard paint |
| | wooden part / furniture | | | ● | 1 time every 2 years | Brush, anti-rust paint, enamel paint |
| | metal frame, joinery (doors, windows, etc.) | | | ● | 1 time every 2 years | Brushes, wire brushes, buckets, sandpaper, primwer, enamel paint; antirust paint |
| Renewal of battery for solar power system | | | | ● | 1 time every 4 years | Budget request for DEO |
| Recharge of fire extinguisher | | | | ● | 1 time every 2 years | Budget request for DEO |
| Minor repairs identified during monitoring | | | | | as soon as possible after discovery | According to the repair |
| Major repair request sent to an authority | | | | | as soon as possible after discovery | Form for repair requst to DEO |

# Annex2 : Action Plan for Annual Maintenance

**Academic year** _____

**Date :** _____ /_____ / **20**_____

| ACTION | MONTH | | | | | | | | | | Total cost estimate | Source of funding | Responsible for execution |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| Daily cleaning of rooms, furniture, toilets, outdoor space | | | | | | | | | | | | | |
| Cleaning roofs | | | | | | | | | | | | | |
| Greasing the moving parts of windows and doors | | | | | | | | | | | | | |
| Pruning and felling of trees, shrubs and plants | | | | | | | | | | | | | |
| Inspection of the septic tank | | | | | | | | | | | | | |
| Emptying of septic tank | | | | | | | | | | | | | |
| Renewal of the painting blackboard | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Note: A column of the "Month" will be reserved exclusively for three months (July, August, September) corresponding to school holidays

## Annex 3 : Action Plan for Medium and Long Term Maintenance

**Academic Year _____** **Date : _____ /_____ / 20_____**

| ACTION | | Period / Frequency | FUNDRAISING PLAN | | | | | | | | Total cost estimate | Source of funding | Responsible for execution |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st YEAR | 2nd YEAR | 3rd YEAR | 4th YEAR | 5th YEAR | 6th YEAR | 7th YEAR | 8th YEAR | | | |
| **The renewal of painting** | **Exterior wall** | 1 time every 8 years | | | | | | | | | | | |
| | **Exterior exposed brick wall** | 1 time every 8 years | | | | | | | | | | | |
| | **Interior wall / ceiling** | 1 time every 5 years | | | | | | | | | | | |
| | **Carpentry / wooden part** | 1 time every 2 years | | | | | | | | | | | |
| | **Metal frame/ Metal part** | 1 time every 2 years | | | | | | | | | | | |
| **Renewal of battery for solar power system** | | 1 time every 4 years | | | | | | | | | | | |
| **Recharge of fire extinguisher** | | 1 time every 2 years | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

## Annex 4 : Monitoring Sheet for Building and Furniture

**Date : _____** **Monitored by : _____**

**Building Type and Location : _____**

| ASPECTS CONSIDERED | NO PROBLEM | MINOR DAMAGE | MAJOR DAMAGE | ACTIONS NEEDED |
|---|---|---|---|---|
| **Exterior :** | | | | |
| roofing | | | | |
| wall | | | | |
| peripheral paving | | | | |
| ramp and stairs | | | | |
| gate | | | | |
| doors and windows | | | | |
| hinges, bolts, locks | | | | |
| | | | | |
| **Interior :** | | | | |
| ceiling | | | | |
| wall | | | | |
| floor | | | | |
| doors and windows | | | | |
| | | | | |
| **Furniture :** | | | | |
| desks, chairs , cabinets, etc. | | | | |
| blackboards | | | | |

## Annex 5 : Monitoring Sheet for Exterior Space

**Date : _____** **Monitored by : _____**

| ASPECTS CONSIDERED | NO PROBLEM | MINOR DAMAGE | MAJOR DAMAGE | ACTIONS NEEDED |
|---|---|---|---|---|
| General cleanliness of the surrounding area | | | | |
| Collection and disposal of paper, garbage, excrement | | | | |
| Soil conditions (need for leveling) | | | | |
| Rain water drain | | | | |
| Condition of trees and roots | | | | |
| Condition of the fence | | | | |
| Condition of the hedge | | | | |
| Doors and windows | | | | |
| Fence | | | | |
| Condition of the plants and garden | | | | |
| Conditon of the sports field | | | | |
| Appearance of the septic tank | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

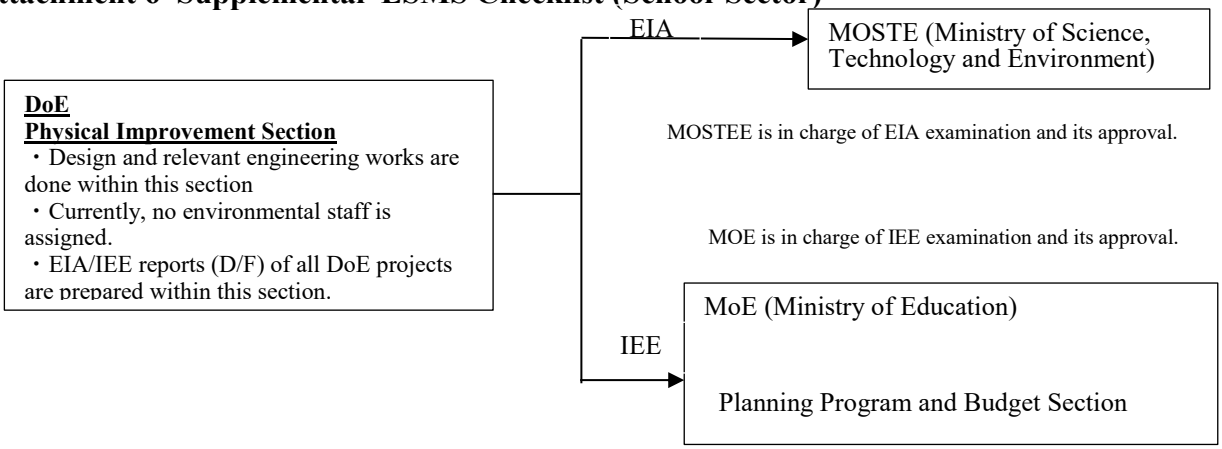
## Annex 6 : Monitoring Sheet : SANITARY and ELECTRICITY

**Date : _____** **Monitored by : _____**

| ASPECTS CONSIDERED | NO PROBLEM | MINOR DAMAGE | MAJOR DAMAGE | ACTIONS NEEDED |
|---|---|---|---|---|
| **SANITARY:** | | | | |
| water tank | | | | |
| water supply network | | | | |
| faucet, wash basin | | | | |
| toilet bowl, urinal, low tank, etc. | | | | |
| sewer network, manhole | | | | |
| septic tank and soak pit | | | | |
| incinerator | | | | |
| **ELECTRICITY :** | | | | |
| electric lines | | | | |
| switch board, distrubution board | | | | |
| lighting fixture / switch | | | | |
| outlet socket | | | | |
| celing fan / switch | | | | |
| solar power system | | | | |
| **OTHER :** | | | | |
| fire extinguisher | | | | |

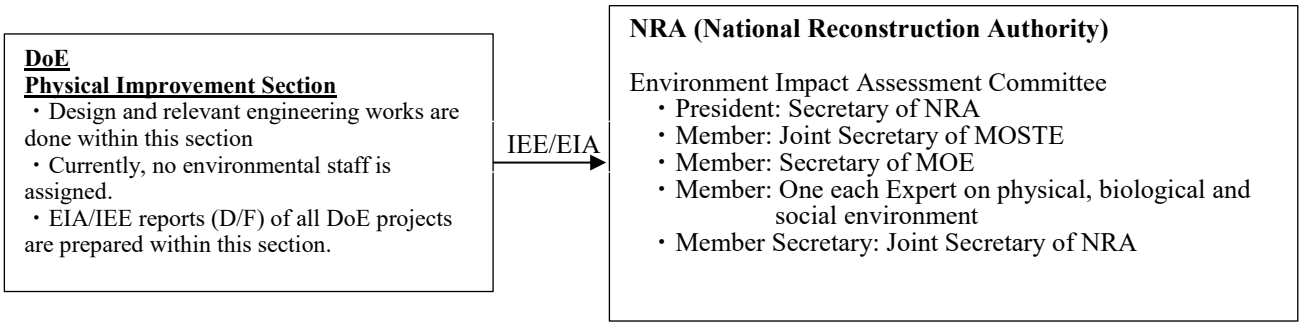
# Attachment 6
# Supplemental ESMS Checklist
# (School-Sector)

## Attachment 6 Supplemental ESMS Checklist (School-Sector)



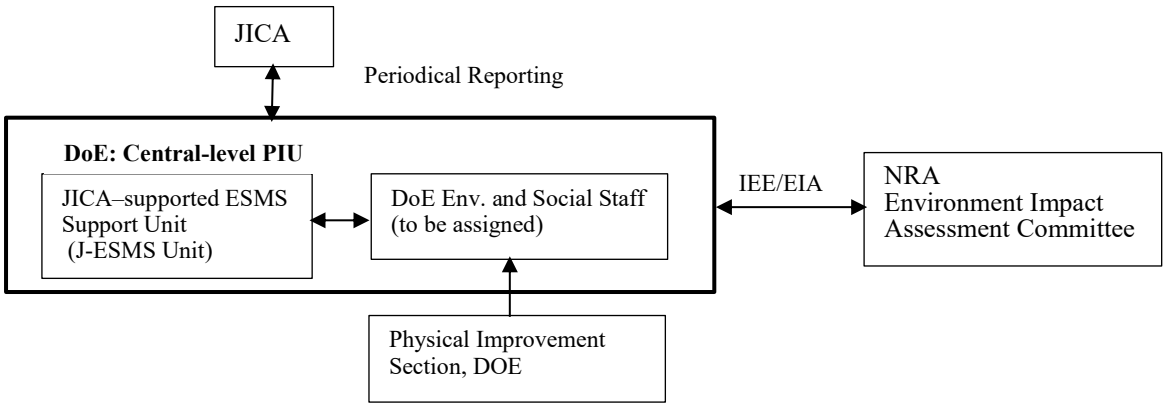

Note: EIA (D/F), prepared by DoE is examined by MOSTE, and then approved by MOSTE if report contents are satisfactory. IEE (D/F), prepared by DoE, is examined by MoE, and then approved by MoE if report contents are satisfactory.

**Figure 1a Regular Environmental Management Process (IEE/EIA): DOE based on EPA96 and EPR97**




Note: Both of EIA (D/F) and IEE (D/F), prepared by DoE is examined by NRA, and then approved by NRA if report contents are satisfactory.

**Figure A1b Environmental Management Process (IEE/EIA): DoE based on RA2015 and RR2015/16**




**ESMS Backup Framework for ESRP**

Main roles of J-ESMS Support Unit are ① Support environmental staff (to be assigned) of DoE in the preparation of the environmental clearance and relevant monitoring activities ②Periodical reporting to JICA ③ Establish proper liaison among NRA and MoE and/or MoSTE ④ Conduct capacity development and/or workshop for ESMS-implementation for school sector ⑤ Conduct environmental audit, review and evaluation of ESMS,⑥ Others

**Staff Allocation for proposed ESMS Implementation**

Basically, two staff (one environment and one social) are assigned at Central and District, respectively. Beside inspection team, consisting of two staff (one environment and one social) are assigned at each district, and this inspection team will go to the site and do relevant activities.

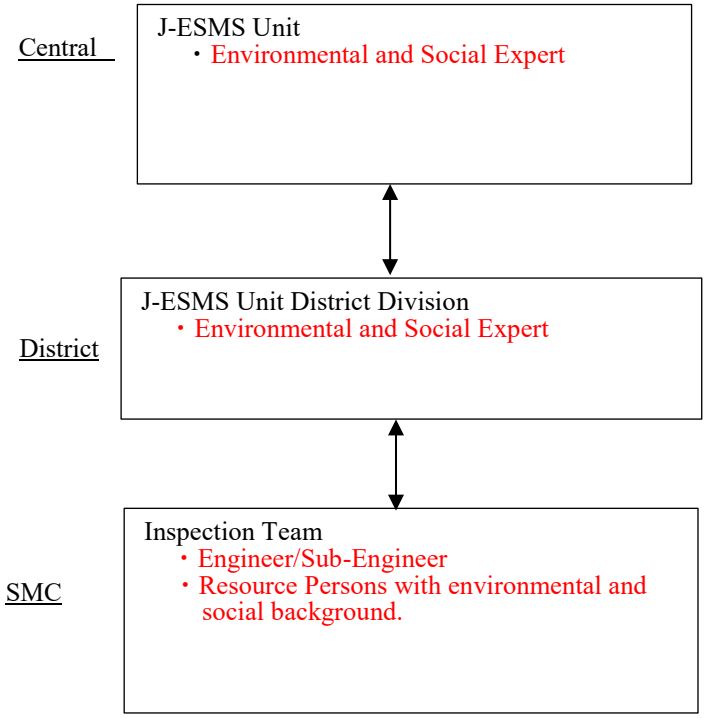
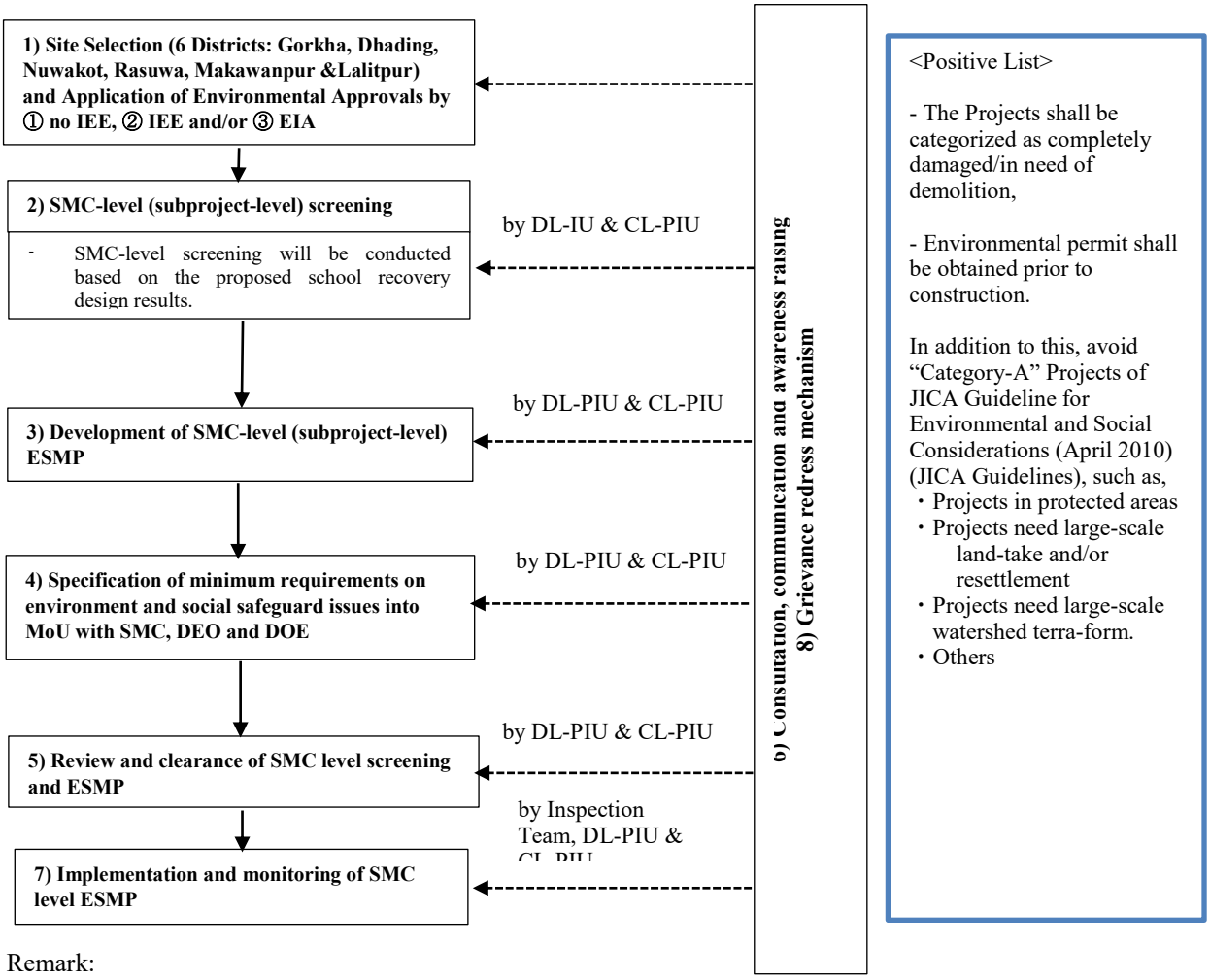


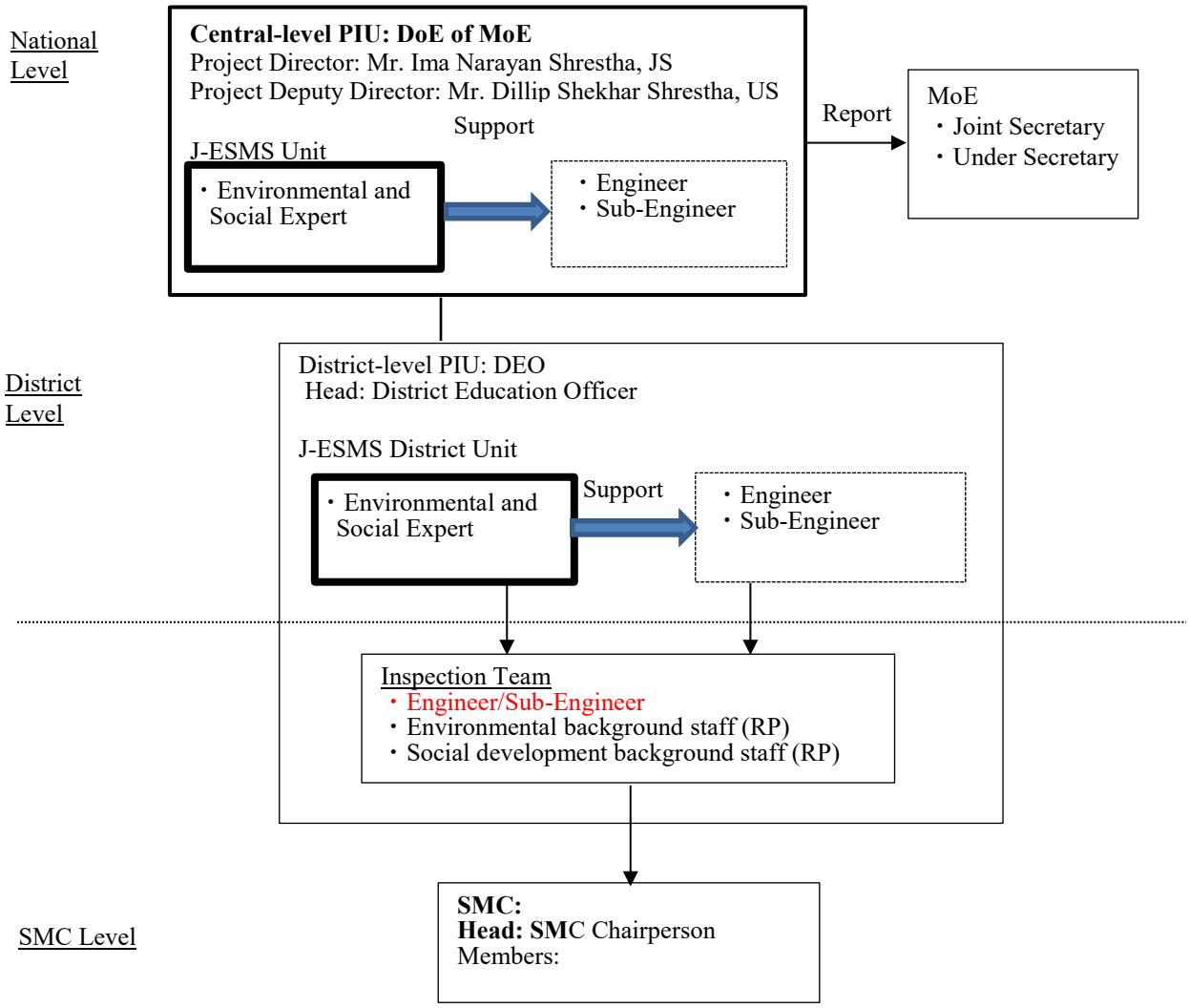

**Figure A1c ESMS Backup Framework for Emergency School Reconstruction Project (ESRP)**

ESMS Implementation Chart and Organogram




Remark:
1. The number with parenthesis of this flowchart refers the same number in subsection 3 of section 2. Procedures (screening category classification and review procedures) of the ESMS Checklist DoE.
2. Subproject will be defined by DL-PIU and CL-PIU as the coverage area of a SMC-level ESMS, which may be a ward, VDC or more than one settlement in a ward.

**Figure A2 Flowchart of Environmental Safeguards (tentative)**




Note: In principal, two staffs will be stationed at the central and district level. An inspection team composed by at least two members at district level for one-site monitoring at the SMC will be mobilized, providing monitoring and supervision of implementation of the ESMS adherence at SMCs.
Environmental monitoring at SMCs will be focused on community wide environmental management, i.e., natural reserve, steep slope, debris and waste disposal, river, important religious facilities, pollution, rendering the technical assistance and capacity building on ESMS implementation to the DoE subsidiary.

**Figure A3 Staff/Consultant Allocation for proposed ESMS Implementation**

# Attachment 7
# School Sector SMC-level ESMS Screening Checklist

**Attachment 7 School Sector SMC-level ESMS Screening Checklist**

DL-PIU➞ CL-

**Date:**
**Reported by:**

## A. General Information

| | | | | |
|---|---|---|---|---|
| 1. | Target District | | | |
| 2. | Name of VDC and Ward No | | | |
| 3. | Name of School | | | |
| 4. | Grade of School | | | |
| 5. | EMIS number (cord) of School | | | |
| 6. | GPS point | | | |
| 7. | No of Students | | | |
| 8. | Previous Address | | | |
| 9. | Name of Contractor | | | |
| 10. | Name of Representative of Contractor | | | |
| 11. | Contact No. of Rep. of Contractor | | | |
| 12. | Name of Representative of SMC | | | |
| 13. | Contact No. of Rep. of SMC | | | |
| 14. | Residence Engineer | | | |
| 15. | Contact No. of Rep. Residence Engineer of SMC | | | |
| 16. | Number of workers | | | |
| 17. | Reconstruction Activity | | | |

## B. Debris Management and Construction Material

| | | | | | |
|---|---|---|---|---|---|
| 1. | Quantity of debris generated (by type) | | | | |
| 2. | How was debris managed? | a. Bring to Disposal site<br>b. Throw them away<br>c. Burning<br>d. Just leave near school<br>e. Others (specify) | | | |
| 3. | Any disposal site near here? | a. Designated site<br>b. Non-Designated site (illegal)<br>c. Nearby fields<br>d. Others (specify) | | | |
| 4. | Quantity of debris that needs to be disposed | | | | |
| 5. | Any hazardous/toxic materials (e.g. lead, asbestos, plasterboard, paint thinners, strippers, and solvents, mercury, fluorescent bulbs, and aerosol cans) mixed with debris? | | | | |
| 6. | Quantity of reusable materials (by type) | Wood: | Brick: | Stone: | Others: |
| 7. | How debris reused as construction material? | | | | |

## C. Waste Management and Construction Material

| | | |
|---|---|---|
| 1. | What type of construction waste is generating? | a. Electrical material<br>b. Rubber<br>c. Wood |

| | | |
|---|---|---|
| | | d. Plastic<br>e. Scrap metal<br>f. Cement and bricks<br>g. Other (specify) |
| 2. | How does the management committee manage the construction waste? | a. Bring to Disposal site<br>b. Throw them away<br>c. Burning<br>d. Just leave near school<br>e. Others (specify) |
| 3. | On average how much construction waste is generate on daily basis. | |
| 4. | Any Discharge of Effluents (e.g., cement waste water and sanitary sewage)? | No<br>Yes (specify) |
| 5. | If Yes in previous question, how those effluents were discharged? | a. Discharged into designated sewerage.<br>b. Discharged into nearby tributaries<br>c. Throw them away at nearby field<br>d. Others (specify) |

## C. Other Typical Environmental and Social Issues

| | **Screening Questions** | Yes | No | Remarks |
|---|---|---|---|---|
| 1 | Is entire reconstruction site adjacent to or within any underground utility, culture heritage, protected area, wetland, buffer zone or any special area protecting? | | | |
| 2 | Is the entire reconstruction site located in area susceptible to landslides, rock fall or erosion, flood prone areas and extreme conditions, fogs? | | | |
| 3 | How is the terrain condition of entire reconstruction site?<br>a. Flat (untouched)<br>b. Flat (developed after earthwork and/or any construction work)<br>c. Steep slope topography<br>d. Located at bottom of Steep Cliff<br>e. Located at mountain ridge,<br>f. Located at river floodplain<br>g. Others (specify ). | | | |
| 4 | Supplemental earthwork was done before reconstruction? | | | |
| | If yes, how much earthwork was done? | Refill: | | |
| | | Cut: | | |
| | If refill was done, how did they obtain refill material? | | | |
| | If soil cut was done, how did they treat those soil? | | | |
| 5 | Are there any encroachments on local important ecology (e.g. sensitive and protected area) around entire reconstruction site? | | | |
| 6 | Would entire reconstruction work pose risk to any endangered species therein? | | | |
| 7 | Is the reconstruction site close to either of tributaries, water recharge area, wells, water reservoirs and other water bodies? | | | |

| | | | | |
|---|---|---|---|---|
| 8 | Is there increased noise and air pollution resulting from increased traffic volume for the entire reconstruction work? | | | |
| 9 | Long term impacts on local hydrology as a result of building hard surface in or near the building? | | | |
| 10 | Is there occupational and community health and safety risk? | | | |
| 11 | Are there conflicts between the contractor and the local people? | | | |
| 12 | Will the entire reconstruction cause adverse potential impact? | | | |

**D. On-Site Instruction and/or Advice (ESMS-related)**

| |
|---|
| **Debris Management** |
| **Waste Management** |
| **Effluent Discharge** |

**E. Overall Complaints/Requests from SMC/local communities**

| |
|---|
| **Please specify.**<br>➢ |

**F. Photo Records**

**Questionnaire with SMC** **Foundation trench**

**H. Water Quality of nearby tributary** （by SMC）

Test Date:

Name and Organization of Examiner

Photo of tributary around the test point

| | |
|---|---|
| Photo 1 (Upstream Site)<br>GPS info of sampling point | Photo 2 (Downstream site)<br>GPS Info of sampling point |
| Test Result by Parameters<br>PH<br>DO<br>……. | |

**G. Screening conclusions**

It is advised that Inspection Team Members shall have a series of interviews with the members of SMC, several residents of nearby reconstruction site and the workers of Constructor, and then report the information mentioned above to the JICA-ESMS staff.

Inspection Team shall summarize conclusion regarding the SMC-level ESMS implementation based on the above information and interviews with residents of nearby communities

| |
|---|
| **(i)** Main environmental issues/concerns and/or complaints |
| **(ii)**Main Social issues/concerns and/or complaints |

**Prepared by Sub-engineer of DEO of District**

**Name: Signature:**

Sub-engineer, a member of Inspection team, who prepared this SMC-level ESMS Screening Checklist, shall have meeting to explain the result of screening to the concerned SMC, and shall obtain the SMC's agreement on it.

**Checked and approved by:**

# Attachment 8
# Power Point Presentation Slides of School-Sector ESMS Implementation Framework

## Attachment 8
**Power Point Presentation Slides of School-Sector ESMS Implementation Framework**

Capacity Development Program
for
School Sector Reconstruction

Guidance of ESMS Implementation and JICA Guideline
for
Loan Project Members

Spring 2017

Kathmandu

Slide 1

## Contents



Slide 2

## 1. JICA's Technical Assistance Policies

**7 Basic Policies**

1: Built Back Better (BBB)
2: Prompt Implementation
3: Implementation Based on Uniform Platform
4: Equality, Transparency & Consistency
5: Prevention of Corruption & Strict Information Management
6: Social & Environmental Considerations (ESMS).
7: Co-operation with On-going Projects

Slide 3

## 2. Purpose of JICA's ESMS (part 1)

- To ensure environmental soundness & sustainability of projects
- To support integration of environmental considerations into project decision-making process
- Identify & manage impacts and/or risk
- Provide framework for consultation & disclosure.
- Support development effectiveness - increase results on ground both short - & long term.

Slide 4

## 2. Purpose of JICA's ESMS (part 2)

- Improve and/or enhance perception and/or common understanding of environmental safeguard.
- Develop & improve District-wide, SMC and/or Cluster-based ESMS.
- Develop & improve implementation skill for school-sector reconstruction projects .
- Establish long-term ESMS Implementation Framework
- To contribute for sustainable socioeconomic growth in areas damaged by earthquake,
- To ensure social - & environment-friendly school reconstruction activities (i.e., earthquake resistance).

Slide 5

## 3. Best Practice for Material Selection, Use and Waste Management (part1 )

- Think through whole supply chain
- Only support sound & legal sourcing of materials
- Design to use fewer materials & reduce waste.
- Use local sources in sustainable way.
- Use disaster debris as reconstruction material.
- Use materials with recycled content & recycle as much as possible.

Slide 6

## 3. Best Practices for Material Selection, Use and Waste Management (part 2)

- Avoid waste
- Reuse gravel & boulders (e.g., from building rubble/encourage reuse from old buildings)
- Dispose of waste properly & safely; avoid unmanaged and unmonitored disposal
- Reduce pollution
- Encourage reuse of bricks from demolished buildings

Slide 7

## 3. Best practices for Material Selection, Use and Waste Management (part 3)

- Design & construct properly to ensure long-term durability
- Select areas where earth can be extracted without causing hazards or environmental impacts
- Encourage timber reuse from debris (e.g., door & window frames, roof members)
- Should be stored in dry place in suitable stack heights
- To ensure proper package & loading/unloading when transporting
- To use certified products if possible

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## 4. Debris Management (part 1)


Slide 9

## 4. Debris Management (part 2)


Slide 10

## 5. ESMS Implementation Framework (part 1)

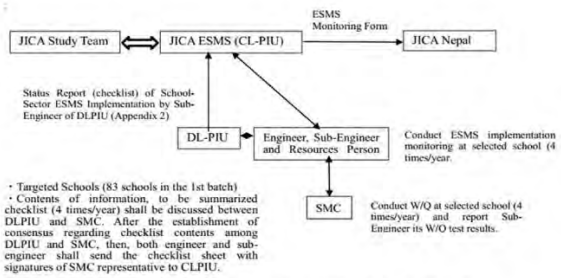


**Figure 1 JICA ESMS Persons and Periodical Reporting Framework (School Sector)**

Slide 11

## 5. ESMS Implementation Framework (part 2)

- 2 ESMS persons at Kathmandu (CLPIU)
  - ➡ International Staff 1
  - ➡ National Staff 1
- On-site Check (W/Q included) is conducted by DLPIU

On-site ESMS Survey Sheet Preparation by DLPIU Sub-Engineer (Dhading, Feb/2017)

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## 5. ESMS Implementation Framework (part 3)


Lalitpur


Makwanpur


Gorkha


Dhading

Slide 13

## 5. ESMS Implementation Framework (part 4)

- Started in October 2016 (on-going), in collaboration with DLPIU staff .
- Periodical Monitoring
- ESMS Monitoring Sheets shall be approved by SMC before submitting to DLPIU

SMC Representative approved ESMS Monitoring Survey Sheet, prepared by DLPIU Sub-engineer (Dhading)

Slide 14

## 6. ESMS Screening Checklist (part 1)

**General Information**

| | | | | |
|---|---|---|---|---|
| 1 | Target District | | | |
| 2 | Name of Municipality/VDC and Ward No. | | | |
| 3 | Name of School | | | |
| 4 | Grade of School | | | |
| 5 | EMIS number (cord) of School | | | |
| 6 | GPS point | | | |
| 7 | No of Students | Total: | Male: | Female: |
| 8 | Previous Address | On Same Place :<br>On Different Place: | | |
| 9 | Name of Contractor | | | |
| 10 | Name of Representative of Contractor | | | |
| 11 | Contact No. of Rep. of Contractor | | | |
| 12 | Name of Representative of SMC | | | |

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## 6. ESMS Screening Checklist (part 2)

| | | | | | |
|---|---|---|---|---|---|
| 13 | Contact No. of Rep. of SMC | | | | |
| 14 | Residence Engineer | | | | |
| 15 | Contact No. of Residence Engineer | | | | |
| 16 | Number of workers | Persons: | (local persons): | | |
| 17 | Reconstruction Activity | Started on: | Completed on: | | |

**B. Debris Management and Construction Material**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Quantity of debris generated (by type) | | | | |
| 2 | How was debris managed? | a. Bring to Disposal site<br>b. Throw them away<br>c. Burning<br>d. Just leave near school<br>e. Others (specify) | | | |
| 3 | Any disposal site near here? | a. Designated site<br>b. Non-Designated site (illegal)<br>c. Nearby fields<br>d. Others (specify) | | | |
| 4 | Quantity of debris that needs to be disposed | | | | |
| 5 | Any hazardous/toxic materials (e.g. lead, asbestos, plasterboard, paint thinners, sinpports, and solvents, mercury, fluorescent bulbs, and aerosol cans) mixed with debris? | | | | |
| 6 | Quantity of reusable materials (by type) | Wood: | Brick: | Stone: | Others: |
| 7 | How debris reused as construction material? | | | | |

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## 6. ESMS Screening Checklist (part 3)

**1. C. Waste Management and Construction Material**

| | | |
|---|---|---|
| 1. | What type of construction waste is generating? | a. Electrical wiring<br>b. Rubber<br>c. Wood<br>d. Plastic<br>e. Scrap metal<br>f. Cement and bricks<br>g. Other (specify) |
| 1. | How often does the management committee manage the construction waste? | a. Bring to Disposal site<br>b. Throw them away<br>c. Burning<br>d. Just leave near school<br>e. Others (specify) |
| 1. | On average how much construction waste is generate on daily basis. | |
| 1. | Any Discharge of Effluents (e.g., cement waste water and sanitary sewage)? | No<br>Yes (specify) |
| 1. | If Yes in previous question, how those effluents were discharged? | a. Discharged into designated sewerage.<br>b. Discharged into nearby tributaries<br>c. Throw them away at nearby field<br>d. Others (specify) |

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## 6. ESMS Screening Checklist (part 4)

**C. Other Typical Environmental and Social Issues**

| | Screening Questions | Yes | No | Remarks |
|---|---|---|---|---|
| 1 | Is entire reconstruction site adjacent to or within any underground utility, culture heritage, protected area, wetland, buffer zone or any special area protecting? | | | |
| 2 | Is the entire reconstruction site located in area susceptible to landslides, rock fall or erosion, flood prone areas and extreme conditions, fogs? | | | |
| 3 | How is the terrain condition of entire reconstruction site?<br>a. Flat (untouched)<br>b. Flat (developed after earthwork and/or any construction work)<br>c. Steep slope topography<br>d. Located at bottom of Steep Cliff<br>e. Located at mountain ridge,<br>f. Located at river floodplain<br>g. Others (specify ). | | | |
| 4 | Supplemental earthwork was done before reconstruction? | | | |
| | If yes, how much earthwork was done? | Refill:<br>Cut: | | |
| | If refill was done, how did they obtain refill material? | | | |
| | If soil cut was done, how did they treat those soil? | | | |

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## 6. ESMS Screening Checklist (part 5)

| | Screening Questions | Yes | No | Remarks |
|---|---|---|---|---|
| 5 | Are there any encroachments on local important ecology (e.g. sensitive and protected area) around entire reconstruction site? | | | |
| 6 | Would entire reconstruction work pose risk to any endangered species therein? | | | |
| 7 | Is the reconstruction site close to either of tributaries, water recharge area, wells, water reservoirs and other water bodies? | | | |
| 8 | Is there increased noise and air pollution resulting from increased traffic volume for the entire reconstruction work? | | | |
| 9 | Long term impacts on local hydrology as a result of building hard surface in or near the building? | | | |
| 10 | Is there occupational and community health and safety risk? | | | |
| 11 | Are there conflicts between the contractor and the local people? | | | |
| 12 | Will the entire reconstruction cause adverse potential impact? | | | |

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## 6. ESMS Screening Checklist (part 6)

| **D. On-Site Instruction and/or Advice (ESMS-related)** |
|---|
| Debris Management |
| Waste Management |
| Effluent Discharge |
| **E. Overall Complaints/Requests from SMC/local communities** |
| **Please specify:** |

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## 6. ESMS Screening Checklist (part 7)

| **F. Photo Records** | |
|---|---|
| Photo (overall photo from front side of construction) | Photo(overall photo from back side of construction) |
| Photo ( About Debris/waste Material) | Photo ( Land structure of coustruction site) |

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## 6. ESMS Screening Checklist (part 8)

**H. Water Quality of nearby tributary**

Test Date:

Name and Organization of Examiner

Photo of tributary around the test point

| Photo 1 (Upstream Site)<br>GPS info of sampling point | Photo 2 (Downstream site)<br>GPS Info of sampling point |
|---|---|
| Test Result by Parameters<br>PH<br>DO<br>…… | |

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## 6. ESMS Screening Checklist (part 9)

**G. Screening conclusions**

| (i) **Main environmental issues/concerns and/or complaints** |
|---|
| (i) **Main Social issues/concerns and/or complaints** |

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## 7. ESMS-related Water Quality Test (part 1)

- 14 Parameters
- Nearby rivers, springs, channels and/or water bodies.

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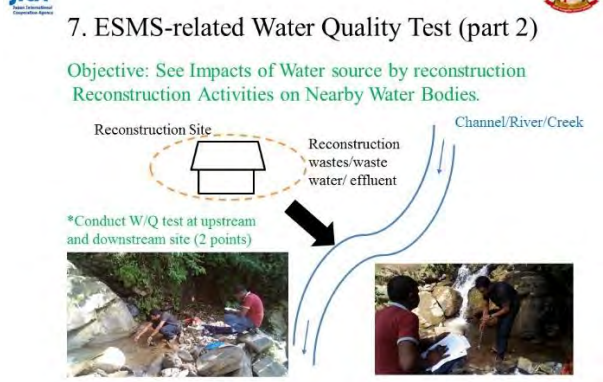


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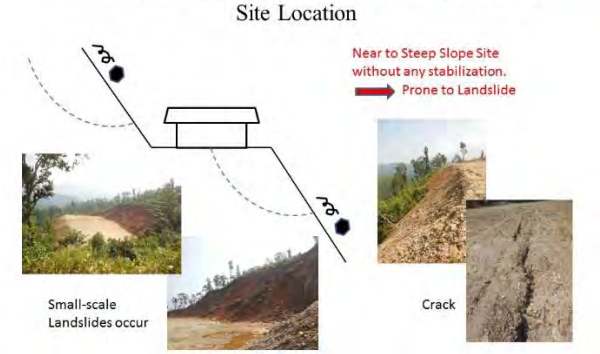


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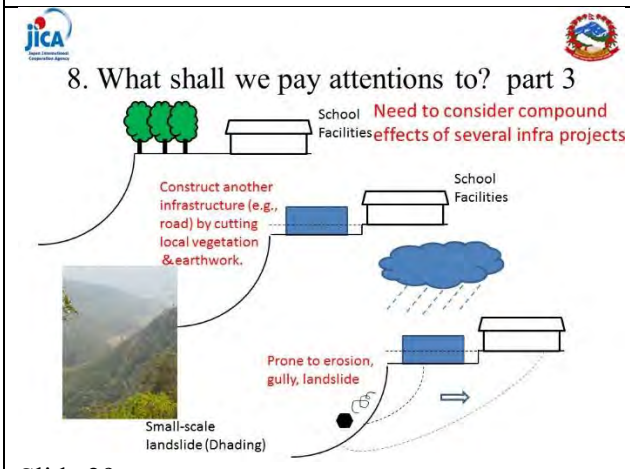


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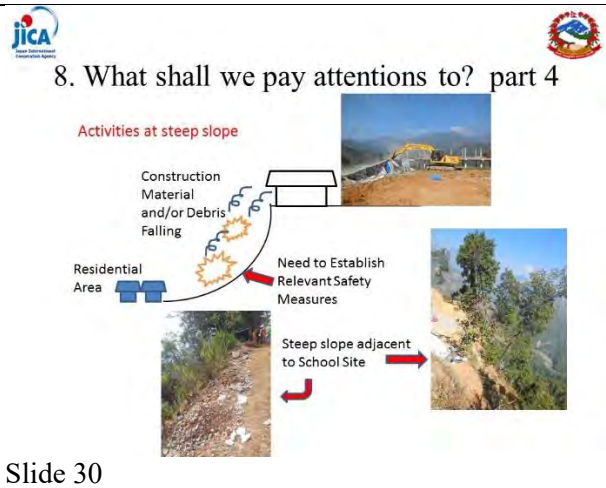


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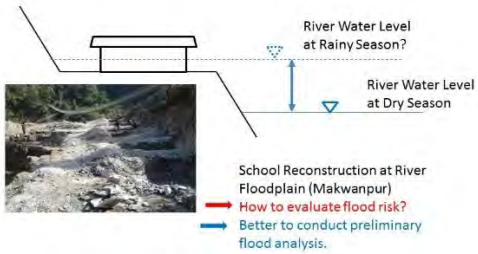
## 8. What shall we pay attentions to? part 5

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## 8. What shall we pay attentions to? part 6

**Without Safety** **With Safety**


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## 8. What shall we pay attentions to? part 7

**Sewage and Effluent Discharge**



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## 8. What shall we pay attentions to? part 8

**Waste and Debris Management**





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## 8. What shall we pay attentions to? part 9

**Nearby Agricultural and Forest Lands (Lalitpur)**

**Cultural Heritages (Dhading)**

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## 8. What shall we pay attentions to? part 10

**Impacts on Local transport system**


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## 8. What shall we pay attentions to? part 11

**Nearby Water Source**

**Slope Protection**

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## 8. What shall we pay attentions to? Part 9

- Review proposed Reconstruction Projects, and Identify negative and positive impacts of entire activities.
- Prepare for Mitigation Measures for identified negative impacts while Sharing same understanding among JICA, CLPIU, DLPIU, SMC , Loan Project Consulting Team and other key Stakeholders.
- Monitor if those identified negative issues are addressed properly. Provide on-site instructions if necessary.

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## 9. Summary of current ESMS Implementation Status

- 1st ESMS Monitoring Survey Sheet Submitted as part of entire project quarterly report (Lalitpur).
- School Reconstructions at Gorkha, Rasuwa & Malwanpur have started last year (ESMS under preparation).
- School Reconstruction at Dhading have started in Jan/17 (ESMS under preparation)
- Not started in Nuwakot (as of Feb/17)

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# Thank you

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