

# **Social Development Foundation**

## **Nuton Jibon Livelihood Improvement Project (P 149605)**

**The World Bank Assisted**

**Environment and Social Management Framework (ESMF)  
Final Report  
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## Executive Summary

The Nuton Jibon Livelihood Improvement Project (NJLIP) seeks to empower the poor and extreme poor, and improve their livelihoods and living conditions in the project areas. NJLIP builds on the implementation of SIPP-II and would seek to further strengthen market linkages and include nutrition messages and demonstrations into its community activities. Some rural small infrastructure works and rural livelihoods activities are undertaken in the sub-projects. These activities may induce adverse and unintended environmental and social impacts. The number, type and locations of sub-project interventions will be decided over the project period. Hence, the adverse environmental and social impacts of each sub-project cannot yet be identified and specified for mitigation. Therefore, the Environmental Social Management Framework (ESMF) has been prepared setting procedures and processes to be followed for environment and social impacts mitigation. NJLIP is categorized as Category B as per the World Bank safeguards requirements. The following provides a summary of the ESMF sections.

**Legal and Regulatory Environment.** A review of prevailing World Bank's Safeguards policy and National laws, acts and regulations was done. OP/BP 4.01 Environmental Assessment is applicable to the project as the project may have some minor impacts from rural small infrastructure, agriculture based livelihoods, and market facilitation which are likely to be site specific with no irreversible impacts and mitigation measures can be designed more readily. For this, the Environmental and Social Management Framework (ESMF) has been prepared. OP 4.09 Pest Management has been triggered as the project beneficiaries may use pesticides on a small scale. The EMF incorporates pest management guidelines and provides a negative list of pesticides. OP/BP 4.04 Natural Habitats has been triggered as a precautionary measure. OP/BP 4.10 Indigenous Peoples is applicable. The project will likely work in areas where indigenous people live and work with them for the improvement of their livelihoods. The Social Management Framework (SMF), therefore, includes a Small Ethnic and Vulnerable Communities Development Framework (SEVCDF) based on which specific sites will be screened and where relevant site specific Small Ethnic and Vulnerable Communities Development Plans (SEVCDP) will be prepared.

The Bangladesh Environmental Conservation Act (ECA), 1995, Environment Conservation Rules (ECR) 1997 and other relevant legislation have been reviewed to understand their Applicability to Nuton Jibon. ECR 1997 Schedule A states that "if the project implements a dairy farm with 25 cattle heads or below in rural areas and poultry up to 1,000 in rural areas, it will be considered as Orange A category and needs to obtain locational clearance. However, units of all kinds of cottage industries with an investment of less than BDT 500,000 remain outside the purview of ECC.

The Acquisition and Requisition of Immovable Property Ordinance, 1982 is the principal legal instrument governing land acquisition in Bangladesh is the Acquisition and Requisition of Immovable Property Ordinance, 1982 (Ordinance II of 1982 with amendments up to 1994) and other land laws and administrative manuals relevant to land administration in Bangladesh. According to the Ordinance, whenever it appears to the Government of Bangladesh that any property in any locality is needed or is likely to be needed for any public purpose or in the public interest, the Government can acquire the land provided that no property used by the



public for the purpose of religious worship, graveyard and cremation ground, after duly paying compensation as stipulated.

The Land Acquisition Act and the World Bank's OP 4.12 are not applicable to this project. The project will not permit the acquisition of private land nor will it undertake any activity that triggers OP 4.12 such as physical or economic displacement of people regardless of title, adverse impacts on livelihoods etc.

**Environment Management Process – Rural Small Infrastructure.** The project will implement following steps for ensuring environmental management in the planning and implementation of rural infrastructure and livelihood programs:

- Reviewing negative list of attributes and sub-projects
- Categorization and environment assessment of sub-projects, development of EMP
- Institutional arrangements
- Monitoring/External Environmental Audit
- Capacity building

**Negative list for Rural Small Infrastructure Sub-Projects:** The Project will not support any activities which may have significant environmental and social impacts. Specific sub-projects with any of the attributes listed below will be ineligible for support:

- **Roads:** Construction, reconstruction and extension of regional, national road and highway Construction/reconstruction of road involving major concrete/ reinforced cement concrete.
- **Dams/Embankment:** Construction/reconstruction of dam/embankment of more than 3 meters in height involving major concrete/ reinforced cement concrete
- **Water supply:** Tube-wells with arsenic higher than national standard (currently 50 ppb). Water supply schemes with probability of bacterial contamination or characteristics which make water unsuitable for drinking.
- **Sanitation:** No unsanitary pit latrines will be considered.
- **Drain/canal/pond:** Construction/reconstruction of drain, canal/pond excavation with loss of agriculture land.
- **Land filling:** Sub-projects that will impact major destruction of top soil of agricultural land. Land filling by industrial, household and commercial wastes.
- **Natural Habitats:** project activities could adversely affect wetlands or water bodies, either through pollution or hydrological changes or destroy the forest;
- **Disputed Land/ Environmental Sensitive Areas/ Cultural Heritage Resources:** No projects activities will be carried out in disputed lands or in the vicinity of lands restricted for development such as, Environmental Protected Areas/ Cultural Heritage Sites/or Socially Sensitive areas.

**Categorization and Screening of Rural Infrastructures.** Although a list of sub-projects has been identified, these will be finalized based on site situation and actual demand for development from the rural poor. Considering significance of negative environmental impacts and requirements of environmental assessment, sub-projects will be categorized into following three groups:

Category	Category 1 (Screening)	Category 2 (IEE)
Type of Works	Toilet Urinal Tube Well	Culverts Drains Canals Roads Wooden Bridges Buildings
Environmental Management Process	Filling Environmental Screening (ES) format Use of ECoPs given in ESMF	Filling IEE format Developing a specific EMP based on ECoPs given in ESMF
Category 3 (Excluded from EA requirement): Any proposal for maintenance or rehabilitation of existing interventions will not require environmental screening or IEE		

### **Category 1: Environmental Screening**

For Category 1 projects, the environmental impacts are identified through filling an Environmental Screening format with the objective to collect basic information on environmental aspects of the proposed sub-project. The ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection stage. For this purpose, a simple Environment Screening sheet is formulated for Rural Small Infrastructure sub-projects, annexed to this ESMF and filled by the Gram Samiti (GS) with the facilitation support of the Cluster Offices duly identifying the environmental issues of concern. The Community Groups undertake the screening through collection of field information and identifying the appropriate ECoPs from ESMF the help of the Cluster Offices and incorporate them into the sub-project proposals as mitigation and enhancement measures.

### **Category 2: Initial Environmental Examination (IEE)**

For Category 2 sub-projects, environmental issues are identified by filling in the Initial Environmental Examination (IEE) with the basic objective to collect basic information on environmental aspects of the proposed sub-project. The ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection. The IEE is filled by the GS with the facilitation support of the Cluster Offices duly identifying the environmental issues of concern. The Community Groups will do the screening through collection of necessary field data with the help of Cluster Mobilizers. When required, supplementary notes on environmental concerns will be added to the ES and IEE formats. The IEE will be attached to the sub-project project proposals. The district-level Infrastructure Expert and Livelihoods Experts review the adequacy of the IEE and sub-project proposals.

**Environmental Management Plan (EMP).** The environmental management plan of infrastructure sub-projects include mitigation and enhancement measures to address negative and enhance positive environmental impacts , implementation responsibility, cost of implementation of mitigation measures and a monitoring plan. For all sub-project categories, the below guidance should be used. SDF would ensure that relevant mitigation measures are being implemented for the sub-projects.

### Environmental Management Plan for Infrastructure

Activities	Impacts (Positive And Negative)	Enhancement/Mitigation Measures	Responsibility
Roads and Cross Drainage Works, Buildings	<p>Positive Impacts</p> <ul style="list-style-type: none"> <li>• Improved accessibility to markets</li> <li>• Improved quality of life</li> <li>• Greater employment generation</li> </ul> <p>Negative Impacts</p> <ul style="list-style-type: none"> <li>• Removal of vegetation during construction activities</li> <li>• Soil loss during the construction of structures and quarrying for stone and other materials</li> <li>• Siltation of water bodies downstream during construction</li> <li>• Low quality construction may lead to failure and more hazards in downstream</li> <li>• Destabilization of the land and soil erosion/landslips along the road cuttings</li> <li>• Maintenance of the structures will require additional responsibilities to the stakeholders.</li> <li>• Destruction of local flora during road construction and also along the roads.</li> <li>• Possibility of natural drainage pattern being disrupted</li> </ul> <p>The construction activities may cause temporary negative environmental impacts, which would need to be addressed. Some of the likely issues are the following:</p> <ul style="list-style-type: none"> <li>• During the construction of project components significant earth work may be involved, which may cause erosion of land and cutting of trees.</li> <li>• Impact on human health and safety due to dust and noise pollution, and inadequate safety measures.</li> </ul>	<p>Enhancement Measures</p> <ul style="list-style-type: none"> <li>• Keep the infrastructure in good condition</li> <li>• Use innovative public private people partnerships to build and maintain infrastructure</li> </ul> <p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Use of land not suitable for other productive purposes may be brought under infrastructure activities.</li> <li>• The safety provisions for Building to be followed.</li> <li>• Proper upkeep and maintenance of facilities built.</li> <li>• Quality of constructions should be ensured to reduce the failure and more hazards in downstream.</li> <li>• Proper designing and planning for road construction/laying will stabilize the land and reduce soil erosion/landslips.</li> <li>• Bio-physical measures to rehabilitate disturbed land to check soil erosion.</li> <li>• All project interventions will be appropriately designed to ensure that they do not impact the forest lands or wet lands. All the physical works should be on Parishad lands.</li> <li>• Suitable changes in location/ alignment shall be made in the schemes to avoid cutting of trees and also avoid erosion and ensure soil stabilization. In the absence of an alternate location, permission from the forest department shall be obtained for felling of trees and the department's guidelines on compensatory afforestation will be followed.</li> <li>• In case of some physical works associated with construction and maintenance there might be chance finds of objects of cultural/ archaeological importance. In such cases, the regional offices the Archaeological Department will be immediately notified.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District/ Cluster Offices</li> <li>• Community Groups</li> </ul>

**Environmental Management Process – Rural Livelihoods.** The Rural Livelihoods taken up by community households are basically agriculture/ animal/ dairy based. A negative list of sub-projects applicable to NJLIP is provided below:

- Pesticides: Use of pesticides under WHO Class Ia and Ib and Class II
- Wood: Activities that consume large amounts of wood without rehabilitation
- Activities that involve Genetically Modified Organisms (GMOs) that have not been approved by an independent panel of internationally recognized experts, and cleared by the World Bank and the Government of Bangladesh.
- Activities within Protected Areas (Wildlife Sanctuaries and National Parks).
- Activities involving significant conversion or degradation of critical natural habitats (mangroves, wetlands, etc.).

### Categorization and Screening

The livelihood program to be implemented under NJLIP will be categorized into following group considering the requirement of environmental assessment.

Livelihood	Excluded from EA	Category 1 (Screening )	Category 2 (IEE)
Livestock sector	Incubation of duck eggs by rice husk incubator /Bee keeping	Rearing of Cow/Ox/Goat/Sheep/ Beef fattening (< 25)	Dairy Farm with 25 cattle heads or more;
		Poultry / Quail/ Rabbit/	Poultry up to 1,000 birds
		Vermin-compost/ Biogas production	
Transport sector	Rickshaw/ cycle/ van/Motor cycle		
Agriculture sector		Home gardening/Fodder / Nursery/ Vegetable/ Maize/ Banana/ Potato/Sugar Cane/ Betel Leaf/Water Melon/ Basok medicine plantation/dyke plantation	
Fisheries sector		Fish culture (pond aquaculture)/ Fingerling/ Crab / Shrimp	
Small trade/ Value chain development	Tea shop/Grocery shop/ Rice husking		Value chain development on livestock/fisheries/ crops or any rural livelihood activities with an investment of >BDT 500,000
Others	Energy efficient cook-stove		
	Workshop/ Training		
Environmental Management Process	No screening required. But, a periodic monitoring will be required.	Use ESS format	Use IEE and follow DoE procedure for clearance.

### Category 1: Environmental Screening

For Category 1 sub-projects, the environmental impacts are identified through filling an Environmental Screening Sheet (ES) with the objective to collect basic information on environmental aspects of the proposed sub-project. Further the ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection stage. The ES is filled by the GS with the facilitation support of the

Cluster Offices duly identifying the environmental issues of concern. The Community Groups will do the screening through collection of necessary field data with the help of Cluster Mobilizers. The Cluster Mobilizers will assist the GS in identifying the appropriate ECoPs from ESMF and incorporate them into the sub-project proposals as mitigation and enhancement measures.

### **Category 2: Initial Environmental Examination**

For Category 2 sub-projects, the environmental impacts are identified in an Initial Environmental Examination Sheet (IEE) with the objective to collect basic information on environmental aspects of the proposed sub-project. Further the ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection stage. The IEE is filled by the GS with the facilitation support of the Cluster Offices duly identifying the environmental issues of concern. The Community Groups will do the filling through collection of necessary field data with the help of Cluster Mobilizers. The Cluster Mobilizers will assist the GS in identifying the appropriate ECoPs from the ESMF and incorporate them into the sub-project proposals as mitigation and enhancement measures. The implementation of the ECoPs will be regularly monitored by the Cluster Mobilizers and reported to District/ Regional Offices.

### **Environmental Management Plan (EMP)**

The environmental management plan of Nuton Jibon livelihood sub-projects include mitigation and enhancement measures to address negative and enhance positive environmental impacts , implementation responsibility, cost of implementation of mitigation measures and monitoring plan. For all categories of rural livelihood sub-projects, the attached guidance should be used. SDF would ensure that mitigation measures are implemented during sub-project implementation.

### **Integrated Pest Management Plan**

The Nuton Jibon groups take up rural livelihoods sub-projects involving home gardening, pond dyke farming, agriculture, and horticulture activities. In NJLIP, OP 4.09 (pest management) has been triggered since crop production or farming may lead to increased use of chemical pesticides. In order to avoid and mitigate the negative impacts of usage of pesticides, a Pest Management guideline has been prepared and all subproject proposals related to crop farming will carry out an environmental screening to identify the risk of pesticides use and suggest implementation of IPM. In addition, the ESMF provided a guideline for handling of pesticides and a list of banned toxic pesticides prohibited in Bangladesh

Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
Agriculture Based (Crops/ Fruits/ Vegetables/ Home/Kitchen Gardens/ Dye Cropping)	<p>Negative impacts</p> <ul style="list-style-type: none"> <li>• Chemical fertilizer, pesticide &amp; insecticide pollution</li> <li>• Drainage congestion</li> <li>• Introduction of high yielding varieties might have impact on local agro biodiversity.</li> <li>• Excess use of GW deplete GW resource.</li> <li>• Use of Arsenic contaminated water for irrigation.</li> <li>• Use of pesticides without following guidelines.</li> <li>• High chemical residues in food crops.</li> <li>• Loss of useful insects (natural enemies to Pest)</li> <li>• Contamination of soil and water bodies nearby due to runoff.</li> <li>• Soil quality and microbial population would be affected due to high doses of fertilizers.</li> <li>• Salinization</li> <li>• GHG is associated with excess N fertilizer use.</li> <li>• Introducing new high yielding varieties may affect local biodiversity and may not offer necessary nutrition.</li> <li>• Use of chemicals is harmful to surroundings and health of consumers.</li> <li>• Water stagnation due to excess irrigation may cause stagnation, attract mosquitoes etc.</li> </ul>	<p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Use of bio-compost, organic mulch/ Green Manure and vermin compost and Suitable organic / biotic control of insects and pests will result in lesser use of permissible chemical fertilizers and pesticides. Selection of low water demanding crops and rain water harvesting, storage of surface water (of streams, nallah, etc.) through water storage ponds will help harvest more water for use in HYV cropping.</li> <li>• High water consumption crops like sugarcane, cotton, etc., should be discouraged</li> <li>• Selection of crops should be based on local water budget and traditional practices</li> <li>• High nutritional value traditional crops should not be totally replaced by high yielding varieties.</li> <li>• Levelling of crop field and maintenance of terraces/ bund to check water runoff and soil loss</li> <li>• Genetically manipulated varieties should be avoided</li> <li>• Integrated management of key pest of mulberry</li> <li>• Organic manure (sheep manure) application to enhance yield</li> <li>• Would be useful to consider traditional varieties with high nutritive values.</li> <li>• Follow organic methods to the extent possible.</li> <li>• Follow efficient practices of irrigation in the gardens.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>
Livestock based (Dairy/ Poultry/ Buffalo, Goat and Sheep Rearing)	<p>Negative Impacts</p> <ul style="list-style-type: none"> <li>• Land/ Vegetation degradation due to overgrazing.</li> <li>• Pollution from poor manure management.</li> <li>• Health risk (zoonotic diseases) from poor housekeeping and handling.</li> <li>• Promotion of only exotic breeds may lead to gradual extinction of indigenous breeds.</li> <li>• Hybrid animals are more prone to diseases and require intensive care and health care.</li> <li>• Loose/ moisturized feeding of urea-molasses brick</li> </ul>	<p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Fodder management incorporating fodder cultivation, stall feeding, rotational grazing, supplementary feeds, use of chaff cutter, etc.</li> <li>• Improved composting methods – pit composting.</li> <li>• Maintenance of safe distance between manure pit and water sources.</li> <li>• Construction of shed location and design as per recommendations.</li> <li>• Maintenance of shed sanitation and hygienic handling.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>

Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
	<p>may lead to poisoning.</p> <ul style="list-style-type: none"> <li>• Lack of nutritious forage may decline the productivity of improved cattle</li> <li>• Stress on pre and post natal care</li> <li>• Post project maintenance of animal health program might be a problem</li> <li>• Need for preservation of vaccines in cryogenic conditions</li> <li>• Increased risk of forest fire, habitat</li> <li>• Safety risk during chaff cutter operation.</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of improved indigenous breeds.</li> <li>• Increase stall feeding and reduce grazing on forest covers</li> <li>• Control feeding of urea-molasses bricks to avoid poisoning.</li> <li>• Proper packing and storage of treated fodder will not result in poisoning.</li> <li>• Animal health practices like storage of vaccines &amp; drugs, insemination center sets, etc. through veterinary depart. be adopted.</li> <li>• Bulk planting of fodder should be carried out on common lands.</li> <li>• Grass planting should be carried out in shallow trenches and ridges.</li> <li>• Proper disposal of dairy waste</li> <li>• Use of masks or nose cover (cloth) during wool processing.</li> <li>• Locate chaff cutter so as to prevent easy access by children.</li> <li>• Use chaff cutters with in-build safety mechanisms.</li> </ul>	
Fisheries Based	<p>Negative Impacts</p> <ul style="list-style-type: none"> <li>• Fish like Tilapia due to omnivorous nature can predate on small fish of native species.</li> <li>• Tilapia fish multiplies fast and may suppress aquatic diversity.</li> <li>• Excessive manuring leads to eutrophication and acidification. Chances of death of fishes.</li> <li>• Conflict among the users over common resources</li> <li>• More demand for water for many IGA activities.</li> <li>• Generation of waste from livelihood activities may cause nuisance, sanitation problems and diseases.</li> </ul>	<p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Species selection in polyculture should be as per recommendation of the DOF – and designed to avoid competition with other species and aquatic life. Use manure in recommended doses. Awareness among the users and proper training will help the users in fish farming activities.</li> <li>• Avoid washing pesticide cans of spraying equipment in fish ponds</li> <li>• Proper upkeep of premises to avoid fly and mosquito menace</li> <li>• Strengthening of village resource management institutions to reduce conflicts among the users over common resources.</li> <li>• Proper upkeep of premises to avoid fly and mosquito menace.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>

## Implementation Mechanism, Monitoring and Training

The following table summarizes environmental activities to be taken up during each sub-project cycle, objectives, process, responsibility and result of each activity by sub-project phase.

### Sub-project implementation phases and related safeguard activities

Nuton Jibon Subprojects/Activities	Environmental Safeguard	Responsibilities/ Institutional Arrangement
Pre-planning:	Review environmental criteria/ negative attribute	
Preparation of subproject proposals on Livelihood or infrastructure	Environmental Screening (ES) ↓	Community groups, Cluster Mobilizer
Conduct Environmental Assessment	Initial Environmental Examination (IEE) ↓	
	Preparation of EMP	
Planning (Appraisal and Selection of subprojects for funding)	Review ES/IEE and verify Environmental Mitigation Measures, Environmental Code of Practices (ECOPs), Health & Safety	Community groups, Cluster Mobilizer, Cluster Team Leader, EFP
Implementation	Compliance Monitoring & Compliance certification by Gram Samiti	Gram Samiti, Community groups, Cluster Mobilizer, Cluster Team Leader
Operation	Quarterly Progress Monitoring	Cluster and District Level Teams, EFP
	Environmental Audit	Consultants for Audit, EFP
Reporting	Half yearly progress report, Monitoring report	Cluster Team Leader, EFP

The ESMF requires detailed supervision, monitoring, and evaluation. SDF will appoint an Environment and Social Focal Points (EFP) at SDF and vesting all the Environment and Social Safeguards Supervision requirements with the respective Infrastructure and Livelihoods Specialists at Regional, District and Cluster Level. At field level, the Cluster Facilitator will be responsible for the implementation of the ESMF. At national and regional level, the EFP will be in charge of implementing the ESMF and guiding and overseeing the implementation of the ESMF at field level. SDF will also incorporate the provisions of the ESMF as action points in the Community Operations Manual and/or other similar document for the project. NJLIP will plan and implement following environmental monitoring, supervision and audit program to ensure environmental sustainability of infrastructure and livelihood programs: (i) Compliance monitoring by field units; (ii) Quarterly progress monitoring by the SDF; (iii) Yearly environmental and social assessment; (iv) Third Party Environmental Audit.

**Training and Capacity Building.** The Nuton Jibon staff will need to have skills and experience regarding the environmental aspects of sub-projects planning and implementation and that will be done through training program. The details of the proposed trainings are as below:

S. No	Training	Implementation schedule	No. of session	Indicative Unit Cost	Total Cost in BDT



1	Five Day Comprehensive ESMF Training for Master Trainers (ToT)	August 2015	1	10,00,000	10,00,000
2	One Day Orientation/ Learning Training Programs (Regional)	May - July 2015 July - Sept 2016	20	1,00,000	20,00,000
3	Five Day Comprehensive Training on ESMF to Key Players (Overseas)		1	20,00,000	20,00,000
4	Two Day Training on the ESMF, and Mitigation/ Management Plans (Regional)	May - July 2015 July - Sept 2016	10	2,00,000	20,00,000
5	One Day Training on the ESMF and Mitigation/ Management Plans (District)	May - July 2015 July - Sept 2016	20	50,000	10,00,000
6	One Day Workshops (National)	Mar 2015, Oct. 2017	5	1,00,000	5,00,000
7	One Day Workshops (Regional)	Mar 2015, Oct 2017	10	50,000	5,00,000

### Social Management Framework

NJLIP's project development objective intends that the project and sub-projects would yield positive and beneficial impacts on the target population. While the general dictum that says 'any and all development interventions will also have some negative impacts', is held in high esteem, the fact is that the negative impacts (if any) induced by NJLIP are negligible, insignificant and temporary. Keeping this in view the likely positive and negative impacts are listed below. The significance of these listed impacts would vary depending on the individual sub-project, its size and location. The size of the sub-projects would normally be small both physically and financially. Due to the likely small size of the sub-projects, adverse impacts, if any, would be at its minimum localized and reversible for the following reasons: (i) the project is rural livelihood project, (ii) the investments that go into these sub-projects are marginal, (iii) significantly low environmental and social impacts

**Positive Impacts.** The following positive impacts are predicted based on the assessment. The impacts could occur during the construction phase and/or operation phase. These possible positive impacts are listed below:

- Improved public safety and security
- Reduced sufferings during monsoons and adverse climatic conditions
- Better infrastructure and connectivity
- Improved access to services
- Productive use of time
- Improvements in income patterns
- Health and Environmental improvements
- Improvements in quality of life and human dignity
- Opportunities for social interaction
- Improved community participation and sense of ownership

**Adverse Social Impacts.** The proposed works may not have significant social impacts due to the nature, type and size of the works. However, the following social impacts could possibly arise out of the proposed projects:

- Inconvenience and nuisance to Public
  - Due to accumulation of excavated earth
  - Disturbance to traffic
  - Disruption of utilities such as water, electricity, telephone, cable, etc.
- Safety hazards
  - To the households in the neighborhood during construction

- Due to impact of vehicles on land outside RoW
  - Due to risk of accidents
- Health Hazards
  - Due to stagnation of water leading to mosquito breeding and public health problems
  - Due to spread of Contagious diseases/ AIDS at construction sites
- Impacts on Small Ethnic Communities

Implementing an appropriate Social Management Plan and a Small Ethnic and Vulnerable Communities Development Plan would mitigate the above mentioned potential negative social impacts.

**Negative List of Sub-Projects.** NJLIP will not support any activities which may have significant adverse social impacts involuntary land acquisition and resettlement and adverse impacts on small ethnic minorities and other vulnerable groups. Specific sub-projects with any of the attributes listed below will be ineligible for support under the project.

- **Involuntary Resettlement:** Activities that would involve involuntary resettlement (dams, roads, etc.). Moreover, the exclusion criteria will be applicable in cases of the displacement of squatters from public/private lands, disruption or closure of livelihood activities carried out by titles or untitled farmers, share croppers, crop loss or damage of any sort. The exclusion criteria will include any activity that has likelihood of leading to economic or physical displacement, whether the impact is temporary or permanent and whether it affects people with or without title.
- **Drain/canal/pond:** Construction/reconstruction of drain, canal/pond excavation with loss of agriculture land. (If there is any minor land requirement, this will be made available through either voluntary donation or direct purchase at market price from willing sellers. The Voluntary Donation given in this SMF ensures that no squatters or encroachers are affected.)
- **Disputed Land/ Sensitive Areas:** No projects activities will be carried out in disputed lands or lands restricted for development or environmentally and/or Socially Sensitive areas.

**Buying Land – Willing Buyer and Willing Seller.** NJLIP will not use land acquisition for land procurement. Land will be required only in case of establishing GS offices in the villages. However this Land requirement would be minimal at around 2 to 5 Decimals. Generally, if the land is required, Parishad land is the first preference and if parishad land is not suitable or available, then land is donated by community members. Specifically, in cases of Parishad/government/khas land, the project will ensure that the displacement of squatters from public/private lands, disruption or closure of livelihood activities carried out by untitled farmers, share croppers, crop loss or damage of any sort take place. Land purchase is opted as a last option.

**Voluntary Donation.** Whenever there is land requirement, GS will interact with the land owners and facilitate voluntary donation of land required for taking up sub-projects under the project. This use of voluntary donation option will be limited to small parcels, say 2 to 5 decimals, of land for rural roads and small plots of land for GS Office. Under no circumstances, the titleholder will be subjected to any pressure, directly or indirectly, to part with the land. For this reasons, the consultation process and the agreement will be thoroughly documented by the District units. These actions are expected to minimize adverse impacts on the local population and help in project benefits reaching all sections of community.

**Community Engagement.** NJLIP will ensure the engagement of target communities through continued consultations for planning and full community management of implementation and

monitoring of sub-project activities. Consultations will be held at regular intervals with target communities, GS/ GP members, women, etc. In general, the following consultations will be carried out during the project cycle.

- Socio-economic survey for preparing the baseline of the poor, hard core poor and vulnerable families
- Estimation of land requirement; possibilities of donation/ willing sale.
- Motivation of titleholders to facilitate the voluntary land donations
- Implementation of the IEC/ Communication plan for awareness creation about project activities
- Identifying livelihood support programs
- In order to keep the momentum of engagement, activity specific consultations and a quarterly overall consultation will be held with all community groups.

**Stakeholder Participation.** Nuton Jibon recognizes the fact that target communities are primary and key stakeholders of the project. Hence, the GS/ GPs would ensure that these stakeholders are consulted on issues and they participate in all the sub-project activities including planning and implementation. The GS/ GPs would address the legitimate concerns of community members and provide opportunities and avenues for consultation and their participation. In order to provide a sense of ownership and ensure sustainability, the community members would be a part of the decision making process. The project has a commitment for community participation in each of the sub-projects taken up.

**Special Attention to Women and Other Vulnerable Groups.** The vulnerable groups include Women Headed Households, Destitute, Below Poverty Line families, Old Aged, Differently Aabled, Chronically Ill, and Orphans. It is envisaged that in the course of conducting Social Assessment and preparing and implementing Social Management Plans, interests of these vulnerable groups would be adequately addressed and protected. Like in other projects, as per available experience, in these sub-projects as well, these groups are likely to experience differential socio-economic setbacks due to their disadvantaged positioning within socio-economic structures and processes. This is likely to be manifested most in the adverse conditions to their participation and engagement. In order to mitigate such impacts, SDF during verification and socio-economic survey shall collect information on the following:

**Balancing Poverty, Vulnerability and Resilience.** Nuton Jibon ensures that all members of the community will have access to the project services and benefits. The Poverty, Vulnerability and Resilience nexus is evident in Bangladesh. In order to ensure social justice, the project will prioritize the beneficiaries based on Poverty, Vulnerability to Shocks and Disasters and their Resilience to Shocks and Disasters.

**Grievance Redressal.** SDF has put in place a Multi-level Grievance Redress mechanism, structures and processes available to not only the Project Affected Persons but also the Project Beneficiaries who would enjoy the benefits of the project in terms of access to funds for reconstruction infrastructure and livelihoods opportunities. The multi-level includes Gram Parishad, Regional and National levels. The time period for Redressal of grievances is given below:

Level	Chairperson	Time period for redress of grievances
Village	President, Gram Parishad	Maximum of one week
Regional	Regional Director	Maximum of one fortnight
National	Managing Director	Maximum of one month

The aggrieved parties will have two kinds of options for addressing their grievances. One is the grievance redressed mechanism incorporate in this framework as above. The other is the general legal environment consisting of court of law to address their grievances. These options will be disclosed to the communities during the public consultation process.

### **Small Ethnic and Vulnerable Communities Development Plan**

The Small Ethnic Communities, especially the Saontals are amongst the poorest in the Project districts and hence will receive priority in NJLIP, i.e., Nuton Jibon. One of the prerequisites of a successful development plan for the Small Ethnic Communities is the preparation of a culturally appropriate development plan, with the involvement of the Small Ethnic Communities and based on full consideration of the options preferred by them. Being a community demand driven project, the active involvement of the Small Ethnic Communities at each stage of the project is a fundamental goal in Nuton Jibon. The involvement of the Small Ethnic Communities in planning, implementation and monitoring of the programs meant for their own development would be the cornerstone of the Small Ethnic and Vulnerable Communities Development Framework (SEVCDF) strategy in Nuton Jibon. The process of community participation in Small Ethnic Communities development would include establishment of viable and sustainable VDC, which are self-managed and self-governed. All project interventions would be guided by VDC. Such an approach would ensure that the development interventions are culturally appropriate. The development needs of each Small Ethnic Communities differ from each other, and therefore there cannot be one single model suited to all Small Ethnic Communities.

**Consultation with Small Ethnic Communities and Other Vulnerable.** The program has been actively working in areas where Small Ethnic Communities reside. Awareness raising and community level consultations with SECs are carried out regularly by the program. The SIPP being a community demand driven project, consultations are being held with Small Ethnic Communities in each project village at each stage of the project: planning, Implementation, monitoring and review. During the preparation of this Small Ethnic and Vulnerable Communities Development Plan (SEVCDP), consultations were held with the Small Ethnic Communities, their leaders and elected representatives. These consultations enabled identification of local problems and incorporation of indigenous knowledge into the SEVCDP.

**Key Issues.** The key issues from the point of view of the Small Ethnic Communities, to be addressed by the project, have been identified on the basis of information collected from field work and the consultation process undertaken with Small Ethnic Communities' elected representatives, NGOs and Government officials. These issues have been categorized under the following major categories:

#### **Backwardness and Impoverishment**

- Lack of awareness among Small Ethnic Communities' women and men on income generating activities
- Low productivity of lands.
- High incidence of landlessness, especially in plain areas
- Depletion of natural forest and common property resources
- Lack of awareness on processing and marketing of agriculture and horticulture produce.
- Lack of market linkages for handicrafts made by Small Ethnic Communities.
- Lack of employment to educated youth.
- Lack of assistance to differently abled persons

#### **Insecurity and Vulnerability**

- Food insecurity during lean seasons
- Vulnerability to natural disasters and social shocks.

Lack of Awareness

- Lack of awareness on Small Ethnic Communities culture to the field level functionaries
- Lack of Gender sensitization among field level functionaries and Small Ethnic and Minority Communities.

Other Issues

- Involvement of traditional Small Ethnic Communities councils in development
- Language skills only in ethnic minorities' dialects are a hindrance for access to education.
- High incidence of dropouts especially among girls.
- Lack of awareness on health, hygiene and sanitation.
- Lack of access to common property resources.

**Institutional.** Mobilization of ethnic minority men and women to form VDC and CG for accessing social assistance and community infrastructure services and benefits is the priority of the project. Orientation and training to the functionaries of VDC and CG on project objectives, preparation, implementation and monitoring of plans need to be given for their proper and continued participation. Small Ethnic Communities capacity needs to be built for voicing and attaining their rights.

**Small Ethnic and Vulnerable Communities Development Plan.** The SEVCDP will consider:

- The ethnic and demographic characteristics of the affected population
- The prevailing intuitions as family, religion, language and education and other indigenous variables and social stigma
- This Plan will accommodate the local traditional leadership (as headman, karbari), gender issues, and civil and NGOs in their implementation plan
- The land ownership pattern and availability of required land for taking up agriculture related livelihoods interventions
- The positive and negative impacts on the prevailing institutions; both formal and informal
- To ensure adequate and appropriate consultation and communication, and their participation and approval of their implementation of project inputs and mitigation plan.

A SEVCDP will be prepared for each village where the small ethnic minority population constitutes more than 5% of the village population. The objectives of the SEVCDP are:

- To evolve a development process which fosters full respect for dignity, human rights and cultural integrity of SECs
- To ensure that they do not suffer adverse effects during the development process
- To take up economic benefit programs which are culturally and socially compatible

**SEVC Participation.** The SEVCDP aims at building strong self-reliant and self-managing institutions of SEC, and through these institutions enable the SEC to access economic and social opportunities to overcome poverty and raise their living standards. Consultations revealed that SEC are cohesive and have come together as strong groups to Implement programs of relevance to their communities like construction of school buildings, community buildings, link roads, small irrigation, drainage structures, etc. The SEC Development Plan will foster and strengthen self-managed institutions of SEC. All development interventions under Nuton Jibon will be undertaken with the complete

involvement of the SEC. The SEVCDP undertaken by SEC will identify opportunities and possible interventions. The development plan will take into consideration the locational variations like tribes living in remote areas, tribes living in relatively developed areas and tribes living in rural areas along with non-SEC. All field workers and their supervisors working in the SEC areas would be oriented towards SEC culture and development Issues to enable them to appreciate the importance of SEC culture while working among them. With this participatory strategy, there would not be any potential adverse impacts on the SEC, as they are completely involved in each and every stage of the intervention process.

**Negative Attributes for Sub-Projects.** Nuton Jibon will not undertake any interventions which will adversely affect SECs with long-term negative consequences in the following manner:

- Threaten their cultural tradition and way of life
- May severely restrict access to common property resources and livelihood activities
- May affect places/objects of cultural and religious significance (places of worship, ancestral burial grounds, etc.)
- That will (anywhere in the country, including areas inhabited by SECs), Require involuntary land donation, "contribution against compensation" and purchases that are not offered on "willing buyer-seller" basis
- Acquire Lands
- Affect private homesteads
- Render households using public lands homeless or impact livelihood activities ongoing there
- Significantly restrict access to common property resources and livelihood activities of groups and communities
- Cause adverse impacts on physical cultural resources like buildings and objects that bear cultural and historical significance (ref: World Bank's OP 4.11 on Physical Cultural Resources).

**Implementation.** The institutional arrangements for Implementation of SEVCDP would be similar to the arrangements in other areas. Since the SEC groups are different from the mainstream population regarding ethnic origins, cultural heritage, religious traditions, dialects, festivals, an in-depth understanding of the socio-cultural, economic, political and religious life of the SEC will be imparted to all the project functionaries, NGOs and supervision and monitoring institutions right from the district level to the village level. Community Support Organizations and Partners Organizations, who will be facilitating community action plans and social assistance programs, would be encouraged to recruit local educated youth from SEC, to assist all the groups in their activities.

Baseline Survey: A baseline survey would be conducted by CSO to provide data for subsequent Impact evaluation. There are villages exclusively inhabited by SEC and villages which have both SEC and non-SECs. Therefore, to address the needs of SEC in these different situations distinct strategies would be adopted. Likely processes are described below, and the actual implementation will be participatory and situation specific.

Exclusive SE Villages: The CSO would consult SEC leaders, both men and women on the kind of groups that would be formed from among the SEC. VDC will include representatives from all SEC. It is likely that CG would be formed separately for each SEC sub-group. This was also the opinion expressed by the SEC during the consultation process. They opined that group members in any of the CG shall belong to the same SEC group as they have close

relations with each other and they trust each other. They can be motivated to work together. All such CGs in a village would form into a VDC, since the different SECs traditionally extend mutual co-operation in times of need.

**Mixed Villages:** Mixed villages would be of two types — SEC majority villages and non-SEC majority villages. The institution building process will be different in each context. The project would address the concerns of the poor non-SEC in SEC villages. In a SEC majority villages, the SEC CGs and the non-SEC CGs would perhaps be formed separately and federate at the VDC level. In a non-SEC majority village, the SEC typically live in a separate settlement within the village or at the outskirts of the village. CGs would be formed for SEC exclusively and the CGs of the non-SEC would be formed separately. Representatives from each CG will form an inclusive VDC.

**Community Infrastructure Works.** As with other vulnerable groups, the CSO will facilitate formation of VDC and CGs, and assist them in developing a community action plan (CAP), the CAP will identify the resources available – natural and human, and the opportunities and risks in each of the existing livelihoods. This would be done through a participatory process and there would be several rounds of discussions. The focus naturally would be on the traditional livelihoods sources and infrastructure needs of the tribes such as skill development, access to seed capital and credit, land, livestock and forests. The community would identify the leakages and gaps and opportunities for consolidation and expansion in their present livelihoods. They would analyze the causes of leakages and gaps in their livelihoods and the alternative approaches that can be adopted for their development and select appropriate plans for intervention. To operationalize these plans the communities would develop the sub-projects to be financed by NJLIP.

### **Social Issues**

One of the key issues identified in the consultation process is the extreme vulnerability of the SEC. Nuton Jibon would also implement a social assistance program for increasing social and economic opportunities for SEC and other vulnerable groups. The objectives of the social assistance program are to increase the capacity of SEC groups to participate in mainstream development activities through:

- increased access to information and knowledge about health and nutrition, including women's health, immunization services, personal hygiene, water and sanitation issues; literacy and leadership program; and human and legal rights, including child rights;
- motivation towards increased participation, 'voice' and empowerment in working with local government bodies for local level planning, decision making and monitoring, thereby decreasing social exclusion and improving local governance; and
- increased economic opportunities for skill development and access to income creating assets.

Activities eligible for financing under the project will include:

- advocacy programs
- occupation skills training
- support for pregnant women and risk pooling pilot initiatives
- legal aid support
- grants for the graduated trainees and worst affected natural hazard victims

In order to ensure effective services in the SEC areas, SDF, CSOs and POs will ensure convergence and synergy with important line departments like health, education, child welfare and nutrition, agriculture, horticulture, fisheries development. SDF, CSO and PO

will facilitate linkages with other poverty reduction programs, such as microfinance, vulnerable groups' development, legal literacy and human rights programs.

**Institutional Arrangements.** The SEVCDP is part of the overall NJLIP. The management of SIPP at the national level is vested on SDF and activities at the district level will be implemented by NGOs (Community Support Organizations-CSO and partner organizations-PO).

**Monitoring and Evaluation.** Monitoring forms an integral part of the Project Management System, as it provides a continuous appraisal of performance of the Project and enables the Project Management to take up corrective measures, if any, required in implementation. The existing M&E System of SIPP-II regarding a) input and output monitoring, b) process monitoring, and c) impact evaluation would ensure effective implementation of SEVCDP, which forms part of NJLIP. For the purpose of monitoring and evaluation of SEVCDP, basic data relating to village wise information on SEC population, infrastructure facilities, land utilization, cropping pattern, livelihoods, etc. would be recorded by CSO in the baseline. The project interventions planned in the village as part of the CAP and the project interventions actually implemented will also be captured in the MIS. The data collection would be the responsibility of the CSO, in association with the VDC. The community would be involved in process monitoring through Focus Group Discussions (FGD) and Participatory Rural Appraisal (PRA) techniques, wherever required in order to know the quality of project Implementation and inputs provided under the project. The VDC will monitor the performance of all CSO and PO functionaries.



## **1. Introduction**

### **1.1 Introduction**

Bangladesh remains a predominantly agricultural country where the agriculture sector plays a pivotal role in accelerating economic growth, increasing food and nutrition security, and securing rural livelihoods. Agriculture (crops, livestock, forestry, fisheries) contribution to economy is declining, but remains one of the largest sectors (19.4% of GDP) with about 43% of total labor force engaged in agriculture. Agriculture has also proven one of the sectors more resilient to the recent political turmoil. Many of Bangladesh's poor in rural areas are in one way or other directly linked to the agricultural sector. Increasing rural incomes by linking pro-poor support to productive employment opportunities building and expanding on sustainable community support mechanisms and increased integration into higher value commodity supply chains will continue to be an important element for the country to address poverty and extreme poverty.

Throughout the 2000-2010 decade, Bangladesh experienced steady and strong GDP growth, averaging a rate of nearly 6 percent per year. Poverty rates also declined at an impressive rate during this period with an average decline of 1.7 percentage points per year. During this time, Bangladesh also achieved better health outcomes, improved living conditions of the poor, lowered childhood mortality, increased under-five vaccination rates for all children, increased literacy rates, and improved its safety net coverage. Despite those achievements, malnutrition remains a challenge in Bangladesh, especially for pregnant and lactating mothers, adolescent girls and children.

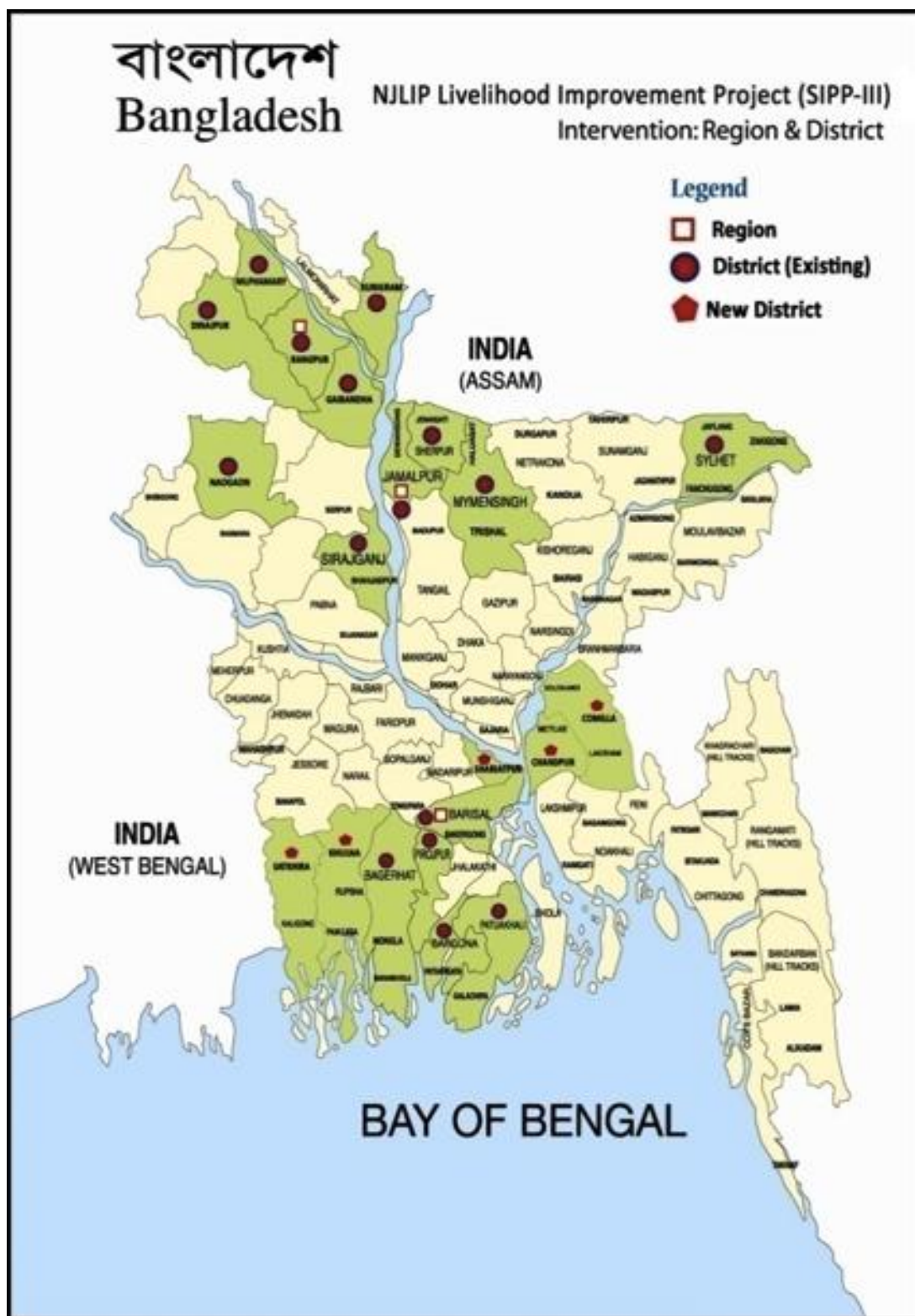
Rural poverty continues to be significantly higher and more extreme than urban. While the decline of extreme poverty in rural areas has been impressive - from 37.9 percent in 2000 to 21.1 percent in 2010 - the poverty level remains almost three times that of urban areas. Extreme poverty continues to be a rural phenomenon. Rural poverty and food security thus remain critical policy areas with emphasis on the need for growth to be inclusive and pro-poor.

With more than 70 percent of the population and the majority of the poor residing in rural areas, agriculture remains important for the rural economy. The recent Poverty Assessment Report (PAR) found that almost half of the poverty decline has been driven by growth in farm incomes. The PAR also found that poor households living in the poorest regions are less able to cope with shocks.

### **1.2 Project Background**

A comprehensive model of support to the poorest and excluded, combining livelihood support, empowerment, access to finance, and community development, was introduced in Bangladesh about ten years ago building on self-governed community institutions – the Social Investment Program (or Nuton Jibon). An impact evaluation showed that the program successfully managed to increase beneficiary incomes, participation and access in microfinance, increases empowerment of the predominantly

female beneficiaries and positively impacts youth employment, food security, and school attendance.



The Program was piloted in two districts and 120 villages in 2003. In 2008, the program was scaled-up under the Social Investment Program Project (SIPP-I), covering seven districts and 944 villages and introducing new opportunities for improving access to financial resources for hard-core poor and poor. A follow-up project (SIPP-II) expanded

activities into 16 districts and more than 3,000 villages. The program is implemented by the Social Development Foundation, an autonomous 'Non-profit' organization established in the year 2000 under the Ministry of Finance. SIPP-II, with a currently scheduled closing date of mid-2016, is estimating to have fully disbursed its funds by mid-2015. The Government has, therefore, requested a follow-up project that would build and expand on SIPP-II and be ready to start by around mid-2015.

### **1.2.1 Lesson Learned from SIPP-II**

The SIPP-II has developed and implemented an Environmental Management Framework and Social Management Framework along with a Tribal Plan. This implementation of these Frameworks and Plan has enhanced the positive environmental and social impacts of the project and helped in mitigating the negative environmental and social impacts. The key lesson learnt from the implementation of these Frameworks and Plan is that Environmental and Social Management Plans need to be integrated into the project design. Another lesson is that the implementation of these be done by the respective communities assisted by sectoral experts of the project.

### **1.3 Present Project**

The proposed project would seek to build on the successful implementation of the Social Investment Program Project-II (Empowerment and Livelihood Improvement 'Nuton Jibon' Project; SIPP-II), while aiming to simplify the project design, deepening its impact, strengthen the support for sustainable institutions, and expand its outreach into other upazilas and districts, based on recent poverty data and other selection criteria.

The proposed project will be implemented in a total 21 districts (Table 1), covering 3 regions – Rangpur, Jamalpur and Barisal. This includes the 16 existing districts where the SIPP project now has a presence and 5 new districts where the project will be introduced.

Table 1: Districts under NJLIP		
No.	Project District	Status
1	Dinajpur	Existing in SIPP-II
2	Nilphamary	Existing in SIPP-II
3	Rangpur	Existing in SIPP-II
4	Kurigram	Existing in SIPP-II
5	Gaibandha	Existing in SIPP-II
6	Naogaon	Existing in SIPP-II
7	Sherpur	Existing in SIPP-II
8	Jamalpur	Existing in SIPP-II
9	Sirajganj	Existing in SIPP-II
10	Mymensingh	Existing in SIPP-II
11	Sylhet	Existing in SIPP-II
12	Bagerhat	Existing in SIPP-II
13	Pirojpur	Existing in SIPP-II
14	Barisal	Existing in SIPP-II

15	Patuakhali	Existing in SIPP-II
16	Barguna	Existing in SIPP-II
17	Shariatpur	Proposed under NJLIP
18	Chandpur	Proposed under NJLIP
19	Comilla	Proposed under NJLIP
20	Khulna	Proposed under NJLIP
21	Shatkhira	Proposed under NJLIP

The proposed project would also seek to further strengthen market linkages and include nutrition messages and demonstrations into its community activities. It would further seek to strengthen the transmission of knowledge and demonstrations on improved agricultural practices. The proposed project would consist of three components over six years with a funding envelop of US\$ 220 million:

- a) Community and Livelihood Development;
- b) Business Development and Institutional Strengthening; and
- c) Project Management, Monitoring and Learning.

### **1.3.1 Project Development Objective**

The Project Development Objective is to improve livelihoods of the poor and extreme poor in the project areas. Key outcome indicators are defined around: (a) livelihoods (increase in household income); (b) outreach and coverage (number of direct beneficiaries by gender and outreach per village); (c) strengthened self-management (index measuring empowerment and gender aspects).

## **1.4 Project Components**

### **1.4.1 Component A – Community and Livelihood Development**

The objective of this component is to: (i) mobilize the poor and extreme poor in selected rural communities by building and strengthening beneficiary community institutions; (ii) provide funding for small infrastructure and livelihood support for project beneficiaries; and (iii) provide nutrition awareness and agricultural production knowledge. The planning and institutional process of engaging with communities and creating and strengthening the community groups would remain largely the same as in SIPP-II. A list of the key interventions into Rural Infrastructure and Livelihoods are given below (a list of all livelihoods activities as taken up by Nuton Jibon group members is provided in the Annex).

Infrastructure component		Livelihoods Component	
Sectors	Activities	Sectors	Activities
Cross Drainage Works and Roads	Double vent Box-culvert Single vent Box-culvert U- type culvert Pipe culvert Drain Wooden Bridge Canal/pond digging Small Rural Road Construction/ Rehabilitation	Agriculture Based	Vegetable Cultivation Maize Cultivation Banana Cultivation Potato Cultivation Tree Nursery Sugarcane Cultivation Betel Leaf Cultivation Water Melon Cultivation Mug Bean Cultivation Home garden, Dyke garden
Sanitation	Toilet Urinal	Animal/ Dairy/ Poultry Based	Dairy Cow Beef Fattening Goat/ Sheep Rearing Poultry Rearing, Poultry feed production
Water Supply	Tube well	Fisheries Based	Fish Culture Fishing/ Fish Trade Shrimp Cultivation
Building Market development	Gram Samiti Office Building	Trade/ Petty Business Based	Handicrafts Grocery Shop Trading/ Agribusiness Stitching Works Bamboo Works
Others	Efficient Cook stove, biogas plant, Vermin-compost production	Transport Based	Motorbike Transport, rickshaw

#### 1.4.1.1 Community Planning and Empowerment

The project would largely keep the procedures of organization, empowerment, planning and implementation of sub-projects under this component intact as per the procedures under SIPP-II. It is suggested that the initial community planning process would be broadened such as to include disaster risk and climate change concerns at that level to feed into the overall investment planning, particularly for infrastructure investments. It is expected that the current funding windows for institutional development, community infrastructure and village development funds would remain. However, further review and discussions will be held as to the share of these funds within a village allocation.

#### 1.4.1.2 Village Development Funding

Community plans are financed through a village development fund. The village development fund consist of three sub-funds (i) the Institutional Development Fund (IDF) which is largely supporting the establishment and capacity building of the community groups; (ii) community financing - the so called Shabolombi Fund (SF) - that operates as a revolving fund to provide loans to beneficiaries for livelihood/income generating activities; and (iii) the Community Infrastructure Support Fund (CISF) that supports prioritized key community infrastructure that supports improved livelihoods.

#### 1.4.1.3 Nutrition

Activities proposed under the project would focus on awareness building, behavioral change for personal hygiene, food preparation, food choices and mainstreaming nutrition sensitive actions, particularly in selected income generating activities of beneficiaries. The target group for the nutrition related activities comprises largely a sub-set of project beneficiaries that are among the core focus group for nutrition interventions – pregnant and lactating mothers and young children. Behavioral change campaigns and awareness building would be facilitated by SDF using the established community mechanism, while the activities would be outsourced to experienced players/NGOs in the intervention areas.

- (i) Raising awareness, capacity strengthening and behavior change would be achieved by (i) community nutrition groups to be formed in each of the targeted villages; (ii) community nutrition professionals; (iii) referral points amongst the SDF field staff at various levels; and (iv) linking with agricultural extension agents already trained on nutrition messages and actions. The implementation of this activity could be contracted out to a partner organization, whose responsibilities would include ensuring that the nutrition counseling messages are harmonized with those across other programs.
- (ii) Mainstreaming nutrition-sensitive activities across project interventions. Given that the project's main focus is not on nutrition, it would seek to join efforts with other programs and projects, and limit its interventions to key nutrition sensitive activities that can be implemented within the project framework, including (i) awareness raising and social development training on nutrition; (ii) provision of water, sanitation and hygiene facilities; and (iii) diversifying income generating activities to include comprehensive homestead gardening for improved dietary intake.
- (iii) Enhancing access to safe and nutritious food. SIPP-II has made good progress in promoting a wide range of farm and non-farm income generating activities. Most project beneficiaries have accumulated assets and increased their household incomes, thus improving the availability of and access to food. The project would support agricultural diversification, to increase the intake of vegetables, fruits and eggs and more broadly to create synergies with nutrition services being provided in the same areas. This would be done in areas that SIPP-II has been active, but not fully completed its support and in new project areas.

The project would seek to provide longer term training to targeted beneficiaries for (i) development of privately operated community-level nurseries to provide quality seeds and saplings tolerant to climate variability; (ii) improved technologies for poultry rearing to increase egg production and local production of poultry feed; (iii) vegetable homestead gardening practices; (iv) small fish ponds; and (v) improved agricultural practices and technologies. For agricultural related activities, arrangements would be made with support from the Local Government and extension services for the provision of adequate technical assistance to the beneficiary households. Given the shortfall of extension workers in livestock and fisheries, skilled community professionals would be selected and additional training provided for quality day-to-day support to the

concerned households, under the overall supervision of the Upazila extension officer. A farmer field school approach could be adopted based on models already introduced by other organizations that integrate basic nutrition and agricultural messages.

#### **1.4.2 Component B – Business Development and Institutional Strengthening**

This component would aim to increase livelihood opportunities of poor and extreme poor by facilitating their organization into producer groups, cooperatives and societies and by improving their market and business orientation and forward and backward linkages in the market systems. Specific objectives would be to (i) build and strengthen producer organizations as market partners and commercially oriented entities; (ii) facilitate interaction between producers and traders/processors of products in the down- and up-stream value chains; and (iii) support market/business oriented investment to solve bottlenecks in the market chains and/or adding value to the products (e.g. poor and extreme poor capturing a higher share in the value chain). The design of the component would built on and further develop the approaches started under the on-going SIPP-II. The component would also continue the youth employment support as provided under SIPP-II.

##### **1.4.2.1 Main Target Group**

The component would target poor and extreme poor producers and skilled workers from the project villages empowered under Component A and from the villages supported under the SIPP-II project. The target organizations, which would be eligible for project support, would be organized at the village, cluster or upazila level or federated at the district level and would include formally registered producer organizations with a transparent governance structure and a viable business plan. Such organizations would originally be built around the primary target group (poor and extreme poor), but may later become open for all producers at the respective organizational levels and location.

Possible activities to be supported under the component would include: (i) capacity building for producer organizations created under the project including registration, management facilities and management training; (ii) regular stakeholder workshops, which would bring producer groups, traders, processors and other value chain actors together for forward and backward information exchange and facilitating business relationship building; (iii) youth employment support (e.g. employment promotion facilities such as web-sites, job centers, job fairs, etc.); and (iv) a fund for market facilitation and value addition available for registered producer groups/ federations/ cooperatives for investments in joint facilities supporting their market access and adding value to their produce (e.g. product storage facilities, product collection points, pre-processing, packaging, transport facilities, quality assurance and food safety improvement investments, etc.).

The formation of producer organizations and development of economic entities envisaged under Component B would follow a successful grassroots level empowerment and livelihood development, which has already been achieved in many of the villages supported under SIPP-II and is envisaged to be achieved under the

proposed project for new villages (Component A) after year two. It is therefore suggested that the implementation of this component would start in the villages of SIPP-II and would gradually cover all project villages under the proposed new project starting after year two. The component would provide support for a range of mutually supportive activities such as:

#### 1.4.2.2 Producer Organizations

To improve the commercial orientation and market integration of small producers the project would use the development and support of commercial, legally registered producer organizations as a basic vehicle. The size and the most appropriate way of registration have yet to be decided and will be explored during project preparation. The project supported organizations/cooperatives would need to become legal entities with a business and service providing function. Project funds would be used for registration, capacity building and management facilities.

#### 1.4.2.3 Nuton Jibon Community Societies (NJCS)

SIPP-II has established cluster and district level societies currently in two districts. These NJCSs are to perform networking and community empowerment functions (taking over as SDF phases-out) as well as business development market linkage promotion functions. These NJCS consist of a number of sub-committees including Community Professionals (CP), Village Credit Organization (VCO), and producer group sub-committees. The project would need to explore, how the functionality, and the financing and incentive system in these societies could be enhanced and streamlined to provide flexible and cost effective business development and market linkage services.

#### 1.4.2.4 Awareness raising and training

Awareness raising and training of project beneficiaries entering commercial agricultural production would among others include basic understanding of production costs calculations and profitability, seasonal price variation and their reasons, product standards requirements, understanding the perceptions of traders and wholesalers, negotiations skills, etc.

#### 1.4.2.5 Surplus to market oriented production

Measures to change the approaches and perceptions of producers changing them from simple providers of surplus production to market and business opportunity responsive producers of goods and services would be achieved by regular joint stakeholder workshops bringing producers and producer organizations together with business operators on the demand side (such as traders, wholesalers, processors, input suppliers, etc.). These workshops would facilitate a forward and backward exchange of information, expectations and perceptions, provide business operators with information about the potential for different kind of products to be provided by project beneficiaries and vice versa the project beneficiaries with the specific demand and requirements from the business side (e.g. type of products, standards, quantities, way of collection, etc.).

#### 1.4.2.6 Youth employment

Similarly the forward and backward linkage of skilled workers (trained youth under Component A) would be supported by job fairs, virtual job centers and internet based



forums to allow workers to offer their skills and potential employers to place their requirements. SDF has already built-up a youth database and linkages with potential employers that would be built on.

#### 1.4.2.7 Marketing facilitation and value adding investments

The project would provide a fund for market facilitation and value adding investments. his fund would be made available to registered produce r organizations base on application and the provision of an acceptable business plan. Possible eligible investments would include product storage facilities, product collection points, pre-processing, packaging, transport facilities, etc. Eligibility, application and selection modalities would be further defined during project preparation.

### 1.4.3 Component C – Project Management, Monitoring and Learning

31. This component would support the management of the project, monitoring and continuous learning throughout the project period. The component would continue supporting third party monitoring and impact evaluation activities as well as build and expand on communication/presentation aspects that SIPP-II has initiated. SIPP-II has established a well-functioning Monitoring and Information System that would be built on and expanded. Information and communication technology supported feed-back mechanisms will be introduced under the proposed project to simplify and feed into existing feedback and monitoring tools.

**Project Management.** The sub-component would cover the operating costs of SDF (national, regional and district level) including salaries and office operating costs. he salaries and some of the operating costs will largely be supported by counterpart funds. DF has reviewed its internal organization structure based on the experiences gained in SIPP-II to increase efficiency and reduce program delivery costs. The project is supporting these revised structures and arrangements which are detailed in SDF's human resource manual.

**Governance and Accountability.** The project would also continue to build on SIPP-II's established governance and accountability functions. SDF has an internal audit team that audits village institutions on a regular basis; an appraisal monitoring team that reviews if milestones have been achieved by the village to receive the next tranche payment and if plans and designs of sub-projects are adequate; a governance team that oversees governance issues, trains the village social audit committees, assesses functioning of the governance mechanisms on a regular basis, and institutes SDF's recently approved exit policy.

**Monitoring and Information System (MIS).** SIPP-II has established a web-based MIS that provides real-time information on a village level. This system will be continued under the proposed new project. However, NJLIP will incorporate a number of improvements to increase the usability of the system and also capture additional information such as: (i) more information on the quality and performance of the revolving funds would be captured in the MIS system, particularly to the aging of the portfolio; (ii) the MIS system would not only provide the information on the village

level, but also be able to provide tailored information to the SDF specialists regarding to their area of expertise; (iii) the system would generate information in a way that is usable by the NJCS once they take the lead of their network of villages and also needs to be eventually customized to serve their purposes and information requirements. This would particularly apply to community financing, infrastructure, livelihood and capacity building activities. ICT tools, introduced under component A, will be integrated into the monitoring loop.

**Third Party Monitoring.** SIPP-II has established a third party monitoring process that looks at processes and activities on a monthly basis and feeds into quarterly monitoring meetings held per region that contribute to program adjustments as needed. The project would continue to use the successful process monitoring mechanisms that have been built under SIPP-II. Based on findings of the Citizen Action Transparency and Accountability (CARTA) Program's survey of SIPP-II that is currently being finalized, the third party monitoring process may be slightly adjusted to capture identified key area for follow-up and improvements.

**Impact Evaluation.** The project would continue building on the impact evaluation process that has been started in SIPP-II and would include a second follow-up survey for communities where the program has been active for some time and a baseline, mid-term and final survey for the new areas to be intervened in. A comprehensive baseline survey for SIPP-II was conducted in 2012 and builds on a sample in four districts. Unfortunately, not all of these four districts would remain project districts for the project and therefore the sample will need to be expanded to cover additional areas not yet covered under SIPP-II.

## **1.5 Need for ESMF**

The Nuton Jibon project takes up certain rural infrastructure works as well as certain livelihoods interventions in the target communities as sub-projects. Although the impacts of the project are expected to be largely positive, as shown by the previous phase which also demonstrated good results for inclusion and participation due to the focus on hard core poor, the ESMF has been prepared to mitigate against any possibility of adverse and/or unintended environmental and social impacts that these interventions might induce. The number, type and locations of sub-project interventions will be decided over the project period. Hence, the adverse environmental and social impacts of each sub-project could not be identified and specified for mitigation. Hence, there is a need for an Environmental and Social Management Framework (ESMF). This ESMF sets procedures and processes to be followed for environment and social impacts mitigation. This project is categorized as Category B as per the World Bank safeguards requirements, as these impacts are negligible, reversible and temporary.

### **1.5.1 Methodology**

The methodology followed for development of this ESMF is a combination of proven classical methods such as a) Desk review of existing project literature, b) Secondary data collection from various possible sources, c) Discussions with various stakeholders, d)

Field visits to project communities and discussions with them, and e) Consultations at project villages for feedback on the Draft ESMF.

## **1.6 Structure of ESMF**

This ESMF has nine chapters including the first chapter which gives the introduction to the project and ESFM. The second chapter provides the Environment and Social Baseline. The third chapter deals with Legal and Regulatory framework. The fourth and fifth chapters deal with environment management process for rural infrastructure and rural livelihoods respectively. The sixth chapter deals with the consultation, institutional and training related matters. The seventh and eight chapters deal with the social management framework and small ethnic community and vulnerable communities' development. The last chapter has the annexures.

## **2. Environment and Social Baseline**

### **2.1 Geographic**

Bangladesh is located in the north-eastern part of South Asia. The majestic Himalayas stand some distance to the north, while in the south lays the Bay of Bengal. West Bengal borders on the west and in the east lies the hilly and forested regions of Tripura, Mizoram (India) and Myanmar. These picturesque geographical boundaries frame a low lying plain of about 1,47,570 square kilometer, criss-crossed by innumerable rivers and streams. Mighty rivers are the Padma (Ganges), Brahmaputra (Jamuna), Meghna and Karnafuli.

Bangladesh's geographical Location is at Latitude between 20°34' and 26°38' North and Longitude between 88°01' and 92°41' East. Bangladesh has an area of 147,570 sq. km. (land: 133,910 sq km, water: 10,090 sq km). Bangladesh is bounded by North - India (West Bengal and Meghalaya), West - India (West Bengal), East - India (Tripura and Assam) and Myanmar and South-Bay of Bengal. It has total of 4,246 km border (border countries: Burma 193 km, India 4,053 km). It has a coastline of 580 km. Bangladesh terrain is mostly flat alluvial plain and hilly in the southeast. Bangladesh has 7 Divisions; Dhaka, Chittagong, Khulna, Sylhet, Rajshahi, Barisal and Rangpur, 64 Districts and 487 Sub districts/Upazilas.

### **2.2 Social**

Bangladesh has a population of 150 million (2011 Census Report by BBS). The present Population Growth Rate of Bangladesh is 1.59%. The present literacy rate is about 50% among which the male literacy is 50% and female literacy is 46%. The net enrolment rate in primary education for girls is 87.8% compared to 85.6% for boys. On the other hand, dropout rate for girls are less (12.2%) than boys (14.4%). Women represents around half of the total population, yet their representation in the public sphere is limited. As the World Bank in 2014 states, proportion of seats held by women in national parliaments is only 20% over the periods in Bangladesh. Bangladesh is predominantly a Muslim populate (86.6%) followed by Hindus (12.1%), Buddhists (0.6%), Christians (0.4%) and Others (0.3%). The sex ratio is

99.68%. The predominant ethnic group is Bengalis (98%) followed by other indigenous minority (2%) including Chakmas, Marmas, Santals, Garos, Manipuri, Tripura, and Tanchangya.

The prevalence of disability per 1,000 was estimated at 13 for women and at 15.2 for men in 2012. Under-five mortality rate per 1,000 live births for male and female is 50% and 43% as in 2010. Maternal mortality ratio (modeled estimate by the World Bank, per 100,000 live births) is 170 in 2013. According to the World Bank, life expectancy at birth is 70.30 years in Bangladesh in 2012.

### **2.2.1 Economy**

Bangladesh is one of the members of the Developing 8 and considered as the Next Eleven Economy of the world in 20 coined by Goldman Sachs. The GDP is US\$1,044 (per capita in 2013). The GDP growth rate of Bangladesh is 6.12 as on year 2013 - 14 (Bangladesh Bureau of Statistics). The poverty level is at 25% (People living with \$2 per day).

According to the Bangladesh Economic Survey, contribution of agriculture and forestry to GDP growth has been declining for the last four years. The contribution of the agriculture and forestry sector to the growth of the country's gross domestic product is 12.64 per cent in the financial year of 2013-14. The share of agriculture in GDP was 14.65 per cent in 2009-10 while it was estimated 14.27 per cent in 2010-11, 13.70 per cent in 2011-12 and 13.09 per cent in 2012-13.

Women's participation in labour force is still low where out of 56.7 million labour force only 17.2 million (35.98%) are women. However, women's growth rate in labour force is much higher than men. It was 8.7% for women as against 1.4% for men in 2010. At aggregate level, women labour force in informal sector was 92.3% and in formal sector it was 7.7%. On the other hand, informal and formal sector labour force participation for men were 85.5% and 14.5% respectively. Disparity exists between wage rate of men and women. Daily women's average wage rate, as percentage of men's is 69%. Average monthly income of women headed household was TK 9,725 as against TK 11,763 for men headed household. It is praiseworthy that 2.88 million (80%) of the total manpower of 3.6 million are employed in the BGMEA member garment factories. According to HIES 2011 by the Bangladesh Bureau of Statistics, proportion of women and men in accessing the microcredit facilities is 61.6 and 38.4 percent respectively.

## **2.3 Environmental**

### **2.3.1 Rivers**

The principal rivers are Padma, Meghna, Jamuna, Surma, Brahmaputra, Karnaphuli, Teesta, Sitalakhya, Rupsha, Madhumati, Gorai, Mahananda etc. Bangladesh is dominated by the low-lying Ganges Delta, but has highlands in the north and southeast. The Ganges delta is formed by the confluence of the Ganges (local name Padma or Pôdda), Brahmaputra (Jamuna or Jomuna), and Meghna rivers and their respective tributaries. The Ganges unites with the Jamuna (main channel of the Brahmaputra) and later joins the Meghna, finally flowing into the Bay of Bengal. The alluvial soil deposited by the rivers when they overflow their banks has created some of the most fertile plains in the world. Bangladesh has 57 trans-boundary rivers, making water issues politically complicated to resolve – in most cases as the lower riparian state to India. Most parts of Bangladesh are less than 12 m (39.4 ft) above sea level, and it is estimated that about 10% of the land would be flooded if the sea level were to rise by 1 m (3.28 ft).

### **2.3.2 Climate**

The temperature ranges are in winter 11° C - 20° C (October - February) and in summer 21° C - 38° C (March - September). The rain fall range is 1,100 mm to 3,400 mm (June - August). The humidity is highest 99% (July) and lowest 36% (December & January)

### **2.3.3 Agriculture**

The principal crops are Rice, Jute, Tea, Wheat, Sugarcane, Pulses, Mustard, Potato, Vegetables.

## **2.4 Issues Identified during Consultations**

During the consultations several issues were raised by the participants. Some of these issues were general and the problems they face during their daily life (these have been summarized in the Annexes). Many of these issues are beyond the scope of the project, whereas the project could build awareness on these. A few of the issues presented during these consultation can be resolved to certain extent by project intervention.

Consultations were conducted in two phases at Matiajani Poschim and Korogram Uttar of Jamalpur district on 24th October 2014 and at Taluk Bahu and Munshipara of Rangpur District on 18th November 2014. These consultations were attended by 82 (Matiajani Poschim), 75 (Korogram Uttar), 50 (Taluk Bahu) and 116 (Munshipara) community members, of which above 95 percent were women (Please see the list of participants in appendix).

The consultations were conducted at the Gram Samiti buildings. Each of these consultations lasted for about 2 to 3 hours. These meetings were initiated by the Gram Samiti with all committee members introducing themselves and then the SDF personnel introducing themselves to the participants. Later the SDF personnel have explained the purpose of the consultations to the participants. After this the participants were briefed on the NJLIP, the Nuton Jibon, and its various components. They were informed of the need for an ESMF as in case of SIPP-II. The various provisions of the ESMF were explained to the participants. Later the participants were asked to seek any clarifications on the ESMF and related issues. A summary of the proceedings of these consultations is given below:

The participants enquired if they can take up more rural infrastructure works. It was clarified that the investment for the infrastructure works will be limited and that only works that are not having negative environmental and social impacts, like rural roads, culverts, tube-wells, latrines, GS buildings, etc. can be taken up. It was further clarified that these works need to be identified by the community and implemented by the community with SDF offices support. The participants informed the meeting that they are used to filling the Screening and IEE formats for approval of these works and if the same procedure will be continued under Nuton Jibon. It was clarified that the Nuton Jibon will have an ESMF that is updated from the previous one and that they will have to fill in similar formats. When the participants enquired if they would get support from the SDF, as during SIPP-II, in filling up these formats, it was clarified that SDF will support them during all stages of the project implementation and will handhold them where necessary.

The participants have informed the meeting that they face Gender Discrimination, Sexual Harassment, Women Abuse, Eve Teasing, Child Labor, Child Abuse, Dowry, Early Marriage, Poly Marriage, Child and Women Trafficking, Superstitions and Religious Constraints, Smoke from Open Stoves, Wastage of Cow Dung, Usage of Chemical Fertilizers and Pesticides, Water Pollution and Water Logging etc. and as to how the project will solve these issues.

It was clarified to them that these issues are not in the project purview, but the project will create awareness on these issues and equip them with the knowledge to overcome them, but it is the community that should come together to solve such deep rooted problems. It was further suggested that the SAC should take lead and discuss these issues in the Gram Samiti meetings and act as a conciliator with regard to such grievances. When the participants raised the issues of illiteracy among the members, it was suggested that the Gram Samiti can take up adult education programs during convenient timings in the Gram Samiti building. It was suggested that those who have discontinued their studies should continue their studies or acquire skills to make them financially independent to overcome such problems.

The participants mentioned about the frequent disasters and their vulnerability to such disasters, it was suggested that Nuton Jibon will have priority ranking

system taking poverty, vulnerability and resilience to avail project benefits. When enquired about environmental issues they face, most of the participants raised the issues of smoke from open stoves and asked as how this can be solved. They were informed that the project is promoting the smokeless stoves and they can avail of this at discounted rate. Most participants expressed their concern about the wastage of cow dung and they were informed that Nuton Jibon will promote composting and vermi-composting for better utilization of animal and agricultural waste. Most participants expressed their desire to take up agriculture and horticulture related livelihood options. They were encouraged to choose such options, but were cautioned about the usage of chemical fertilizers and pesticides and were advised to go for organic farming and integrated pest management for better prices for their produce. When some of the participants have brought up the issue of increasing groundwater pollution, they were advised to get their tube well water tested on regular basis and properly seal their tube well from bacteriological contamination. With regard to water logging they were advised to not take up activities which will result in water logging and not to dispose the debris in water courses.

## **2.5 Key Environmental Issues in the Nuton Jibon Livelihood Improvement Project**

### **Erosion and Siltation**

Removal of natural land cover, excavation, extraction of construction materials, badly managed agricultural land, deforestation, or draining wetlands and irrigation can result in soil erosion. Runoff from irrigated croplands during a storm can carry more sediment and agro-chemicals into surrounding ponds, rivers and wetlands. Increased siltation can deteriorate quality of pond water used for drinking and other purposes, and clog irrigation intakes, pumps, filtration operations and in-field channels downstream.

### **Losses of Trees and Vegetation**

Small scale rural infrastructure such as roads construction and widening, GS office building, or other development works may require removal of trees and other vegetation. While some trees may need to be removed because they are in the path of widening activities or because they pose safety hazards, there are many which could be saved through the cutting back of branches. The road sides may be used for plantation of similar species, which will compensate the losses trees and vegetation.

### **Loss of Top Soil of Agricultural Land**

Small-scale infrastructure like office building construction, improvement of drainage facilities, , sanitation, community water supply system etc. involve one or more of several diverse activities: demolition, site-clearing, excavation, pipe laying, soil grading, leveling, and compacting. The most of these activities are related to the earthen works. This will require use of soil materials. The practice of soil collection from the top soil layer of agricultural land deprives the land from fertile ingredients, which reduce the agricultural production. Such impact can be avoided by collection of soil from barren land or stockpile top soil and replace it later on. Soil can also be collected from existing borrow pits/ponds nearby, which will help increased fish production from those areas.

### **Change in Land Use and Loss of Agricultural Land**

Construction of new alignment for road, small infrastructure may change the land use pattern. Agricultural land may gradually be converted to non-agricultural uses. Improving the rural roads by widening/or increasing height will cause road-side agricultural land loss. While it is not possible to avoid the agricultural lands, the mitigation measure is to provide steep slopes for the road by applying improved soil stabilization means to minimize the land loss. Among others grass turfing or vetiver grass plantation could be effective means in minimizing erosion.

### **Drainage Congestion/Water Logging**

The construction of rural road and other small infrastructure may interfere with cross drainage and can cause drainage congestion in adjacent areas during period of high rainfall. This may affect villagers or commercial activities in the market and cause potential risk to community health, crop damage and in extreme cases long-term loss of agricultural lands. Possible drainage congestion/water logging should be properly addressed and taken in consideration during design phase of the project.

### **Pest Infestation**

Pest infestation is a serious concern in Bangladesh and pesticide use has increased manifold from 758 metric tons in 1960 and 3028 metric tons in 1980 to over 19000 metric tons in 2000 and in 2008, the amount of pesticide applied in fields across the country rose to 48690 metric tons. Insecticides, being the dominant item, account for 76% of the pesticides applied. It has been reported that 20 insecticides, 18 fungicides and 2 rodenticides, are being used in Bangladesh. The major pesticides used by the farmers are Cypermethrin, Dichlorvos, Malathion, Carbofuran, Mancozeb and Diazinon depending upon the pests. Besides, many pesticides used in Bangladesh are in the banned or restricted list under international agreements.

Most farmers apply pesticide without knowing its actual requirements and/or effectiveness, and thus there are very high frequencies of pesticides application, for example, 150 sprays in a crop season in brinjal is noticed. More than 90% farmers of Bangladesh use pesticide unnecessarily, indiscriminately and excessively due to their ignorance and unconsciousness about the use<sup>1</sup>.

### **Groundwater Depletion**

Groundwater is a vital natural resource for the reliable and economic provision of irrigation water and potable water supply. It thus plays a fundamental role in human well-being. Ground waters from both shallow and deeper aquifers are being used extensively for irrigation. However, aquifer depletion and salinity are already issues of concern. It is necessary to exercise caution in the large scale exploitation of confined deep aquifers, as these may be depleted giving rise to serious problems in the future. Therefore, activities that encourage groundwater recharge need to be integrated into the design of crop based programs.

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<sup>1</sup> *Unsafe use of pesticides and its impact on health of farmers – A case study in Burichong Upazila Bangladesh.*  
Viewed at <http://iosrjournals.org/iosr-jestft/papers/vol8-issue1/Version-5/J08155767.pdf> on 13th October 2014.



## **Water Pollution**

Farming projects normally use fertilizers, but overusing them puts excess nutrients in the ecosystem. Nitrates, which are water-soluble, are quickly transported into rivers and canals. Phosphates attach to soil particles, but may eventually seep through to contaminate groundwater or be carried in rainwater runoff to rivers, streams and lakes. As phosphate concentrations rise, they may stimulate rapid growth of aquatic vegetation and algae. Irrigation can affect downstream water quality by reducing the amount of water available to dilute contaminants and by potentially increasing agrochemical pollution.

## **Arsenic Contamination**

Arsenic contamination of ground water is a serious issue of concern in the country. The source is parent rock and several tube well irrigated crops receive the contaminated water. For long, the arsenic bearing minerals such as arsenic sulfides were submerged in groundwater and remained inert. With the start of intensive withdrawal of groundwater for drinking and irrigation for growing Boro rice, the aquifers started to drop causing arsenic to oxidize. Once oxidized, arsenic sulfides become water-soluble which ultimately come up with the pumped water. Out of 64 districts in Bangladesh, water of 61 districts has arsenic in the ground water – an area that more than 65 percent of the population lives.

## **Scarcity of Fodder**

Bangladesh has one of the highest cattle densities at 145 large ruminants per sq.km<sup>2</sup>. The acute shortage of feed and fodder is one of the single most important obstacles to livestock development in the country. The main constraints for feed management are: shortage of feeds and fodder, scarcity of land for fodder production, seasonal fluctuations in supply of feeds and fodder, low quality feed, high feed prices and poor husbandry practices.

## **Under-utilization of Dung**

Cattle dung is an important link between crop and animal production in Bangladesh. It is estimated that only about 20-40% of the dung is composted while 5% is directly applied to crops. Also, 25-30% of dung is directly used a fuel with only about 15% of manure – especially from large farms being used for biogas production. Another 10-50% is sold for use as fuel or manure<sup>3</sup>.

## **Food Safety**

The use of anabolic steroids for cattle fattening is common in Bangladesh (about 58% farmers reported their use for cattle fattening for 3-6 months). No registration is required for feed additives such as toxins binder, antibiotics, and vitamin-mineral premixes, animal protein – many of which are potentially harmful to human health. Most of the drug traders and shop keepers have no formal training on drug handling, transportation, storing and dispensing and readily sell drugs such as antibiotics,

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<sup>2</sup> Ministry of Fisheries and Livestock, Government of Bangladesh. *National Livestock Development Policy 2007*.

<sup>3</sup> Sarker, 2013. *Present Status Livestock & Manure Management of Bangladesh*. Start-up meeting on CCAC Agriculture Initiative's Livestock and Manure Management Component.

hormones and sedatives across the counter without prescription. The laboratories of the Department of Livestock Services have no provision for residue analysis of drugs, heavy metals, hormones, pesticides and toxins in foods of animal origin<sup>4</sup>.

### **Air Pollution from Poultry and Dairy Farms**

Large scale poultry farms built in villages can pollute the environment, particularly with offensive odors, and render them unfit for human habitation. The same is true for dairy farms set up in residential area. However, the farms targeted for NJLIP are small-scale ones and so do not present such difficult environmental problems.

## **2.6 Major Social Safeguards Concerns**

The project builds on the success of SIPP-I and -II. Since the nature and the scale of interventions remains the same, NJLIP will not trigger any land acquisition or resettlement activities. Land acquisition, displacement of people, with or without title from public or private lands and any adverse impacts on on-going livelihood activities has been clearly put on a “negative list” for screening all sub-project proposals. OP 4.12 is not triggered for this project. Only encumbrance free public lands may be used and as has been taking place in previous phases, land can be voluntarily contributed by the communities (as the benefits of the interventions are large) and/or it may be purchased from the communities on a willing buyer willing seller basis. Both the latter methods require full documentation which is described in details in this ESMF.

The geographic reach of the project has been expanded compared to its previous phases and interventions are likely in areas where small ethnic communities live. OP 4.10 has been triggered for the project and a Small Ethnic People and other vulnerable community’s framework has been included in this ESMF.

Lessons learned from the previous phases of the project show that the focus on community driven processes, strong community consultation and participation and a special emphasis on gender and hard core poor have built a strong platform for social inclusion and participative decision making. The current project will continue these processes. The ESMF addresses consultation and inclusion measures for communities where small ethnic or especially marginalized and vulnerable people may be in the majority or minority.

## **2.7 Environment and Social Observations from Field**

- The various registers of the Gram Samiti are maintained in a neat fashion.
- The participating members know the project details by heart, but are not in position to readily recall the project principles.
- Most the participating members are not aware of the project song and could not sing it without efforts.
- Though the land is purchased on full willing seller basis, land cost paid through cheque, but the land is yet to be transferred in the name of Gram Parishad.

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<sup>4</sup> Ministry of Fisheries and Livestock, Government of Bangladesh. *National Livestock Development Policy 2007*.

- The Gram Samiti members are duly filling the existing screening and IEE formats. In some cases they have filled both the formats. This implies they need further awareness creating and training on relevance and filling these formats
- The Gram Samiti members took care of noise issues during construction by regulating the brick breaking machine timings
- The culverts build did not leave any debris at site
- No excess cutting was made at the culverts
- The roads were limited repairs within the existing width
- No water logging is observed at the culverts sites
- No foul smell is observed at latrine sites
- No water logging is observed at hand pumps
- The dairy practitioners are doing vermin-compost on their own.
- The livelihoods interventions are confined to the household premises
- No pesticide cans were seen in the households of agriculture livelihoods practitioners.
- The easy bike transport livelihoods option runs on battery and cause no noise or air pollution.

## **2.8 Case Studies**

### **2.8.1 A Differently Abled Beneficiary**

Md. Saiful Islam, a differently abled person has received BDT 3,000 as grant from the project. By using the grant amount he has purchased one goat. After a few month the goat produces two kids making the proud owner of three goats. Meanwhile, one and half years back, he got married. Presently, his wife rears the goats and maintains the family. He is now the member of Nuton Jibon group and received BDT 10,000 as Shabolombi loan. With this he opened a small shop. He sells mostly general fast selling items such as pan, candy, biscuits, condiments, some groceries, cigarettes, etc. Presently his sales turnover is BDT 500 and he is earning about BDT 200 per day as profit. He hopes to expand his business and buy more goats and cows. He says, before he joined he project, he was a non-entity in village and nobody cared for him, but after joining the project people are treating him with respect.

### **2.8.2 Poultry Rearing**

Ms Mabuda Begum (38) her husband Md Abul Kashem (43) belongs to Hard Core Poor category in Talukhabu village under the upazila of Gangachara at Rangpur district. She involved herself with the project since the year 2012. Her PIP No is 83. She received training on poultry rearing and cow rearing. To start with she has accumulated BDT 1,430 as internal lending. After that she took BDT 10,000 as Shabolombi loan and started poultry business. She says this is a profitable venture. After some initial profit and experience and she wanted to expand her business and took another loan after paying back the initial loan completely. The second loan was BDT 50,000 again from the Shabolombi loan fund. She is now continuing the poultry business and at the same time she purchased a cow. She is now operating two poultry sheds. The first shed consists 600 birds and the second is now empty for preparatory works. She will earn BDT 15,000

from the first shed and BDT 20,000 from the second shed. Her cow also brings in some income. She is happy with this as she is able to maintain her family well.

### **2.8.3 Easy Bike**

Ms. Sonali Begum (36), her husband Md. Raja Mian (47), a Hard Core Poor family living in Talukhabu village of Gangachara upazila under Rangpur district. Soanli began with an accumulated savings of BDT 1,430. She has taken taka 50,000 from the Shabolombi fund and purchased an Easy Bike operated by battery. Her husband is the driver of the easy bike. They purchased the bike at the cost of BDT 160,000 in the name of her husband where Sonali Begum's contribution was BDT 50,000 and the remaining money was provided her husband. Their daily income from the bike is taka BDT 700- 900. The daily maintenance cost is BDT 200 (Battery charging-120, repairing-60 and others-20). Their net income from the bike is BDT 500 per day. They mentioned that the bike ran 120 km after each charging and the running cost is one taka per km. The seating capacity of the bike is maximum 7, but in general he gets 4-5 passengers at one time. They have two sons and two daughters. Both the daughters are married. Both the sons are working at a biscuit factory at native district. Their two sons bring about BDT 10,000 per month.

### **2.8.4 Cow Rearing and Vermi-Compost**

Ms Mabuda Begum (34) her husband Md Abul Kashem (43) are one of the Hard Core Poor families in Munshipara village under the upazila of Taraganj at Rangpur district. Mabuda started her involvement with the project from 2012. She has accumulated an amounting of BDT 1,850. Her PIP No is 101. She received training on cow rearing and vermin-compost. At first she has taken BDT 10,000 as Shabolombi loan and started making vermin compost. By selling earth worms and compost she earned BDT 3,000-5,000 as every three months. She has taken another loan of BDT 25,000 as second loan from the Shabolombi fund and purchased a cow at a price of BDT 35,000. She could manage the remaining amount from the other sources. She is now collecting/ harvesting ten litres milk from the two cows; she had a cow of her own. She is selling the milk at market at the rare of BDT 40 per liter and earning BDT 12,000 per month. The cost of feed, medicine, etc. is almost BDT 12 per day. Her net profit is BDT 280 per day. She routinely checks up the health of the cows with the assistance of the upazila Livestock Officer. Again she took BDT 32,000 as third loan from the Shabolombi fund and has taken a piece of 3 decimals land on lease for cultivating crops and vegetables. She got admitted her elder son in the high school and younger son in primary school. She made remarkable success in rearing cows and making vermin-compost. The other members of the village are inspired and motivated by her activities and they are preparing themselves for doing the same. She thanks the project as well as SDF. She has a vision to establish a dairy farm in the coming years with the assistance from the project. She is now happy and maintaining her family decently.

### **2.8.5 Change in Life Style**

Ms. Anurfa Begum and Md. Asraf Ali, belong to village Munshipara of union Hariarkuti, upzila Taragonj and District Rangpur under Rangpur Region. Her PIP number is 102. Anurfa Begum with her husband and three children were a poor family in Shampur village who were struggling to make both ends meet. Her husband didn't know any work except daily wage labor. While they were struggling and had no scope and hope to earn money, at that time SDF has introduced project activities in this village in 2011. Anurfa was selected as a poor NJG member. SDF has discussed various development activities with the members. Then she understood that SDF would be helpful for her and other poor people in this village. She had found the way how to change her life through dairy cow rearing.

As a member of NJ group she started to save 10 taka per week as savings. At first she took BDT 30,000 from SF Loan and she invested that money in dairy cow rearing. She added BDT 7,000 from her husband's savings and bought 2 dairy cows for BDT 37,000. At that time she got the IGA training on dairy cow rearing. From IGA training she learned how to rear cross breeds, de-worming, vaccination, artificial insemination and also learned about feeding system. After the re-payment of SF Loan successfully, she had taken BDT 35,000 from Shabolombi Fund as 2<sup>nd</sup> Cycle loan. She added BDT 10,000 from milk selling and bought another cross breed dairy cow for BDT 45,000. At first the dairy cow delivered a bull calf. With three cows the average milk production is 16 liter per day. She earns (16 liter  $\times$  40/ =) BDT 640 from selling milk and per day investment BDT 150. As a result, her net profit stands at BDT 14,700/month. She recovered her loan by selling milk, saved some money and spent some money for family purpose. As a result her income was increasing day by day. At present she has three dairy cows, one calf and one heifer in her farm. They are consuming some milk daily; as a result they are able to recover the malnutrition. Her daughter and son both are school going. Now she spends her time to take care of cows and other activities at her home. Anurfa Begum has changed her life style by earning money from dairy cow rearing. Now her social and economic condition is increasing day by day. She desires to establish a dairy farm in her house one day.

#### **2.8.6 Beef Fattening**

Mrs. Argina Begum is a housewife. She lives at Munshipara village of Hariarkuti union under Taragonj upazilla of Rangpur district. Her family consists of six members. Her husband Md. Idris Ali is a daily wage laborer. Few years ago they led a very difficult life. They had no extra income source by which they could live decently. Actually they lived from hand to mouth. At that time SDF initiated the project in their village. Argina Begum was enlisted as a poor member in their Gram Samiti under Jibikayan Group of Cluster no.4 of Rangpur district. She started to do savings at the rate of ten taka per week. After few months, she took BDT 8,000 from Shabolombi loan from her VCO for beef fattening. She added an additional amount of BDT 5,000 and purchased a cow for fattening amounting at BDT 13,000. After three months, she sold a cow at BDT 26,000. With this she paid all installments of her first loan. Again she took a second Shabolombi loan of BDT 20,000/, for beef fattening. Again she added additional money of BDT 10,000/ and purchased three cows for beef fattening at an amount of BDT 30,000. Argina future plan is very simple. She wants to increase her family income more and

become slowly by rearing hen, goats and cow. Her dream is that her son will be a well-educated. She is thankful to the Gram Samiti as well as SDF.

### 3. Laws and Regulations - Environment and Social

#### 3.1 Introduction

This chapter deals with the laws, regulations and policies, of Government of Bangladesh, and the World Bank, related to environment and social issues. Only the laws, regulations and policies relevant to the project are discussed here. This sections needs to be updated as when new laws, regulations and policies are made and enforced or the existing ones are revised.

#### 3.2 Operational Policies and Directive of the World Bank

The relevant and applicable safeguards policies of the World Bank are also reviewed. The below table describes the relevant safe guard policies of the World Bank and discusses their applicability to the project.

**Table 1: Operational Policy and Directives of World Bank**

Policy	Key Features	Applicability to this project
<b>OP/BP 4.01 Environmental Assessment</b>	<p>Potential environmental consequences of projects identified early in project cycle.</p> <p>EAs and mitigation plans required for projects with significant environmental impacts or involuntary resettlement.</p> <p>EAs should include analysis of alternative designs and sites, or consideration of "no option"</p> <p>The World Bank categorizes the projects as A or B or C depending on the size and magnitude of the impacts. This is detailed below.</p> <p>Requires public participation and information disclosure before Board approval.</p>	<p><b>Applicable.</b></p> <p>While the project is designed to improve livelihoods and living conditions of rural poor and extreme poor, it may have some minor impacts from small-scale local infrastructure, agriculture based livelihoods, and market facilitation. Therefore, the project is classified as a "Category B" under OP/BP 4.01 with a partial assessment as the impacts are likely to be very minor, site specific with no irreversible impacts and mitigation measures can be designed more readily.</p> <p>The Environmental Management Framework (EMF) prepared for SIPP-II has been updated. This updated EMF ensures environmental management of newly incorporated interventions as well as compliance with World Bank Safeguard policies. This EMF provides a check list as well as guidelines to carry-out sub-project specific environmental assessment and EMPs, consultations, costing, implementation, and guidelines for construction and post-construction monitoring. In addition this EMF provides a negative list of attributes and interventions so that no natural habitats or physical cultural resources will be affected during the implementation of sub-projects.</p>

Policy	Key Features	Applicability to this project
<b>OP/BP 4.04 Natural Habitats</b>	Prohibits financing of projects involving "significant conversion of natural habitats unless there are no feasible alternatives". Requires environmental cost benefit analysis. Requires EA with mitigation measures.	<b>Applicable.</b> The project will not implement any activities inside the Protected Areas (wildlife sanctuaries, national parks, etc.). It is also highly unlikely that any natural habitats formed largely by native plant and animal species would undergo transformation of use or would be affected or modified by project activities. However, as a precautionary measure, the Natural Habitats OP has been triggered. The presence of natural habitats will be assessed during the environmental screening of sub-projects. The EMF includes an environmental code of practice to follow if unforeseen issues arise.
<b>OP/BP 4.36 Forestry</b>	Prohibits financing for commercial logging operations or acquisition of equipment for use in primary moist tropical forests.	<b>Not Applicable.</b> No activities will be undertaken inside forest areas nor will be forest planting undertaken.
<b>OP 4.09 Pest Management</b>	Supports environmentally sound pest management, including integrated pest management. Pest management is the borrower's responsibility in the context of a project's EA.	<b>Applicable</b> Although, the project will work on soil health improvement and promote IPM technologies in the small-scale home gardening program, project beneficiaries may use pesticides on a small scale. Therefore, the Pest Management OP has been triggered. The EMF incorporates pest management guidelines and provides a negative list of pesticides. This Pest Management is given under Chapter 5 of this ESMF
<b>OP/BP 4.12 Involuntary Resettlement</b>	Implemented in projects which displace people. Requires public participation in resettlement planning as part of SA for project. identification of "those who have formal legal rights to land (including customary and traditional rights recognized under the laws of the country). Intended to restore or improve income earning capacity of displaced populations in addition to their resettlement. Intended to provide compensation for lost assets and other resettlement assistance to "those who have no recognizable legal right or claim to the land they are occupying.	<b>Not Applicable.</b> No land acquisition or displacement of people from public or private lands is permissible under the project. This is explicitly mentioned in the updated SMF, as it was done for SIPP-II. The project undertakes small scale infrastructure development on vacant public lands or existing office sites; small earthen roads, culverts, tube wells, latrines, repairs to school buildings, etc. have been undertaken previously. The nature and scale of infrastructure development will largely remain the same for the proposed project. However, the updated SMF includes additional documentation requirements for infrastructure development sub-projects to demonstrate that the works are on vacant public lands and no displacement or negative impacts on livelihoods are caused due to the interventions. If lands are contributed by

Policy	Key Features	Applicability to this project
		private parties or purchased on a willing seller and willing buyer basis, adequate documentation and consultation will have to be demonstrated via required reporting guidelines which are included in the updated SMF.
<b>OP/BP 4.10 Indigenous Peoples</b>	Purpose is to ensure indigenous peoples benefit from Bank financed development and to avoid or mitigate adverse effects on indigenous peoples. Applies to projects that might adversely affect indigenous peoples or when they are targeted beneficiaries. Requires participation of indigenous peoples in creation of “indigenous peoples development plans”.	<b>Applicable.</b> The project will likely work in areas where indigenous people live and will engage with them for the improvement of their livelihoods. SIPP-II did not trigger OP 4.10, therefore, the existing Social Management Framework (SMF) is updated to include a Small Ethnic Communities Development Framework (SECDF) based on which specific sites will be screened and where relevant site specific Small Ethnic Communities Plans will be prepared. The SMF has also updated the Communications and Inclusion components and address gender issues and those of very vulnerable people in a more focused manner. The SMF includes a Grievance Redressal Mechanism that is easily understandable and accessible at local levels.
<b>OP/BP 4.11 Physical Cultural Resources</b>	Purpose is to assist in the preservation of cultural property, such as sites having archeological, paleontological, historical, religious and unique cultural values. Generally seeks to assist in their preservation and avoid their elimination. Discourages financing of projects that will damage cultural property.	<b>Not Applicable.</b> It is not expected that any sub-projects to be designed and implemented by the project will affect, modify, or reverse any designated physical cultural resources. Projects near physical and cultural resources are included in a negative list in the respective chapters.
<b>OP/BP 4.37 Safety of Dams</b>	Applies to large dams (15 meters or more in height). Requires review by independent experts throughout project cycle. Requires preparation of EA and detailed plans for construction and operation, and periodic inspection by the Bank.	<b>Not Applicable.</b> The project will not construct or rehabilitate dams larger than 10 meters in height.
<b>OP/BP 7.50 Projects on International Waterways</b>	Covers riparian waterways that form boundary between two or more states, as well as any bay, gulf, strait or channel bordered by two or more states. Applies to dams, irrigation, flood control, navigation, water, sewage and industrial projects. Requires notification, agreement between states, detailed maps, feasibility surveys.	<b>Not Applicable.</b> The OP on International Waterways has not been triggered. Being implemented in the lowest riparian country in the Ganges-Brahmaputra watershed, the project will not carry out any interventions that affect the use or pollute international waterways, particularly river or body of surface water that flows through two or more states.
<b>OP/BP 7.60 Projects in Disputed Areas</b>	Applies to projects where there are territorial disputes present. Allows Bank to proceed if governments agree to go forward without prejudice to	<b>Not Applicable.</b>



Policy	Key Features	Applicability to this project
	claims. Requires early identification of territorial disputes and descriptions in all Bank documentation.	

As per the Environmental Safeguards 4.01, The Bank categorizes projects into three categories depending on the type, location, sensitivity, size, and scale of the project and the nature and magnitude of its potential environmental impacts. The categories, in brief, are:

**Category A:** A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives, and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. For a Category A project, the borrower is responsible for preparing an EIA.

**Category B:** A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas--including wetlands, forests, grasslands, and other natural habitats – are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigatory measures can be designed more readily than for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category A EA. Like the Category A EA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

**Category C:** A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

Other World Bank Policies important to Environmental Concerns is the BP 17.50. This policy deals with Disclosure of Operational Information. The Bank's [Policy on Disclosure of Information](#), has been incorporated in the project implementation plan.

### **3.3 Environmental Policies and Regulations of GoB**

#### **3.3.1 National Environmental Policy 1992**

The concept of environmental protection through national efforts was first recognized and declared in Bangladesh with the adoption of the Environment Policy, 1992 and the Environment Action Plan, 1992. The major objectives of Environmental policy are to: i) maintain ecological balance and overall development through protection and improvement of the environment; ii) protect country against natural disaster; iii) identify and regulate activities, which pollute and degrade the environment; iv) ensure environmentally sound development in all sectors; v) ensure sustainable, long term and environmentally sound base of natural resources; and vi) actively remain associate with all international environmental initiatives to the maximum possible extent.

#### **3.3.2 Bangladesh Environmental Conservation Act (ECA), 1995 amended 2002**

This umbrella Act includes laws for conservation of the environment, improvement of environmental standards, and control and mitigation of environmental pollution. It is currently the main legislative framework document relating to environmental protection in Bangladesh, which repealed the earlier Environment Pollution Control ordinance of 1977. The main provisions of the Act can be summarized as:

- Declaration of ecologically critical areas, and restrictions on the operations and processes, which can be carried or cannot be initiated in the ecologically critical area;
- Regulation in respect of vehicles emitting smoke harmful for the environment.
- Environmental Clearance;
- Regulation of industries and other development activities with regards to discharge permits;
- Promulgation of standards for quality of air, water, noises and soils for different areas for different purposes;
- Promulgation of standard limits for discharging and emitting waste; and
- Formulation and declaration of environmental guidelines;

The first sets of rules to implement the provisions of the Act were promulgated in 1997 (see below: "Environmental Conservation Rules 1997"). The Department of Environment (DoE) implements the Act. DoE is headed by a Director General (DG). The DG has complete control over the DoE and the main power of DG, as given in the Act, may be outlined as follows:

- Identification of different types and causes of environmental degradation and pollution;
- Instigating investigation and research regarding environmental conservation, development and pollution.
- Power to close down the activities considered harmful to human life or the environment.

- Power to declare an area affected by pollution as an Ecologically Critical Area. Under the Act, operators of industries/projects must inform the Director General of any pollution incident. In the event of an accidental pollution, the Director General may take control of an operation and the respective operator is bound to help. The operator is responsible for the costs incurred and possible payments for compensation.

The Act was amended in 2006 (SRO No. 175-Act/2006 dated August 29, 2006) on collection and recycling of used/non-functional batteries for conservation of environment, improving environmental standard and control and prevention of environmental pollution. According to this amendment, no recycling of battery will be permitted without environmental clearance of DOE. This also restricted the improper disposal of used batteries or any parts of used battery in open place, water bodies, waste bins etc. All used batteries must be sent to the DOE approved battery recycling industry at earliest convenience. No financial transaction was allowed for used/non-functional batteries. However, the act was amended on same issue again in 2008 (SRO No. 29-Act/2008 dated February 11, 2008) to allow financial transaction on mutually agreed fixed cost.

### **3.3.3 Environment Conservation Rules (ECR) 1997 amended 2003**

These are the first set of rules, promulgated under the Environment Conservation Act 1995. Among other things, these rules set (i) the National Environmental Quality Standards for ambient air, various types of water, industrial effluent, emission, noise, vehicular exhaust etc., (ii) requirement for and procedures to obtain Environmental Clearance, and (iii) requirements for IEE/EIA according to categories of industrial and other development interventions.

However, the rules provide the Director General a discretionary authority to grant '*Environmental Clearance*' to an applicant, exempting the requirement of site/location clearance, provided the DG considers it to be appropriate.

Presently, "EIA Guidelines for Industries" published by the Department of Environment and the "Environment Conservation Rules 1997" are the formal documents providing guidance for conducting Environmental Assessment. Any proponent planning to set up or operate an industrial project is required to obtain an "*Environmental Clearance Certificate*" from the Department of Environment (DoE), under the Environment Conservation Act 1995 amended in 2002.

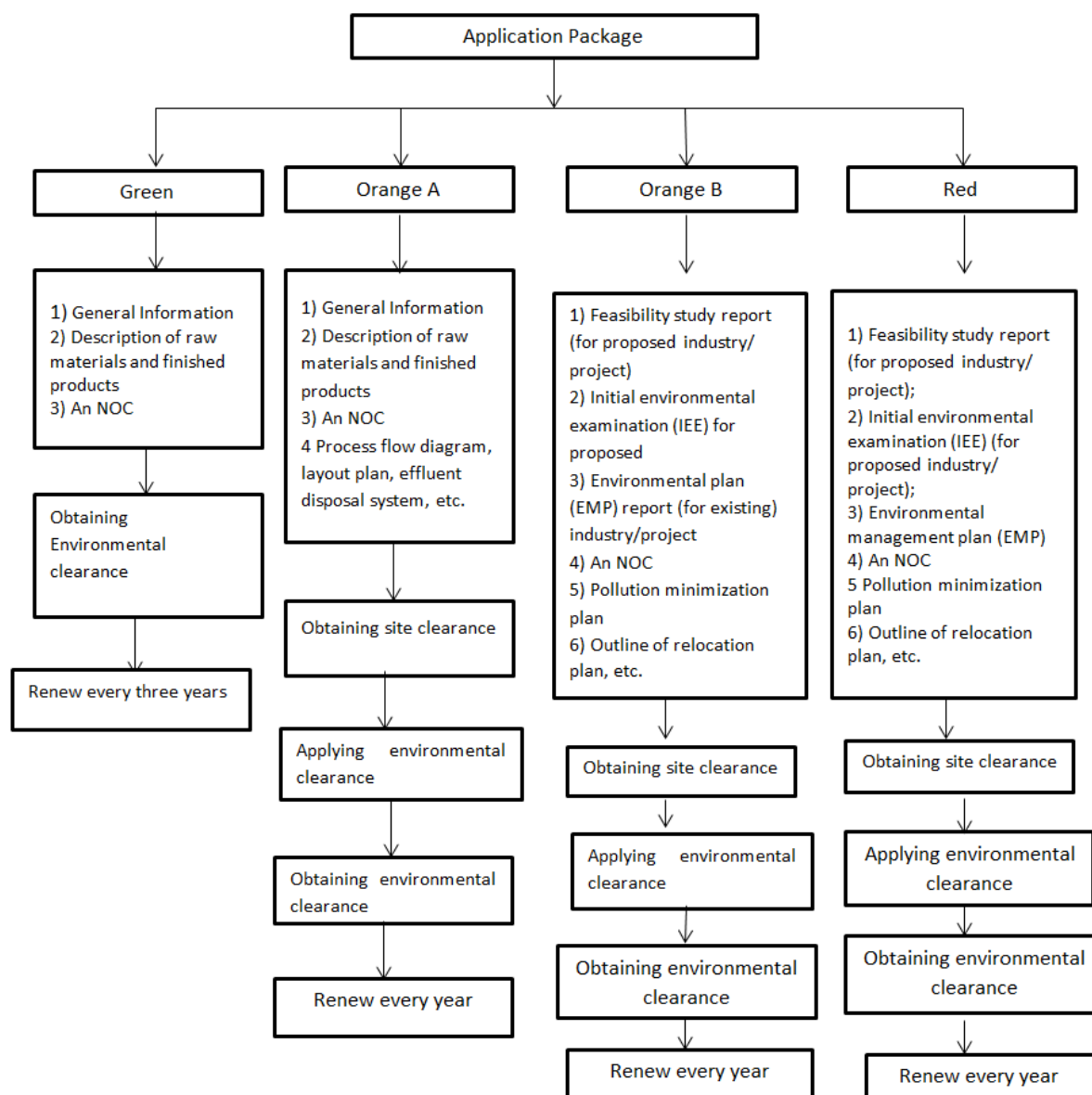
The first step of obtaining *Environmental Clearance* for the project the proponent is to apply for it in prescribed form, together with a covering letter, to the Director/Deputy Director of respective DoE divisional offices. The application should include a project feasibility study report, the EIA report, *No Objection Certificate* (NOC) of the local authority; Mitigation Plan for minimizing potential environmental impacts; and appropriate amount of fees in 'treasury chalan' (in the present case the amount is BDT 50,000). The DOE authority reserves the right to request additional information,

supporting documents, or other additional materials for the proposed project. Under the conditions specified in the Environment Conservation Rules-1997, the DoE divisional authority must issue environmental site clearance certificates within 60 working days from the date of submitting the application, or the refusal letter with appropriate reasons for such refusal. The clearance issued remains valid for a one-year period and is required to be renewed 30 days prior to its expiry date.

Environment Conservation Rules-1997 ensures the right of any aggrieved party to appeal against the notice order or decision to the appellate authority. The appeal should be made to the appellate authority with clear justification and the attested copy of the specific notice, order, or decision of the respective DoE office against, which the appeal is to be made. Prescribed fee is to be paid through treasury Chalan and the relevant papers for the appeal must be placed.

### 3.3.3.1 Categorization as per ECR 1997

Rule 7 of Environment Conservation Rules (ECR) has classified the projects into following four categories based on their site conditions and the impacts on the environment; (a) Green, (b) Orange A, (c) Orange B and (d) Red. Various industries and projects falling under each category have been listed in Schedule 1 of ECR 1997. According to the Rules, Environmental Clearance Certificate is issued to all existing and proposed industrial units and projects, falling in the Green Category without undergoing EIA. However, for category Orange A and B and for Red projects, require location clearance certificate and followed by issuing of Environmental Clearance upon the satisfactory submission of the required documents. Green listed industries are considered relatively pollution-free, and therefore do not require *site clearance* from the DoE. On the other hand, Red listed industries are those that can cause 'significant adverse' environmental impacts and are, therefore, required to submit an EIA report. These industrial projects may obtain an initial *Site Clearance* on the basis of an IEE based on the DoE's prescribed format, and subsequently submit an EIA report for obtaining *Environmental Clearance*. Figure 1 shows the process of application leading to environmental clearance for all four categories of projects.



NOC = No Objection Certificate, usually obtained from local government.

**Figure 1: Process of application for environmental clearance in Bangladesh (Source: ECR 1997)**

### 3.3.3.2 Institutional Arrangements at National and Sub- national Levels

As outlined in the National Environment Policy (1992) and National Forest Policy (1994), the Ministry of Environment and Forests (MoEF) acts as the guide and custodian for the conservation and development of the environment and, in the pursuit of that goal, to ensure through appropriate laws and regulations that natural resources, including land, air, water and forests, are exploited and managed in an environmentally sustainable manner. The Department of Environment (DoE), formed in 1989 with a mandate for environmental management later formalized under the Environment Conservation Act, 1995 (ECA'95), acts as the technical arm of the Ministry and is responsible for environmental planning, management, monitoring and enforcement. The DoE is headed by a Director General, with Divisional offices in Dhaka, Chittagong, Bogra, Khulna, Barisal and Sylhet. The Environment Conservation

Rules (1997) provide the Director General a discretionary authority to grant 'Environmental Clearance' to an applicant, exempting the requirement of site/location clearance, provided the DG considers it to be appropriate. The mandate of the Department has expanded over time, evolving from an exclusive focus on pollution control to include natural resources and environmental management, now covering:

- monitoring environmental quality;
- promoting environmental awareness through public information programs;
- controlling and monitoring industrial pollution;
- reviewing environmental impact assessments and managing the environmental clearance process; and,
- establishing regulations and guidelines for activities affecting the environment

### 3.3.3.3 Applicability of ECR 1997 to Nuton Jibon

The project interventions are in rural area with small investments. ECR 1997 Schedule A under Green Category states "Units of all kinds of cottage industries other than those listed in this Schedule shall remain outside the purview of Environmental Clearance Certificate (Unit of cottage industry means all industrial units producing goods or services in which by full-time or part-time labor of family members are engaged and the capital investment of which does not exceed BDT 500,000." ECR 1997 Schedule A under Orange-A Category states that "Dairy Farm, 10 (ten) cattle heads or above in urban areas and 25 cattle heads or above in rural areas and Poultry (up to 250 in urban areas and up to 1,000 in rural areas)." As per the ECR 1997 Schedule A, rural interventions with an investment of less than BDT 500,000/- remain outside the purview of ECC. Most of the project interventions are below this threshold level.

### 3.3.4 National Land-use Policy, 2001

The Government of Bangladesh has adopted national Land use Policy, 2001. The salient features of the policy objectives relevant to the proposed are as follows:

- To prevent the current tendency of gradual and consistent decrease of cultivable land for the production of food to meet the demand of expanding population;
- To ensure that land use is in harmony with natural environment;
- To use land resources in the best possible way and to play supplementary role in controlling the consistent increase in the number of landless people towards the elimination of poverty and the increase of employment;
- To protect natural forest areas, prevent river erosion and destruction of hills;
- To prevent land pollution; and
- To ensure the minimal use of land for construction of both government and non-government buildings.

### 3.3.5 Environment Court Act, 2000

The aim and objective of the Act is to materialize the Environmental Conservation Act, 1995 through judicial activities. This Act established Environmental Courts (one or more in every division), set the jurisdiction of the courts, and outlined the

procedure of activities and power of the courts, right of entry for judicial inspection and for appeal as well as the constitution of Appeal Court.

### **3.3.6 Bangladesh Labor Act, 2006**

This Act pertains to the occupational rights and safety of factory workers and the provision of a comfortable work environment and reasonable working conditions. In the chapter VI of this law safety precaution regarding explosive or inflammable dust/ gas, protection of eyes, protection against fire, works with cranes and other lifting machinery, lifting of excessive weights are described. And in the Chapter VIII provision safety measure like as appliances of first aid, maintenance of safety record book, rooms for children, housing facilities, medical care, group insurance etc. are illustrated.

### **3.3.7 Public Procurement Rule (PPR), 2008**

This is the public procurement rules of Bangladesh and this rule shall apply to the Procurement of Goods, Works or Services by any government, semi-government or any statutory body established under any law. The rule includes the adequate measure regarding the “Safety, Security and Protection of the Environment’ in the construction works. This clause includes mainly, the contractor shall take all reasonable steps to (i) safeguard the health and safety of all workers working on the Site and other persons entitled to be on it, and to keep the Site in an orderly state and (ii) protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of the Contractors methods of operation.

### **3.3.8 National Water Policy, 1999**

The National Water Policy promulgated in 1999 with the intension of guiding both public and private actions in the future for ensuring optimal development and management of water that benefit both individuals and the society at large. The policy aims to ensure progress towards fulfilling national goals of economic developments, poverty alleviation, food security, public health and safety, decent standard of living for the people and protection of natural environment.

According to the policy, all agencies and departments entrusted with water resource management responsibilities (regulation, planning, construction, operation, and maintenance) will have to enhance environmental amenities and ensure that environmental resources are protected and restored in executing their tasks. Environmental needs and objectives will be treated equally with the resources management needs.

The policy has several clauses related to the protection and conservation of the natural environment for ensuring sustainable development. Some of the relevant clauses are:

*Clause 4.5b:* Planning and feasibility studies of all projects will follow the Guidelines for Project Assessment, the Guidelines for People's Participation (GPP), the Guidelines

for Environmental Impact Assessment, and all other instructions that may be issued from time to time by the Government.

*Clause 4.9b:* Measures will be taken to minimize disruption to the natural aquatic environment in streams and water channels.

*Clause 4.9d:* Water bodies like baors, haors, beels, roadside borrow pits, etc. will, as far as possible, be reserved for fish production and development. Perennial links of these water bodies with the rivers will also be properly maintained.

*Clause 4.9e:* Water development plans will not interrupt fish movement and will make adequate provisions in control structures for allowing fish migration and breeding.

*Clause 4.10a:* Water development projects should cause minimal disruption to navigation and, where necessary, adequate mitigation measures should be taken.

*Clause 4.12a:* Give full consideration to environmental protection, restoration and enhancement measures consistent with National Environmental Management Action Plan (NEMAP) and the National Water Management Plan (NWMP).

*Clause 4.12b:* Adhere to a formal environmental impact assessment (EIA) process, as set out in EIA guidelines and manuals for water sector projects, in each water resources development project or rehabilitation program of size and scope specified by the Government from time to time.

*Clause 4.12c:* Ensure adequate upland flow in water channels to preserve the coastal estuary eco-system threatened by intrusion of salinity from the sea.

*Clause 4.13b:* Only those water related projects will be taken up for execution that will not interfere with aquatic characteristics of those water bodies.

### **3.3.9 National Safe Drinking Water Supply and Sanitation Policy 1998**

National Safe Drinking Water Supply and Sanitation Policy (NSDWSSP, 1998) was drafted in 1998, and sets out the basic framework for the improvement of public health quality and to ensure improved environment, together with a set of broad sectoral action guidelines. The draft policy offered various objectives to achieve the goal and these are:

- To manage water supply and sanitation related basic needs for all.
- To bring the positive change of peoples attitude, regarding water and sanitation.
- To reduce the outbreak of water borne diseases.
- To increase the efficiency of the Local Government and associated community for handling more effectively the problems related to water supply and sanitation.
- To improve sustainable water supply and sanitation system.
- To ascertain proper conservation, management and use of surface water and to control water pollution due to the scarcity of underground water.



- To take necessary steps to use and conserve rain water.

### **3.3.10 National Fisheries Policy, 1998**

The National Fisheries Policy, 1998 recognizes that fish production has declined due to environmental imbalances, adverse environmental impact and improper implementation of fish culture and management programs. The policy suggests following actions:

- To conserve fish habitats from damage, appropriate care should be taken during the implementation of all development activities such as flood control, irrigation and drainage projects, agriculture, industries, road and development projects.
- Shrimp and fish culture will not be expanded to the areas which damage mangrove forest in the coastal region
- Biodiversity will be maintained in all natural water bodies and in marine environment. Chemicals harmful to the environment will not be used in fish and shrimp farms
- Harvest of fish and shrimp by the trawlers in the shallow coastal areas (within 40 meter depth) will be banned
- Breeding ground of fish and fresh water giant prawn will be conserved
- Environment friendly shrimp culture technology will be used
- Control measures will be taken against activities that have a negative impact on fisheries, resources and vice-versa
- Jobless youths will be trained on aquaculture and financial assistance will be provided for their post-training fish culture activities.

### **3.3.11 National Agricultural Policy, 1999**

The overall objective of the National Agriculture Policy is to make the nation self-sufficient in food through increasing production of all crops including cereals and ensure a dependable food security system for all. One of the specific objectives of National Agricultural Policy is to take necessary steps to ensure environmental protection as well as 'environment friendly sustainable agriculture' through increased use of organic manure and strengthening of the integrated pest management program. The policy also suggests creating awareness so that the chemical fertilizers and pesticides used for increased crop production do not turn out to be responsible for environmental pollution. Water logging and salinity are identified as one of the serious problem in some parts of the country including the coastal areas for agricultural activities and environmental damage. The policy recommends for crop diversification and salt tolerant crop varieties. Irrigation from surface water will get priority and appropriate infrastructure will be built for capturing surface water from khals, beels and small rivers considering the water bodies as fish production systems.

### **3.3.12 National Livestock Development Policy, 2007**

The National Livestock Development Policy has been prepared to address the key challenges and opportunity for a comprehensive sustainable development of the

Livestock subsector through creating an enabling policy framework. The policy recognizes that there are no guidelines for environmental protection and bio-security when establishing poultry farms. The use of antibiotics in feeds is thought to be common and a cause of public health concern. The policy recommends for developing and enforcing specific guidelines for establishing environment-friendly commercial poultry farms.

### **3.4 Social Policies, Laws and Regulations of GoB**

Infrastructure development projects using lands in Bangladesh is designed and implemented under the legislative and regulatory framework to compensate the affected persons due to land acquisition using the power of eminent domain. Whenever it appears to the Government that any property in any locality is needed or is likely to be needed for any public purpose or in the public interest, the property is acquired using existing laws and regulations. Land acquisition is governed by the Acquisition and Requisition of Immovable Property Ordinance, 1982 (Ordinance II of 1982). The ordinance supersedes earlier laws including the Land Acquisition Law of 1894 and others that have been in force between 1947 and 1982. In addition to the Ordinance, acquisition of any land or forest area in Chittagong Hill- Tracts (CHT) districts requires consent under the Chittagong Hill-Tracts (Land Acquisition) Regulation 1958, the CHT Regional Council Act 1998 and the Forest Act (1927). There is no national policy in Bangladesh governing social effects of infrastructure development projects on the project area communities. However, the Constitution of Bangladesh provides some rights to the affected persons, communities and groups those are not upheld in the Ordinance II of 1982 which is the instrument followed for land acquisition. The active instruments under the legislative and regulatory framework in Bangladesh are discussed below:

#### **3.4.1 Constitutional Provisions**

The fundamental rights under the Constitution indicate the general guidelines for a policy on resettlement/rehabilitation of citizens adversely affected (whatever be the mechanism) due to any activity of the State. Article 40 of the constitution states categorically that every citizen has the right to practice any lawful occupation which implies that anything impeding such right (a) should not be done or (b) there should be supplementary measures to make good the losses incurred by the citizen. Resettlement and rehabilitation of adversely affected people due to infrastructure projects very clearly falls within this requirement for supplementary measures. However, as per Article 42, sub-clause 2, no law with provision of compensation for acquisition of land can be challenged in a court on the ground that such compensation has been inadequate. However, under World Bank OP 4.12 Involuntary Resettlement, every affected person will have access to a project specific Grievance Redress Mechanism for dispute resolution before the matter is moved to the courts. Complaints, the resolution process and the outcome will be reviewed by the project proponents as well as the Bank. Until the dispute is resolved the funds for the disputed asset must be held in an escrow account (top-up payments due from the project agency can be held

until the project closes; the amount placed with the DC may be held for 10 years or more if necessary).

### **3.4.2 The Acquisition and Requisition of Immovable Property Ordinance, 1982**

The principal legal instrument governing land acquisition in Bangladesh is the Acquisition and Requisition of Immovable Property Ordinance, 1982 (Ordinance II of 1982 with amendments up to 1994) and other land laws and administrative manuals relevant to land administration in Bangladesh. According to the Ordinance, whenever it appears to the Government of Bangladesh that any property in any locality is needed or is likely to be needed for any public purpose or in the public interest, the Government can acquire the land provided that no property used by the public for the purpose of religious worship, graveyard and cremation ground. The 1982 Ordinance requires that compensation be paid for (i) land and assets permanently acquired (including standing crops, trees, houses); and (ii) any other damages caused by such acquisition. The Deputy Commissioner (DC) determines (a) market value of acquired assets on the date of notice of acquisition (based on the registered value of similar property bought and/or sold in the area over the preceding 12 months), and (b) 50% premium on the assessed value (other than crops) due to compulsory acquisition. The 1994 amendment made provisions for payment of crop compensation to tenant cultivators. The law specifies methods for calculation of market value of property based on recorded prices obtained from relevant Government departments such as Registrar (land), Public Works Department (structures), Department of Forest (trees), Department of Agriculture (crops) and Department of Fisheries (fish stock). Given that people devalue land during title transfer to minimize tax payment, compensation for land paid by DC including premium largely remains less than the actual market price.

The Ministry of Land (MOL) is authorized to deal with land acquisition. The MOL delegates some of its authority to the Commissioner at Divisional level and to the Deputy Commissioner at the District level. The Deputy Commissioners (DCs) are empowered by the MOL to process land acquisition under the Ordinance and pay compensation to the legal owners of the acquired property. Khas (government owned land) lands should be acquired first when a project requires both khas and private land. If a project requires only khas land, the land will be transferred through an inter-ministerial meeting following the acquisition proposal submitted to DC or MOL as the case may be. The DC is empowered to acquire a maximum of 50 standard bigha (6.75 ha) of land without any litigation where the Divisional Commissioner is involved for approval. Acquisition of land more than 50 standard bigha is approved from the central land allocation committee (CLAC) headed by the chief executive of the Government of Bangladesh proposed by the MOL.

The land owner needs to establish ownership by producing record-of-rights in order to be eligible for compensation under the law. The record of rights prepared under 4. 143 or 144 of the State Acquisition and Tenancy Act 1950 (revised 1994) are not always updated and as a result legal land owners have faced difficulties trying to “prove” ownership. The affected person (AP) has also to produce rent receipt or receipt of

land development tax, but this does not assist in some situations as a person is exempted from payment of rent if the area of land is less than 25 bighas (3.37 ha).

The Land Acquisition Act and The World Bank's OP 4.12 are not applicable to this project. The project will not permit the acquisition of private land nor will it undertake any activity that triggers OP 4.12 such as physical or economic displacement of people regardless of title, adverse impacts on livelihoods etc.

### **3.4.3 Constitutional Right of the Small Ethnic Communities**

The Constitution of Bangladesh does not mention the existence of the cultural and ethnic minorities in Bangladesh. The only protective provision for the ethnic minorities that the policy makers often refer to is Article 28 (4) which states that: Nothing shall prevent the state from making special provision in favor of women and children or for the advancement of any backward of the citizens. The above provision is an ambiguous one and it does not define who or what constitutes "backward". However, the Government recognizes existence of "Small Ethnic Communities" and the need for special attention and in general Small Ethnic Communities are essentially viewed as backward, poor and socio-economically & culturally inferior. Towards this end a special program was initiated in 1996-97 by the Prime Minister's Secretariat aimed at improving the socio-economic situation of the Small Ethnic Communities of Bangladesh, resident outside the Chittagong Hill Tracts.

### **3.4.4 The Chittagong Hill Tracts Regulation 1900**

The Chittagong Hill Tracts Regulation, 1900 (Regulation I of 1900) is the regulatory framework for State sovereignty over the traditional rights of the Small Ethnic Communities living in the Chittagong Hill Tracts (CHTs) region. They are governed through Revenue Circle Chiefs who are local revenue collectors vide an amalnama (authorization by the Government). The Deputy Commissioner and the Commissioner from the Central Government reserve the authority to settle land to the hill-men or non-hill residents or lease out land (non-transferable) for rubber plantation or establishing industries in the CHTs. The regulation provides the right to possessing cultivable land up to 5 acres by hill men or non-hill residents. The headman is responsible for the conservation of the resources of his mouza through exercising his authority to (i) prohibit the removal of forest produces by residents of respective mouzas other than for their domestic purposes or by non-residents for any purpose, (ii) exclude any area or areas in his mouzas from the jhuming (shifting cultivation), (iii) prevent new comers from cutting jhums in his mouza, and (iv) prevent a person from grazing cattle in his mouza.

### **3.4.5 The Chittagong Hill –Tracts (Land Acquisition) Regulation, 1958**

Most of the land in CHT belongs to the Government either as reserve forest or as unclassified state forest. The CHT Regulation I of 1900 was the sole legal instrument for the governance and administration of the Hill Tracts. Under the regulation, the DC could resume land even though settlement of the same might have been given earlier. The rule prescribed payment of compensation for various interests as in the case of land acquisition. In order to expedite the acquisition of land in CHT, the Government made the Chittagong Hill-Tracts (Land Acquisition) Regulation, 1958. This regulation has provision for payment of compensation for requisitioned property. The compensation may be fixed by agreement or by rules framed on this behalf.

### **3.4.6 The CHT Regional Council Act, 1998**

The National Parliament of Bangladesh in 24 May 1998 passed the Peace Accord 1997 as the “Chittagong Hill Tracts Regional Council Act, 1998 (Act 12 of 1998). In addition to re- establishing peace, the Accord recognized the ethnic people’s right to land, culture, language, and religion. The Accord set out detailed provisions for strengthening the system of self- governance in the CHT, and redressing the most urgent land-related problems including resolution of land disputes by a commission on land, the transfer of authority for land administration to the hill district councils (HDCs), the cancellation of lease granted to non- residents during the conflict period, the distribution of land to ethnic or “Small Ethnic Communities” villages, and the strengthening of customary land rights. Under this Act, no lands, hills and forests within the control and jurisdiction of the HDCs shall be acquired or transferred by the government without consultation and consent of the Regional Council. No law will be executed in the region which is not developed and enacted in consultation and agreement with the Small Ethnic Communities peoples in CHT. A ministry on CHT Affairs was established by appointing a Minister from among the Small Ethnic Communities of hill districts. An Advisory Council from the CHT region assists this ministry.

## **3.5 Statutory Clearances and Authorizations Required**

The Social Development Foundation is committed to implement environmentally sustainable and socially acceptable interventions to bring improvements in the quality of life of the targeted communities, i.e., Hard Core Poor, Poor and Vulnerable and Small Cultural and Ethnic Minorities. Environmental consideration will be the integral part of all interventions of Nuton Jibon, such as small rural infrastructure and livelihoods, in planning, construction, operation and maintenance. All interventions will require environmental and social screening. The Village level communities should screen and monitor environmental and social issues in both construction and operation & maintenance phase and it will ensure the implementation of the project keeping all environmental and social parameters in control. Hence no prior statutory clearances or authorizations are foreseen.

Single small scale rural infrastructure and livelihoods have almost no or little environmental and social adverse impacts, however, cumulative impacts should consider when implemented in a large numbers. Natural resource exhaustion and waste management should be considered. Environmental and social impacts, bio- diversity conservation and bio-safety will need to be considered for large scale agriculture/ animal/ dairy/ poultry/ fisheries based interventions.

### **3.6 Implication of Environmental and Social Regulatory Framework on NJLIP Activities**

The relevant legal and regulatory requirements have been incorporated as required into the Environment Management Process. Specifically, the following arrangements have been incorporated:

#### **List of Negative Attributes and/or Sub-projects**

A negative list of attributes, sub-projects or activities that will not be supported under the NJLIP has been agreed upon. This list includes the following sub-projects:

- **Water supply:** Tube-wells with arsenic contamination higher than national standard (currently 50 ppb).
- **Sanitation:** No unsanitary pit latrines will be considered.
- **Land filling:** Sub-projects that will impact major destruction of top soil of agricultural land. Land filling by industrial, household and commercial wastes.
- **Natural Habitats:** Rural small infrastructure, or other works which could adversely affect wetlands or water bodies, either through pollution or hydrological changes or destroy the natural forest; Activities within Protected Areas (Wildlife Sanctuaries and National Parks).
- **Land Acquisition and involuntary Resettlement:** No subproject that anticipates triggering land acquisition or the displacement of people (economic or physical) with or without title, temporarily or permanently from public or private lands will be considered.
- **Adverse impacts on on-going livelihood activities** due to any project intervention will not be permitted.
- **Disputed Land/ Environmental Sensitive Areas/ Cultural Heritage Resources:** No projects activities will be carried out in disputed lands or in the vicinity of lands restricted for development such as, Environmental Protected Areas/ Cultural Heritage Sites/or Socially Sensitive areas.
- **Pesticides:** Use of pesticides under WHO Class Ia, Ib, and Class II
- **Deforestation:** Activities that consume large amounts of local wood without rehabilitation
- **GMO:** Activities that involve Genetically Modified Organisms (GMOs) that have not been approved by an independent panel of internationally recognized experts, and cleared by the World Bank and the Government of Bangladesh.

#### **Environmental and Social Assessment**

The NJLIP activities will go through environmental and social screening and assessment. The procedure identified for the environmental screening and assessment is in alignment with that prescribed in the ECR, 1997 of the Government of Bangladesh. A

social screening format has been prepared. The implementing agency has successfully applied similar formats in the past and has carried out social assessments for the previous phases too, which have been regularly reported to the Bank.

## **4. Environmental Management Process – Rural Small Infrastructure**

### **4.1 Introduction**

This chapter describes the general guidelines for mainstreaming the environmental considerations in different activities of rural development through small rural infrastructures. It discusses the overall environmental management process of rural infrastructures to be implemented by the SDF. This includes baseline data collection, categorization of infrastructures based on their EA requirements, and the environmental management process including tools for screening or assessing environmental impacts, environmental mitigation measures, and environmental codes of practice. A process flow diagram showing planning and implementation of sub-projects and various phases of environmental management process has been illustrated in Figure 4-1.

The USP (Unique Selling Proposition) of Social Development Foundation is “Promoting Sustenance in Rural Bangladesh”. The Government of Bangladesh through the Ministry of Finance has mandated the SDF to finance and develop rural infrastructure and livelihoods projects. SDF, which has set out to implement the Nuton Jibon, aims to promote environmentally sound and sustainable, socially acceptable and economically viable rural infrastructure and livelihoods sub-projects. SDF believes that each of the sub-projects of the Nuton Jibon will improve the living standards and the environment of populations of the participating communities and areas around these villages.

In line with this policy, SDF along with Community Groups is committed to identify, prepare and implement socially acceptable, environmentally sound and sustainable and financially sustainable sub-projects. Further, these sub-projects would be implemented with the continuous community engagement, environmental oversight, financial prudence and managerial prowess that are inherent strengths of SDF.

The project undertakes two types of investments: a) Rural Small Infrastructure and b) Rural Livelihoods Promotion. These activities are both small in size and local in nature requiring minimal investments. Environmental and social considerations are an integral part of all interventions of NJLIP. Although implementation of SIPP-II revealed that these simple small scale rural infrastructures have almost no or little environmental and social adverse impacts, SDF will follow some principles in the overall environmental management of sub-projects to be implemented for rural development component of NJLIP:

- Activities with severe negative environmental impacts will not be supported by NJLIP.
- All subprojects will go through environmental screening and assessment and will have sub-projected specific Environmental Management Plans (EMPs).

- The Village level communities plan, screen, mitigate and monitor environmental and social issues in both, construction and operation and maintenance. 'Environmental Enhancement Measures' will be recommended specifically to address adaptation needs in the context of climate change.

## 4.2 Size and Scope of Rural Small Infrastructure

The project communities take up rural small infrastructures works. Each project village choses a provision in the range of BDT 12,00,000 to BDT 15,00,000 for infrastructure which allows to finance one or two small rural infrastructure works. The list of types of rural infrastructure works taken up is given below:

**Table 3: Sizes of Rural Small Infrastructure**

Category of Component	Infrastructure component	Size	
		Maximum	Minimum
Cross Drainage Works and Roads	Double vent Box-culvert	2.5 X 2.5 X 3 m	2.5 X 2.5 X3 m
	Single vent Box-culvert	2 X 2 X 3.66 m	1.5 X 1.5 X 3 m
	U- type culvert	1.4 X 0.9 X5.5 m	0.75 X 0.9 X 3 m
	Pipe culvert	0.6 dia X 5 m	0.9 dia X 6 m
	Drain	Width- 300 mm Depth/height- 400 mm Length-50 m	Width- 300 mm Depth/height- 400 mm Length-50 m
	Wooden Bridge	Length-5 m Width-2 m 250 X 250 mm RCC post 250 X 250 mm RCC beam	Length-11 m Width-2 m 250 X 250 mm RCC post 250 X250 mm RCC beam
	Canal digging	6 X 2 X 2 m Top width X depth X bottom width	6 X 2 X 2 m Top width X depth X bottom width
	Roads	3 m wide and 200 m long	5 m wide 500 m long
Sanitation	Toilet	1.83 X 1.5 m	1.83 X 1.5 m
	Urinal	1.22 X 0.92 m	0.92 X 0.92 m
Water Supply	Tube well	13.72 m Depth	350.61 m Depth
Building	Market development	Market shade- 3.66 m X 10.98 m Length X Width (including internal drain, tube well, toilet, latrine etc. as per field condition)	Market shade- 3.66 m X 10.98 m Length X Width (including internal drain, tube well, toilet, latrine etc. as per field condition)
	Gram Samiti Office Building	350 Sq.ft	550 sq.ft.

## 4.3 Environmental Management Process

Following steps will ensure environmental management in the planning and implementation of rural infrastructure:

- Reviewing negative list of attributes and subprojects
- Categorization of sub-projects
- Environment assessment of sub-projects and development of EMP
- Institutional arrangements



- Monitoring /External Environmental Audit
- Capacity building

A process flow diagram showing planning and implementation of sub-projects and various phases of environmental management process is shown in Figure 4-1.

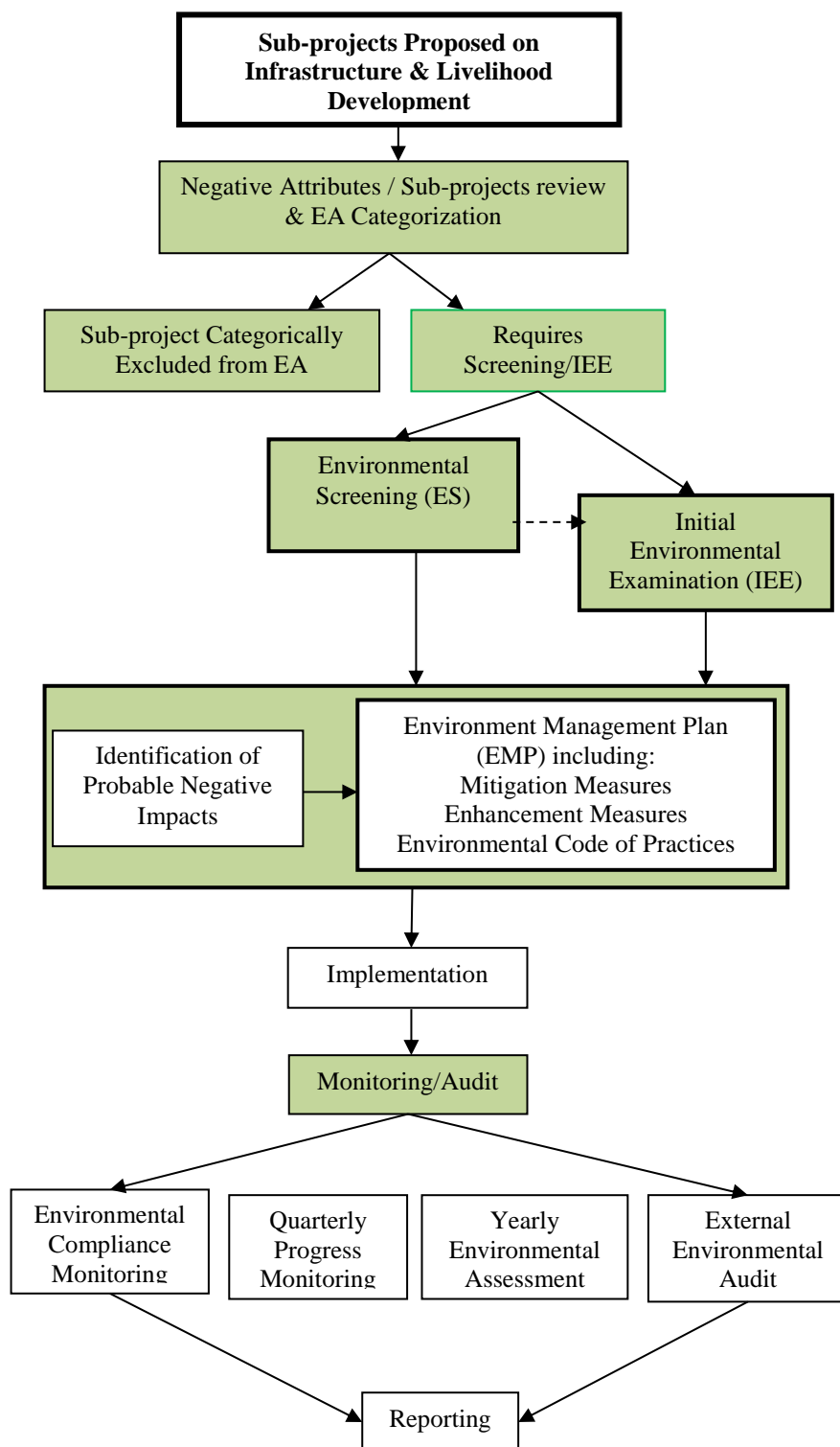
#### 4.3.1 Negative List of Sub-Projects

The project will not support any activities which may have significant environmental and social impacts. Specific sub-projects with any of the attributes listed below will be ineligible for support under the project.

- **Roads:** Construction, reconstruction and extension of regional, national road and highway Construction/reconstruction of road involving major concrete/ reinforced cement concrete.
- **Dams/Embankment:** Construction/reconstruction of dam/embankment of more than 3 meters in height involving major concrete/ reinforced cement concrete
- **Water supply:** Tube-wells with arsenic contamination higher than national standard (currently 50 ppb). Water supply schemes with high probability of bacterial contamination or characteristics which may make water unsuitable for drinking.
- **Sanitation:** No unsanitary pit latrines will be considered.
- **Drain/canal/pond:** Construction/reconstruction of drain, canal/pond excavation with loss of agriculture land.
- **Land filling:** Sub-projects that will impact major destruction of top soil of agricultural land. Land filling by industrial, household and commercial wastes.
- **Natural Habitats:** Rural small infrastructure, or other works which could adversely affect wetlands or water bodies, either through pollution or hydrological changes or destroy the natural forest;
- **Disputed Land/ Environmental Sensitive Areas/ Cultural Heritage Resources:** No projects activities will be carried out in disputed lands or in the vicinity of lands restricted for development such as, Environmental Protected Areas/ Cultural Heritage Sites/or Socially Sensitive areas.

In the event of any sub-project falling under the purview of ECR 1997, SDF will review these sub-projects and makes a decision on taking up such sub-projects. SDF, after consultation with The World Bank, will make a decision to go or not to ahead with such sub-Projects. If SDF decides to go with such sub-Projects, then process as outlined in ECR 1997 will be followed. However, there is possibility that Federations at village/ cluster level taking-up enterprises, which will be larger than the individual livelihoods enterprises. Such common enterprises will need to be assessed and appropriate procedures followed as per ECR 1997, as suggested above.

**Figure 4.1: A process flow diagram showing various phases of environmental management**



#### 4.4 Categorization of Rural Small Infrastructure

NJLIP is under preparation and sub-projects are yet to be identified. Further the implementation of these sub-projects will take place over a period of time and this time lag will lead to changes in the environmental and social assessments. As already

mentioned earlier, the sub-projects are of small in size and local in nature inducing no or negligible and temporary impacts. For such reasons preparation and implementation of an ESMF is proposed for this project. As part of this process Nuton Jibon will follow the following process:

- a) Sub-projects require Environmental Screening or
  - b) Sub-projects require Initial Environmental Examination (IEE) format and developing a specific Environmental Management Plan (for managing social impacts and issues a Social Management Framework is given under Chapter 7) based on the ECoPs given in the ESMF based on the type of sub-project.
  - c) Sub-projects excluded from environmental assessment: Any rehabilitation or maintenance work of the existing infrastructures.
- The category of sub-projects falling under these categories given below:

**Table 4: EA Categorization of Subprojects**

Category	Category 1 (Screening)	Category 2 (IEE)
Type of Works	Toilet Urinal Tube Well	Culverts Drains Canals Roads Wooden Bridges Buildings
Environmental Management Process	Filling Environmental Screening (ES) format Use of ECoPs given in ESMF	Filling IEE format Developing a specific EMP based on ECoPs given in ESMF
Any proposal for maintenance or rehabilitation of existing interventions will not require environmental screening or IEE		

#### **4.4.1 Category 1: Environmental Screening**

For Category 1 projects, the environmental impacts are identified through filling an Environmental Screening format (ES) (Annex 1). The basic objective of the filling in this sheet is to collect basic information on environmental aspects of the proposed sub-project. Further the ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection stage. For this purpose, a simple Environment Screening sheet (ES) is formulated for Rural Small Infrastructure sub-projects, annexed to this ESMF. The ES is filled by GS with the facilitation support of the Cluster Offices duly identifying the environmental issues of concern. The Community Groups will do the screening through collection of necessary field data with the help of Cluster Mobilizers. The Cluster Mobilizers will assist the GS in identifying the appropriate ECoPs from ESMF and incorporate them into the sub-project proposals as mitigation and enhancement measures. The ES will be attached to the sub-project project proposal.

#### **4.4.2 Category 2: Initial Environmental Examination (IEE)**

For Category 2 projects, the environmental issues are identified by filling in Initial Environmental Examination format (IEE). The basic objective of the filling in this sheet is to collect basic information on environmental aspects of the proposed sub-project. Further the ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection stage. For this purpose, a simple Initial Environmental Examination format (IEE) is formulated for Rural Small Infrastructure sub-projects, annexed to this ESMF (Annex 2). These IEEs is filled by GS with the facilitation support of the Cluster Offices duly identifying the environmental issues of concern. The Community Groups will do the screening through collection of necessary field data with the help of Cluster Mobilizers. When required, supplementary notes on environmental concerns will also be added to the ES and IEE formats. The IEE will be attached to the sub-project project proposals. The GS with the help of Community Mobilizers will identify appropriate ECoPs given in this ESMF and incorporate the same as mitigation and enhancement measures into the sub-project proposals. The District level Infrastructure Expert and Livelihoods Experts does the review of the adequacy of the IEE and sub-project proposals.

#### **4.5 Prediction of Environmental Impacts and Mitigation**

The sub-project categorization as Category 1 or Category 2 and filling of ES and IEE needs to be done on the basis of field visits, primary and secondary data and analysis. After identifying the impacts, the mitigation measures need to be determined. Some generic mitigation measures as Environmental Codes of Practices (ECoPs) are included as a guidance, in this ESMF. This guidance table also includes information on whether these mitigation measures have to be undertaken in the planning/ design, construction and operation phases. However, each category of sub-projects needs to incorporate mitigation measures as given below. In case of all sub-projects, the Cluster/ District/ Regional Offices of SDF need to ensure that the relevant EMP Provisions are a part of the sub-project proposals for facilitating its integration into the sub-project implementation.

##### **4.5.1 Prediction of Impacts**

NJLIP aims to provide environmentally sustainable infrastructure facilities in the target villages to improve the quality of life in the habitations of the project area. Hence, from the project development objective, it can be seen that this project and the sub-projects would yield positive and beneficial impacts on the target population. While the general dictum that says 'any and all development interventions will also have some negative impacts', is held in high esteem, the fact is that the negative impacts (if any) induced by Nuton Jibon are negligible, insignificant and temporary. Keeping this in view the likely positive and negative impacts are listed below. The significance of these listed impacts would vary depending on the individual sub-project, its size and location. The size of the sub-projects would normally be small both physically and financially. Due to the likely small size of the sub-projects, adverse impacts, if any, would be at its minimum localized and reversible for the following reasons:

- Proposed project is rural livelihood project
- The investments that go into these sub-projects are marginal
- Significantly low environmental and social impacts

#### **4.5.2 Generic Positive Impacts**

The following environmental and social impacts are predicted based on the assessment. The impacts could occur during the construction phase and/or operation phase. These possible positive impacts are listed below:

- Improved public safety and security
- Reduced sufferings during monsoons and adverse climatic conditions
- Better infrastructure and connectivity
- Improved access to services
- Productive use of time
- Improvements in income patterns
- Health and Environmental improvements
- Improvements in quality of life and human dignity
- Opportunities for social interaction
- Improved community participation and sense of ownership

#### **4.5.3 Generic Adverse Environmental Impacts**

Since the sub-projects are yet to be finalized, mostly generic impacts which mostly could be caused by such typical projects are listed under this section. The proposed sub-project interventions may not cause any of the listed impacts due to their small size and local nature.

- Loss of trees due to tree cutting, if any trees are cut.
- Impact on land and soil like loss of productive soil and soil erosion
- Changes in Land Use
- Impacts due to borrow areas and quarrying of material
- Compaction and contamination of soil due to vehicular movements
- Impact on surface water bodies due to siltation
- Potential changes to local drainage patterns in and beyond the construction zone
- Impacts on surface water quality of rivers and other water bodies
- Impacts on aquatic ecology due to deposition of debris and temporary sedimentation and turbidity
- Impacts due to construction debris/waste
- Health and safety of construction workers and local people/ community
- Impacts due to transportation and storage of construction materials
- Reduction in air quality due to construction activities
- Increase in noise levels during construction
- Obstruction and disruption of traffic

- Loss/ impact on common property resources

#### **4.6 Environmental Management Plan (EMP)**

The Environmental Management Plan (EMP) lists mitigation and enhancement measures including Environmental Code of Practices (ECoPs) for the possible negative and positive impacts caused by Rural Small Infrastructure sub-projects under NJLIP. In addition, the EMP includes a monitoring plan and a timeline for implementation of the suggested mitigation and enhancement measures.

For all categories of Rural Small Infrastructure sub-projects, the attached guidance can be made use of. The mitigation measures given in this guidance should be followed during implementation and operation and maintenance. Based on the actual nature and type of sub-project suitable and appropriate modifications and additions can be made. SDF would ensure that relevant mitigation measures are implemented as sub-projects go into implementation.

For category 2 sub-projects, the attached guidance is indicative but not exhaustive. The IEE will provide information on what are the environmental impacts and appropriate mitigation measure need to be designed and an EMP prepared accordingly. SDF District Office would ensure that relevant mitigation measures are implemented as sub-projects go into implementation.

##### **4.6.1 Suggested Impact Mitigation Plan for Roads, CD Works and Buildings**

The Environmental Impact Mitigation/ Management Plan for Roads, CD works and Building works is given below:

**Table 5: Environmental Impact Mitigation Plan – Guidance for Roads, CD Works and Buildings**

Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
Roads and Cross Drainage Works, Buildings	<p>Positive Impacts</p> <ul style="list-style-type: none"> <li>• Improved accessibility to markets</li> <li>• Improved quality of life</li> <li>• Greater employment generation</li> </ul> <p>Negative Impacts</p> <ul style="list-style-type: none"> <li>• Removal of vegetation during construction activities</li> <li>• Soil loss during the construction of structures and quarrying for stone and other materials</li> <li>• Siltation of water bodies downstream during construction</li> <li>• Low quality construction may lead to failure and more hazards in downstream</li> <li>• Destabilization of the land and soil erosion/landslips along the road cuttings</li> <li>• Maintenance of the structures will require additional responsibilities to the stakeholders.</li> <li>• Destruction of local flora during road construction and also along the roads.</li> <li>• Possibility of natural drainage pattern being disrupted</li> </ul> <p>The construction activities may cause temporary negative environmental impacts, which would need to be addressed. Some of the likely issues are the following:</p> <ul style="list-style-type: none"> <li>• During the construction of project components significant earth work may be involved, which may cause erosion of land and cutting of trees.</li> <li>• Impact on human health and safety due to dust and noise pollution, and inadequate safety measures.</li> </ul>	<p>Enhancement Measures</p> <ul style="list-style-type: none"> <li>• Keep the infrastructure in good condition</li> <li>• Use innovative public private people partnerships to build and maintain infrastructure</li> </ul> <p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Use of land not suitable for other productive purposes may be brought under infrastructure activities.</li> <li>• The safety provisions for Building to be followed.</li> <li>• Proper upkeep and maintenance of facilities built.</li> <li>• Quality of constructions should be ensured to reduce the failure and more hazards in downstream.</li> <li>• Proper designing and planning for road construction/laying will stabilize the land and reduce soil erosion/landslips.</li> <li>• Bio-physical measures to rehabilitate disturbed land to check soil erosion.</li> <li>• All project interventions will be appropriately designed to ensure that they do not impact the forest lands or wet lands. All the physical works should be on Parishad lands.</li> <li>• Suitable changes in location/ alignment shall be made in the schemes to avoid cutting of trees and also avoid erosion and ensure soil stabilization. In the absence of an alternate location, permission from the forest department shall be obtained for felling of trees and the department's guidelines on compensatory afforestation will be followed.</li> <li>• In case of some physical works associated with construction and maintenance there might be chance finds of objects of cultural/ archaeological importance. In such cases, the regional offices the Archaeological Department will be immediately notified.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District/ Cluster Offices</li> <li>• Community Groups</li> </ul>

#### **4.6.2 Tube Wells and Hand Pumps**

##### **A. Points to Keep in Mind**

- Local geology; slope of ground surface
- Nature of soil and underlying porous strata; whether clay, sand, gravel, rock; coarseness of sand or gravel; thickness of water bearing stratum, depth to water table.
- Slope of water table, preferably as determined from observational wells
- Extent of drainage area likely to contribute water to the supply.
- Nature, distance and direction of local sources of pollution.
- Possibility of surface water entering the supply and of wells becoming flooded; methods of protection
- Methods used for protecting the supply against pollution by means of sewage treatment, waste disposal.
- Well construction – Total depth of well
- Casing: diameter, wall thickness, material and length from surface.
- Screen or perforations: diameter, material, construction, locations and lengths.
- Disinfection: equipment, supervision, test kits, or other types of laboratory control.

##### **B. Other Important Guidance**

- Direct runoff of rain water into bore well sources should be prevented;
- A concrete mat of sufficient thickness for 75 cm radius around the bore well shall be provided to seal the outer periphery of the bore well. The casing pipe should be raised 60 cm above ground level and provided with a sanitary plug until the pump is installed.
- Rainwater harvesting and recharge structure should be located at least 15 m away from the bore well to avoid direct contamination.
- Soak pit for the disposal of effluent from septic tank or other sanitation facility should not allowed within 15 m radius from the bore well of water supply source to avoid direct contamination.
- For bore wells, the annular open space on the outside of the well casing needs to be filled with neat cement grout.
- The Hand pump should be provided with a concrete platform around for a dia of 3 meters with drainage arrangement into a soak pit.

##### **C. Preventive Measures for Maintaining Quality of Drinking Water**

- Sources of water supply including wells fitted with hand pumps should be disinfected regularly. Free residual chlorine level of not less than 0.2 mg/L and more than 0.5 mg/L should be maintained.
- Hand Pump should be periodically cleaned at least once in three months
- Leakages in pipes should be arrested
- Surroundings of the hand pump should have clean and hygienic environment



### **4.6.3 Latrines**

#### **A. Safe Sanitation Technologies Alternative Analysis**

Selection and installation of safe sanitation technologies to suit the local soil characteristics and hydrogeology is necessary so as to minimize ground water contamination. For selecting the most appropriate system for any location the following factors are to be considered:

- Number of people to be served
- Per capita water supply rate and the water availability for ablution and flushing
- Extent of space available within the plot/street for sanitation facility
- Hydro-geologic characteristics of the subsoil
- Depth to groundwater table from the ground surface (summer and rainy season)
- Quality of groundwater in the vicinity and their present uses
- Locations of the existing water supply wells sources

**Table 6: Sanitation Technologies – Analysis of Different Alternatives**

<b>Latrine Type</b>	<b>Suitable for high Ground Water table</b>	<b>Suitable for areas prone to floods, tidal floods or flushes</b>	<b>Suitable for loose soils</b>	<b>Suitable for soils of low permeability</b>	<b>Water requirement</b>	<b>Ease of construction</b>	<b>Ease of maintenance</b>	<b>Remarks</b>
Direct Single Pit Latrine Without Pour flush	Yes, if raised	Yes, if raised	Yes, if fully clay soils lined	Not for	No	Easy	Easy	Sludge unsafe
Direct Twin Pit Latrine Without Pour flush	Yes, if raised	Yes, if raised	Yes, for fully lined	Not for, clay soils	No	Easy	Easy	Safe sludge
Offset Single Pit Latrine with Pour-flush	Yes, if raised and with soak away	Yes, if raised	Yes, for fully lined	Yes, with soak away	Yes	Easy	Easy	Sludge unsafe
Offset Twin Pit Latrine with Pour-flush	Yes, if raised and with soak away	Yes, if raised	Yes, for fully lined	Yes, with soak away	Yes	Fairly Easy	Fairly	Safe sludge easy
Solar Heated Single-vault eco-sanitary latrine with urine separation	Yes	Yes	Yes	Yes	No	Easy	Difficult	Safe dehydrated material
Single-vault eco-sanitary latrine with urine separation	Yes	Yes	Yes	Yes	No	easy	Difficult	Safe dehydrated material
Urinal	Yes	Yes	Yes	Yes	Yes a bit	Easy	Easy	

Considering the various sanitation options available and the factors to be considered, the following on-site sanitation options are recommended as suitable sanitation for the rural habitations:

- two-pit pour-flush latrines (TPPL)
- composting toilet or eco-sanitation (Eco-san)

The GS should play a crucial role in facilitating the choice of appropriate sanitation system for the site specific situation.

## **B. Environmental Code of Practices in Location of Latrines**

<b>Specific topic on which information/ data is needed</b>	<b>Considerations</b>
<b>Type of soil –stability</b>	
Loose, sides of wall collapse	Line the pits. In very sandy soils, sink cement rings that are perforated or set on top of each other without cement.
Hard to dig	Use the pits. In very sandy soils, sink cement rings that are perforated or set on top of each other without cement.
<b>Permeability (how water is absorbed by soil)</b>	
Clay soil	Test by pouring water into a hole and measuring how long it takes to be absorbed. Pits in dense clay may need back filling about 1.2 meters with more sandy soil.
Coarse sand	Back fill around the rings with denser soil and /or locate the latrine pipes far (for example, 40 meters or more) from a well-used for drinking.
Hard Latrine	If there might be cracks in the latrine, the latrine pits can pollute nearby drinking water sources. Place the latrine far from these sources.
<b>Ground water level in wet season (deepest level)</b>	
Water rises higher than one meter from bottom of the latrine pit, but never completely floods the latrine pits	Locate the latrine pit far from any well used for drinking purpose and should be away for example, 40 meters or more
Water rises to or above the ground level and sludge comes out the latrines	Raise the latrines above the ground level so that the top third of the pit is always above the water level. Place latrines far from drinking water sources.
<b>Distance to Water sources</b>	
Distance from latrines pit to drinking water sources	At least 15 meters
Children or teachers may be spent extra time, for example, more than 15 minutes going one-way to collect water.	VIP latrine is preferred as it uses less water.

## **C. Recommended Environmental Code of Practices and Pollution Safeguards for TPPL**

### **1. Construction of Pits**

#### **a. Pits in Water logged, Flood Prone and High Sub-soil Water Areas**

In high sub-soil, water logged or flood-prone areas, the pits should be raised above the ground level to a height such that the invert of the incoming drains/pipes is just above the likely flood water or sub-soil water level. Raising the pipes will necessitate raising the latrine floor also. In pits located in water logged or flood prone areas, earth should be filled and well compacted all around the pits in 1000 mm width and up to the top. It is not necessary to raise the pits by more than 300 mm above the plinth of the house. In these situations, the pits should be designed as wet pits, taking into consideration the infiltration rate of the type of soil.

#### **b. Pits in Soils with Low Infiltration Capacity**

Leaching capacity tends to be the limiting factor when the infiltration capacity of soil is low. In these circumstances, there are two options: construct a larger pit, or increase the critical leaching area by backfilling and compacting with brick ballast, gravel, sand etc., for the required width all around the pit.

### **2. Emptying of Pits/ Septic Tanks**

Emptying of pits becomes essential when they get filled. The three most important issues related to emptying of pits are frequency, cost, and hygiene. Manual methods of emptying are common for pour-flush latrines. The responsibility for emptying latrines is with the users. The main guidelines relating to latrine emptying include:

- Advising householders that the filling/ emptying cycle is likely to be between three to six years and that they need to make their own arrangements for emptying the pits.
- Emptying costs are location-specific; anticipated emptying costs should be ascertained with local contractors during program planning.

### **3. Groundwater Pollution**

A problem that is related to on-site sanitation is the potential for pollution of groundwater that is associated with these systems. Groundwater under or near pit latrines may become polluted, which can be a serious problem when it affects the quality of drinking-water drawn from wells and boreholes. Water in leaky pipes may also be contaminated if the pressure drops and polluted groundwater levels are above the pipes.

A particular problem in densely populated areas is the possible proximity of latrine pits and shallow wells on neighboring plots. The key guideline is that a minimum distance of 15 m, other than in fractured formations, between a pit and a downstream water-point, is normally sufficient to remove all contaminants.

### **4. Pollution Safeguards for TTPL**

To ensure that the risk of polluting ground water and drinking water sources is minimal, the following safeguards should be taken while locating the pits of the pour flush latrines:

- Drinking water should be obtained from another source or from the same aquifer but at a point beyond the reach of any fecal pollution from the leach pits.
- If the soil is fine (effective size 0.2 mm or less), the pits can be located at a minimum distance of 3 m from the drinking water sources, provided the maximum ground water level throughout the year is 2 m or more below the pit bottom (low water table). If the water table is higher, i.e., less than 2 m below the pit bottom, the safe distance should be increased to 10 m.
- If the soil is coarse (effective size more than 0.2 mm), the same safe distances as specified above can be maintained by providing a 500 mm thick sand envelope, of fine sand of 0.2 mm effective size, all around the pit, and sealing the bottom of the pit with an impervious material such as puddle clay, a plastic sheet, lean cement concrete, or cement stabilized soil.
- If the pits are located under a footpath or a road, or if a water supply main is within a distance of 3 m from the pits, the invert level of the pipes or drains connecting the leach pits should be kept below the level of the water main, or 1 m below the ground level. If this is not possible due to site considerations, the joints of the water main should be encased in concrete.

## **5. Operation and Maintenance - DOs and DON'Ts of Twin-pit Pour-flush Latrines**

### **a. Dos**

- Keep a bucket full of water outside the toilet.
- Keep a 2 liters can in the toilet filled with water for flushing.
- Before use, pour a little quantity of water to wet the pan so that excreta can slide smoothly into the pit.
- Flush the excreta after each use.
  - Pour a little quantity of water, say half a liter, in the squatting pan after urination.
  - The squatting pan should be cleaned daily with a soft broom or soft brush with a long handle after sprinkling a small quantity of water and detergent powder/soap.
  - Use minimum quantity of water in washing the pan and toilet floor.
  - Wash hands, using soap or ash, after defecation at the assigned place.
  - If any construction defect is observed during the defect-liability period, report the matter to the local authority or the construction agency.
  - When the pit in use is full, divert the flow to the second pit.
  - If the trap gets choked, rodding should be done from the pan side as well as from the rear side by means of a split bamboo stick, after removing the cover of the drain or junction chamber.
- Care should be taken while desludging the pits located in water-logged or high water sub-soil water areas and in case of combined pits, as humus may not be safe for handling.

#### **b. Don't s**

- Do not use both the pits at the same time.
- Do not use more than 2 liters of water for each flushing (if the waste is not flushed with 2 liters, pour more water at the specific spots for flushing the waste).
- Do not use caustic soda or acid for cleaning the pan.
- Do not throw sweepings, vegetable or fruit peelings, rags, cotton waste, and cleaning materials like corn cobs, mud balls, stone pieces, leaves, etc. in the pan or the pits.
- Do not allow rain water, kitchen or bath waste to enter the pits.
- Do not provide water tap in the toilet.
- Do not throw lighted cigarette butts in the pan.
- Do not desludge the pit before 1½ years of its being in use.

#### **Institutional Arrangement, Monitoring and Capacity Building**

Chapter 6 discusses the institutional arrangement for implementation of the ESMF, environmental monitoring, and capacity building of SDF for mainstreaming environmental management in the rural small infrastructure programs.

### **5. Environmental Management Process – Rural Livelihoods**

#### **5.1 Introduction**

This chapter describes the general guidelines for mainstreaming the environmental considerations in the livelihood programs to be implemented by SDF. It discusses the overall environmental management process of selected livelihoods including categorization of interventions based on their EA requirements, tools for screening or assessing environmental impacts, environmental mitigation measures, and environmental codes of practice. A process flow diagram showing planning and implementation of sub-projects and various phases of environmental management process is illustrated in Figure 4-1.

#### **5.2 SDF Environment Policy**

The Government of Bangladesh through the Ministry of Finance has mandated the SDF to finance and develop rural infrastructure and livelihoods projects. SDF, which has set out to implement the Nuton Jibon, along with Community Groups aims to promote environmentally sound and sustainable, socially acceptable and economically viable livelihoods sub-projects. SDF believes that each of the sub-projects of the Nuton Jibon will improve the living standards and the environment of populations of the participating communities and areas around these villages.

The Rural Livelihoods Promotion activities to be undertaken by the project are small in size and local in nature requiring minimal investments. Environmental and social

considerations are an integral part of all interventions of NJLIP. Although, these simple livelihoods have almost no or little environmental and social adverse impacts, SDF will follow some principles in the overall environmental management of sub-projects to be implemented for rural development component of NJLIP:

- Activities with severe negative environmental impacts will not be supported by NJLIP.
- All subprojects will go through environmental screening and assessment and will prepare sub-projected specific Environmental Management Plans (EMPs).
- Subprojects would be implemented with the continuous community engagement, environmental oversight, financial prudence and managerial prowess that are inherent strengths of SDF.
- The Village level communities plan, screen, mitigate and monitor environmental and social issues in both, construction and operation and maintenance.

### 5.3 Size and Scope of Rural Livelihood

The Rural Livelihoods taken up by community households are basically agriculture/ animal/ dairy based. The investment on these ventures ranges from BDT 5,000 to BDT 20,000 (in more mature communities higher amounts of up to BDT 50,000 are sometimes provided). A detailed list of activities is appended to this ESMF. The following are the main activities taken up by the communities:

Category of Activity	Type of Activity	Remarks
Agriculture Based	Vegetable Cultivation Maize Cultivation Banana Cultivation Potato Cultivation Tree Nursery Sugarcane Cultivation Betel Leaf Cultivation Water Melon Cultivation Mug Bean Cultivation	All activities are rural based and taken up by individuals. No group activities are taken up. Per community up to 10 livelihoods activities are taken up. This means that these activities are taken up by households involving household members and thus would not attract ECR 1997 provisions. This means the cumulative impacts at the community level are minimal.
Animal/ Dairy/ Poultry Based	Dairy Cow Beef Fattening Goat/ Sheep Rearing Poultry Rearing	
Fisheries Based	Fish Culture Fishing/ Fish Trade Shrimp Cultivation	
Trade/ Petty Business Based	Handicrafts Grocery Shop Trading/ Agribusiness Stitching Works Bamboo Works	
Transport Based	Motorbike Transport, rickshaw	

There is a possibility of village level/cluster level Federations taking up group enterprises. The size and scope of such enterprises will be larger than the enterprises

taken up by individuals. A detailed list of livelihood activities has been provided in Annex 3.

#### 5.4 Environmental Management Process

Following steps will ensure environmental management in the planning and implementation of livelihood or Income Generating Activities in NJLIP:

- Reviewing negative list of attributes and subprojects
- Categorization of sub-projects
- Environment assessment of sub-projects and development of EMP
- Institutional arrangements
- Monitoring/ External Environmental Audit
- Capacity building

#### 5.5 Negative List of Sub-Projects

The Project will not support any activities which may have significant environmental impacts including destruction of natural habitats, deforestation, involuntary land acquisition and resettlement including Small Ethnic Communities and other vulnerable groups. Specific sub-projects with any of the attributes listed below will be ineligible for support under NJLIP.

- **Pesticides:** Use of pesticides under WHO Class Ia, Ib, and Class II (Annex 12 provided the list of pesticides banned in Bangladesh)
- **Wood:** Activities that involve clearing of forest or cutting of large mature tree or that consume large amounts of local wood without rehabilitation
- Activities that involve Genetically Modified Organisms (GMOs) that have not been approved by an independent panel of internationally recognized experts, and cleared by the World Bank and the Government of Bangladesh.
- Activities planned to implement within Protected Areas (Wildlife Sanctuaries and National Parks).
- Activities involving significant conversion or degradation of critical natural habitats (mangroves, wetlands, etc.).

In the event of any sub-project falling under the purview of ECR 1997, SDF will review these sub-projects and makes a decision on taking up such sub-projects. SDF, after consultation with The World Bank, will make a decision to go or not to go ahead with such Sub-Projects. If SDF decides to go with such Sub-Projects, then process as outlined in ECR 1997 will be followed. However, there is possibility that Federations at Village/ Cluster level taking up enterprises, which will be larger than the individual livelihoods enterprises. Such Common Enterprises will need to be assessed and appropriate procedures followed as per ECR 1997, as suggested above.

#### 5.6 EA Categorization of Rural Livelihoods

Nuton Jibon project is under preparation and sub-projects are yet to be identified. Further the implementation of these sub-projects will take place over a period of time



and this time lag will lead to changes in the environmental and social assessments. As already mentioned earlier, the sub-projects are of small in size and local in nature inducing no or negligible and temporary impacts. For such reasons preparation and implementation of an ESMF is proposed for this project. As part of this process Nuton Jibon will follow the following process and categorize the EA requirement of the livelihood activities:

a) Categorically excluded from EA: Listing all Rural Livelihoods interventions which do not have any negative impacts and categorically excluded from EA requirement. Column 2 of Table 6 provided examples of some livelihood development projects that can be approved without environmental screening.

b) Category 1 (Environmental Screening): Subprojects require environmental screening that may have minor impacts. Column 3 of Table 6 provided examples of some livelihood development projects that require environmental screening.

c) Category 2: Initial Environmental Examination (IEE): Subprojects require an Initial Environmental Examination (IEE) will also have minor, but relatively larger impacts than previous group. Column 4 of Table 6 provided a list of livelihood development projects that require an IEE.

The details of the sub-projects falling under these categories given below:

**Table 2: EA Categorization of Livelihood Activities**

Livelihood Sub-sectors	Excluded from EA Requirement	Category 1 (Screening )	Category 2 (IEE)
Livestock sector	Incubation of duck eggs by rice husk incubator /Bee keeping	Rearing of Cow/Ox/Goat/Sheep/ Beef fattening (less than 25)	Dairy Farm with 25 cattle heads or more;
		Poultry bird/ Quail/ Rabbit/	Poultry bird up to 1000
		Vermin-compost/ Biogas production	
Transport sector	Rickshaw/ cycle /van/Motor cycle		
Agriculture sector (Plantation/ cultivation related livelihoods must follow the pest management guidelines provided in Chapter 6)		Small home gardening/fodder production/ crop cultivation/ Nursery/ Vegetable/ Maize/ Banana/ Potato/Sugar Cane/ Betel Leaf/Water Melon/ Basok medicine plantation/dyke plantation	
Fisheries sector		Fish culture (pond aquaculture)/ Fingerling/ Crab cultivation/ Shrimp	
Small trade/	Tea shop/Grocery shop/		Value chain development

Value chain development	Rice husking		(Agro business) on livestock/fisheries/crops or Any rural livelihood activities with an investment of more than BDT 500,000
Others	Energy efficient cook-stove		
	Workshop/ Training /Capacity building		
Environmental Management Process	No screening required. But, a periodic monitoring will be required to record environmental benefits.	Use ESS format (Annex 4-6)	Use IEE (Annex 7-8) and follow DoE procedure for environmental clearance. This process is described in Chapter 3

#### 5.6.1.1 Applicability of ECR 1997 to NJLIP Interventions

The project interventions are in rural areas with small investments. ECR 1997 Schedule A under Green Category states “Units of all kinds of cottage industries other than those listed in this Schedule shall remain outside the purview of Environmental Clearance Certificate (Unit of cottage industry means all industrial units producing goods or services in which by full-time or part-time labor of family members are engaged and the capital investment of which does not exceed BDT 500,000”

ECR 1997 Schedule A under Orange-A Category states that “Dairy Farm 25 cattle heads or above in rural areas and Poultry up to 1,000 in rural areas.” As per the ECR 1997 Schedule A, rural interventions with an investment of less than BDT 500,000 remain outside the purview of ECC. Most of the project interventions are below this threshold level. As the livelihoods activities are taken up by households with investments less than BDT 500,000, these are deemed to be exempted from the purview of ECR 1997.

#### 5.6.2 Category 1: Screening Formats

For Category 1 projects, the environmental impacts are identified through filling an Environmental Screening sheet (ES). The basic objective of the filling in this sheet is to collect basic information on environmental aspects of the proposed sub-project. Further the ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection stage. For this purpose, a simple Environment Screening sheet (ES) is formulated for category 1 sub-projects, annexed to this ESMF. Three separated formats for assessing the impacts of crops, fisheries, and livestock related livelihood programs have been developed and attached in Annex 4-6. The ES is filled by Gram Samiti (GS) with the facilitation support of the Cluster Offices duly identifying the environmental issues of concern. The Community Groups will do the screening through collection of necessary field data with the help of Cluster Mobilizers. The Cluster Mobilizers will assist the GS in identifying the appropriate mitigation measures from ESMF and incorporate them into the sub-project proposals as mitigation and enhancement measures. The ES will be

attached to the sub-project proposal. In addition, all subprojects on crops and horticulture will follow a pest management guidelines provided in Section 5.9.

### **5.6.3 Category 2: IEE Formats**

As shown in Table 6, large scale cattle rearing programs and agro-processing (crops/fisheries/livestock) will have minor to moderate impacts and grouped in Category 2 projects. For Category 2 projects, the environmental impacts are identified through filling an Initial Environmental Examination sheet (IEE). The basic objective of the IEE is to collect basic information on environmental aspects of the proposed sub-project. Further the ESMF requires that sub-project data and basic environmental data pertaining to the proposed sub-project be compiled during the field data collection stage. For this purpose, two separate simple Initial Environment Examination sheet (IES) have been formulated, annexed to this ESMF (Annex 7 & 8). These IEE is filled by GS with the facilitation support of the Cluster Offices duly identifying the environmental issues of concern. The Community Groups will do the filling through collection of necessary field data with the help of Cluster Mobilizers. The Cluster Mobilizers will assist the GS in identifying the appropriate mitigation and enhancement measures from ESMF and incorporate them into the sub-project proposals. These IEEs will be attached to the sub-project proposal. The implementation of the mitigation measures will be regularly monitored by the Cluster Mobilizers and reported to District/ Regional Offices.

## **5.7 Assessing Environmental Impacts and Preparing Environmental Management Plan (EMP)**

The sub-project categorization as Category 1 or Category 2 and filling of ES and IEE formats need to be done on the basis of field visits, primary and secondary data and analysis.

All subprojects (Category 1 or Category 2) need to identify potential negative and positive impacts during the planning stage (proposal preparation for SDF funding). Mitigation measures need to be determined, if there are any negative impacts. Table 7 provided some guidance on the identification of subproject specific negative and positive impacts. This guidance table also includes some examples of mitigation and enhancement measures. . In case of all sub-projects, the Cluster/ District/ Regional Offices of SDF need to ensure that the relevant EMP Provisions are a part of the sub-project proposals for facilitating its integration into the sub-project implementation.

### **5.7.1 Prediction of Impacts**

Nuton Jibon aims to provide environmentally sustainable and socially acceptable livelihood opportunities and limited infrastructure facilities in the target villages to improve the quality of life in the habitations of the project area. Hence, from the project development objective, it can be seen that this project and the sub-projects would yield positive and beneficial impacts on the target population. While the general dictum that says 'any and all development interventions will also have some negative impacts', is

held in high esteem, the fact is that the negative impacts (if any) induced by Nuton Jibon are negligible, insignificant and temporary. Keeping this in view the likely positive and negative impacts are listed below. The significance of these listed impacts would vary depending on the individual sub-project, its size and location. The size of the sub-projects would normally be small both physically and financially. Due to the likely small size of the sub-projects, adverse impacts, if any, would be at its minimum localized and reversible for the following reasons:

- Proposed project is rural livelihood project
- The investments that go into these sub-projects are marginal
- Significantly low environmental impacts

Guidance on the identification of sub-project specific positive and negative impacts is provided in Table 7.

## **5.8 Environmental Management Plan**

The outcome of the environmental assessment (ES and IEE) will be a Sub-project Environmental Management Plan (EMP) which is an integral part of the sub-project proposal. The EMP will also identify the technical and financial support required to implement the necessary mitigation measures and suggest a monitoring plan. The financial support required to implement the mitigation measures will be included in the sub-project cost.

The major components of an EMP include: mitigation measures, enhancement measures, estimation of cost of EMP, environmental monitoring, and institutional arrangement for implementation of EMP. The EMP consists of the following components:

1. Environmental Mitigation/ Enhancement Measures
2. Environmental Monitoring and Audit
3. Institutional Arrangements
4. Capacity Building Plan
5. Budget for implementation of EMP

For all categories of rural livelihood sub-projects, Table 7 provided guidance on the identification of sub-project specific impacts and corresponding mitigation/enhancement measures. The mitigation measures given in this guidance should be followed during implementation and operation of livelihood activities. Based on the actual nature and type of sub-project suitable and appropriate modifications and additions can be made. SDF would ensure that relevant mitigation measures are implemented as sub-projects go into implementation.

**Table 3: Environment Impact Mitigation Plan – Guidance**

Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
Agriculture Based (Crops/ Fruits/ Vegetables/ Home/Kitchen Gardens)	Positive Impacts <ul style="list-style-type: none"> <li>• Increased fodder production</li> <li>• Reduced surface run-off and soil and nutrient loss</li> <li>• Improved crop cultivation practices</li> <li>• Enhanced soil moisture</li> </ul>	Enhancement Measures <ul style="list-style-type: none"> <li>• Mixed cropping and flexibility in planting, rotation of crops and bringing the cultivated land under leguminous crop (pea, lentil etc.) should be encouraged as these will maintain soil fertility.</li> <li>• Promotion of agro-forestry will maintain biological fertility of soil.</li> <li>• Plantation of fodder species in the uncultivable waste land will supplement fodder.</li> <li>• Use of waste bio products for packaging</li> <li>• Demonstrations should be established only where surface stabilization using vegetative barriers are complete</li> <li>• Plantation/ protection of pest controlling plants (Marigold, etc.)</li> <li>• Build awareness among farmers on mixed cropping, use of bio-compost, biotic control of pests, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>

Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
Agriculture Based (Crops/ Fruits/ Vegetables/ Home/Kitchen Gardens/Dye Cropping)	<p>Negative impacts</p> <ul style="list-style-type: none"> <li>• Chemical fertilizer, pesticide &amp; insecticide pollution</li> <li>• Drainage congestion</li> <li>• Introduction of high yielding varieties might have impact on local agro biodiversity.</li> <li>• Excess use of ground water for intensive cropping depleting the ground water resource.</li> <li>• Use of Arsenic contaminated water for irrigation would result in accumulation of residues through food chain.</li> <li>• Use of pesticides without following guidelines would lead to application of high doses resulting in pest resurgence and development of resistance.</li> <li>• High chemical residues in food crops.</li> <li>• Loss of useful insects (natural enemies to Pest)</li> <li>• Contamination of soil and water bodies nearby due to runoff.</li> <li>• Open disposal of pesticide containers is hazardous to cattle, children.</li> <li>• Use of fertilizers under INM without following the recommendations leads to algal blooms in water bodies leading to loss of aquatic biodiversity.</li> <li>• Soil quality (capacity of infiltration of water) and microbial population would be affected due to high doses of fertilizers. Salinization of soil could be another problem. Greenhouse Gas emissions are associated with excess N fertilizer use.</li> <li>• Farm level operation without information on weather parameters might lead to ineffectiveness and repeated applications of chemicals or loss of crop.</li> </ul>	<p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Use of bio-compost, organic mulch/ Green Manure and vermin compost and Suitable organic / biotic control of insects and pests will result in lesser use of permissible chemical fertilizers and pesticides. Pest management guidelines have been provided in Section 5.9. to control application of chemical pesticides and promote IPM technologies.</li> <li>• Selection of low water demanding crops and rain water harvesting, storage of surface water (of streams, nallah, etc.) through water storage ponds will help harvest more water for use in HYV cropping.</li> <li>• High water consumption crops like sugarcane, cotton, etc., should be discouraged</li> <li>• Selection of crops should be based on local water budget and traditional practices</li> <li>• High nutritional value traditional crops should not be totally replaced by high yielding varieties.</li> <li>• Leveling of crop field and maintenance of terraces/ bund to check water runoff and soil loss</li> <li>• Genetically manipulated varieties should be avoided</li> <li>• Integrated management of key pest of mulberry</li> <li>• Organic manure (sheep manure) application to enhance yield</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>

Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
	<ul style="list-style-type: none"> <li>Introducing new high yielding varieties may affect local biodiversity and may not offer necessary nutrition.</li> <li>Use of chemicals is harmful to surroundings and health of consumers.</li> <li>Water stagnation due to excess irrigation may cause stagnation, attract mosquitoes etc.</li> </ul>	<ul style="list-style-type: none"> <li>Would be useful to consider traditional varieties with high nutritive values.</li> <li>Follow organic methods to the extent possible.</li> <li>Follow efficient practices of irrigation in the gardens.</li> </ul>	<ul style="list-style-type: none"> <li>SDF</li> <li>Regional/ District Offices</li> <li>Community Groups</li> <li>Beneficiaries</li> </ul>
Livestock based ((Dairy/ Poultry/ Buffalo and Sheep Rearing)	Positive Impacts <ul style="list-style-type: none"> <li>Improved livestock / milk production</li> <li>Reduced exploitation of forest areas</li> <li>Greater management of fodder resources</li> <li>Healthy Livestock</li> <li>Improved sanitation</li> </ul>	Enhancement Measures <ul style="list-style-type: none"> <li>Farmers training and awareness programs to check the quality of the urea-molasses brick and poisoning.</li> <li>Veterinary camps may be sponsored.</li> <li>Services should be provided by professionals.</li> <li>Use of farm yard manure should be encouraged</li> <li>Shelter for animals owned by transhumant.</li> <li>Training should be imparted for upgradation of animals, livestock husbandry, health of animals and nutritional standards</li> <li>Livestock productivity should be monitored regularly</li> </ul>	<ul style="list-style-type: none"> <li>SDF</li> <li>Regional/ District Offices</li> <li>Community Groups</li> <li>Beneficiaries</li> </ul>

Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
Livestock based (Dairy/ Poultry/ Buffalo, Goat and Sheep Rearing)	<p>Negative Impacts</p> <ul style="list-style-type: none"> <li>• Land/ Vegetation degradation due to overgrazing.</li> <li>• Pollution from poor manure management.</li> <li>• Health risk (zoonotic diseases) from poor housekeeping and handling.</li> <li>• Promotion of only exotic breeds may lead to</li> <li>• gradual extinction of indigenous breeds.</li> <li>• Introduction of exotic/ alien species of grasses and fodder crops to meet the demand of fodder that dominate the local species.</li> <li>• Hybrid animals are more prone to diseases and require intensive care and more provisions for health care.</li> <li>• Loose/ moisturized feeding of urea-molasses brick may lead to poisoning.</li> <li>• Lack of nutritious forage may decline the productivity of improved cattle</li> <li>• Stress on pre and post natal care</li> <li>• Post project maintenance of animal health program might be a problem</li> <li>• Need for preservation of vaccines in cryogenic conditions</li> <li>• Increased risk of forest fire, habitat and grazing resources loss</li> <li>• Water pollution due to processing of wool for making products.</li> <li>• Possible occupational health hazards during wool processing.</li> <li>• Safety risk during chaff cutter operation.</li> </ul>	<p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Fodder management incorporating fodder cultivation, stall feeding, rotational grazing, supplementary feeds, use of chaff cutter, etc.</li> <li>• Improved composting methods – pit composting.</li> <li>• Maintenance of safe distance between manure pit and water sources.</li> <li>• Construction of shed location and design as per technical recommendations.</li> <li>• Maintenance of shed sanitation and hygienic handling.</li> <li>• Promotion of improved indigenous breeds.</li> <li>• Increase stall feeding and reduce grazing on forest covers</li> <li>• Control feeding of urea-molasses bricks to avoid poisoning.</li> <li>• Proper packing and storage of treated fodder will not result in poisoning.</li> <li>• Animal health practices like storage of vaccines &amp; drugs, insemination center sets, etc. through veterinary departments shall be adopted.</li> <li>• Bulk planting of fodder should be carried out mainly on common lands.</li> <li>• Grass planting should be carried out in shallow trenches and ridges.</li> <li>• Proper disposal of dairy waste</li> <li>• Processing of wool washing not be done directly in water sources.</li> <li>• Use of masks or nose cover (cloth) during wool processing.</li> <li>• Locate chaff cutter so as to prevent easy access by children.</li> <li>• Use chaff cutters with in-build safety mechanisms.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>



Activities	Impacts (Positive And Negative)	Enhancement/ Mitigation Measures	Responsibility
Fisheries Based	<p>Positive Impacts</p> <ul style="list-style-type: none"> <li>• Increased income levels</li> <li>• Better usage of natural resources and skills</li> </ul>	<p>Enhancement Measures</p> <ul style="list-style-type: none"> <li>• Marginal groups should be given priority in the local employment generation.</li> <li>• Training programs to inculcate technological advancements in production</li> <li>• Showcasing and publicity for products</li> <li>• Establishment of marketing networks</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>
Fisheries Based	<p>Negative Impacts</p> <ul style="list-style-type: none"> <li>• Fish like Tilapia due to omnivorous nature can predate on small fish of native species.</li> <li>• Tilapia fish multiplies fast and may suppress aquatic diversity. Excessive manuring leads to eutrophication and acidification. Chances of death of fishes due to diseases.</li> <li>• Conflict among the users over common resources</li> <li>• More demand for water for many IGA activities.</li> <li>• Generation of waste from livelihood activities may cause nuisance, sanitation problems and diseases.</li> </ul>	<p>Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Species selection in polyculture should be as per recommendation of the DOF – and designed to avoid competition with other species and aquatic life. Use manure in recommended doses. Awareness among the users and proper training will help the users in fish farming activities.</li> <li>• Avoid washing pesticide cans of spraying equipment in fish ponds</li> <li>• Proper upkeep of premises to avoid fly and mosquito menace</li> <li>• Strengthening of village resource management institutions to reduce conflicts among the users over common resources.</li> <li>• Proper upkeep of premises to avoid fly and mosquito menace.</li> </ul>	<ul style="list-style-type: none"> <li>• SDF</li> <li>• Regional/ District Offices</li> <li>• Community Groups</li> <li>• Beneficiaries</li> </ul>

## Institutional Arrangement, Monitoring and Capacity Building

Chapter 6 discusses the institutional arrangement for implementation of the ESMF, environmental monitoring, and capacity building of SDF for mainstreaming environmental management in the rural livelihood programs.

## 5.9 Pest Management Guidelines

Nuton Jibon groups take up rural livelihoods sub-projects involving home gardening, pond dyke farming, agriculture, and horticulture activities. In NJLIP, OP 4.09 (pest management) has been triggered since crop production or farming may lead to increased use of chemical pesticides. In order to avoid and mitigate the negative impacts of usage of pesticides, a Pest Management guideline has been proposed which incorporates an Integrated Pest Management Plan (IPMP). Over dependence on the use of synthetic pesticides in crop production programs has resulted in disturbances to the environment, pest resurgence, pest resistance to pesticides, and lethal and sub-lethal effects on non-target organisms, including humans. These side effects have raised public concern about the routine use and safety of pesticides. Therefore the farmers are required to manage their land with greater attention to direct and indirect off-farm impacts of various farming practices on water, soil, and flora and fauna. Thus, reducing dependence on chemical pesticides in favor of ecosystem manipulations is a better strategy and suggested to adopt in the NJLIP agri-based livelihood programs.

### 5.9.1.1 Objectives of Integrated Pest Management Plan

The purpose of IPMP is to

- promote and support safe, effective, and environmentally sound pest management in agriculture related interventions undertaken under Nuton Jibon.
- promote the use of biological and environmental control methods and the reduction in reliance on synthetic chemical pesticides.

The revised International Code of Conduct on the Distribution and Use of Pesticides, FAO (2002) defines IPM as follows:

*“IPM means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption of agro-ecosystems and encourages natural pest control mechanisms.”*

Integrated Pest Management is the approach now being adopted worldwide to address the issue of excessive use of chemical pesticides in horticulture and agriculture. The World Bank’s Operational Policy 4.09 defines integrated pest management as a mix of farmer-driven, ecologically based pest control practices that seeks to reduce reliance on synthetic chemical pesticides. It involves;

- Managing pests (keeping them below economically damaging levels) rather than seeking to eradicate them
- Relying, to the extent possible, on non-chemical measures to keep pest populations low; and
- Selecting and applying pesticides, when they have to be used, in a way that minimizes adverse effects on beneficial organisms, humans, and the environment.

## Screening and Monitoring of application of pesticides

All sub-project proposals related to crop farming, horticulture, or home gardening will carry out an environmental screening to identify the risk of pesticides use and suggest implementation of IPM. The Annex provides environmental screening formats for the livelihood programs that incorporate checklist on the usage of pesticides and suggest application of IPM as an environmental management measure.

Livelihood subprojects will continue Crop monitoring, that keeps track of the pests and their potential damage, is the foundation of IPM, for appropriate selection of IMP techniques and to record benefits of IPM. This provides knowledge about the current pests and crop situation and is helpful in selecting the best possible combinations of the pest management methods. Pheromone traps have an advantage over other monitoring tools such as light and sticky traps; being selective to specific pests, they have proven their usefulness in large scale IPM validations. Annex 11 provides guidelines for handling of pesticides, detail information on IPM and application of pesticides are provided in Annex 12.

### Key Components of IPM

- Identification of major pests & diseases for the crop in the area
- Identification of the minor pests & diseases for the crop in the area
- Assessment of ETL for major pests /diseases
- Pest monitoring based on Agro Ecosystem Analysis (AESA) and conjunctive use of pheromone traps, sticky traps, etc.
- IPM in action
  - Identification of pest & disease tolerant/resistant varieties
  - Cultural methods
  - Physical / mechanical methods
  - Biological methods
  - Bio-pesticides
  - Chemical methods (preferably use chemicals that are less toxic and have a shorter life after application)

## Criteria for Pesticide Selection and Use

The procurement of any pesticide in a Bank financed project is contingent on an assessment of the nature and degree of associated risks, taking into account the proposed use and the intended users. With respect to the classification of pesticides and their specific formulations, in reference to the World Health Organization's Recommended Classification of Pesticides by Hazard and Guidelines to Classification. The following criteria apply to the selection and use of pesticides:

- They must have negligible adverse human health effects.
- They must be shown to be effective against the target species.
- They must have minimal effect on non-target species and the natural environment.
- The methods, timing, and frequency of pesticide application are aimed to minimize damage to natural enemies. Pesticides used in public health programs must be demonstrated to be safe for inhabitants and domestic animals in the treated areas, as well as for personnel applying them.
- Their use must take into account the need to prevent the development of resistance in pests.

Guidelines for handling of pesticides are provided in Annex 11. It is required that any pesticides be manufactured, packaged, labeled, handled, stored, disposed of, and applied according to standards acceptable to the WHO. Formulated products that fall in WHO classes IA and IB, or formulations of products in Class II, if (a) lacks of restrictions on their distribution and use; or (b) they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store and apply these products properly are not permissible in the project<sup>5</sup>. A list of banned pesticides has been provided in Annex 13.

### **5.9.2 Operational Aspects of IPM**

- Growing a healthy crop involves the right varieties selection; appropriate seed bed management, plant nutrition, and plant physiology, water and weed management.
- Optimize natural enemies recognize beneficial insects in the field, learning insect population dynamics, life cycles, and food webs; understanding the effects of pesticides on beneficial populations, promoting survivorship of predators through habitat management and making local reference collections.
- Observe fields weekly for damage symptoms, changes in insect populations, to evaluate plant growth and physiology, relationship between plant stages and insect populations, effects of weather conditions, and water and nutrient management.
- Farmers as experts: agro-system analysis and decision making based on information directly observed and collected leads to farmers to make sound conclusions crop management decisions.

### **5.9.3 The World Bank Operational Guidelines**

The World Bank & IFC Pesticide guidelines aims to ensure that the pesticide

- Must have negligible adverse human health effects
- Should be effective against target pests and minimal effect on non-target species
- Development of pest resistance to be kept in view
- Public health pesticides must be safe for inhabitants and animals

Integrated pesticide management specifically identifies the following as the key in pest control.

- A categorical preference for bio-control methods along with institutional and capacity building for the same.
- Reducing reliance on synthetic chemical pesticides and only if approved by IPM approach.
- Does not permit under any circumstance the use of IA, IB and II classified pesticides. Listing of these chemicals and provided by the World Health Organization is given at the end of the report.
- Recommends the use of Participatory IPM along with specific investment components for the same.

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<sup>5</sup> [http://www.who.int/ipcs/publications/pesticides\\_hazard/en/](http://www.who.int/ipcs/publications/pesticides_hazard/en/)

- Permits category III type pesticides and these are listed at the end of the report. But even these must be used as part of the IPM strategy. No to all chemical Pesticides if it is likely to be used without training and safety.

### **Safe Use of Pesticides**

Farmers are not the only ones to be exposed to pesticides. The laborers, whether it is the person spraying or the person engaged in horticulture/ agriculture work in the field, also faces threats of pesticide poisoning. The target group of the project is focused toward a large number of the land less agriculture/ horticulture labor, especially women who are most often used in hazardous fieldwork. Hence protective measures such as gears and education becomes crucial to ensure that no negative health impacts. A listing of the factors to be borne in mind is listed under:

- Avoid making cocktails of insecticides. If necessary, then each should be used in recommended dose.
- Use two piece protective clothing, hand gloves, a cap, a full sleeved shirt and boots, and preferably a face shield.
- Spray during cooler hours of the day-morning and afternoon. Spray along the wind, not against it.
- Wash the spray equipment at the end of the day.
- Do not eat, drink, smoke, or chew tobacco during spraying.
- No not allow children, especially young girls to work in such fields.
- After handling or spraying pesticides wash hands, face, legs, with soap and water before eating, drinking, smoking or chewing tobacco.
- Seal cuts and wounds with medicated waterproof tape before spraying. Provide first aid in case of poisoning according to the instructions given in the label.

### **Awareness Building**

Awareness building on safe use among farmers and workers is another instrument that must be used for implementing the PMP in the project. The highest exposure to pesticides is compelled by poverty to work in unsafe conditions.

All supports to pesticide sprayers and equipment must include making available a protective gear. Pamphlets and posters on safe use of pesticides which deal from purchase, transport, storage, application to disposal must be provided to village organizations. In high pesticide use areas, cultural expressions like folk songs must be provided to village organizations.

A major impact of pesticide usage is on water. Reducing pesticide usage by adopting IPM/NPM and permitting only class III pesticides, while substantially reducing pesticide usage, the threat to water contamination reduction is possible. Educating the community not to spray pesticides during or just before a rain must be included in the awareness material. Monitoring the health on the people,

especially workers, on a sample basis in high pesticide use area would be another task taken up by the project.

The Current IPM Technologies for controlling insects of rice, vegetables and fruits differ according to the Commodities and the Types of Insects and Diseases. The details for specific crops, vegetables and fruits relevant to specific insects and diseases are provided in Tables 4-9. The general IPM Technologies available now for controlling insects and diseases across crops, vegetables and fruits are summarized below.

#### **5.9.4 Current General IPM Measure for Insect Control**

- Perching for attracting insect-eating birds.
- Use of sex Pheromone trap.
- Use of light traps.
- Use of tolerant/resistant varieties.
- Picking/catching by hand net or mosquito net and destruction of eggs, nymphs & adults.
- Burning or mixing the debris and left-over rice straw under soil.
- Delaying pesticide spray to help parasitic (friendly) insects in eating eggs of destructive insect pests.
- Removing water from the field and drying the soil temporarily.
- Increasing planting space of seedlings to allow increased light penetration through the canopy.
- Using balanced fertilizer.
- Pulling out of affected plants & burying under the soil.
- Collection and destruction of infested leaf (with egg mass and grub).
- Application of ash on the plants.
- Practicing clean cultivation.
- Using yellow sticky trap.
- Cultivating trap crops like okra or mustard between rows and around the field.
- Spraying bio-pesticides.
- Destruction of infested flower pods and fruits regularly.
- Treating seeds with insecticides before planting in seedbed.
- Covering seedbeds with fine nylon net.
- Irrigation of field during infestation with very low quantity of kerosene oil.
- Use of poison bait (broken rice husk+ gur + Carbarin insecticide).
- Using approved insecticide as a last resort.

#### **5.9.5 Current General IPM Measures for Disease Control**

- Using tolerant varieties
- Using height trap and hand net
- Using balanced fertilizer, urea application in three installments
- With-holding irrigation for 7-8 days & applying 5 kg potash fertilizer per bigha (0.33 areas) of land
- Collecting floating debris along the field borders and burying under soil
- Using crop rotation

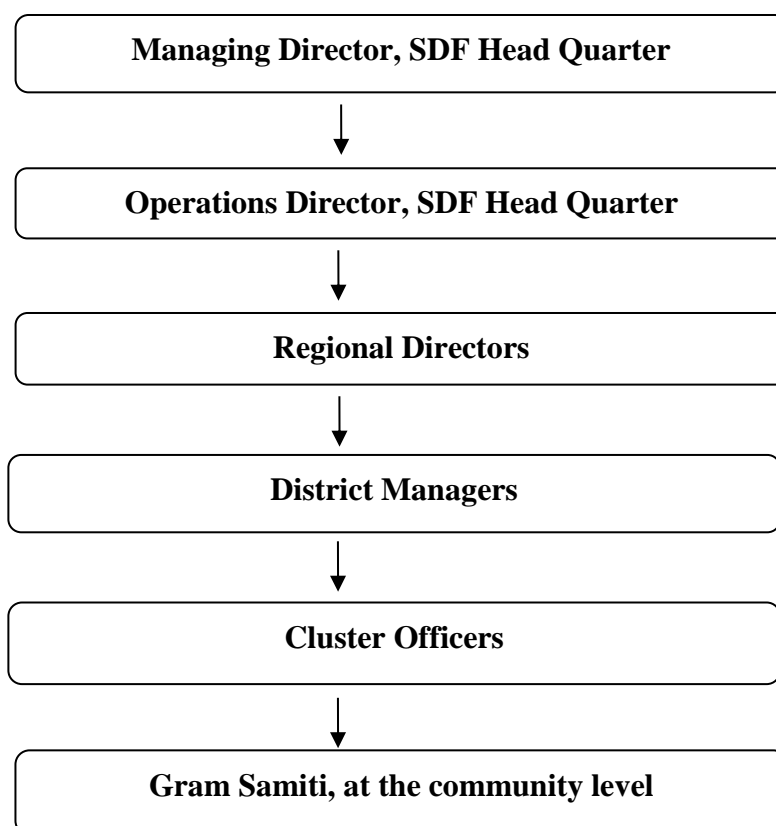
- Using seed collected from healthy plants
- Using seed treatment measures
- Using organic manure
- Keeping standing water in the field (depending on the disease)
- Keeping the land dry for some time in case of leaf scald attack
- Burning out the affected straw
- Keeping under control the grass-type weeds
- Not to use same land for seedbed be continuously
- Using purified seed by soaking in fungicide-mixed water
- Using soft seed bed and keeping it moist all the time (depending on the disease)
- Drying land immediately after disease appearance (depending on the disease)
- Throwing disease affected seedlings
- Burning out the disease affected plants
- Growing different varieties of rice at interval
- Using balanced fertilizer
- Mixing rice bran with seed bed soil (depending on the disease)
- Covering seedbed with polythene sheets during cold spells
- Prompt destruction of infested plant material to reduce initial inoculums
- Weed control (solanaceous weeds) such as nightshades
- Removal and destruction of the affected plant parts
- Application of neem cake at 250kg/ha
- Using yellow sticky traps
- Field sanitation by burning of crop debris
- Avoiding crowded planting of seedlings
- Maintaining field sanitation
- Using virus tolerant varieties
- Using of disease free seeds
- Use of high land and well-drained soil (for vegetables & fruits)
- Use of fungicide as a last resort

## 6. Institutionalization and Capacity Building

### 6.1 Institutional Arrangements for ESMF Implementation

Building on the experience of SIPP-I and SIPP-II implementation process, SDF emphasizes social safe guard issues in implementing poverty alleviation programs. As per organogram, under each district SDF will establish a number of cluster offices to be headed by a Cluster Officer (CO) and be supported by required number of Cluster Facilitators. Each Cluster Facilitator will be in charge of supervising 5-6 villages. The cluster team will facilitate the community to implement the SMF at the village level. A District Manager will be posted in each district and he/she will be assisted by a number of District Officers, who in turn, will provide necessary supports including social issues to cluster teams as well as intervention villages.

It has been planned to establish three regional setups under SIPP III to be headed by Regional Directors (RDs) and a number of regional specialists under the guidance of Regional Directors to be providing necessary supports to district teams to implement the SMF. At national level an Operations Director under the guidance of Managing Director will be in charge of entire program implementation including SMF and supervise regions, districts, and clusters and provide necessary guidance as needed. The Operations Director will also be assisted by a number of Thematic Specialists at national level. The project will earmark sufficient resources for capacity development of staff on environment and social issues. The following diagram shows the organogram for the institutional arrangements:





SDF will arrange a five level ESMF implementation and monitoring mechanism. At national level over all ESMF oversight will be ensured by SDF through an Environmental Focal Point (EFP). ToR for an EFP are provided in Annex 14. The Regional Offices will ensure implementation of ESMF and do regular monitoring. The District Offices will assist the Regional Offices in supervision of ESMF implementation. The Cluster Offices will ensure day to day aspects ESMF implementation and data collection for monitoring. The Community Groups will be responsible for Environment and Social sustenance of the sub-projects. SDF- staff and Community members will be trained as required for implementation of ESMF. The implementation arrangement is depicted in Table 8 below:



**Table 8: Institutional Arrangements for ESMF Compliance**

Level	Organization	Personnel	Functions
National	SDF	Environmental and Social Focal Point (ESFP)	<ul style="list-style-type: none"> <li>➤ Orientation and training to Field Units on ESMF and providing oversight on the EA process and its outputs, as well as the requirements, format and consultation requirements for the preparation of Small Ethnic Communities and other Vulnerable Communities Plans (SECVCDP) based on the framework for the same provided in the ESMF, for sub-projects taking place where such communities live. Special training must be given on the inclusion and gender aspects of the projects and participatory processes; previous phases of the project has performed well in this area and there is sufficient capacity within SDF. However new field staff should receive adequate training and orientation.</li> <li>➤ Assisting in fulfilling requirements for all Category sub-projects</li> <li>➤ Review of monitoring reports submitted by the Regional Offices on ESMF/EMP/(SECVCDP) implementation.</li> <li>➤ Regularly visiting sub-project sites to review ESMF compliance during sub-project planning and implementation.</li> <li>➤ Providing guidance and inputs to the Field Units on environment and social management aspects.</li> <li>➤ Managing Monitoring Evaluation Audit and Learning of ESMF implementation.</li> <li>➤ Assisting External Independent Consultants in Bi-Annual Environmental and social Audit.</li> <li>➤ Preparing Quarterly ESMF compliance Reports and sharing them with The World Bank.</li> <li>➤ All the actions related to ensure compliance with ESMF as directed by Managing Director, SDF.</li> </ul>
Regional	Regional Office	Infrastructure and Livelihoods Specialists	<ul style="list-style-type: none"> <li>➤ Managing ESMF implementation and monitoring and evaluation</li> <li>➤ Collecting data for monitoring.</li> <li>➤ Providing ESMF assistance to District and Cluster Offices.</li> <li>➤ Coordination with the other agencies at for ESMF compliance.</li> <li>➤ Monthly reporting on ESMF compliance to SDF.</li> <li>➤ All the actions related to ensure compliance with ESMF as directed by Managing Director, SDF.</li> </ul>
District	District Office	Infrastructure and Livelihoods Officers	<ul style="list-style-type: none"> <li>➤ Supervising ESMF implementation.</li> <li>➤ Compliance screening and Categorization of all sub-Projects and preparation of EMPs/SECVCDPs.</li> <li>➤ Assisting Regional Office in collecting data for monitoring.</li> <li>➤ Providing ESMF assistance to Cluster Offices.</li> </ul>
Cluster	Cluster Office	Cluster Facilitators: General and Technical	<ul style="list-style-type: none"> <li>➤ Ensuring ESMF provisions in implementation.</li> <li>➤ Data collection for screening and categorization of all sub-Projects and preparation of EMPs.</li> <li>➤ Data Collection for monitoring.</li> <li>➤ Providing ESMF assistance to Community Groups.</li> </ul>
Community	Community Groups	Gram Samiti Members	<ul style="list-style-type: none"> <li>➤ Implementing and monitoring ESMF provisions in all sub-projects.</li> <li>➤ Assisting in Collection of data for screening and categorization of sub-projects</li> </ul>

### 6.1.1 Project Implementation Process – ESMF Functions

Table 9 summarizes environmental activities to be taken up during each sub-project cycle, objectives, process, responsibility and result of each activity by sub-project phase. Details of each phase of implementation, needed environmental safeguard activities and responsibility are provided in Table 10.

**Table 9: Sub-project implementation phases and related safeguard activities**

Nuton Jibon Subprojects/Activities	Environmental Safeguard	Responsibilities/ Institutional Arrangement
Pre-planning:	Review environmental criteria/ negative attribute	
Preparation of subproject proposals on Livelihood or infrastructure	Environmental Screening (ES) 	Community groups, Cluster Mobilizer
Conduct Environmental Assessment	Initial Environmental Examination (IEE) 	
	Preparation of EMP	
Planning (Appraisal and Selection of subprojects for funding)	Review ES/IEE and verify Environmental Mitigation Measures, Environmental Code of Practices (ECoPs), Health & Safety	Community groups, Cluster Mobilizer, Cluster Team Leader, EFP
Implementation	Compliance Monitoring & Compliance certification by Gram Samiti	Gram Samiti, Community groups, Cluster Mobilizer, Cluster Team Leader
Operation	Quarterly Progress Monitoring	Cluster and District Level Teams, EFP
	Environmental Audit	Consultants for Audit. EFP
Reporting	Half yearly progress report, Monitoring report	Cluster Team Leader, EFP

**Table 4: Environmental Activities and Responsibilities to be fulfilled during the sub-project cycle**

<b>Phase</b>	<b>ESMF Activity</b>	<b>Objectives</b>	<b>Process</b>	<b>Responsibility</b>	<b>Result</b>
Preplanning	<b>Identification</b> Environmental Screening format (ES) for Category 1 Initial Environmental Examination Sheet (IEES) for Category 2 and prepared EMPs for specific sub-projects	To collect basic information on environmental aspects of the proposed sub-project.	The ESMF requires that basic environmental data pertaining to the proposed sub-project be compiled at the field data collection stage. For this purpose, a simple Environmental Screening sheet (ES) was formulated for sub-projects. The formats for the ES are furnished under Annexures. The sub-project implementing Community Group fills up the ES with the facilitation support of the Community Mobilizers duly identifying the environmental issues of concern along the basic data. The ESMF requires that basic environmental data pertaining to the proposed sub-project be compiled at the field data collection stage. For this purpose, a simple Initial Environmental Examination Sheet (IEE) was formulated for sub-projects. The formats for the IEE are furnished under Annexures. The sub-project implementing Community Group fills up the IEE with the facilitation support of the Community Mobilizers duly identifying the environmental issues of concern along the basic data. Supplementary notes on environmental and social concerns to be added to these sheets.	Community Groups Cluster Mobilizer	ES/ IEE filled. EMPs prepared and attached with the sub-project proposal/ concept note
Planning	<b>Appraisal</b> of sub-project proposal and verification of ESS/IEE and Environmental Management Plans	To arrive at appropriate Environmental Management Plans for integration into sub-project Proposals	For Category 1 sub-projects, the relevant and appropriate provision given in ESMF under ECoPs/ EMP will be made use of in the sub-project proposals. This will be done by GS with the assistance of Cluster Mobilizers. For Category 2 sub-projects, the relevant and appropriate provision given in ESMF under ECoPs/ EMP will be made use of in the sub-project proposals in preparing a specific EMP. This will be done by GS with the support of Cluster Team Leader.	Community Groups Cluster Mobilizer Cluster Team Leader	EMPs Reviewed/verified and disclosed prior to start of sub-project implementation.
Implementation	<b>Implementation</b> Implementation	To ensure that the prescribed	The prescribed environmental mitigation measures (including construction stage measures) as identified	Gram Samiti Cluster	ICR with environmental

Phase	ESMF Activity	Objectives	Process	Responsibility	Result
	of Environmental mitigation measures.	environmental mitigation measures (including construction stage) are implemented.	through the environmental appraisal process are adequately implemented. Implementation Completion Report (ICR) for sub-project will need to include an Environmental Compliance Certificate given by the Gram Samiti indicating that the mitigation measures identified in the appraisal (including construction stage) have been implemented.	Mobilizers Cluster Team Leader	compliance information.
O&M	<b>Supervision, Monitoring and Evaluation and Audit</b> Environmental supervision, monitoring and evaluation and audit IEC and capacity building on environmental issues.	To ensure that environmental aspects are integrated in the O&M phase.	Monitoring of indicators will be conducted as per project monitoring protocol. Supervision will be conducted by the designated environmental officers of the implementing agencies for all the sub-projects All sub-projects will be monitored by GS and Cluster and District Teams. Capacity building and IEC activities are undertaken to enable effective implementation of the ESMF including assessment procedures, supervision, monitoring, etc. as well as for community awareness and sensitization. This will be done by the Regional Teams and in turn the Regional Teams will be trained by SDF. An external environmental audit to be carried out by SDF. TOR for Audit Specialist/Firm provided in Annex 15.	Cluster and District Level Teams SDF Environment and Social Focal Points External Training Consultants for Audit Training	SDF will conduct quarterly progress monitoring and submit Half-Yearly Monitoring Reports to The World Bank on Safeguards Implementation. An Audit reports by SDF before midterm. Periodic environmental and social supervision reports. Training and IEC activity reports.

### **6.1.2 Supervision and Monitoring Evaluation Audit Learning (MEAL)**

The ESMF requires detailed Supervision and Monitoring, Evaluation Audit and Learning (MEAL) of the impact of the project on the environment aspects. In order to carry out this, SDF will have specific arrangements made at National, Regional, District, Cluster and Village level. There is a need to internalize the Environmental Safeguards Management processes at all levels, as these cannot be treated as stand-alone and parallel functions any more. The Nuton Jibon project is adopting such approach. This internalization of environmental processes helps in better implementing the safeguards provisions, provided the capacity of implanting supervising agencies is adequately built in Safeguards Management. The arrangements for Supervision and MEAL include appointment/ designating of an Environment and Social Focal Points (EFP and SFP) at SDF and vesting all the Environment and Social Safeguards Supervision and MEAL requirements with the respective Infrastructure and Livelihoods Specialists at Regional, District and Cluster Level. At Field Level the Cluster Facilitator will be the Kingpin to the entire Safeguards Management of the project.

EFP and SFP will be in charge of implementing the ESMF and guiding and overseeing the implementation of the ESMF at field level. This overall guidance will be given by them. Further the SDF will incorporate the provisions of this ESMF as actionable points in the Community Operations Manual and/or other similar document for the project. These will be non-negotiable and will have to be followed by all Field Units. The EFP and SFP will oversee the application of these provisions and guide the process, while at the same time building the capacity of the Field Units.

Further the EFP and SFP will instruct the Regional and District level units on how to implement the provisions of this ESMF. The EFP and SFP at SDF will arrange training, with the help of resource persons, institutes, agencies, etc., to all the concerned field level staff. Implementation of the provisions of ESMF will be new to these staff and hence several orientations and trainings are proposed as a part of this ESMF to build their capacity. In order to achieve the objectives of this ESMF and to ensure the safeguards are implemented in a proper manner, the following provisions are made in this ESMF:

### **6.1.3 Types of Monitoring**

NJLIP will plan and implement following environmental monitoring, supervision and audit program to ensure environmental sustainability of infrastructure and livelihood programs.

- Compliance monitoring by field units
- Quarterly progress monitoring by the SDF
- Yearly environmental and social assessment
- Third Party Environmental Audit

#### **6.1.4 Compliance Monitoring by Field Units**

This is basically done by the Regional, District and Cluster level Infrastructure and Livelihoods Specialist. All the sub-projects will be visited at regular intervals by them to check if all safeguard requirements are met and to identify any issues that need to be addressed. Regional Unit will submit monthly progress reports on Safeguards Supervision and Monitoring to SDF on safeguards implementation and compliance. The concurrent internal supervision and monitoring will be done as part of the regular monitoring by field units for safeguards compliance. All the Cluster Facilitators will be trained on Environmental and Social Safeguards Management and they will ensure ESMF implementation at field level. The Community Groups will be oriented on the ESMF requirements in each sub-project and made aware of the environmental requirements. A format for environmental compliance monitoring has been provided in Annex 9.

#### **6.1.5 Quarterly Monitoring and Evaluation by SDF**

The quarterly monitoring and evaluation will be done by SDF. The EPF and SPF will visit the field on a regular basis. They will visit about an appropriate percentage of all category sub-projects, as decided by SDF. These Focal Points will prepare appropriate formats for monitoring. SDF will send Half-yearly Monitoring Reports on ESMF compliance to The World Bank. A format for environmental monitoring has been provided in Annex 10.

#### **6.1.6 Yearly Environmental Assessment**

Once every year, SDF will prepare a report of the environmental and social situation in the project districts including data and analysis of relevant parameters as given below:

- Flooding/drought/water logging
- Water quality (drinking water parameters including arsenic)
- Salinity in Ground and surface water
- Soil erosion
- Soil quality improvement (due to application of organic fertilizer/ compost)
- Contamination of surface water (agro-chemicals, sedimentation in water bodies)
- Changes in land use
- Saving of fuel wood and indoor air quality improvement (due to cook stove)
- Tree coverage

This report also should give a listing of relevant new legislation and regulations that have a bearing on the environmental performance of the project. SDF will submit this report to the World Bank. The ESMF will be suitably revised, if needed, on the basis of this document by the SDF.

## 6.1.7 Monitoring Plan

Given in the table below are indicators for project investments, for which monitoring need to be taken up by SDF in a regular manner.

**Table 11: Indicators for Project Investments**

<b>Project Activities</b>	<b>Monitoring Indicators (Frequency/ Method of Testing)</b>	<b>Reporting Frequency</b>	<b>Agency</b>
1. Rural Small Infrastructure 1a. Roads and Cross Drainage Works 1b. Sanitation 1c. Water Supply 1d. Buildings	<b>Environmental parameters</b> <ul style="list-style-type: none"> <li>• Drinking Water quality – Surface and Groundwater (Half-Yearly/ Testing and Govt. Records)</li> <li>• Soil erosion – Area Affected (Yearly/ Visual)</li> <li>• Sedimentation in water bodies – Turbidity (Half-Yearly/ Visual)</li> <li>• Debris deposits on lands – Area/ No. of locations (Yearly/ Visual)</li> <li>• Changes in land use (Yearly/ Visual and Govt. Records)</li> <li>• Top Soil Collection (Yearly/ Visual)</li> <li>• Tree Cutting (Yearly/ Visual)</li> <li>• Arsenic Contamination of Groundwater (Half-Yearly/ Testing and Govt. Records)</li> <li>• Water logging (Yearly/ Visual)</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly by Regional Units with the help of District and Cluster Units</li> <li>• Annually by SDF</li> </ul>	<ul style="list-style-type: none"> <li>• Regional Units collect information on indicators and send Quarterly Reports to SDF</li> <li>• SDF to review these quarterly reports and prepare Annual Reports</li> </ul>
Livelihood Opportunities Agriculture Based Animal/ Dairy/ Poultry Based Fisheries Based Trade/ Business Based Transport Based	<b>Environmental parameters</b> <ul style="list-style-type: none"> <li>• Drinking Water quality – Surface and Groundwater (Half-Yearly)</li> <li>• Changes in land use (Yearly)</li> <li>• Changes in usage of Fertilizers and Pesticides (Yearly)</li> <li>• Changes in usage of Cattle, Poultry and Fisheries feeds (Yearly)</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly by Regional Units with the help of District and Cluster Units</li> <li>• Annually by SDF</li> </ul>	<ul style="list-style-type: none"> <li>• Regional Units collect information on indicators and send Quarterly Reports to SDF</li> <li>• SDF to review these quarterly reports and prepare Annual Reports</li> </ul>



The Regional Units, with the help of District and Cluster units, will monitor these parameters on a quarterly basis and will send this information to SDF. At SDF the Environment Focal Point (EFP) will review this data based on information collected from their own field visits and compile into Annual Reports. SDF will send these Annual Reports to the World Bank.

### **6.1.8 Third Party Environmental Audit and Learning**

SDF will conduct an external Environment Audits using trained resources to audit Environmental procedures and processes and compliance with ESMF. This audit is not only a compliance audit, but also takes note of good practices followed by the project. This Audit will visit an appropriate percentage of all Category sub-projects. An experienced Environmental Audit Specialist or audit firm will be recruited to conduct Environmental Audit. This experienced Environmental Audit Specialist will also design the procedures and formats for Audit and provides oversight to the process including summarization. Annex 15 provided a ToR for an Environmental Audit Specialist/Firm.

## **6.2 Training and Capacity Building**

The Nuton Jibon staff will need to have awareness, sensitivity, skills and experience regarding the environmental aspects of sub-projects planning and implementation. For sustainability and seamless adaption of the environmental principles and safeguards by all the implementing partners, awareness creation and capacity building becomes necessary. This capacity building and IEC strategy has been outlined as part of the ESMF program developed for the project aims at building environmental awareness and environmental management capacity in the project administration structure as well as in the intended target communities. Capacity building for environmental management will be integrated with overall capacity building component of the project.

### **6.2.1 Objectives**

The objectives of the capacity building initiatives are:

- To build and strengthen the capability of SDF staff, its stakeholders, and other partners to integrate sound environmental management into sub-project implementation.
- To orient the SDF staff, its stakeholders to the requirements of the project's ESMF.

Systematic capacity building initiatives need to be introduced only after completion of training needs assessment. The training should be of cascade mode. All the trained staff and others will in turn conduct further trainings at Regional, District, Cluster and village levels. However, since capacity building goes beyond mere imparting training, institutionalization of best practices becomes a prerequisite for improved sub-project environmental and social management. The training outcomes like trainees' understanding of the training content, achievement of learning objectives, application of methods, tools and techniques learnt during training, etc. need to be monitored and

audited. This will be done by SDF on a regular basis through monitoring.

### 6.2.2 Training Resources

In view of the specialized training and capacity building envisaged under the ESMF of the project, it is necessary to identify nodal training institutes that will work closely with PMU for conceptualizing, designing, conducting and managing training programs on the ESMF. Some such specialized institutions are:

- ✓ Selected Expert Staff of Nuton Jibon
- ✓ Selected Expert Staff of Ministry of Environment, Agriculture Department, Animal Husbandry Department, Water Resources Department, etc.
- ✓ Leading Institutes of Science and Technology
- ✓ Identified Overseas Institutes Providing ESMF Training such as Engineering Staff College of India, Hyderabad
- ✓ Other Identified Consultants
- ✓ Any Other?

The details of the proposed training programs are as below:

- ESMF Master Trainers Training
- Orientation/ Learning Training Programs
- Training on the ESMF and Mitigation Plans for Sub-Projects
- Training on Environmental Issues and Management
- Workshops on ESMF

### 6.2.3 Trainees

The likely participants are key officials of the project, SDF National Staff, Regional, District and Cluster Level Staff, Community Representatives, Women Groups, etc. About 20 to 30 trainees would participate in each of the training programs. It is intended that these trained persons will in turn provide onsite training to SDF National, Regional, District, Cluster level Staff, Resource Persons, Community Members, NGOs, CBOs, Women Groups, etc.

### 6.2.4 Training Budget

The total estimated cost of training on environmental management under the proposed project is presented in the table below:

**Table 12: Training Budget**

S. No.	Training	Implementation schedule	No. of Programs	Indicative Unit Cost in BDT	Total Cost in BDT
1	Five Day Comprehensive ESMF Training for Master	August 2015	1	10,00,000	10,00,000

	Trainers (ToT)				
2	One Day Orientation/ Learning Training Programs (Regional) 20 during first year and 20 second year	May - July 2015 & July - Sept 2016	20	1,00,000	20,00,000
3	Five Day Comprehensive Training on ESMF to Key Players (Overseas)		1	20,00,000	20,00,000
4	Two Day Training on the ESMF and Mitigation/ Management Plans (Regional) 5 during first year and 5 second year	May - July 2015 & July - Sept 2016	10	2,00,000	20,00,000
5	One Day Training on the ESMF and Mitigation/ Management Plans (District) 20 during first year and 20 second year	May - July 2015 & July - Sept 2016	20	50,000	10,00,000
6	One Day Workshops (National) 3 during project beginning 2 mid way	March 2015 October 2017	5	1,00,000	5,00,000
7	One Day Workshops (Regional) 6 during project beginning 4 mid way	March 2015 October 2017	10	50,000	5,00,000
	Total				90,00,000

## 6.3 Disclosure

### 6.3.1 National Level

SDF has disclosed the draft ESMF and all Safeguards related documents and mitigation plans, viz., SA/ EA / EMP/ SMP, at its website on December 2, 2014. These documents will be translated into local language (Bangla) and placed on the website. When these documents are updated, then the updated versions would also be uploaded. SDF will arrange a workshop to share the ESMF with the concerned stakeholders.

### 6.3.2 Regional/ District Level

SDF will also arrange to disclose the final versions of the ESMF and the Executive Summary in English and Bangla and all EA/ SA/ EMP/ SMP, in English and Bangla, in all the Regional/ District Offices. When these documents are updated, then the updated versions would also be disclosed.

### 6.3.3 Disclosure by the World Bank at the Infoshop

The World Bank has disclosed the draft ESMF at the Infoshop on December 18, 2014 for downloading and reference by interested parties.

During the implementation phase, all the sub-project EA/ SAs shall be disclosed by SDF and the Regional/ District offices at the local level.

#### 6.4 Comprehensive ESMF Review and Update

SDF would undertake one thorough/ comprehensive review of the ESMF during the project period. Based on the review, the ESMF would be updated if necessary. SDF would undertake this review and revision prior to mid-term review by the World Bank. Any revision of this ESMF will have the concurrence of the World Bank.

#### 6.5 Grievance Redress Mechanism

SDF will have a grievance redress mechanism which will look into all aspects of sub-projects and their activities. This is explained further under the SMF.

#### 6.6 ESMF Budget

The total administrative budget for environmental and social management activities under the Nuton Jibon has been worked out as BDT 2.2 crore. The cost of implementing the proposed mitigation measures is not included in this costing. The cost of mitigating environmental and social impacts need to be included in the respective sub-projects' budgets. The detailed breakup of the administrative budget is presented in the table below.

**Table 13: Administrative Budget for ESMF activities**

S. No.	Activity	Amount in BDT
1	Training and workshops (as estimated)**	90,00,000
2	External/ Third Party Independent Consultants for Environment and Social Audit to be taken place before Mid-term	10,00,000
3	Preparation of specific environment and social related community awareness materials (lumpsum)	50,00,000
4	Unforeseen Items	20,00,000
6	Total	1,70,00,000

\*\* -Table 12 provided the details of the training programs.

## **7. Social Management Framework (SMF)**

### **7.1 Introduction**

The USP (unique selling proposition) of Social Development Foundation is “Promoting Sustenance in Rural Bangladesh”. The Government of Bangladesh through the Ministry of Finance has mandated the SDF to finance and develop rural infrastructure and livelihoods projects. SDF, which has set out to implement the Nuton Jibon, aims to promote environmentally sound and sustainable, socially acceptable and economically viable rural infrastructure and livelihoods sub-projects. SDF believes that each of the sub-projects of the Nuton Jibon will improve the living standards and the environment of populations of the participating communities and areas around these villages.

In line with this policy, SDF along with Community Groups is committed to identify, prepare and implement socially acceptable, environmentally sound and sustainable and financially sustainable sub-projects. Further, these sub-projects would be implemented with the continuous community engagement, environmental oversight, financial prudence and managerial prowess that are inherent strengths of SDF.

Nuton Jibon undertakes two types of investments: a) Rural Infrastructure and b) Livelihoods Promotion. These activities are both small in size and local in nature requiring minimal investments. Environmental and social considerations are an integral part of all interventions of NJLIP. The Village level communities plan, screen, mitigate and monitor environmental and social issues in both construction and operation and maintenance. These simple small scale rural infrastructure and livelihoods have almost no or little environmental and social adverse impacts. These interventions and the impacts due to them are further described below:

### **7.2 Prediction of Impacts**

NJLIP's project development objective says that this project and the sub-projects would yield positive and beneficial impacts on the target population. While the general dictum that says ‘any and all development interventions will also have some negative impacts’, is held in high esteem, the fact is that the negative impacts (if any) induced by Nuton Jibon are negligible, insignificant and temporary. Keeping this in view the likely positive and negative impacts are listed below. The significance of these listed impacts would vary depending on the individual sub-project, its size and location. The size of the sub-projects would normally be small both physically and financially. Due to the likely small size of the sub-projects, adverse impacts, if any, would be at its minimum localized and reversible for the following reasons:

- Proposed project is rural livelihood project.
- The investments that go into these sub-projects are marginal
- Significantly low environmental and social impacts

### **7.2.1 Generic Positive Impacts**

The following impacts are predicted based on the assessment. The impacts could occur during the construction phase and/or operation phase. These possible positive impacts are listed below:

- Improved public safety and security
- Reduced sufferings during monsoons and adverse climatic conditions
- Better infrastructure and connectivity
- Improved access to services
- Productive use of time
- Improvements in income patterns
- Health and Environmental improvements
- Improvements in quality of life and human dignity
- Opportunities for social interaction and network creation
- Improved community participation and sense of ownership

### **7.2.2 Social Impacts**

The proposed works may not have significant social impacts due to the nature, type and size of the works. However, the following social impacts could possibly arise out of the proposed projects:

- Inconvenience and nuisance to Public
  - Due to accumulation of excavated earth
  - Disturbance to traffic
  - Disruption of utilities such as water, electricity, telephone, cable, etc.
- Safety hazards
  - To the households in the neighborhood during construction
  - Due to impact of vehicles on land outside RoW
  - Due to risk of accidents
- Health Hazards
  - Due to stagnation of water leading to mosquito breeding and public health problems
  - Due to spread of Contagious diseases/ AIDS at construction sites
- Impacts on Small Ethnic Communities

Implementing an appropriate Social Management Plan and a Small Ethnic and Vulnerable Communities Development Plan (SEVCDP) could mitigate the above mentioned negative social impacts.

### **7.3 Negative List of Sub-Projects**

The Project will not support any activities which may have significant adverse social impacts involuntary land acquisition and resettlement and adverse impacts on small ethnic minorities and other vulnerable groups. Specific sub-projects with any of the attributes listed below will be ineligible for support under the project.

- **Involuntary Resettlement:** Activities that would involve involuntary resettlement (dams, roads, etc.). Moreover, the exclusion criteria will be applicable in cases of the displacement of squatters from public/private lands, disruption or closure of livelihood activities carried out by titles or untitled farmers, share croppers, crop loss or damage of any sort. The exclusion criteria will include any activity that has likelihood of leading to economic or physical displacement, whether the impact is temporary or permanent and whether it affects people with or without title.
- **Drain/canal/pond:** Construction/reconstruction of drain, canal/pond excavation with loss of agriculture land. (If there is any minor land requirement, this will be made available through either voluntary donation or direct purchase at market price from willing sellers. The Voluntary Donation given in this SMF ensures that no squatters or encroachers are affected.)
- **Disputed Land/ Sensitive Areas:** No projects activities will be carried out in disputed lands or lands restricted for development or environmentally and/or socially sensitive areas.

#### 7.4 Social Impacts and Mitigation

The adverse generic and possible Social Impacts are listed above. All sub-project proposals will be reviewed by the Cluster/ District/ Regional Infrastructure and Livelihoods Specialists. Nuton Jibon considers alternatives to avoid land requirement and adverse social impacts on the people and communities. As mentioned earlier, all the sub-projects under the Nuton Jibon aim at improving living standards of the target population.. The individual sub-projects proposals will detail the social impacts. Hence, a Social Management Framework (SMF) is proposed. This SMF deals a) Land Requirement – Direct Purchase or Voluntary Donation, b) Stakeholder Consultation and Community Engagement, c) Women Empowerment and Participation of Vulnerable Groups, d) Ensuring Upward Mobility of Target Groups, e) Grievance Redressal, and f) Small Ethnic and Vulnerable Communities Development Framework (SEVCDF) based on which appropriate plans can be prepared when required.

The provisions of the Social Management Framework are applicable across all sub-projects taken up by Nuton Jibon. When required, as decided by SDF in consultation with The World Bank a Social Assessment (SA) will be conducted along with IEE for certain sub-projects and a specific Social Management Plan (SMP) will be prepared.

#### 7.5 SMF - Objectives

The primary objective of this SMF is to improve the standard of living of the project target communities. The other objectives of this SMF are to:

- Ensure Project Principles of Social Justice are adhered to at all times
- Avoid or minimize any negative impacts on the target communities
- Ensure that no land Acquisition and/or Resettlement is triggered. The exclusion criteria will be applicable in cases of the displacement of squatters

from public/private lands, disruption or closure of livelihood activities carried out by titles or untitled farmers, share croppers, crop loss or damage of any sort. The exclusion criteria will include any activity that has likelihood of leading to economic or physical displacement, whether the impact is temporary or permanent and whether it affects people with or without title.

- If land is required for project facilities, then same may be donated by community or purchased under Willing Buyer-Willing Seller norm. Based on the experience of SIPP II no private land requirement or activities triggering OP 4.12 occurred.
- Assist target population in improving their living standards, income earning capacity, and production levels, etc.
- Encourage and enable community participation in planning and implementing project components
- Provide assistance to target communities in redressing their grievances

This SMF will address the following social issues:

- ❖ Land Procurement
- ❖ Community Engagement
- ❖ Special Attention to Women and Other Vulnerable Groups
- ❖ Ensuring Upward Mobility of Target Groups
- ❖ Grievance Redressal
- ❖ Small Ethnic and Vulnerable Communities Development Plan (SEVCDP)

## **7.6 Buying Land - Willing Buyer and Willing Seller**

Nuton Jibon will not use land acquisition for land procurement. Land will be required only in case of establishing GS offices in the villages. However this Land requirement would be minimal at around 2 to 5 Decimals. Generally, if the land is required, encumbrance free Parishad land is the first preference and if Parishad land is not suitable or available, then land is donated by community members. Specifically, in cases of Parishad/government/khas land, the project will ensure that the displacement of squatters from public/private lands, disruption or closure of livelihood activities carried out by untitled farmers, share croppers, crop loss or damage of any sort do not take place. Land purchase is opted as a last option.

### **7.6.1 Land Identification**

Under the willing buyer and willing seller norm, suitable land is identified by villagers through a Gram Parishad meeting. This land requirement is discussed when there is a need for building a GS Office. When Parishad land is not available and donations are not coming forth, only then in the Gram Parishad meeting, villagers will be requested to come forward if they are willing to sell land. The willing sellers convey their readiness to sell the land to GS. Then GS with SAC will then physically verify the plot and examines its suitability for the purpose. GS with the assistance of SAC will verify the land price in the area and negotiates the price with seller. The Price needs to be at least



equal to the prevailing and actual market price in the area, (not that which is available at the DC's office, as these are often registered at rates far below actual market rates). After negotiating the price, GS will seek GP approval in a meeting. If GP approves, then GS will start purchasing process. GS with SAC will verify the land ownership, possession, interested parties, documents, etc. with the help of Land Office. After completion of verification, GS and seller both will communicate this decision to Land Office, Department of Land. The seller with the assistance of Surveyor from local registration office gets the land surveyed and demarcated in the presence of adjoining land owners. Disputes and claims, if any will be resolved then and there. After verification, GS calls a meeting of GP where all the information about the land is shared and discussed and if GP approves, then GS will proceed further to purchase the land. The entire process of consultation, negotiation, agreement, transfer of land documents will be recorded by the GS committee members and will be available for review.

### **7.6.2 Registration and Mutation of Records**

As a first step towards purchase, a Baina deed is prepared, if necessary, and registered with the local Land Office. This deed is signed by GS and Seller and token advance is given to seller by GS. This Baina deed is valid for 3 months. The deed is registered with Land Registraton Office after paying necessary fee. Once the registered deed is received, it is kept in the GS office. After baina deed, the GS will erect signboards saying that GS is the owner of the land along with land transaction information. Within 3 months, a sale deed is prepared and registered with Land Registration Office. During registration the remaining amount is paid through cheque to the seller. GS receives the sale deed from the Land Registration Office. This deed is kept at the GS office. Later the Land Department updates their records, through mutation, once the GS applies for mutation. From then on land belongs to concerned GS.

### **7.7 Voluntary Land Donation**

Whenever there is land requirement, GS will interact with the land owners and facilitate voluntary donation of land required for taking up sub-projects under the project. This use of voluntary donation option will be limited to small parcels, say 2 to 5 decimals, of land for rural roads and small plots of land for GS Office. Under no circumstances, the titleholder will be subjected to any pressure, directly or indirectly, to part with the land. For this reasons, the rules given under 7.7.1 stipulates that the consultation process and the agreement will be thoroughly documented by the District units. These actions are expected to minimize adverse impacts on the local population and help in project benefits reaching all sections of community.

Nuton Jibon will ensure that the process of voluntary donation of land will be meticulously documented at all levels to avoid confusions, misunderstandings, litigations, etc. at a later stage. A format for this purpose is enclosed in the Annexures. This process will be taken up mainly at three levels as described below:

**Table 14: Process of voluntary donation of land**

Level	Process	Output	Responsibility
GP/ Village Level	Based on the land survey, lands will be identified and the list of titleholders will be prepared. This will be done by Gram Parishad (GP) with the help of SAC. GP motivates the title holders for voluntary land donation required for the project. The SAC will help in this process and will document the willingness to donate land by the titleholders and encroachers in the presence of the President of GP in the form of a Willingness Letter. The list of such persons will be displayed at the GP Office. GP and SAC jointly verify the land and after completion of verification, GP and Donor both will communicate this decision to Land Office, Department of Land. The Donor with the assistance of Surveyor from the local registration office, gets the land surveyed and demarcated in the presence of adjoining land owners. Disputes and claims, if any will be resolved then and there. After verification, GP calls a meeting where all the information about the land is shared and discussed and if approved in the meeting, then GP will proceed further to donation of the land.	Willingness Letters	President, GP, SAC and Titleholder
Block Level	BDO or concerned Revenue Official surveys the land and demarcates the extent of area required. The survey will identify if the land is public, private or encroachment. Based on the survey, maps are prepared. The entire process will be carried out along with GP and SAC. The maps will be signed by President, GP and concerned Revenue Officer.	Survey map signed by relevant persons indicating the extent of land required.	BDO, Surveyor, President, GP,
District Level	Formalize relinquishment of land rights where concerned local people voluntarily donate their private land for the project for public purpose. This land is then registered in the name of GP. Later the Land Dept updates their records, through mutation, once the GP applies for mutation. From then on land belongs to concerned GP.	Effect Changes in Land Revenue Records	District Collector, BDO
	The entire process of consultation and agreement will be thoroughly documented.	Documentation	District Office of SDF

### 7.7.1 Rules for Transparency in Donation

In order to make this process transparent, the following rules are prescribed:

- The Titleholder should not belong to the Hard-Core Poor/Poor/Vulnerable sections.
- The Titleholder should be holding more than the minimum prescribed land, i.e., 1 hectare of wet land and 2 hectares of dry land after donation.
- The impacts must be minor. The voluntary donation should not be more than 10 percent of the area of that particular holding of the Titleholder in that category of land (dry, wet or commercial/ residential). This should not require any physical relocation of the Titleholder. The land donated should not be more than 0.4 Ha in case of dry land, 0.2 Ha acre in case of wet land and 0.1 Ha acre in case of commercial/ residential.

- The land must be jointly identified by the GS and SAC. However the SDF District Office should ensure that the land is appropriate for sub-project purposes and that the sub-project will not invite any adverse social, health, environmental, safety, etc. related impacts by procuring this land.
- The land in question must be free of squatters, encroachers, or other claims or encumbrances.
- Verification of the voluntary nature of land donations must be obtained from each of the persons donating land. This should be in the form of notarized witnessed statements.
- In case of any loss of income or physical displacement is envisaged, verification of voluntary acceptance of community-devised mitigation measures must be obtained from those expected to be adversely affected.
- The land title must be vested in the GS and appropriate guarantees of public access to services must be given by the private titleholder.
- The Titleholder donating land should be provided access on priority basis, subject to eligibility, to the Government housing/ poverty reduction/ livelihoods/ etc. programs operating in the area.
- The Titleholder donating land should made to understand that they will have equal access to the infrastructure built on the donated land like any other community member and that they cannot claim for any priority treatment.
- The whole consultation process will be documented and agreement recorded by District Teams.
- Grievance mechanisms must be available.

## **7.8 Community Engagement**

Nuton Jibon will ensure the engagement of target communities through continued consultations for planning and full community management of implementation and monitoring of sub-project activities. Consultations will be held at regular intervals with target communities, GS/ GP members, Women, etc. In general, the following consultations will be carried out during the project cycle.

- Socio-economic survey for preparing the baseline of the poor, hard core poor and vulnerable families
- Estimation of land requirement; possibilities of donation/ willing sale.
- Motivation of titleholders to facilitate the voluntary land donations
- Implementation of the IEC/ Communication plan for awareness creation about project activities
- Identifying livelihood support programs
- In order to keep the momentum of engagement, activity specific consultations and a quarterly overall consultation will be held with all community groups.

### **7.8.1 Stakeholder Participation**

Nuton Jibon recognizes the fact that Target Communities are primary and key stakeholders of the project. Hence, the GS/ GPs would ensure that these stakeholders are consulted on issues and they participate in all the sub-project activities including

planning and implementation. The GS/ GPs would address the legitimate concerns of community members and provide opportunities and avenues for consultation and their participation. In order to provide a sense of ownership and ensure sustainability, the community members would be a part of the decision making process. The project has a commitment for community participation in each of the sub-projects taken up.

## **7.9 Special Attention to Women and Other Vulnerable Groups**

The vulnerable groups include Women Headed Households, Destitute, Below Poverty Line families, Old Aged, Differently Aabled, Chronically Ill and Orphans. It is envisaged that in the course of conducting Social Assessment and preparing and implementing Social Management Plans, interests of these vulnerable groups would be adequately addressed and protected. The latter will be provided improved opportunities for participation in groups, and in decision making activities. Priority will be given to the especially vulnerable in terms of enhanced project benefits. Field officers may visit and learn more about their special needs and assess how project benefits can be tailored/enhanced for them as part of the social assessment in project proposals.

### **7.9.1 Vulnerable Groups**

Like in other projects, as per available experience, in these sub-projects as well, women are likely to experience differential socio-economic setbacks due to their disadvantaged positioning within socio-economic structures and processes. This is likely to be manifested most in the adverse conditions to their participation and engagement. In order to mitigate such impacts, SDF during verification and socio-economic survey shall collect information on the following:

- Number of women headed households and Small Ethnic Communities households and other vulnerable persons
- Socio-demographic characteristics of affected women and Small Ethnic Communities and other vulnerable groups
- Health status including number of children per woman
- Women's role in household economy by collecting information on usual activity; occupation; etc.
- Time Disposition
- Decision making power among women

As women are often the worst victims of transition between poverty and alleviation, they have to be integrated in the project as full-fledged participants taking part in all the stages of the project starting from planning through implementation and on to the post-project stages. This is the only way to make sure that the process of poverty alleviation an exercise in equitable distribution of resources and benefits in a gender sensitive manner. The experience of SIPP-I and SIPP-II have been encouraging in this area and have shown growing participation of women both, in regular groups and in decision making positions.

## 7.9.2 Actions to be taken

SDF District and Cluster Offices has to perform following tasks:

- Ensure participation of vulnerable groups in project activities
- Ensuring project benefits to vulnerable persons
- Carrying out other responsibilities towards vulnerable groups

Participation and engagement of women and other vulnerable groups can be ensured specifically in the following ways:

- During the project initiation, conduct a survey and identify Women and Other Vulnerable Groups in the village. Document their details, socio-economic status, poverty, vulnerability, etc. during this survey.
- Ensure that the women and other vulnerable groups are consulted and invited to participate in group-based activities, to gain access and control over the resources.
- Ensure that women and other vulnerable groups are actually taking part in issuance of identify cards, opening accounts in the bank, receiving assistance amounts through cheques in their name, etc. This will further widen the perspective of participation by the women and other vulnerable groups in the project implementation. While registering properties make sure they are registered in both spouses' names.
- Provide separate trainings to women and other vulnerable groups for upgrading the skill in the alternative livelihoods and assist throughout till the beneficiaries start up with production and business.
- Initiate women's Self-Help Group linking with special development schemes of the Government. Also form special SHGs for other vulnerable groups where possible and required.
- Encourage women and other vulnerable groups to evaluate the project outputs from their point of view and their useful suggestions should be noted for taking necessary actions for further modifications in the project creating better and congenial situation for increasing participation from women and other vulnerable groups.
- Wherever possible, women and other vulnerable groups' involvement in construction activities should be encouraged in order to help them have access to benefits of project activities.

All these done in a participatory manner might bring sustainable results in positive outcomes including income improvement of women and other vulnerable groups.

### 7.9.2.1 Other Actions

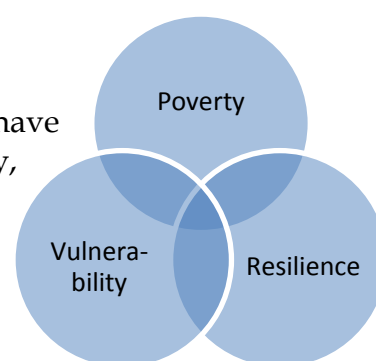
The following actions would result in women and other vulnerable groups' participation and their engagement.

- Cases of assistance to vulnerable groups/ persons should be handled with care and concern considering their inhibited nature of interaction.

- All assistances would be paid in a joint account in the name of both the spouses; except in the case of women headed households and women wage earners.
- Cluster Offices shall prepare a list of able bodied and willing women and other vulnerable persons for constructional activities and utilize their services.
- SIPP-II has done a commendable job of inducting women into groups and into the leadership positions of these groups. The same trend needs to be continued with vigor and women and other vulnerable groups need to be formed.
- At present there are not many women among the project staff. It should be noted that this project primarily interacts and deals with women at village level, but the number of women staff at cluster, district and regional level is far below that of men. Hence, at least half (subject to a minimum of one third) of the project staff and all other involved agencies (including consulting agencies) staff should be woman. When qualified/ skilled women are not available, women with lesser qualifications/ skills may be employed and trained. They may be encouraged and facilitated to obtain the necessary qualifications and/or skills during the employment. Women personnel may be replaced during the period of project contract, only with women persons of equivalent qualifications and experience.
- Same wage rate for men and women must be ensured.
- Small ethnic communities' population identified and they should be given first preference in selection for any project benefit, viz., infrastructure, demonstration projects, tube wells, livelihoods, etc.
- The petty contracts arising out of the sub-project should be considered for entrusting to SHGs on community contract basis.
- While selecting community members for training at least half of them should be women and vulnerable persons.

## 7.10 Balancing Poverty, Vulnerability and Resilience

Nuton Jibon ensures that all members of the community will have access to the project services and benefits. The Poverty, Vulnerability and Resilience nexus is evident in Bangladesh. In order to ensure social justice, the project will prioritize the beneficiaries based on Poverty, Vulnerability to Shocks and Disasters and their Resilience to Shocks and Disasters. This will be done in the following manner.



Participatory Identification of Poor (PIP) from among community members
Rank each poor household for its Poverty on a 1 to 10 scale using Participatory Ranking System: Outcome PR
Rank each poor household's Vulnerability to shock and natural disasters on a 1 to 10 scale, using Participatory Ranking System: Outcome VR
Rank each poor household's Resilience to shock and natural disasters on a 1 to 10 scale, using Participatory Ranking System: Outcome RR

Prioritize beneficiaries using the scores of the Participatory Rankings of Poverty, Vulnerability and Resilience: Prioritization: PR+VR-RR

This exercise needs to be conducted during pre-planning phase of the project during initiation of project in the village. The District and Cluster teams of SDF will perform this ranking exercise in a participative manner with the assistance of identified informed villagers. The Project teams need to be trained in this ranking method.

### 7.10.1 Ensuring Upward Mobility of Target Groups

Further as this is a third generation Poverty Reduction and Empowerment project, the projects will assist the target communities to select livelihoods for their Upward Mobility from Poor to



Lower Middle Class status. For example the beneficiaries will opt for livelihood options like leased agriculture, bigger poultry, etc. which are expected to take them to the next economic status.

## 7.11 Grievance Redressal

This section deals with the structures and processes of multi-level, three-tier, Grievance Redress Mechanism and also the legal options available to not only the Project Affected Persons but also the Project Beneficiaries who would enjoy the benefits of the project in terms of access to funds for reconstruction infrastructure and livelihoods opportunities. The multi-level includes Gram Parishad, Regional and National levels.

### 7.11.1 Grievance Redressal Committees

In order to redress grievances related to project, three bodies are to be established; Grievance Redressal Committee (GRC) at the National level, Regional Level and Gram Parishad (GP) level.

At GP level the SAC with President of the GP will act as the Grievance Redressal Committee. It is proposed that the aggrieved community members first register the grievances with the GS. After receipt of grievance, the GS should take up these grievances with the SAC during the next immediate meeting and initiate measures for redress. No grievance can be kept pending for more than a month which means the committee has to meet every month. Implementation of the redress rests with the GS. In case the aggrieved party is not satisfied with the proposed redress measures, it can take approach the Regional level committee. If the aggrieved party is not satisfied with the decision of Regional level committee, it can approach the State level committee. If the aggrieved party is not satisfied with the decision of State level committee, it can approach the court of law.

The GRC at Gram Parishad level will be headed by the President of the Parishad who will also be the Convener. At the Regional level the GRC will be chaired by the Regional Director, with Infrastructure and Livelihoods Specialists, any two District Office Managers and two GS members from the region as members. At the National level the GRC will be chaired by the Managing Director, with EFP-CB and SFP-CB, Infrastructure and Livelihoods Specialists, any two Regional Directors and two GS members as members.

The number of Members of GRC at each level will be decided by the Managing Director at the time of constituting the GRCs at three levels. The membership will follow the following principles and the number of non-Government representatives will be in proportion to Government representatives. The level of Government representatives at each level will also be determined by the Managing Director. Half of the (at least one-third) of the GRC members at all levels will be women.

### **7.11.2 Scope of GRC**

The GRCs will receive and redress all complaints and grievance that relate to the Project that are formally brought to the GRCs in writing only by the person and group of persons who have a grievance because of the project's adverse impact on him/her and them. The complaints/grievance could relate, among others, to:

- ❖ Access to project benefits such as financial assistance;
- ❖ Selection of site for rural infrastructure and other facilities;
- ❖ Selection of sites for livelihoods;
- ❖ Payment of price for land purchase
- ❖ Any other grievance

### **7.11.3 Processes of GRCs**

The GRCs at Village, Regional and National level will follow the following process norms.

1. The GRCs will meet on a fixed day/date of every month during the first year and this could be changed during the following years;
2. The GRCs will meet the following working day if the day/date fixed for the monthly meeting falls on a holiday
3. The GRCs will work out a time frame to redress grievance at each level if the complaint/grievance is not addressed in the first meeting;
4. The GRCs will acknowledge the receipt of complaints/grievances by registered letter within one week;
5. The GRCs will hold public meetings that would also include all those who have complained or who have a grievance expressed in writing in order to facilitate transparency and accountability;
6. The GRC's decisions at the National level are not final and the complainants have the right to seek judicial redress if they are not satisfied with the final decision at the National level.



7. The grievances will be received in written form, as when they arrive and registered in the Grievance Register by the IA.
8. The procedures to redress grievances will be transparent involving all the members of the committee and the aggrieved party.
9. The timeframe for redressing grievances is given in the table below. The decisions regarding Redressal will be communicated in writing to the aggrieved party within a week after arriving at the decision. The aggrieved party when not satisfied may appeal to next level GRC within a month of the communicating the decision.

#### 7.11.4 Documentation of the Processes

The GRCs at each level will maintain the Grievance Registers that would, among others, help with monitoring and evaluation of the functioning of GRCs but also to document the processes of GRCs. The registers should have the following details:

- Complainant details
- Main complaint/grievance
- Date of receipt of complaint/grievance
- Redressal details
- Date of Redressal
- Complainant's opinion on Redressal
- Closure details
- Further course

The grievance redress process will be a continuous, transparent and participatory process that would be an integral part of the project's accountability and governance agenda. The GRC at each level will maintain the above mentioned Registers. The GRC at each level will also keep a separate case file for each complainant/grieved persons in which all complaint/grievance related documents will be kept. SDF will also prepare periodic reports on the grievance redress on the basis of reports received from the three levels of GRCs.

**Table 15: Time Period for Redressal of Grievances**

Level	Chairperson	Time period for redress of grievances
Village	President, Gram Parishad	Maximum of one week
Regional	Regional Director	Maximum of one fortnight
National	Managing Director	Maximum of one month

#### 7.11.5 Legal Options to Aggrieved Parties

The aggrieved parties will have two kinds of options for addressing their grievances. One is the grievance redressed mechanism incorporate in this framework as above. The other is the general legal environment consisting of court of law to address their

grievances. These options will be disclosed to the communities during the public consultation process.

## **7.12 Monitoring and Evaluation of the SMF**

SDF will develop and implement a comprehensive monitoring and evaluation of its different components. The potential M&E indicators include indicators include the land donation process and outcome, willing buyer/seller/prices paid, the grievances redress process (complaints received and resolved along with outstanding ones), social benefits of the project (all aspects of it) improved livelihood by groups and gender etc. The M&E framework includes monitoring of inputs, processes, outputs, outcomes and impacts. It also suggests both internal and external M&E arrangements. The M&E framework has been presented in Annex 17.

## **8. Small Ethnic and Vulnerable Communities Development Framework (SEVCDF)**

### **8.1 Introduction**

The Government of Bangladesh through the Ministry of Finance has mandated the SDF to finance and develop rural infrastructure and livelihoods projects. SDF, which has set out to implement the Nuton Jibon, aims to promote environmentally sound and sustainable, socially acceptable and economically viable rural infrastructure and livelihoods sub-projects. SDF believes that each of the sub-projects of the Nuton Jibon will improve the living standards and the environment of populations of the participating communities and areas around these villages.

In line with this policy, SDF along with Community Groups is committed to identify, prepare and implement socially acceptable, environmentally sound and sustainable and financially sustainable sub-projects. Further, these sub-projects would be implemented with the continuous community engagement, environmental oversight, financial prudence and managerial prowess that are inherent strengths of SDF. The Nuton Jibon project is designed to maximize the participation of the target groups, i.e. the poor, extreme poor and vulnerable population.

The objectives of Nuton Jibon are that the poor, extreme poor and vulnerable groups become more self-reliant and are able to establish inclusive institutions such as Village Development Committees (VDC) and Community Groups (CG) and through these institutions are able to access economic and social opportunities. Nuton Jibon will facilitate on a priority basis establishment of VDC; and development and Implementation of community action plans in the Small Ethnic Communities areas. Small Ethnic Communities are also given priority in the provision of Social assistance program, especially education, health, awareness, skill development and provision of seed capital; human and legal rights and legal aid.

The Small Ethnic Communities, especially the Saontals are amongst the poorest in the Project districts and hence will receive priority in NJLIP. One of the prerequisites of a successful development plan for the Small Ethnic Communities is the preparation of a culturally appropriate development plan, with the involvement of the Small Ethnic Communities and based on full consideration of the options preferred by them. Being a community demand driven project, the active involvement of the Small Ethnic Communities at each stage of the project is a fundamental goal in NJLIP. The involvement of the Small Ethnic Communities in planning, implementation and monitoring of the programs meant for their own development would be the cornerstone of the Small Ethnic and Vulnerable Communities Development Framework (SEVCDF) strategy in NJLIP.

The process of community participation in Small Ethnic Communities development would include establishment of viable and sustainable VDC, which are self-managed and self-governed. All project interventions would be guided by VDC. Such an approach would ensure that the development interventions are culturally appropriate. The development needs of each Small Ethnic Communities differ from each other, and therefore there cannot be one single model suited to all the Small Ethnic Communities.

## 8.2 Small Ethnic Community Status

Review of the primary and secondary data and information does not show any negative impact occurring to the Small Ethnic Communities living in the districts under SIPP-II. The information which was collected from secondary sources (BBS Bangladesh Population Statistics, 2007, and Banglapedia, 2006) about the ethnic nationals in the SIPP-II areas is summarized below:

**Table 16: Small Ethnic Communities in the SIPP-II Areas**

Districts	Ethnic Nationals	Total Population	% Ethnic Population
<b>SIPP District</b>			
Jamalpur	Garos, Hodi, Kurmi and Mal	2089366	NA
Gaibandha	Santal 861 families and Garo 227	2117959	NA
<b>Non-SIPP Flood Districts</b>			
Sirajgonj	-	2707011	-
<b>SIDR Districts</b>			
Patuakhali	Rakhains 13300	1444340	0.92
Bagerhat	-	1515815	-
Pirojpur	-	1126525	-
Barguna	-	837955	-
<b>SIPP-II Districts</b>			
Kurigram	-	1782277	-
Nilphamari	Santal 2000	1550686	0.12
Rangpur	Santal and Oraon	2534365	NA
Dinajpur	Santal and Oraon	2617942	NA
Panchagar	Santal 138, Uria 45 and other 155 families	829374	0.21

Thakurgaon	Santal	1196429	0.87
Lalmonirhat,	Koch, Rajbanshi and Santal	1088918	0.16
Bogra	-	2988567	-
Sherpur	Garo, Koch, Hajong, Banai and Rajbanshi	1246511	NA
Mymensingh	Garo, Hajong, Koch and Hadi	4439017	0.89
Barisal	-	2330960	-

NA= Not Available

In a recent report on Indigenous households covered in SIPP-II sub-projects, the data shows that significant number of project beneficiaries belongs to indigenous people or Small Ethnic Communities as indicated in the table below.

**Table 17: SEC HHs under SIPP-II**

Region	District	SIPP-II villages in district	No. of villages have SEC HHs	No. of target HHs (HCP & Poor) in the villages	No. of SEC HHs exist among the targeted households	Inclusion of SEC HHs in SHGs	Holding decision making positions by SEC HHs
Rangpur	1. Gaibandha	480	-	-	-	-	-
	2. Nilphamari	190	-	-	-	-	-
	3. Dinajpur	160	17	3525	554	517	65
	4. Rangpur	220	05	976	353	328	42
	5. Naogoan	180	27	5076	1151	1001	102
	6. Kurigram	190	-	-	-	-	-
<b>Total</b>		<b>1420</b>	<b>49</b>	<b>9577</b>	<b>2058</b>	<b>1846</b>	<b>209</b>
Jamalpur	7. Jamalpur	543	01	163	54	50	05
	8. Sherpur	120	06	1002	270	208	67
	9. Sirajgonj	230	-	-	-	-	-
	10. Mymensingh	180	06	898	203	170	43
	11. Sylhet	60	06	1660	486	359	52
<b>Total</b>		<b>1133</b>	<b>19</b>	<b>3723</b>	<b>1013</b>	<b>787</b>	<b>167</b>
Barisal	12. Barisal	90	-	-	-	-	-
	13. Barguna	251	13	2534	245	236	13
	14. Bagerhat	132	-	-	-	-	-
	15. Pirojpur	136	-	-	-	-	-
	16. Patuakhali	100	-	-	-	-	-
<b>Total</b>		<b>709</b>	<b>13</b>	<b>2534</b>	<b>245</b>	<b>236</b>	<b>13</b>
<b>TOTAL</b>		<b>3262</b>	<b>81</b>	<b>15834</b>	<b>3316</b>	<b>2869</b>	<b>389</b>

Most of the Small Ethnic Communities are rural while some are urban. Many of these Small Ethnic Communities migrate for seasonal work and usually lives alongside the mainstream population but still with separate Identity. Literacy level, health status and awareness of majority of Small Ethnic families are low. They usually receive health and education services from missionary agencies and NGOs. A very few families have been able to make a good progress in terms of social and economic status with higher education and diverse employment. Many of them work as agricultural labor. Some earn their livelihood from poultry and livestock rearing, rickshaw/ van pulling. The literacy rate among the rural Small Ethnic Communities is low and the female Small Ethnic Communities literacy rate is low for both men and women compared to mainstream majority ethnic groups.

The most common health problems in the Small Ethnic Communities residing areas include T.B., acute respiratory infections, goiter, diarrhea and gastroenteritis. The common malnutrition problems found among the Small Ethnic Communities are anemia, Vitamin A deficiency and Iodine deficiency diseases. The poor nutritional status among them makes them more susceptible to infection resulting in high mortality and morbidity. Lack of personal hygiene, environmental sanitation and awareness on health and health seeking behavior among Small Ethnic Communities constitute the major factors affecting their health status.

Agriculture and agriculture labor constitute the mainstay of livelihoods for majority of Small Ethnic Communities living in rural areas. Land forms the principal source of livelihood for majority of the Small Ethnic Communities. Land assumes greater importance in the scheme of Small Ethnic Communities' development as lack of education, and lack of enterprise among Small Ethnic Communities adversely affects their capacity for taking up alternative avenues of employment. With the depletion of non-timber forest produce in the forest areas, the dependence of Small Ethnic Communities on land for sustenance has increased even more. The Small Ethnic Community households possess relatively small pieces of land compared to other social groups, and they are mostly agricultural labor. A few of the households keep livestock and poultry, and important source of income and nutrition.

### **8.2.1 Small Ethnic Communities Institutions**

The Government of Bangladesh has a Special Affairs Division under the Prime Minister's secretariat, which looks after the development of Small Ethnic Communities population. As the Small Ethnic Communities population residing in Chittagong Hill Tracts constitutes more than fifty percent of the population in that area, it receives more attention than other districts, where Small Ethnic Communities population is scattered and relatively assimilated with the general population.

### **8.3 Consultation with Small Ethnic Communities**

Although the previous phases of the project did not trigger OP4.10 during preparation, some project interventions in SIPP II did touch upon small ethnic communities in terms of providing livelihood opportunities. OP 4.10 has been triggered for SIPP III. Awareness raising and community level consultations with SECs are carried out regularly by the program. SIPP, being a community demand driven project, free, prior and informed consultations are being held with Small Ethnic Communities in each project village at each stage of the project: planning, Implementation, monitoring and review. During the preparation of this Small Ethnic and Vulnerable Communities Development Framework (SEVCDF), consultations were held with the Small Ethnic Communities, their leaders and elected representatives. These consultations enabled identification of local problems and incorporation of indigenous knowledge into the SEVCDF.

#### **8.3.1 Key Issues**

The key Issues, from the point of view of the Small Ethnic Communities, to be addressed by the project, have been identified on the basis of information collected from field work and the consultation process undertaken with Small Ethnic Communities' elected representatives, NGOs and Government officials. These issues have been categorized under the following major categories:

##### **8.3.1.1 Institutional**

Mobilization of ethnic minority men and women to form VDC and CG for accessing social assistance and community infrastructure services and benefits is the priority of the project. Orientation and training to the functionaries of VDC and CG on project objectives, preparation, implementation and monitoring of plans need to be given for their proper and continued participation. Small Ethnic Communities capacity needs to be built for voicing and attaining their rights.

##### **8.3.1.2 Backwardness and Impoverishment**

- Lack of awareness among Small Ethnic Communities' women and men on income generating activities
- Low productivity of lands.
- High incidence of landlessness, especially in plain areas
- Depletion of natural forest and common property resources
- Lack of awareness on processing and marketing of agriculture and horticulture produce.
- Lack of market linkages for handicrafts made by Small Ethnic Communities.
- Lack of employment to educated youth.
- Lack of assistance to differently abled persons

##### **8.3.1.3 Insecurity and Vulnerability**

- Food insecurity during lean seasons
- Vulnerability to natural disasters and social shocks.

#### 8.3.1.4 Lack of Awareness

- Lack of awareness on Small Ethnic Communities culture to the field level functionaries
- Lack of Gender sensitization among field level functionaries and Small Ethnic and Minority Communities.

#### 8.3.1.5 Other Issues

- Involvement of traditional Small Ethnic Communities councils in development
- Language skills only in ethnic minority dialects are a hindrance for access to education.
- High incidence of dropouts especially among girls.
- Lack of awareness on health, hygiene and sanitation.
- Lack of access to common property resources.

### 8.4 Small Ethnic and Vulnerable Communities Development Plan

A Small Ethnic and Vulnerable Communities Development Plan (SEVCDP) will be prepared on the basis of this Framework provided. An independent consultant/firm will be hired to prepare the plan. The SEVCDP will consider:

- The ethnic and demographic characteristics of the affected population
- The prevailing intuitions as family, religion, language and education and other indigenous variables and social stigma
- This Plan will accommodate the local traditional leadership (as headman, karbari), gender issues, and civil and NGOs in their implementation plan
- The land ownership pattern and availability of required land for taking up agriculture related livelihoods interventions
- The positive and negative impacts on the prevailing institutions; both formal and informal
- To ensure adequate and appropriate consultation and communication, and their participation and approval of their implementation of project inputs and mitigation plan.

The SEVCDP will be prepared for each village where the small ethnic minority population constitutes more than 5% of the village population. The objectives of the SEVCDP are:

- To evolve a development process which fosters full respect for dignity, human rights and cultural integrity of SECs
- To ensure that they do not suffer adverse effects during the development process
- To take up economic benefit programs which are culturally and socially compatible

For villages where the concentration of small ethnic community members is less than 5%, the sub-project proposal and social assessment will take special care to ensure the

inclusion of representatives in the community group formations and in the delivery of project interventions and services. These have to be documented in tabular form with adequate analysis as SDF has maintained in the past in their Social Assessment reports submitted to the Bank. In view of these objectives, SDF will undertake a number of suggested tasks, as below, during sub-project cycle.

#### **8.4.1 Small Ethnic Communities Participation**

This SEVCDP aims at building strong self-reliant and self-managing institutions of SEC, and through these institutions enable the SEC to access economic and social opportunities to overcome poverty and raise their living standards. Consultations revealed that SEC are cohesive and have come together as strong groups to Implement programs of relevance to their communities like construction of school buildings, community buildings, link roads, small irrigation, drainage structures, etc.

The SEC Development Plan will foster and strengthen self-managed institutions of SEC. All development interventions under Nuton Jibon will be undertaken with the complete involvement of the SEC. The SEVCDP undertaken by SEC will identify opportunities and possible interventions. The development plan will take into consideration the locational variations like tribes living in remote areas, tribes living in relatively developed areas and tribes living in rural areas along with non-SEC. All field workers and their supervisors working in the SEC areas would be oriented towards SEC culture and development issues to enable them to appreciate the importance of SEC culture while working among them. With this participatory strategy, there would not be any potential adverse impacts on the SEC, as they are completely involved in each and every stage of the intervention process.

##### **8.4.1.1 Negative Attributes**

Nuton Jibon will not undertake any interventions which will adversely affect SECs with long-term negative consequences in the following manner:

- Threaten their cultural tradition and way of life
- May severely restrict access to common property resources and livelihood activities
- May affect places/objects of cultural and religious significance (places of worship, ancestral burial grounds, etc.)
- That will (anywhere in the country, including areas inhabited by SECs), Require involuntary land donation, “contribution against compensation” and purchases that are not offered on “willing buyer-seller” basis
- Acquire Lands
- Affect private homesteads
- Render households using public lands homeless or impact livelihood activities ongoing there
- Significantly restrict access to common property resources and livelihood activities of groups and communities

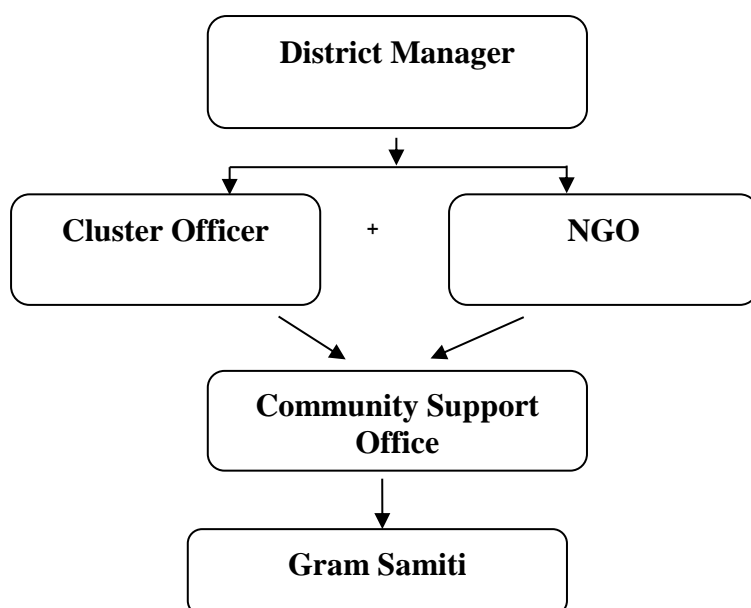


- Cause adverse impacts on physical cultural resources like buildings and objects that bear cultural and historical significance (ref: World Bank's OP 4.11 on Physical Cultural Resources).

## 8.4.2 Implementation Strategy

The institutional arrangements for Implementation of SEVCDP would be similar to the arrangements in other areas. Since the SEC groups are different from the mainstream population regarding ethnic origins, cultural heritage, religious traditions, dialects, festivals, an in-depth understanding of the socio-cultural, economic, political and religious life of the SEC will be imparted to all the project functionaries, NGOs and supervision and monitoring institutions right from the district level to the village level. Community Support Organizations and Partners Organizations, who will be facilitating community action plans and social assistance programs, would be encouraged to recruit local educated youth from SEC, to assist all the groups in their activities.

The following figure shows the organogram for the implementation of SEVCDP:



### 8.4.2.1 Baseline Survey

A baseline survey would be conducted by CSO to provide data for subsequent Impact evaluation. There are villages exclusively inhabited by SEC and villages which have both SEC and non-SECs. Therefore, to address the needs of SEC in these different situations distinct strategies would be adopted. Likely processes are described below, and the actual implementation will be participatory and situation specific.

#### 8.4.2.2 Exclusive SE villages

The CSO would consult SEC leaders, both men and women on the kind of groups that would be formed from among the SEC. VDC will include representatives from all SEC. It is likely that CG would be formed separately for each SEC sub-group. This was also the opinion expressed by the SEC during the consultation process. They believe that group members of any of the CG shall belong to the same SEC group as they have close relations with each other and they trust each other. They can be motivated to work together. All such CGs in a village would form into a VDC, since the different SECs traditionally extend mutual co-operation in times of need.

#### 8.4.2.3 Mixed Villages

Mixed villages would be of two types - SEC majority villages and non-SEC majority villages. The institution building process will be different in each context. The project would address the concerns of the poor non-SEC in SEC villages. In a SEC majority villages, the SEC CGs and the non-SEC CGs would perhaps be formed separately and federate at the VDC level.

In a non-SEC majority village, the SEC typically lives in a separate settlement within the village or at the outskirts of the village. CGs would be formed for SEC exclusively and the CGs of the non-SEC would be formed separately. Representatives from each CG will form an inclusive VDC.

#### 8.4.2.4 Community Infrastructure Works

As with other vulnerable groups, the CSO will facilitate formation of VDC and CGs, and assist them in developing a community action plan (CAP), the CAP will identify the resources available – natural and human, and the opportunities and risks in each of the existing livelihoods. This would be done through a participatory process and there would be several rounds of discussions. The focus naturally would be on the traditional livelihoods sources and infrastructure needs of the tribes such as skill development, access to seed capital and credit, land, livestock and forests. The community would identify the leakages and gaps and opportunities for consolidation and expansion in their present livelihoods. They would analyze the causes of leakages and gaps in their livelihoods and the alternative approaches that can be adopted for their development and select appropriate plans for intervention. To operationalize these plans the communities would develop the sub-projects, to be financed by NJLIP.

The SEC through their institutions would not only develop CAP, but would be responsible for Implementation and monitoring of the plans thus prepared. In order to bridge their knowledge gap SEC youth would be trained as volunteers and provided necessary inputs in managing that sector interventions. The SEC institutions would receive capacity building inputs from the project staff and functionaries for the evolution and management of sub projects. The capacity building inputs for the SEC

would include visits to successful interventions. The VDC would discuss the CAP and sub projects in a meeting before submission to the SDF to ensure that the entire community is informed and gets a chance to give their advice and suggestions. The sub project proposals would be submitted by the CG to SDF for funding.

#### 8.4.2.5 Social Assistance

One of the key Issues identified in the consultation process is the extreme vulnerability of the SEC. Nuton Jibon would also implement a social assistance program for increasing social and economic opportunities for SEC and other vulnerable groups. The objectives of the social assistance program are to increase the capacity of SEC groups to participate in mainstream development activities through:

- increased access to information and knowledge about health and nutrition, including women's health, immunization services, personal hygiene, water and sanitation issues; literacy and leadership program; and human and legal rights, including child rights;
- motivation towards increased participation, 'voice' and empowerment in working with local government bodies for local level planning, decision making and monitoring, thereby decreasing social exclusion and improving local governance; and
- increased economic opportunities for skill development and access to income creating assets.

Activities eligible for financing under this program will include five types:

- advocacy programs
- occupation skills training
- support for pregnant women and risk pooling pilot initiatives
- legal aid support
- grants for the graduated trainees and worst affected natural hazard victims

#### 8.4.3 Linkages and Leverages

In order to ensure effective services in the SEC areas, SDF, CSOs and POs will ensure convergence and synergy with important line departments like health, education, child welfare and nutrition, agriculture, horticulture, fisheries development. SDF, CSO and PO will facilitate linkages with other poverty reduction programs, such as micro-finance, vulnerable groups development, legal literacy, and human rights programs.

#### 8.4.4 Institutional Arrangements

The SEVCDP is part of the overall NJLIP. The management of SIPP at the national level is vested on SDF and activities at the district level will be implemented by NGOs (Community Support Organizations-CSO, and partner organizations-PO).

## 8.4.5 Monitoring and Evaluation

Monitoring forms an integral part of the Project Management System, as it provides a continuous appraisal of performance of the Project and enables the Project Management to take up corrective measures, if any, required in implementation. The existing M&E system adopted in SIPP-II related to a) input and output monitoring, b) process monitoring, and c) impact evaluation would ensure effective implementation of SEVCDP, which forms part of NJLIP.

For the purpose of monitoring and evaluation of SEVCDP, basic data relating to village wise information on SEC population, infrastructure facilities, land utilization, cropping pattern, livelihoods, etc. would be recorded by CSO in the baseline. The project interventions planned in the village as part of the CAP and the project interventions actually implemented will also be captured in the MIS. The data collection would be the responsibility of the CSO, in association With the VDC.

The community would be involved in process monitoring through Focus Group Discussions (FGD) and Participatory Rural Appraisal (PRA) techniques, wherever required in order to know the quality of project Implementation and inputs provided under the project. The VDC will monitor the performance of all CSO and PO functionaries. An M&E matrix is presented below:

Level	Organization	Personnel	Parameters
National	SDF	Environmental and Social Focal Point (ESFP)	<ul style="list-style-type: none"> <li>➤ Reviews of monitoring reports submitted by the Regional Offices on ESMF/EMP/ (SEVCDP) implementation are done.</li> <li>➤ Number of visit in project areas for monitoring ESMF implementation</li> <li>➤ Managing Monitoring Evaluation Audit and Learning of SEVCDP implementation.</li> </ul>
Regional	Regional Office	Infrastructure and Livelihoods Specialists	<ul style="list-style-type: none"> <li>➤ Periodic data is collected for monitoring SEVCDP</li> <li>➤ Coordination with the other agencies (such as NGO) for SEVCDP compliance.</li> <li>➤ Monthly reporting on SEVCDP to SDF.</li> </ul>
District	District Office	Infrastructure and Livelihoods Officers	<ul style="list-style-type: none"> <li>➤ Compliance screening and Categorization of all sub-Projects and preparation of SEVCDP</li> <li>➤ Presence and assistance of personnel from DO to Regional Office in collecting data for monitoring.</li> </ul>
Cluster	Cluster Office	Cluster Facilitators: General and Technical	<ul style="list-style-type: none"> <li>➤ Data collection for screening and categorization of all sub-Projects and preparation of SEVCDP.</li> <li>➤ Data Collection for monitoring.</li> <li>➤ Providing assistance to SEC Groups</li> </ul>
Community	Community Groups	Gram Samiti Members	<ul style="list-style-type: none"> <li>➤ Assisting in Collection of data for screening and categorization of sub-projects</li> </ul>
	SEC		<ul style="list-style-type: none"> <li>➤ Monitoring the project implementation procedure and updating on improvement\ challenges experienced</li> <li>➤ Participating in FGDs and PRAs</li> </ul>

## **9. Annexes**

## Annex 1: Environmental and Social Screening Sheet

### Environmental and Social Screening Sheet (Applicable for Sanitary Latrine, Tube-well)

<b>Directives:</b> This form has to fill by VDMC at village level at the time of preparation of proposal				
General Information	1. Name of village			
	2. Name of Union			
	3. Name of Upazila			
	4. Name of District			
	5. Name of sub-project			
	6. Location			
	7. Type of sub-project	New Construction		Reconstruction
		Rehabilitation		Others(please specify)
	8. Objective of the proposed scheme and brief description			
	9. Does the proposed scheme involve all types and classes of the people in the locality			

**Site of the sub-project:** Is the project area adjacent to or within any of the following Ecologically Critical Areas (ECAs)/environmentally sensitive areas?

☐ i. Sundarbans/ National park/ Wildlife Sanctuaries /other protected area

☐ ii. Natural Habitats formed by native and critically endangered plant /animal species that may be affected by the project

**(proposed proposal will be rejected if appropriate mitigation measures can not identified)**

	Environmental Screening	Please Tick mark(✓)		
		Yes	No	Not applicable
B. Environmental Checklist (Please tick mark in the right place)	1. Does the scheme's implementation interrupt the natural flow of river, canal or any stream?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2. Does the scheme's implementation increase the possibility of groundwater pollution?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3. Does the scheme's implementation increase the possibility of surface pollution?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4. Does the scheme will generate any waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5. Is there any waste management plan for the scheme if it generates waste? (please include the waste management plan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6. Is there any chance of increase public health problem by throwing waste into open water bodies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	7. For constructing of irrigation canal, is there any chance to create problem to water bodies that	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	are used for irrigation?			
	8. For sanitary latrine construction, is there any drinking water source near 30 feet distance of the latrine?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	9. Is there any chance of tree cutting by the implementation of the scheme? (if yes than please specify the number of tree cutting)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	10. Is there any chance of destruction of natural habitat /biodiversity (fish, birds and animals) habitat or important heritage sites by the implementation of the scheme?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	For any negative impacts identified above, please suggest mitigation measures:			

#### Environmental Management Plan (EMP)

Environmental issues/problems	Mitigation/enhancement measures/ECOPs	Implementation Schedule	Cost	Responsibility	Monitoring Plan (timing/frequency)

C. Social Impact Part	1. Is there any chance of resettlement of people living in the land for the implementation of the scheme?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2. Is there any chance of land acquisition from public for the implementation of the scheme?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3. Is there any chance of destruction of homestead land?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4. Is there any chance of resettlement of people living in the government land for the implementation of the scheme?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5. Is there any chance of destruction of religion and cultural place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6. Is there any chance of loss of employment of the people of lower down the living standard for the implementation of the scheme?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	7. Is there any chance of destruction of cultural tradition of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	8. Mitigation measures			
D. Indigenous people Part	1. Is the Scheme located in an area where majority indigenous people live?			
	<b>N.B. If yes, please answer the following question</b>			

	2. Are the indigenous people involved in the planning and implementation of the scheme?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3. Is there any chance of indigenous people be affected?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4. What are the feelings of indigenous people to the schemes?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Positive		<input type="checkbox"/>		
	Negative		<input type="checkbox"/>		
	Not any one		<input type="checkbox"/>		
		If the answer of the question number 4 is negative, please briefly describe the reason and mitigation measure:			
Other Information (if any)					
Signature of the member of the VDMC					
S No	Name	Designation	Signature	Date	

Recommendation of Social Audit Committee:				
The form is filled correctly or not (Please tick ✓ mark)		Yes <input type="checkbox"/>		No <input type="checkbox"/>
Mitigation measure are satisfactory or not (Please tick ✓mark)		Yes <input type="checkbox"/>		No <input type="checkbox"/>
If the mitigation are not satisfactory then please specify your opinion (where necessary):				
Signature of the member of the Social Audit Committee:				
S No	Name	Designation	Signature	Date
<b>Evaluation by SDF District Specialist</b>		<b>Category 1</b>	<b>Category 2</b>	
If the mitigation are not satisfactory then please specify your opinion (where necessary):				
<b>Name of the District Team Leader</b>		<b>Signature</b>	<b>Date</b>	



## Annex 2: Initial Environmental Examination Sheet

### Initial Environmental Examination Sheet (IEE) for Rural Infrastructure Sub-projects

(construction/repairing of earthen roads, construction of culvert, re-excavation of canal, raising school field, repairing embankment, construction of office building for GS/multipurpose GS building)

#### Section A: General Information

Instruction: The Gram Samiti will fill in this sheet with the help Community Mobilizer and District Specialist and append this to the Sub-project proposal														
General Information	Village			Union			Upazila			District				
Name of the Scheme														
Location														
Types of the Scheme (put√):	New construction				Re-construction				Repair			others		
Purpose and brief description of the sub-project														
How many people will be benefited if it is implemented														

Site of the sub-project: Is the project area adjacent to or within any of the following Ecologically Critical Areas (ECAs)/environmentally sensitive areas?

- ☐ i. Sundarbans/ National park/ Wildlife Sanctuaries /other protected area  
☐ ii. Natural Habitats formed by native and critically endangered plant /animal species that may be affected by the project

**(proposed proposal will be rejected if appropriate mitigation measures can not identified)**

#### Section B: Prediction of Environmental Impacts

Parameters	Initial Environmental Examination														
	During Construction							After Construction							
	Positive Impact (put √)			No Impact (put √)	Negative Impact (put √)			Positive Impact (put √)			No Impact (put √)	Negative Impact (put √)			Remarks
	L	M	H		L	M	H	L	M	H		L	M	H	
1.1Water logging and drainage congestion															
1.2 Erosion and siltation															
1.3 Obstruction to wastewater/sewerage flow															

1.4 Air and dust															
1.5 Surface water quality															
1.6 Ground water quality															
1.7 Impact on noise level															
1.8 Flooding															
1.9 Impact on soil quality, its stability and compactness															
1.10 Loss of existing building and property															
Suggest Mitigation measures/ ECoPs for any negative impacts:															
2. Biological Environment															
2.1 Removal of trees (mention how many)															
2.2 Wetland/PA															
2.3 Fish migration															
2.4 Wildlife/Natural habitat/ physical cultural resources (heritage sites)															
2.5 Forests/PA															
2.6 Rare endangered species(i.e. wildlife. fish, plant, bird)															
2.7 Aquatic plants/macro-phytes															
2.8 Eutrophication															
Suggest mitigation measures/ECoPs for negative impacts:															
3. Socio-economic environment															
3.1 Impact on irrigation															
3.2 Impact on navigation															
3.3 Impact on transportation															

3.4 Loss of agriculture land and top soil															
3.5 Employment generation (mention how many)															
3.6 Commercial Activities															
3.7 Impact on local livelihood															
3.8 Impact on human life of the poor															
3.9 Social Audit															
3.10 Health risks to laborers involved in constriction works															
3.11 Public health and safety															
3.12 Archaeological and cultural heritage															
Suggest mitigation measures/ECOPs for any negative impacts:															
4. Others (if any)															
5. Detailed Restoration and rehabilitation plan (if any)															

Section C: Suggested Environmental Management Plan (EMP)

Environmental issues/problems identified above	Suggested Mitigation/enhancement measures/ECOPs	Implementation Schedule	Cost	Responsibility	Monitoring plan (timing/frequency)

Person performed the study:

Designation:

Signature and Date:

### Annex 3: List of Key Livelihood Activities

Livelihood activities( Sector wise)	Livelihood activities( Sub-sector wise)
Livestock sector	Beef fattening Dairy Goat/sheep Poultry
Transport sector	Rickshaw/van Motor vehicle
Agriculture sector	Vegetable Crop Nursery
Small trade	Tea shop Grocery shop Rice husking Agro business
Fisheries sector	Shrimp Fingerling Fish culture.
Innovative and supplementary IGAs	Quail rearing Rabbit rearing Bee keeping Basok medicine plant Vermi-compost Breeding buck Crab cultivation Ox rearing Incubation of duck eggs by rice husk incubator Squash cultivation

## **Annex 4: Environmental Screening for- Agriculture based Livelihood Activities (Home Gardening/ Tree Nursery/Fodder Production/Crop Production)**

### **Part A: General Description**

Screening date: \_\_\_\_\_

Name of the beneficiary: \_\_\_\_\_

Location (Village/upazila/district): \_\_\_\_\_

Name of sub-project being proposed: \_\_\_\_\_

Brief description of activities to be undertaken under the sub-project:

\_\_\_\_\_  
\_\_\_\_\_

**Part B: Site of the sub-project:** Is the project area adjacent to or within any of the following Ecologically Critical Areas (ECAs)/environmentally sensitive areas?

☐ i. Sundarbans/ National park/ Wildlife Sanctuaries /other protected area

☐ ii. Natural Habitats formed by native and critically endangered plant /animal species that may be affected by the project

**(proposed proposal will be rejected if appropriate mitigation measures can not identified)**

**Part C: Assessment of Negative Impacts of the Proposed Activities in the Sub-project. Tick (✓) all likely impacts**

#### Pest Management

☐ Possibility of using hazardous pesticides impacting human and environmental health

☐ Unsafe use of pesticides impacting human health

☐ Overuse/overdoses of pesticides impacting human and environmental health

#### Soil Degradation

☐ Possibility of imbalanced use of chemical fertilizers impacting environmental health

#### Ground Water Depletion

☐ Possibility of over-extraction of water for irrigation leading to ground water depletion

#### System Loss of Water

☐ Inefficient use of water for irrigation leading to wastage

#### Arsenic Contamination

☐ Use of Arsenic contaminated water leading to impact on human health

#### Soil Salinity

☐ Use of saline water in irrigation

#### Biodiversity

☐ Possibility of large mature tree cutting

☐ Loss of native crop varieties

#### Surface Water Pollution

☐ Possibility of surface water (nearby pond/dighi/river/ canal/ beel/haor/baor/any water body) pollution from the erosion/agricultural run-off enriched with pesticides and fertilizer or sediments

#### Climate Risk

☐ Crop production vulnerable to extreme rainfall, dry spells, flood, drought or other climatic events

☐ Any other, mention:

**Part D: Environmental Management Plan (EMP) for the Sub-project**

<i>Identified Mitigation/Enhancement Measures. Tick (✓) all required measures</i>	<i>Implementation Schedule</i>	<i>Budget</i>	<i>Monitoring frequency</i>
<b>Pest Management</b>			
<input type="checkbox"/> Integrated Pest Management as per Pest Management Plan			
<input type="checkbox"/> Use of tolerant varieties (Name-			
<input type="checkbox"/> Crop Diversification through -----			
<input type="checkbox"/> Planting of multiple varieties with varying susceptibility to pests-----			
<b>Soil Degradation</b>			
<input type="checkbox"/> Organic Farming			
<input type="checkbox"/> Soil test based fertilizer application			
<input type="checkbox"/> Application of Compost			
<input type="checkbox"/> Use of organic matters like animal manures including cow-dung and farmyard manures, green manure, oilcake, homestead waste etc.			
<input type="checkbox"/> Application of vermin-compost			
<input type="checkbox"/> Growing leguminous crops for biological nitrogen fixation (BNF)			
<input type="checkbox"/> Incorporation of biomass of leguminous crops into the soil after harvesting pods and nuts			
<b>Underground Water Depletion</b>			
<input type="checkbox"/> Ensure safe distance (min 250 meter) between 2 tube wells			
<input type="checkbox"/> Use of rain water			
<input type="checkbox"/> Growing pulses, oil seeds, wheat etc. (these require much less water than growing rice)			
<b>System Loss of Irrigation Water</b>			
<input type="checkbox"/> Use of efficient irrigation methods (sprinkler, drip, buried pipe line etc.)			
<input type="checkbox"/> Use of Alternate Wetting & Drying method of irrigation			
<b>Arsenic Contamination of Water</b>			
<input type="checkbox"/> Water quality testing to check suitability of water for irrigation			
<input type="checkbox"/> Promote rain-fed agriculture			
<b>Biodiversity</b>			
<input type="checkbox"/> Facilitation of seeds/ germplasm preservation by villagers/local agencies			
<input type="checkbox"/> Use of environment-friendly characters of indigenous varieties in crop breeding programs.			
<b>Climate Risk</b>			
<input type="checkbox"/> Planation of drought/flood tolerant varieties (suggest names:-----			
<input type="checkbox"/> Any other, mention:			

Summary of the suggested EMP:

Prepared by (Name, Designation, Signature, Date): \_\_\_\_\_

Reviewed and Approved by (Name, Designation, Signature, Date): \_\_\_\_\_

## **Annex 5: Environmental Screening - Livestock based Livelihood (Cow/Goat/Ox rearing, Poultry rearing, beef fattening, Vermin-Compost - Small Scale)**

### **Part A: General Description**

Screening date: \_\_\_\_\_

Name of the beneficiary: \_\_\_\_\_

Location (Village/upazila/district): \_\_\_\_\_

Name of sub-project being proposed: \_\_\_\_\_

Brief description of activities to be undertaken under the sub-project:

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**Part B: Site of the sub-project:** Is the project area adjacent to or within any of the following Ecologically Critical Areas (ECAs)/environmentally sensitive areas?

☐ i. Sundarbans/ National park/ Wildlife Sanctuaries /other protected area

☐ ii. Natural Habitats formed by native and critically endangered plant /animal species that may be affected by the project

**(Proposed proposal will be rejected if appropriate mitigation measures can not identified)**

**Part C: Assessment of Negative Impacts of the Proposed Activities in the Sub-project. Tick (✓) all likely impacts.**

☐ Unsafe disposal of dung/ manure /poultry litter/ animal carcass

☐ Surface/sub-surface water pollution from poor manure/litter management (run-off/ leaching of livestock waste - dung/ manure /poultry litter, etc.)

☐ Air pollution from dairy and poultry farms. ☐ Land/vegetation degradation due to overgrazing

☐ Health risk (zoonotic diseases) from poor housekeeping and handling of livestock

☐ Gradual extinction of native livestock breeds due to promotion of only exotic breeds

☐ Any other, mention:

### **Part D: Environmental Management Plan for the Sub-project**

<i>Identified Mitigation /Enhancement Measures. Tick (✓) all required measures</i>	<i>Implementation Schedule</i>	<i>Budget</i>	<i>Monitoring frequency</i>
<input type="checkbox"/> Improved composting methods – pit composting			
<input type="checkbox"/> Produce vermin-compost			
<input type="checkbox"/> Grazing management (rotational grazing)			
<input type="checkbox"/> Fodder management incorporating fodder cultivation, stall feeding, supplementary feeds, use of chaff cutter, etc.			
<input type="checkbox"/> Regular cleaning of poultry/cattle sheds			
<input type="checkbox"/> Maintenance of safe distance between manure pit and water sources			
<input type="checkbox"/> Periodic and regular removal of slurry from biogas plants for reuse as manure			
<input type="checkbox"/> Construction of shed location and design as			



per technical recommendations			
<input type="checkbox"/> Maintenance of shed sanitation and hygienic handling			
<input type="checkbox"/> Promotion of improved indigenous breeds			
<input type="checkbox"/> Avoid synthetic and hazardous feed			
<input type="checkbox"/> Deworming and vaccination			
<input type="checkbox"/> Training to dairy farmers getting hybrid calves on improved methods of calf rearing.			
<input type="checkbox"/> Any other, mention:			

Summary of the suggested EMP:

Prepared by (Name, Designation, Signature, Date): \_\_\_\_\_

Reviewed and Approved by (Name, Designation, Signature, Date): \_\_\_\_\_

## Annex 6: Environmental Screening – Fish Production

### Part A: General Description

Screening date: \_\_\_\_\_

Name of the beneficiary: \_\_\_\_\_

Location (Village/upazila/district): \_\_\_\_\_

Name of sub-project being proposed: \_\_\_\_\_

Brief description of activities to be undertaken under the sub-project:

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**Part B: Site of the sub-project:** Is the project area adjacent to or within any of the following Ecologically Critical Areas (ECAs)/environmentally sensitive areas?

☐ i. Sundarbans/ National park/ Wildlife Sanctuaries /other protected area

☐ ii. Natural Habitats formed by native and critically endangered plant /animal species that may be affected by the project

**(Proposed proposal will be rejected if appropriate mitigation measures can not identified)**

**Part C: Assessment of Negative Impacts of the Proposed Activities in the Sub-project. Tick (✓) all likely impacts**

☐ No dyke and risk of breaking the pond dyke

☐ Pollution due to use of chemical feeds, fertilizers and antibiotics

☐ Contamination of surrounding water bodies

☐ Threats to mangrove forest/coastal environment

☐ Loss of native fish diversity and aquatic diversity due to introduction of new and improved species

☐ Risk introducing invasive alien species

☐ Disposal of wastes

☐ Any other, mention:

### Part D: Environmental Management Plan for the Sub-project

<i>Identified Mitigation /Enhancement Measures. Tick (✓) all required measures</i>	<i>Implementation Schedule</i>	<i>Budget</i>	<i>Monitoring frequency</i>
<input type="checkbox"/> Location of fish farm (ponds and wetlands) to be approved by the relevant village committee.			
<input type="checkbox"/> Approval of village committee to be obtained regarding the quality of chemical feeds, fertilizers and antibiotics.			
<input type="checkbox"/> Ensure pond dyke			
<input type="checkbox"/> Selection of varieties that does not pose any threat to local species.			
<input type="checkbox"/> Use of permitted chemicals and antibiotics in recommended doses.			
<input type="checkbox"/> Avoid hazardous fish feed			
<input type="checkbox"/> Use natural feeds like rice bran to the extent			

possible in recommended doses.			
<input type="checkbox"/> Use natural manures, fertilizers in recommended doses			
<input type="checkbox"/> Species selection in poly-culture should be as per recommendation of the DOF – and designed to avoid competition with other species and aquatic life.			
<input type="checkbox"/> Proper and approved means of waste disposal should be practiced.			
<input type="checkbox"/> Any other, mention:			

Summary of the suggested EMP:

Prepared by (Name, Designation, Signature, Date): \_\_\_\_\_

Reviewed and Approved by (Name, Designation, Signature, Date): \_\_\_\_\_

## Annex 7: Initial Environmental Examination (IEE) – For Agro-Processing (Value Chain Development) On Crops/Livestock/Fisheries

### Part A: General Description

Screening date: \_\_\_\_\_

Name of the beneficiary: \_\_\_\_\_

Location (Village/upazila/district): \_\_\_\_\_

Name of sub-project being proposed: \_\_\_\_\_

Brief description of activities to be undertaken under the sub-project:

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**Part B: Site of the sub-project:** Is the project area adjacent to or within any of the following Ecologically Critical Areas (ECAs)/environmentally sensitive areas?

☐ i. Sundarbans/ National park/ Wildlife Sanctuaries /other protected area

☐ ii. Natural Habitats formed by native and critically endangered plant /animal species that may be affected by the project

**(Proposed proposal will be rejected if appropriate mitigation measures can not identified)**

**Part C: Assessment of Negative Impacts of the Proposed Activities in the Sub-project. Tick (✓) all likely impacts.**

☐ Use of non-permissible chemical (e.g. calcium carbide for ripening, non-food grade dyes for coloring, anabolic steroids and feed additives, etc.) impacting human/livestock health

☐ Usage of harmful chemicals like formaldehyde and toxic dyes for storage

☐ Overuse of pesticides or use of hazardous pesticides (e.g. to control pests during storage) impacting human/livestock and environmental health

☐ Use of water contaminated with Arsenic and other pollutants leading to impact on human/livestock health

☐ Air and noise pollution from activities such as milling, de-husking, crushing etc.

☐ Water pollution due to release of untreated effluent

☐ Possible un-hygienic practices contaminating food/feed

☐ Occupational health and safety hazards from improper use of machinery

☐ Location of the units and construction having negative impact on environment

☐ Pollution due to disposal of wastes like fish gut, scales and waste water from ice units and waste ice

☐ Use of contaminated water or arsenic polluted water for processing or for preparing ice

☐ Un-hygienic environment, un-hygienic practices in handling (not using protective gear, etc.)

☐ High energy requirement for processing machinery, ice units etc.

☐ Any other, mention:

### Part D: Environmental Management Plan for the Sub-project

Identified Mitigation/Enhancement Measures. Tick (✓) all required measures	Implementation Schedule	Budget	Monitoring frequency
<input type="checkbox"/> Use only permissible, food-grade chemicals and packaging materials			
<input type="checkbox"/> Use of permitted preservatives as per recommended doses.			

<i>Identified Mitigation/Enhancement Measures. Tick (✓) all required measures</i>	<i>Implementation Schedule</i>	<i>Budget</i>	<i>Monitoring frequency</i>
<input type="checkbox"/> Integrated Pest Management to manage food/feed pests as per Pest Management Plan			
<input type="checkbox"/> Locate unit at safe distance from residential area (ensure Location and Environmental Clearance from DOE)			
<input type="checkbox"/> Locate unit at safe distance from residential area (ensure no objection from local Union Parishad)			
<input type="checkbox"/> Ensure appropriate discharge of effluent that will not waste any surface water body as per plan approved by Department of Environment.			
<input type="checkbox"/> Use of protective gears by workers for safety and sanitation			
<input type="checkbox"/> Use of water that meets permissible standards of As for human consumption			
<input type="checkbox"/> Use safe quality water for processing (washing and making ice).			
<input type="checkbox"/> Practice safe disposal of wastes (fish gut contents, scales, used ice, waste water, etc.) safely as per prescribed standards			
<input type="checkbox"/> Energy efficiency in processing, and storage should be ensured			
<input type="checkbox"/> Any other, mention:			

Summary of the suggested EMP:

Prepared by (Name, Designation, Signature, Date): \_\_\_\_\_

Reviewed and Approved by (Name, Designation, Signature, Date): \_\_\_\_\_

## Annex 8: Initial Environmental Examination (IEE) for Larger-Scale Cattle Farming

(This form will be used if the subproject plans to have cattle heads above 25 in one location of a village instead of separate places by several individuals)

### Part A: General Description

IEE date: \_\_\_\_\_

Name of the beneficiary: \_\_\_\_\_

Location (Village/upazila/district): \_\_\_\_\_

Name of sub-project being proposed: \_\_\_\_\_

Details of activities to be undertaken under the sub-project:

S. No.	Activity	Description of activity (including details of scale in quantitative terms)	Cost

(Note: Add rows as required, one row for each of the activities in the proposed sub-project)

**Part B: Site of the sub-project:** Is the project area adjacent to or within any of the following Ecologically Critical Areas (ECAs)/environmentally sensitive areas?

☐ i. Sundarbans/ National park/ Wildlife Sanctuaries /other protected area

☐ ii. Natural Habitats formed by native and critically endangered plant /animal species that may be affected by the project

**(Proposed proposal will be rejected if appropriate mitigation measures can not identified)**

### Part C: Assessment of Negative Impacts of the Proposed Activities in the Sub-project.

#### B.1 Location of the unit

Where is the unit located (residential area, commercial area, industrial area, proximity to any water body)?

Does the location of the unit have the potential to cause any significant negative environmental impact?

#### B.2 Fodder requirement

What is the number of animals to be reared on the dairy farm?

What is the fodder requirement?

S. No.	Type of fodder	Amount required (kg per day)	Source
	Green fodder		
	Dry fodder		
	Concentrate feed		
	Any other		

#### B.3 Manure and waste management

S. No.	Nature of material generated	Amount generated (kg or litre per day)	Method of management or disposal
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	Cattle dung		
	Cattle urine		
	Left over fodder and feed		
	Animal carcasses		
	Bio-medical wastes (medicine containers, syringes, body fluid stained swabs, etc.)		
	Any other		

#### ***B.4 Water use***

<i>S. No.</i>	<i>Source of water</i>	<i>Purpose of use (drinking water for animals, cleaning of animals, equipment, premises, etc.)</i>	<i>Amount of water required (litres per day)</i>	<i>Does the water confirm to the prescribed standards?</i>

#### ***B.5 Water pollution***

What are the potential sources of water pollution?

What is the amount of waste water generated in litres per day?

What is the potential severity of the water pollution (which parameters are likely to exceed prescribed standards)?

#### ***B.6 Occupational health and safety hazards***

What are the potential occupational health and safety risks?

#### ***B.7 Any other significant environmental impacts, mention:***

#### **Part D: Environmental Management Plan for the Sub-project**

<i>Identified Mitigation Actions</i>	<i>Implementation Schedule</i>	<i>Budget</i>	<i>Monitoring indicator</i>	<i>Monitoring frequency</i>
<i>Location of unit</i>				
Secure 'Location Clearance' from DoE				
<i>Fodder management</i>				
Fodder cultivation				
Chaff cutter				
Other measures:				
<i>Drug/chemical/pesticide use</i>				
Review of production process and removal of any non-permissible drugs, pesticides and chemicals				
<i>Water use</i>				
Water quality testing to ensure conformity to prescribed standards				

<i>Identified Mitigation Actions</i>	<i>Implementation Schedule</i>	<i>Budget</i>	<i>Monitoring indicator</i>	<i>Monitoring frequency</i>
Review of production process and introduction of water conservation practices				
<i>Water pollution</i>				
Effluent treatment to meet prescribed standards				
<i>Manure and waste management</i>				
Composting of manure and waste fodder				
Biogas plant (if possible)				
Disposal of animal carcasses as per prescribed procedures and standards				
Disposal of bio-medical wastes as per prescribed procedures and standards				
<i>Occupational health and safety</i>				
Review of production process and introduction of processes and equipment to enhance worker health and safety				
<i>Any other</i>				

Summary of the suggested EMP:

Prepared by (Name, Designation, Signature, Date): \_\_\_\_\_

Reviewed and Approved by (Name, Designation, Signature, Date): \_\_\_\_\_



## Annex 9: Environmental Compliance Monitoring

### Part A: General Description

Monitoring date: \_\_\_\_\_

i) Name of the subproject:.....

ii) completion status: completed implementation/in progress

iii) Location:.....

### Part B: Compliance Monitoring

1. Has the subproject conducted an ES/IEE ☐ Yes ☐ No ☐ N/A
2. Is there any Environmental Management Plan (EMP) ☐ Yes ☐ No
3. Has the proponent shared the EMP with local community ☐ Yes ☐ No
4. Did the project obtain any clearance from the local community / local authority
5. Implementation of EMP

Specific environmental problems/ issues	Suggested mitigation/ enhancement measures	Implementation status of EMP (done/not yet done/in progress)	Environmental problem mitigation status (mitigated/not mitigated/partially)	Suggest additional mitigation measures (if needed)

Summary of the observations:

Prepared by (Name, Designation, Signature, Date): \_\_\_\_\_

Reviewed and Approved by (Name, Designation, Signature, Date): \_\_\_\_\_

## Annex 10: Quarterly Environmental Field Monitoring for Infrastructure and Livelihood Activities

### Part A: General Description

Monitoring date: \_\_\_\_\_

i) Name of the activity:..... ii) Year of formation:.....

iii) Location:.....

### Part B: Monitoring Indicators

Activities/Indicators	At present	Before	Remarks
Types of IPM technology adopted (Pheromone Traps, Brachonet, etc.)			
Area coverage by IPM (ha)			
Reduction of pesticides (Ripcord, Melathion, Sumithion) use (kg) due to practicing of IPM technology (kg/ha)			
No. of compost pits produced			
Amount of compost produced (kg)			
Amount of compost applied in the field (kg)			
Reduction in urea use (kg) due to use of compost (kg/ha)/ organic fertilizer (kg/ha)			
Amount of organic fertilizer produced (kg)			
Amount of vermin-compost produced (kg)			

#### Agro-processing

Activities/Indicators		At present	Before	Remarks
Maintenance of Sanitary & Phyto-sanitary Standards (SPS) & Maximum Residual Levels (MRL) in produce	Hazardous pesticide residues			
	Use of Formalin			
	Use of Carbamate			
Contamination during supply chain	Harmful chemicals for ripening/coloring			
Processing & Transportation	Use of unhygienic packaging materials, wash water, etc.			

#### Training

# of people attended the training	At present	Before	Remarks
Training on IMP/safe use of pesticides/ bio-safety Received			

#### Biogas/ efficient cook stove

No of efficient cook stove functional ( in use)			
No. of biogas plant installed using cow dung			
Cooking fuel saved (kg) due to use of cook stove/biogas (kg/month)			
Slurry produced (kg) from biogas plant (kg/month)			
Slurry applied in the field (kg/ha)			

#### Slat System

Use of Slat system for goats	Yes/No If yes, mention the benefits	Yes/No	Tick one
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### Liter and Carcass Management

Proper litter and carcass management practices			
<u>Disposal of litter</u> <ul style="list-style-type: none"> <li>Using for Biogas</li> <li>Disposal in pit for composting</li> <li>Selling to other farmers/compost traders</li> </ul>			

### Deworming and Vaccination

Nature of disease events reduced due to deworming and vaccination	No. of outbreak (%) cattle poultry goat	No. of outbreak (%) cattle poultry goat	
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### Infrastructure

	Yes	no	Quantity
Agricultural land used			
Top soil used			
Drainage congestion/water logging reduced			
# of mature tree needed to cut			
Maintained min distance between toilet and tube well			
Performed arsenic test			
Depth of groundwater table			

Any other observations:

Monitoring by (Name, Designation, Signature, Date): \_\_\_\_\_

Reviewed by (Name, Designation, Signature, Date): \_\_\_\_\_

## **Annex 11: Guidance on Proper Storage Handling and Disposal of Pesticides**

### **Introduction**

General safety precautions while handling pesticides and guidelines for proper storage, transportation and safe disposal of pesticides and pesticides containers are mentioned below for further reference.

### **General safety precautions while handling pesticides**

Exposure to pesticides may occur when handling and spraying pesticides. The exposures to pesticides may occur in following situations:



- When handling the pesticides product during opening of the package, mixing and preparation of the spray.
- When spraying the pesticides.
- When disposing the pesticides solution and containers General precautions:
  1. The operator should also wear a protective hat and face shield or goggles.
  2. Do not eat, drink or smoke while working.
  3. Wash hands and face with soap and water after spraying and before eating, smoking or drinking.
  4. Shower or bath at the end of every day's work and wear new clean clothes.
  5. Wash overalls and other protective clothing at the end of every working day in soap and water and keep them separate from the rest of the family's clothes.
  6. If the insecticide touches the skin, wash off immediately with soap and water.
  7. Change clothes immediately if they become contaminated with pesticides.
  8. Inform the supervisor immediately if one feels unwell.

### **Protective clothing and equipment**

Absorption of pesticides occurs mainly through the skin, lungs and mouth. Specific protective clothing and equipment given below must be worn in accordance with the safety instructions on the product label.

- Broad-rimmed hat (protects head, face and neck from spray droplets).
- Face-shield or goggles (protects face and eyes against spray fall-out).
- Face mask (protects nose and mouth from airborne particles).
- Long-sleeved overalls (worn outside of boots).
- Rubber gloves.

- Boots

## Storage

1. Pesticides storehouses must be located away from areas where people or animals are housed and away from water sources, wells, and canals.
2. They should be located on high ground and fenced, with access only for authorized persons. However, there should be easy access for pesticides delivery vehicles and, ideally access on at least three sides of the building for fire-fighting vehicles and equipment in case of emergency.
3. Pesticides must NOT be kept where they would be exposed to sunlight, water, or moisture which could affect their stability.
4. Storehouses should be secure and well ventilated.
5. Containers, bags or boxes should be well stacked to avoid possibility of spillage. The principle of .first expiry first out. should be followed.
6. Stock and issue registers should be kept up to date. Access to the pesticides should be limited to authorized personnel only.
7. The store room should have a prominently displayed mark of caution used for poisonous or hazardous substances. It should be kept locked.
8. Containers should be arranged to minimize handling and thus avoid mechanical damage which could give rise to leaks. Containers and cartons should be stacked safely, with the height of stacks limited to ensure stability.



## Transportation

1. Pesticides should be transported in well-sealed and labeled containers, boxes or bags.
2. Pesticides should be transported separately. It should NOT be transported in the same vehicle as items such as agricultural produce, food, clothing, drugs, toys, and cosmetics that could become hazardous if contaminated.
3. Pesticides containers should be loaded in such a way that they will not be damaged during transport, their labels will not be rubbed off and they will not shift and fall off the transport vehicle onto rough road surfaces.
4. Vehicles transporting pesticides should carry prominently displayed warning notices.
5. The pesticides load should be checked at intervals during transportation, and any leaks, spills, or other contamination should be cleaned up immediately using accepted standard procedures. In the event of leakage while the transport vehicle is moving, the vehicle should be brought to a halt immediately so that the leak can be stopped and the leaked product cleaned up. Containers should be inspected upon

arrival at the receiving station. There should be official reports to the national level and follow-up enquiries in the event of fires, spills, poisonings, and other hazardous events.

### **Disposal of remains of pesticides and empty packaging**

1. At the end of the day's work during IRS activities, the inside of the spray pump should be washed and any residual pesticides should be flushed from the lance and nozzle.
2. The rinsing water should be collected and carefully contained in clearly marked drums with a tightly fitted lid. This should be used to dilute the next day's tank loads or disposed properly by the supervisor at disposal sites like pits or digs.
3. Never pour the remaining pesticides into rivers, pools or drinking-water sources.
4. Decontaminate containers where possible. For glass, plastic or metal containers this can be achieved by triple rinsing, i.e. part-filling the empty container with water three times and emptying into a bucket or sprayer for the next application.
5. All empty packaging should be returned to the supervisor for safe disposal according to national guidelines.
6. Never re-use empty insecticide containers.
7. It shall be the duty of manufacturers, formulators of pesticides and operators to dispose packages or surplus materials and washing in a safe manner so as to prevent environmental or water pollution.
8. The used packages shall not be left outside to prevent their re-use.
9. The packages shall be broken and buried away from habitation.

### **Disposal of Expired Pesticides**

1. Adequate measures should be undertaken to avoid expiry of stocks in storehouses.
2. First Expiry First Out principle should be strictly followed during stock movements.
3. The expired stock should be returned to manufacturer for disposal as per guidelines preferably through incineration process.
4. The chemical efficacy should be tested before disposal of expired pesticides to find out possibility of usage. The efficacy and active ingredient percentage of pesticides is tested and certified by the authorized testing laboratory.

### **Health Monitoring**

1. In case of accidental exposures or appearances of symptoms of poisoning, medical advice must be sought immediately.
2. In case of organophosphorus (Malathion), regular monitoring of cholinesterase (CHE) level should be carried-out and spraymen showing decline in CHE to 50% should be withdrawn and given rest and if needed medical aid

### **Annex 12: Integrated Pest Management (IPM)**

Successful IPM is based on sound farmer's knowledge of the ongoing agro-ecological processes of the farming environment; such farmers should therefore be technically sound to

make decisions on the most appropriate management strategies to apply at the specific period of crop development.

IPM is a broad ecological approach of pest control (insects, diseases, weeds, rodents, etc.) employing all methods and techniques viz. cultural, mechanical, genetic, regulatory, biological and chemical in a compatible manner to keep pest population below economic threshold level (ETL).

Currently, the major thrust areas of plant protection is promotion of Integrated Pest Management (IPM), ensuring availability of safe and quality pesticides, streamlining the quarantine measures and for human resource development including empowerment of women in plant protection skills.

### **IPM Tools**

IPM involves a range of methods to control pests:

- a) Reactive options: Such as—physical and mechanical methods, biological and chemical control. A sudden withdrawal of pesticides will invariably bring down the yields drastically which the farmer can ill afford. IPM recommends a gradual withdrawal of pesticides allowing time for both the plants (and the farmers) to adjust and build up internal strength, reserves and resilience.
- b) Proactive Options: However the long term goal should be to promote proactive options to grow perfectly good crops without the help of chemical pesticides. Crop rotations and creation of habitat for beneficial organisms permanently lower the carrying capacity of the farm for the pest. Cultural controls are also considered as proactive strategies, which includes maintaining healthy, biologically active soil (increasing below ground diversity), maintaining habitat for beneficial organisms (increasing above ground diversity) and using appropriate plant cultivars. Some of the ways that can be used to maintain biodiversity of the farm would include, increasing genetic diversity, species diversity, crop rotations, multiple cropping, inter cropping, use of disease free seed and planting material, use of resistant varieties, sanitation, plant spacing, altered planting dates, optimum growing conditions, use of mulch material, etc.

### **Pest Resistant Varieties**

Breeding for pest resistance is a continuous process. At the same time the pests also, particularly the plant pathogens, co-evolve with their hosts. Thus, gene transfer technology is useful in developing cultivars resistant to insects, plant pathogens and herbicides. An example of this is the incorporation of genetic material from *Bacillus Thuringensis* (Bt), a naturally occurring bacterium, in cotton, corn, and potatoes, which makes the plant tissues toxic to the insect pests. Scientific community is impressed by its huge potential in managing the pests, but is also concerned about the possibility of increased selection pressure for resistance against it and its effects on non-target natural fauna. However, due to ethical, scientific and social considerations, this potential technology has been surrounded by controversies.

### **Cultural Pest Control**

It includes crop production practices that make crop environment less susceptible to pests. Crop rotation, fallowing, manipulation of planting and harvesting dates, manipulation of plant and row spacing, and destruction of old crop debris are a few examples of cultural

methods that are used to manage the pests. Planting of cover crops, nectar producing plants and inter-planting of different crops to provide habitat diversity to beneficial insects are important management techniques. Cover crops, often legume or grass species, prevent soil erosion and suppress weeds. A cover crop can also be used as a green manure, which is incorporated in the soil to provide nitrogen and organic matter to the subsequent crop. Cultural controls are selected based on knowledge of pest biology and development.

### **Physical or Mechanical Controls**

These are based on the knowledge of pest behaviour. Placing plastic lined trenches in potato fields to trap migrating Colorado potato beetles is one example of the physical control. Hand picking of insect pests is perhaps the simplest pest control method. Installation of dead as well as live bird perches in cotton and chickpea fields has proved effective in checking the bollworm infestation. Using mulches to smother weeds and providing row covers to protect plants from insects are other examples.

### **Biological Controls**

These include augmentation and conservation of natural enemies of pests such as insect predators, parasitoids, parasitic nematodes, fungi and bacteria. In IPM programs, native natural enemy populations are conserved, and non-native agents may be released with utmost caution. *Trichogramma* spp. is the most popular parasitoids being applied on a number of host crops. A number of microorganisms such as *Trichoderma* spp., *Verticillium* spp., *Aspergillus* spp., *Bacillus* spp. and *Pseudomonas* spp. that attack and suppress the plant pathogens have been exploited as biological control agents.

### **Chemical Controls**

Pesticides are used to keep the pest populations below economically damaging levels when the pests cannot be controlled by other means. Pesticides include both the synthetic pesticides and plant derived pesticides. Synthetic pesticides include a wide range of man-made chemicals. These are easy to use, fast-acting and relatively inexpensive. Ideally, pesticides should be used as a last resort in IPM programs because of their potential negative effect on the environment. Pesticides with the least negative impacts on non-target organisms and the environment are most useful. Fortunately, new generation pesticides with novel modes of action and low environmental effects are being developed and registered for use. Pesticides that are short-lived or act on one or a few specific organisms fall in this class.

### **Assessment of Economic Threshold Level**

This is based on the concept that most plants can tolerate at least some pest damage. In an IPM program where the economic threshold is known, chemical controls are applied only when the pest's damaging capacity is approaching the threshold, despite application of other alternative management practices.

### **Use of Botanical Pesticides**

These can be prepared in various ways. They can be as simple as raw crushed plant leaves, extracts of plant parts or as complex as chemicals purified from the plants. Pyrethrum, neem, tobacco, garlic, and pongamia formulations are some examples of botanicals. Some botanicals are broad spectrum pesticides. Botanicals are generally less harmful to the environment, because of their quick degrading property. They are less hazardous to transport. The major advantage is that these can be formulated on-farm by the farmers themselves.



### **Pesticide Management in Water**

Drift of pesticides must be avoided when spraying. They should not be applied when rain is imminent and the users should follow the direction given in the container for pesticide handling safety precautions, application rates and proper disposal. To reduce contamination of surface water and ground water from pesticides:

Evaluate the pest problems, previous pest control measures, and cropping history; Use integrated pest management (IPM) strategies that:

- Apply pesticides only when an economic benefit to the producer will be achieved
- Apply pesticides efficiently and at times when runoff losses are unlikely
- When pesticide applications are necessary and a choice of registered materials exists, consider the persistence, toxicity, runoff potential, and leaching potential of products in making a selection
- No use of pesticide belonging to category 1 & 2 as classified in the pesticide code

The goal of this management measure is to reduce contamination of surface water and ground water from pesticides. The basic concept of the pesticide management measure is to foster effective and safe use of pesticides without causing degradation to the environment. Pesticide Management Plans (PMP's) identify:

- Identify areas vulnerable to pesticides;
- Monitor source water for pesticide contamination;
- Prevent pesticides from reaching ground water;
- Respond to pesticide detection.

### **Use of Plastic**

- To minimize the use of pesticides as seed treatment to reduce the incidence of disease in nurseries, use of specific plastic sheet can be recommended for soil solarization.
- Plastic sheets will also be helpful in moisture conservation as mulch.
- Use of plastic in the form of poly tunnels and poly houses under adverse climatic conditions. This will also help in growing insect and disease free seedlings, off season vegetables and flowers to improve the economy of farmers, thus minimizing the pesticide application.

### Annex 13: List of Banned Pesticides in Bangladesh

Name of pesticide	Registration Number	Name of Company
1. Diazinon	14G AP-08	Shetu Corporation Ltd.
2. Bizaguard	2P AP-09	Ciba-Geigy (Bangladesh) Ltd.
3. Roxion	40EC AP-11	International Services (Bangladesh) Ltd
4. Dankavapon	100 AP-13	Shetu Corporation Ltd.
5. Damphin	2P AP-19	Ciba-Geigy (Bangladesh) Ltd.
6. Diazinon	90L AP-20	Ciba-Geigy (Bangladesh) Ltd.
7. Damphin 950EC	AP-25	Ciba-Geigy (Bangladesh) Ltd.
8. Dichlorovos	AP-27	Bayer (Bangladesh) Ltd.
9. Cureterr 3G	AP-30	Bayer (Bangladesh) Ltd.
10. 2,4-D Na Salf	AP-34	Bayer (Bangladesh) Ltd.
11. Folithion ULVC 98	AP-36	Bayer (Bangladesh) Ltd.
12. Methybron	AP-38	Excell trading Co.
13. Heptachlor 40WP	AP-39	Krishi Banijjya Protishthan
14. Chlordane 40 WP	AP-40	Krishi Banijjya Protishthan
15. Aerovap 100 EC	AP-41	Liza Enterprise Ltd.
16. Aerodriel 20EC	AP-42	Liza Enterprise Ltd.
17. Aeromal 57% EC	AP-44	Liza Enterprise Ltd.
18. Padan 10G	AP-52	Data Enterprise Ltd.
19. Fenitrothin 98	AP-53	Farm Chemical corporation Ltd.
20. Carbin 85 WP	AP-54	Farm Chemical corporation Ltd.
21. Diamal 57EC	AP-55	Farm Chemical corporation Ltd.
22. Detia Gas EXT	AP-56	Farm Chemical corporation Ltd.
23. Dichlovos 100	AP-57	Farm Chemical corporation Ltd.
24. Methyl Bromide 98	AP-58	Farm Chemical corporation Ltd.
25. Malathion 57EC	AP-68	BPI Ltd.
26. Cureterr 3G	AP-69	Bayer (Bangladesh) Ltd.
27. Dieldrin 20EC	AP-73	Shell Company of Bangladesh Ltd.
28. Bidrin 24WSC	AP-74	Shell Company of Bangladesh Ltd.
29. Malathion 57EC	AP-78	Burma Eastern Ltd.
30. Vapona	AP-79	Shell Company of Bangladesh Ltd.
31. Bidrin 85WSC	AP-80	Shell Company of Bangladesh Ltd.
32. Diealdrin 50WP	AP-82	Shell Company of Bangladesh Ltd.
33. Dieldrin 40WP	AP-83	Shell Company of Bangladesh Ltd.
34. Furadan 3G	AP-85	FMC International S. A.
35. Actellic 2% Dust	AP-99	Bangladesh Manufacturers Ltd.
36. Quickphos	AP-102	Agrani Traders
37. Torque 550g/l	AP-115	International Service Bangladesh Ltd.
38. Ridan 3G	AP-131	Rupali Sangstha Ltd.
39. Bkzne 14G	AP-135	B. K. Traders Ltd.
40. Aerocypermethrin	AP-137	Liza Enterprise Ltd.
41. Karmex	AP-145	BEXIMCO Agrochemicals Ltd.
42. Carbaryl 85Wp	AP-147	Shetu Corporation Ltd.
43. Agridhan 3G	AP-154	Shetu Corporation Ltd.
44. Tecto 2% Dust	AP-157	Alco Pharma Ltd.
45. Manex II	AP-163	Shetu Corporation Ltd.
46. Phytos MZ-80	AP-164	Liza Enterprise
47. Uniflow TM Sulphur	AP-167	Shetu Corporation

48. Fenkil 20EC	AP-169	Agrani Traders
49. Sunfuran 3G	AP-171	Shertu Corporation Ltd.
50. Hekthion 57EC	AP-178	Farm Chemicals Corporation Ltd.
51. Poligor 40EC	AP-180	Farm Chemicals Corporation Ltd.
52. Melbromid 98	AP-185	Horizon Trade Ltd.
53. Mebrom	AP-186	Bengal Wings Trade Ltd.
54. Agrine 85WP	AP-187	Edgro (Pvt) Ltd.
55. Drawizon 60EC	AP-190	Keeco Pesticides Ltd.
56. Gastoxin	AP-195	Bright Corporation
57. Cekomethrin 10EC	AP-219	Premier Traders
58. Cythrin	AP-220	Bari and company Ltd.
59. Cekuthoate 40EC	AP-225	Premier Traders
60. Arifos 20EC	AP-229	Bari and company Ltd.
61. Malathion 57EC	AP-230	Sabrina Trading Corporation.
62. Cardan 5G	AP-234	Bari and Company Ltd.
63. Diazinon 14G	AP-236	Liza Enterprise Ltd.
64. Rizinon 60EC	AP-239	Bari and Company Ltd.
65. Zincphosphide	AP-258	Liza Enterprise Ltd.
66. Davison Glyphosate	AP-266	Shetu Pesticides Ltd.
67. Morestan 25WP	AP-269	BEXIMCO Agrochemicals Ltd.
68. Manzate 200	AP-22 & 277	Auto Equipment Ltd.
69. Dimecron 100SL	AP-301	Novratis (Bangladesh) Ltd.
70. Pillarcron 100SL	AP-148	Shetu Pesticides Ltd.
71. Benicron 100WSC	AP-06	Sabrina Trading Corporation.
72. DDVP 100W/V	AP-03	ACI Formulations Ltd.
73. ChemoDDVP 100EC	AP-245	Chemsfil Bangladesh Ltd.
74. DDVP 100EC	AP-151	Mcdonald Bangladesh (Pvt) Ltd.
75. Nogos 100EC	AP-26&274	Novertis (BD) Ltd.
76. Phosvit 100EC	AP-46	Data enterprises Ltd.
77. Daman 100EC	AP-325	Petrochem (B) Ltd.
78. Azodrin 40WSC	AP-336	BASF Bangladesh Ltd.
79. Nuvacron 40SL	AP-18&275	Novratis (Bangladesh) Ltd.
80. Megaphos 40SL	AP-175	Mcdonald Bangladesh (Pvt) Ltd.
81. Phoskil 40SL	AP-339	United Phosphorous (Bangladesh) Ltd.
82. Kadette 40WSC	AP-284	BISCO Pesticides & Chemical Corporation
83. Monophos 40WSC	AP-328	Alpha Agro Ltd.
84. Monodrin 40WSC	AP-07	Sabrina Trading Corporation
85. Corophos 40SL	AP-342	Corbel International Ltd.
86. Luphos 40SL	AP-388	ACI Formulations LTD.
87. Amcordin 40SL	AP-340	Atherton Imbros Co. Ltd
88. Vitacron 40SL	AP-341	Shetu Marketting Co.
89. Monotaf 40WSL	AP-331	Auto Equipment Ltd
90. Tamaron 40SL	AP-188	Haychem (B) Ltd.
91. Folythion 50EC	AP-32	Haychem (B) Ltd.
92. Macuprex 65%	AP-65	Bayer Crop Science
93. Zithiol 57EC	AP-126	Rohn Polenk Bangladesh.
94. Delapon Na-84	AP-66	Rohn Polenk Bangladesh.
95. Anthio 25EC	AP-64	Rohn Polenk Bangladesh.

96. Zolone 35EC	AP-67	Rohn Polenk Bangladesh.
97. Rentokill CC Type 75%	AP-221	Getco Limited
98. Paramount CC Type	AP-300	B. D. Associate and Company.
99. Darsbun 20EC	PHP-5	Auto Equipment Ltd.
100. Darsbun 20EC	PHP-85	Auto Equipment Ltd.
101. Basudin 10G	AP-23	Syngenta Bangladesh Ltd.
102. Diazinon 60EC	AP-24	Syngenta Bangladesh Ltd.
103. Mortin King Mosquito Coil	PHP-54	Reckit and Benckiser Bangladesh Ltd.
104. Mortin Mosquito Coil	PHP-101	Reckit and Benckiser Bangladesh Ltd.
105. Sarfium 56%	AP-689	Sar Trade
106. Sicofen 20 EC	AP-624	Genetica
107. Pesnon 57 EC	AP-189	Sea Trade Fertilizer Ltd.
108. Sicofen 20 EC	AP-624	Genetica

(Updated Up to December 2012)

### **Internationally banned chemicals in 122 countries including Bangladesh:**

- (1) The internationally banned chemicals are known as Persistent Organic Pollutants (POP).
- (2) POPs include nine pesticides (Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Mirex and Toxaphene). Mirex and toxaphene never entered into Bangladesh.
- (3) Two other chemicals (Furans and dioxins) which are by-products of other chemical processes are also banned.

## **Annex 14: ToR for the Environmental Focal Person**

The key responsibilities of the Environmental Focal Person (EFP) will be to assist the SDF Managing Director in the implementation of Environmental and Social Management Framework (ESMF). S/he will ensure that all subprojects to be implemented under infrastructure and livelihood components will follow the guidelines provided in the ESMF, conduct environmental screening/ IEE and implement Environmental Management Plans (EMPs) in accordance with the guidelines of the World Bank and environmental rules and regulations of the Government of Bangladesh. S/he will work as a team member for the preparation of NJLIP environmental safeguard implementation manual in light with ESMF. S/he will also be responsible for organizing environmental management training program for capacity building of SDF staff and beneficiaries.

The Environmental Focal Person (EFP), preferably with the post-graduation specialization in environmental management/engineering /environmental science, rural development or relevant field, shall have at test 5 years of working experience related to preparation of EA, integration of environmental and social issues in the design, implementation and operation of rural infrastructure and livelihood projects. Experience in community driven projects is preferred.

The specific roles and responsibilities of the EFP shall include, but not limited to the following:

- Lead the environmental safeguard related activities in the NJLIP
- Design and implement capacity development initiative in the NJLIP
- Develop, organize and deliver environmental training and orientation programs and workshops for the staff of the SDF and beneficiaries
- Review categorization for each sub-project and recommend for further steps based on environmental screening
- Take part in the project document review process and assess the initial environmental examination (IEE) and environmental management plan (EMP) if any, attached to the project paper submitted by the field offices
- Carry out regular field visit to assess the quality and adequacy of screening, IEE, EMP and also supervision of environmental activities
- Hold regular meeting with project management in SDF, Project Monitoring Officers of SDF and Regional and District Offices
- Prepare and submit regular environmental monitoring and implementation progress reports
- Prepare good practice dissemination notes based on the experience gained from site supervision
- Working with SDF management to strengthen its environmental capacity and mainstream integration of environmental consideration in project planning, implementation and operation

## **Annex 15: Terms of Reference for External Environmental and Social Audit**

### **Objectives:**

Objectives of external audit are to verify/check the following:

- To check the compliance with the system and procedures detailed in the Environmental and Social Management Framework.
- To check the quality of the design, implementation and effectiveness of the Sub-project Environmental Management Plans (EMPs) and Social Management Plans.
- To assess the effectiveness of the SIPP- Nuton Jibon environmental and social monitoring.
- To assess the effectiveness of the capacity building initiatives on environmental and social management.

### **Scope:**

The scope of the audit will include all sub-projects. It will also cover all the various activities supported under NJLIP including institutional strengthening, support to rural poor.

### **Frequency:**

External audit will be carried out prior to the mid-term review. The audit will include both field visits as well as a desk review. The external audit will be done by a technically competent agency appointed by the PMU for the NJLIP as a whole.

### **Methodology:**

- Desk review: The desk review will focus on reviewing available documents and data with reference to the objectives and selected indicators. For social safeguards compliance, the audit will ensure that the negative list was fully complied with and that Small Ethnic Community and other Vulnerable Community Development Plans (SECVCDP) were prepared and implemented fully for sub-projects that work in areas where such communities live.
- Field visits: Site visits and field level consultations will be organized for a sample of sub-projects to check (a) the quality of the design, implementation and effectiveness of the Sub-project Environmental Management Plans, and, (b) to check the quality of implementation and effectiveness of the environmental and social mitigation measures and enhancement measures.

The sample will cover 50% of sub-projects requiring IEE and SECVCDPs and 20% of sub-projects requiring Screening. The sample will be representative in terms of the nature of the activities supported and will include agriculture, livestock, fisheries and village development infrastructure interventions.

### **Report of Audit:**

A detailed report of the external audit must be submitted to the PMU for action. The report must include the following:

- Description of methodology including details of sampling
- Review of the following (implementation and issues):

- Effectiveness of the system and procedures in identifying issues and implementing appropriate mitigation measures.
  - Institutional arrangements for implementation of the EMP and SMP.
  - Capacity building on the EMP.
- Overall environmental performance of the NJLIP with respect to identified performance indicators.
- Recommendations for strengthening the environmental management system.
- Individual reports of the field visits undertaken.

## Annex 16: Public Consultation – List of Participants

A complete list of the stakeholders consulted for preparation of the ESMF has been provided below.

### Social Development Foundation (SDF)

Regional Office, Jamalpur

Period: September 23-24, 2014

List of participants attended meeting with Mr. B. K. D. Raja, Consultant, ESMF

Name of village: Matiajani Poschim

Sl. No.	Name of participants	Name of Organization/Committee	Position
01	Mina Parving	GS	President
02	Taslima	GS	Secretary
03	Ruksana	GS	Cashier
04	Chameli	GS	Member
05	Anuwara	GS	Member
06	Suanti	GS	Member
07	Luky	VCO	Secretary
08	Insanara	VCO	Leader
09	Usha	VCO	Cashier
10	Rina	SPC	President
11	Liza	SPC	Secretary
12	Jorna	SPC	Cashier
13	Morjina	SPC	Member
14	Mursheda	SAC	Convener
15	Hunufa	SAC	Member
16	Forida	SAC	Cashier
17	Aleya	SSC	Cashier
18	Happy	SSC	Cashier
19	Luky	SSC	Leader
20	Moriam	SSC	Leader
21	Marshada	NJG	Member
22	Chandra Banu	NJG	Member
23	Mukta	NJG	Cashier
24	Shila	NJG	Leader
25	Marjina	NJG	Member
26	Sofura	NJG	Member
27	Nasima	NJG	Member
28	Shapali	NJG	Member
29	Moyna	NJG	Member
30	Deluara	NJG	Member
31	Santi	NJG	Member
32	Hashi	NJG	Member
33	Razia	NJG	Member
34	Monawara	NJG	Member
35	Banesa	NJG	Member
36	Rupban	NJG	Member
37	Rukaya	NJG	Member
38	Rikta	NJG	Member
39	Amena	NJG	Member
40	Babeya	NJG	Member
41	Sokina	NJG	Member
42	Sultana	NJG	Member



43	Anguri	NJG	Member
44	Banasha	NJG	Member
45	Kohinur	NJG	Member
46	Moriwam	NJG	Member
47	Mosiron	NJG	Member
48	Keya	NJG	Member
49	Razia	NJG	Member
50	Mukta	NJG	Member
51	Hasena	NJG	Member
52	Mohuwa	NJG	Member
53	Firuja	NJG	Member
54	Sokina	NJG	Member
55	Sajeda	NJG	Member
56	Banesha	NJG	Member
57	Amena	NJG	Member
58	Lili	NJG	Member
59	Roshonara	NJG	Member
60	Rogina	NJG	Member
61	Momota	NJG	Member
62	Meherun	NJG	Member
63	Beli	NJG	Member
64	Hasi	NJG	Member
65	Laki	NJG	Member
66	Shiuli	NJG	Member
67	Sajeda	NJG	Member
68	Shila	NJG	Member
69	Sonavanu	NJG	Member
70	Badul	NJG	Member
71	Rukon	NJG	Member
72	Ruma	NJG	Member
73	Uzzala	NJG	Member
74	Salim	NJG	Member
75	Ahiron	NJG	Member
76	Aklima	NJG	Member
77	Mina	NJG	Member
78	Nijam	NJG	Member
79	Moriwam	NJG	Member
80	Taposhi	NJG	Member
81	Rukia	NJG	Member
82	Sonavanu	NJG	Member

**Name of village: Korogram Uttar.**

Sl. No.	Name of participants	Name of Organization/Committee	Position
01	Rakha	GS	President
02	Juthi	GS	Secretary
03	Rina	GS	Cashier
04	Josona	GS	Member
05	Salma	GS	Member
06	Nasima	GS	Member
07	Lipi	GS	Member
08	Josna	VCO	Leader
09	Nasima	VCO	Secretary

10	Parul	VCO	Cashier
11	Rumi	SSC	Cashier
12	Dilruba	SSC	Leader
13	Lipi	SSC	Cashier
14	Johura	SSC	Cashier
15	Nasima	SPC	President
16	Shapla	SPC	Secretary
17	Sanuara	SPC	Cashier
18	Asma	PC	Convener
19	Fanchi	PC	Member
20	Rashada	PC	Member
21	Sobuja	SAC	Convener
22	Rahela	SAC	Member
23	Morjina	NJG	Leader
24	Salma	NJG	Leader
25	Rashada	NJG	Member
26	Surjo	NJG	Member
27	Kohinur	NJG	Member
28	Sufia	NJG	Member
29	Rani	NJG	Member
30	Mohiron	NJG	Member
31	Amena	NJG	Member
32	Nazma	NJG	Member
33	Nasima	NJG	Member
34	Anuwara	NJG	Member
35	Kanchon	NJG	Member
36	Sufia	NJG	Member
37	Rikta	NJG	Member
38	Saleha	NJG	Member
39	Jesmin	NJG	Member
40	Jorna	NJG	Member
41	Sheeti	NJG	Member
42	Bayana	NJG	Member
43	Hobiron	NJG	Member
44	Banesha	NJG	Member
45	Halima	NJG	Member
46	Rohima	NJG	Member
47	Sahara	NJG	Member
48	Saleha	NJG	Member
49	Shirina	NJG	Member
50	Sufia	NJG	Member
51	Chosmon	NJG	Member
52	Rahela	NJG	Member
53	Rasheda	NJG	Member
54	Shirina	NJG	Member
55	Sibon	NJG	Member
56	Sonavanu	NJG	Member
57	Sufia	NJG	Member
58	Rita	NJG	Member
59	Rofiqul	NJG	Member
60	Nasima	NJG	Member
61	Josona	NJG	Member
62	Johura	NJG	Member

63	Momota	NJG	Member
64	Sarjina	NJG	Member
65	Sohiton	NJG	Member
66	Anuwara	NJG	Member
67	China	NJG	Member
68	Parul	NJG	Member
69	Konika	NJG	Member
70	Ayasha	NJG	Member
71	Firuja	NJG	Member
72	Sima	NJG	Member
73	Kohinur	NJG	Member
74	Motovanu	NJG	Member
75	Salma	NJG	Member

**Participants list meeting with Bandhuchula, BRAC and SDF staff.**

SL #	Name	Designation	Organization	Mobile #
<b>Bondhu Chola Program</b>				
01	Kala Chand Sarker Shushil	Divisional Manager	Bondhu Chola Program	01833104115
02	Bijoy Chokraborty	Zonal Manager	Bondhu Chola Program	01847003567
03	Md. Salim Javed	District Manager	Bondhu Chola Program	01847003681
<b>BRAC</b>				
04	Md. Jahangir Alam	Regional Manager (Dabi)	BRAC, Regional Office, Jamalpur	07130348384
05	Md. Jahangir Hossain	Regional Manager (Progoti)	BRAC, Regional Office, Jamalpur	01716111526
06	Md. Kamruzzaman	Regional Manager (TUPi)	BRAC, Regional Office, Jamalpur	01717674449
07	Md. Younus Ali	Regional Manager (TUP)	BRAC, Regional Office, Jamalpur	01712435807
08	Md. Shafiqul Islam	District Brac Representative	BRAC Regional Office, Jamalpur	01712246728
09	Md. Mofizur Rahman	Monitoring Officer	BRAC Regional Office, Jamalpur	01730348672
<b>SDF Staff</b>				
10	Nazrul Alam Sarder	Regional Director	Regional Office, Jamalpur	01712210043
11	Md. Kamal Bashar	Manager (Technical)	HQ, SDF, Dhaka	01712210038
12	Abil Hasan Mohammad Monir	RS-(Technical)	Regional Office, Jamalpur	01716123587
13	Md. Harunoor Rashid	RS-Livelihood	Regional Office, Jamalpur	01712514070
14	Tanzina Alam	RS-ECCRR	Regional Office, Jamalpur	01711156050
15	Nurul Huda Cowdhury	District Manager	District Office, Jamalpur	01914244572
16	Dr. Md. Rukunuzzaman	District Officer (Livelihood)	District Office, Jamalpur	01712782882
17	Md. Ali Akter	District Officer (Technical)	District Office, Jamalpur	01719134344
18.	Md. Abu Raihan	Cluster Officer	Cluster-16, Jamalpur	01727345992
19.	Md. Rafiqul Islam	CF (Technical)	Cluster-16, Jamalpur	01771932626

**Social Development Foundation (SDF)**  
**List of participants attend meeting with Mr. B. K. D. Raja, Consultant, ESMF on 18/11/14.**

**Name of village: Munshipara under Ekorchali cluster in Rangpur District**

List of Participants:

Sl No.	Name of participants	Name of organization/committee	Position
1	Mamun Jera	GS President	Poor
2	Shefali	GS Secretary	Youth
3	Bulbuli	GS Cashiar	Poor
4	Samita	Member	HCP
5	Amena	Member	Poor
6	Sabura	Member	HCP
7	Shilpi	Member	Poor
8	Parvina	Member	HCP
9	Aduri	Member	Poor
10	Ranjina	VCO Leader	Poor
11	Monjila	VCO Secretary	Poor
12	Momena	VCO Cashiar	HCP
13	Fereza	Member	Poor
14	Rojina	Member	HCP
15	Sheuli	SPC Leader	Poor
16	Argina	SPC Secretary	Poor
17	Sonali	SPC Cashiar	Poor
18	Morsalina	Member	HCP
19	Feroza	Member	Poor
20	Shefali	SAC Convenor	Youth
21	Atifa	Member	Poor
22	Jesmin	Member	Poor
23	Mohsena	Member	Poor
24	Rehena	Member	Poor
25	Rujina	Member	Poor
26	Rotna	NJG member	HCP
27	Sobura	NJG member	HCP
28	Rabea	NJG member	HCP
29	Ambia	NJG member	HCP
30	Najina	NJG member	HCP
31	Roksana	NJG member	HCP
32	Chen Banu	NJG member	HCP
33	Aklima	NJG member	HCP
34	Morion	NJG member	Poor
35	Rozina	NJG member	HCP
36	Mahmauda	NJG member	HCP
37	Julekha	NJG member	HCP
38	Kadbanu	NJG member	HCP
39	Regia	NJG member	HCP
40	Somita	NJG member	HCP
41	Fulti	NJG member	Poor
42	Argina	NJG member	Poor
43	Joshna	NJG member	Poor

44	Rasheda	NJG member	Poor
45	Momotara	NJG member	HCP
46	Ospeara	NJG member	HCP
47	Rehena	NJG member	HCP
48	Amena	NJG member	HCP
49	Mamunjera	NJG member	Poor
50	Tahomida	NJG member	Poor
51	Laily	NJG member	Poor
52	Molida	NJG member	Poor
53	Bilkish	NJG member	Poor
54	Samina	NJG member	Poor
55	Mohsena	NJG member	Poor
56	Mukta	NJG member	Poor
57	Shahida	NJG member	Poor
58	Moyna	NJG member	Poor
59	Rupia	NJG member	Poor
60	Atifa	NJG member	HCP
61	Hoshneara	NJG member	HCP
62	Hafiza	NJG member	HCP
63	Arjina	NJG member	HCP
64	Oheda	NJG member	Poor
65	Amena	NJG member	HCP
66	Raoshanara	NJG member	Poor
67	Jahanara	NJG member	Poor
68	Shefali	NJG member	Poor
69	Shahida	NJG member	Poor
70	Hajera	NJG member	Poor
71	Ashia	NJG member	Poor
72	Monoara	NJG member	Poor
73	Anjuara	NJG member	Poor
74	Nilufa	NJG member	Poor
75	Majeda	NJG member	Poor
76	Shahnaj	NJG member	Poor
77	Sheuli	NJG member	Poor
78	Hamida	NJG member	HCP
79	Nurnahar	NJG member	HCP
80	Shohagi	NJG member	HCP
81	Argina	NJG member	HCP
82	Maleka	NJG member	HCP
83	Mabia	NJG member	Poor
84	Rashida	NJG member	Poor
85	Nasia	NJG member	Poor
86	Aklima	NJG member	Poor
87	Fahima	NJG member	Poor
88	Golejan	NJG member	Poor
89	Morsheda	NJG member	Poor
90	Dulaly	NJG member	Poor
91	Moshlema	NJG member	Poor
92	Rafika	NJG member	Poor
93	Jannati	NJG member	Poor
94	Sonali	NJG member	Poor
95	Mollika	NJG member	Poor
96	Rasheda	NJG member	Poor

97	Afroza	NJG member	HCP
98	Anurfa	NJG member	HCP
99	Anoara	NJG member	HCP
100	Dulaly	NJG member	HCP
101	Monira	NJG member	HCP
102	Sheuli	NJG member	HCP
103	Lovli	NJG member	HCP
104	Jorimon	NJG member	Poor
105	Surma	NJG member	Poor
106	Golapi	NJG member	Poor
107	Ashma	NJG member	Poor
108	Mostara	NJG member	Poor
109	Moshlema	NJG member	HCP
110	Morjina	NJG member	HCP
111	Monjuara	NJG member	HCP
112	Shilifa	NJG member	HCP
113	Shilpi	NJG member	HCP
114	Shamima	NJG member	Youth
115	Ataur	NJG member	Youth
116	Akkasul	NJG member	Youth
117	Dr. BKD Raja	World Bank	Consultant
118	Md. Kamal Bashar	Infrastructure Specialist	SDF HQ
119	Md. Mizanur Rahman	RS-ECCRR	SDF Rangpur Region
120	Md. Abdul Bari Ansary	District Manager	SDF Rangpur district
121	Md. Saidur Rahman	RS-Livelihoods	SDF Rangpur Region
122	Md. Asadur Rahman	RS-Technical	SDF Rangpur Region
123	Md. Helal Uddin	District Livelihood Officer	SDF Rangpur district
124	Md. Rafiqul Islam	Cluster Officer	Ekorchali cluster, Rangpur
125	Mst Nazma Begum	CF	Ekorchali cluster, Rangpur

**Name of village: Talukhabu under Gajaghanta cluster in Rangpur District**

List of Participants:

Sl No.	Name of participants	Name of Organization/Committee	Position
01	Rasheda Begum	GS President	Poor
02	Rokshana Begum	GS Secretary	Poor
03	Nasima Begum	GS Cashier	Poor
04	Laiju Begum	NJG member	Poor
05	Monira Begum	NJG member	Hard core poor (HCP)
06	Rashida Begum	NJG member	HCP
07	Jorina Begum	NJG member	HCP
08	Nilupha Begum	NJG member	HCP
09	Amena Begum	NJG member	HCP
10	Easmin Begum	NJG member	Poor
11	Shiuli Begum	NJG member	Poor
12	Shefali Begum	NJG member	Poor
13	Mabuda Begum	NJG member	Poor
14	Yeasmin Begum	NJG member	HCP
15	Nurjahan Begum	NJG member	Poor
16	Dulali Begum	NJG member	Poor
17	Sokina Begum	NJG member	HCP
18	Roksana Begum	NJG member	Poor

19	Arifa Begum	NJG member	HCP
20	Nilufa Begum	NJG member	HCP
21	Nargish Begum	NJG member	Poor
22	Selina Begum	NJG member	HCP
23	Rojina Begum	NJG member	Poor
24	Mabuda Begum	NJG member	HCP
25	Hasina Begum	NJG member	Poor
26	Monira Begum	NJG member	Poor
27	Sofura Begum	NJG member	Poor
28	Mahamuda Begum	NJG member	Poor
29	Angura Begum	NJG member	HCP
30	Shiuli Begum	NJG member	Poor
31	Sofia Begum	NJG member	HCP
32	Ambia Begum	NJG member	Poor
33	Fatema Begum	NJG member	Poor
34	Labuda Begum	NJG member	HCP
35	Robiul	NJG member	HCP
36	Mohulla Begum	NJG member	Poor
37	Bedena	NJG member	Poor
38	Rehana Begum	NJG member	HCP
39	Mohula Begum	NJG member	HCP
40	Saherbanu Begum	NJG member	Poor
41	Sadeka Begum	NJG member	HCP
42	Salima Begum	NJG member	HCP
43	Unus	NJG member	Poor
44	Laveli	NJG member	Poor
45	Lija	NJG member	HCP
46	Asma Begum	NJG member	HCP
47	Pervin Begum	NJG member	Poor
48	Mojina Begum	NJG member	HCP
49	Mahbuba Begum	NJG member	HCP
50	Rubina Khatun	NJG member	Poor
51	Dr. BKD Raja	World Bank	Consultant
52	Md. Kamal Bashar	Infrastructure Specialist	SDF HQ
53	Md. Mizanur Rahman	RS-ECCRR	SDF Rangpur Region
54	Md. Abdul Bari Ansary	District Manager	SDF Rangpur district
55	Md. Saidur Rahman	RS-Livelihoods	SDF Rangpur Region
56	Md. Asadur Rahman	RS-Technical	SDF Rangpur Region
57	Md. Helal Uddin	District Livelihood Officer	SDF Rangpur district
58	Md. Shahanur Rahman	Cluster Officer	Gajaghanta cluster, Rangpur
59	Mst Nargis Begum	CF	Gajaghanta cluster, Rangpur



### Pictures from the Consultations







### Annex 17: Monitoring and Evaluation matrix

Activities	Type of works to be done	Indicators	Data collection instrument/ Method	Frequency	Responsibility	Remarks
<b>a. MONITORING &amp; LEARNING</b>						
Monthly Monitoring & Learning workshop at District, Cluster and village level	Updating the project authority regarding implementation progress and challenges of social issues	Report submitted by the PO	Prescribed reporting format and discussion; Sharing field findings; Sharing key issues of PMA; Exchange project learning, constraints etc.	Monthly at field level	Director ML, Manager-MEL, MIS Manager	Monthly physical and financial progress report will be available and discuss.
Quarterly Monitoring and Learning Workshop	Quarterly status of the different components of the SIPP, problems confronted, lessons learned and revision of work plan	Report submitted by the PO	Discussion, prescribed reporting formats, work plan	Quarterly	Director ML, Manager-MEL, MIS Manager	Revised work plan, inputs for QPR
Update Village Matrix Information	Update village information on monthly basis		Prescribed VM format	Monthly	CFs	Village Matrix Database
Update Key Monitoring Milestones	Compilation from Village Matrix (VM)		VM format; Key Milestone Format	Monthly	CTL/DT/RT	Cluster-District-Region-Project
Update field data by putting SDFMIS at HO	Update Field level transaction information, achieving milestones, baseline, village profile, project village information, livelihood dev. fund etc.		Prescribed format	On regular basis	Community Facilitator and respective Manager	Tracking project fund, progress, performance of JG/GS etc. through SDF-MIS



Activities	Type of works to be done	Indicators	Data collection instrument/ Method	Frequency	Responsibility	Remarks
	Identify and mort out duplicate transactions, duplicate data entry, error etc.					
Thematic Study/ Beneficiary Assessment	Beneficiaries' attitude about the project services, bottlenecks, reasons for success or failure, remedy measures required		Workshop, formal and informal consultative meetings, group discussion	As per need	Director ML Manager-MEL	By external agency
Updating Result Framework	Updating quarterly progress on the basis of set indicators.		Pre-set indicators	Quarterly	MIS Manager, Manager, ME&L and RT/DT/CT	WB requirement
Annual Implementation Plan (AIP)	Identify key focus areas, targeting as per Result Framework		Compile Cluster-District-Region and Project level planning with key focus areas	Annually	ME&L, Finance and Program Division	Prepare AIP and forward it to WB for approval for FY; Qtrly Implementation Plan is prepared on the basis of AIP; Implement field activities as per AIP
<b>b. BASELINE, IMPACT EVALUATION AND SPECIAL STUDY</b>						
Impact Evaluation	Baseline survey and impact evaluation on socioeconomic condition of SEC, village wise information on	% of beneficiaries with improved socio-economic standard than baseline	House hold Survey and PRA techniques	As per Plan	Impact Evaluation Consultant	Baseline survey, Mid-term Impact Evaluation, Impact Evaluation at the end of the year and

Activities	Type of works to be done	Indicators	Data collection instrument/ Method	Frequency	Responsibility	Remarks
	SEC population, infrastructure facilities, land utilization, cropping pattern, livelihoods etc.	% of women with improved socio-economic standard than baseline % of other vulnerable groups with improved socio-economic standard than baseline				Terminal Impact Evaluation
Special Studies	In-depth information about a specific issue		Sample study, FGD/PRA, Group discussion, observation, Workshop	As per requirement	Consultant	Study report will be produced
<b>c. PROCESS MONITORING ACTIVITIES</b>						
1. Land use		Amount of land used for GS office owned by Parishad	Official document	As per requirement	Process Monitoring Consultant	
2. Voluntary land donation	Documentation of the process of land donation by the community	% of land used for project purpose have willingness letter	Official document	As per requirement		
		% of land transferred to project after free, prior and informed consultation, negotiation and agreement	Official records; FGD, PRA	As per requirement		
3. Purchase of land	Reviewing official documents for the records of lands purchased/used for project purpose.	Amount of land purchased for project use	Official document	As per requirement		

Activities	Type of works to be done	Indicators	Data collection instrument/ Method	Frequency	Responsibility	Remarks
4. Grievance redress mechanism		Number of complaints received	Official document	Monthly		
		Number of complains resolved	Official document	Monthly		
5. CAP implementation		Number of women headed households are taking part in issuance of identify cards	Official record	Quarterly	CO	
		Number of women headed households are taking part in opening accounts in the bank, receiving assistance amounts through cheques	Official record	Quarterly	CO	
		Number of Destitute, Below Poverty Line families, Old Aged, Differently Abled, Chronically Ill and Orphans households are taking part in issuance of identify cards	Baseline Survey, project Document, FGD, PRA	Quarterly	CO	
		Number of Destitute, Below Poverty Line families, Old Aged, Differently Abled, Chronically Ill and Orphans households are taking part in opening accounts in the bank, receiving assistance	Official record	Quarterly	CO	

Activities	Type of works to be done	Indicators	Data collection instrument/ Method	Frequency	Responsibility	Remarks
		amounts through cheques				
		Number of separate training delivered for women and other vulnerable groups	Official record	Quarterly	CO	
6. SEVCDP implementation		% of SEC members among the project participants	FGD, PRA	Quarterly	CO	
		% of SEC are restricted from using common resources	FGD, PRA	Quarterly	CO	
		Number of affected homesteads of SEC members	FGD, PRA	Quarterly	CO	
<b>d. INPUT MONITORING</b>						
CAP preparation		Number of stakeholders participated in the preparation of CAP	Official record	Monthly	CO	
		% of women among the participants of stakeholder meeting	Official record	Monthly	CO	
		% of other vulnerable group representatives participated in the stakeholder meeting	Official record	Monthly	CO	
IEC campaign		Number of IEC campaign held	Official record	Monthly	CO	
		% of villagers participated in the IEC campaign	Official record	Monthly	CO	