

Annexure 6-B: Environmental Survey Checklist (Existing)

SCREENING CHECKLIST – SERICULTURE AND HANDLOOM & TEXTILES SECTOR (EXISTING)

ASSAM AGRIBUSINESS AND RURAL TRANSFORMATION PROJECT

<u>Basic Information</u>	
Name of Project :	
Village :	Cluster:
Block :	District:
Type of the Project :	
Total Area :	
Name of Monitor's :	
Name of Supervisor :	

SI. No.	Questions asked to the Farmers	Response	Specify/Remarks
1.	Area of the plantation Plot?		
2.	Is the plot located within or near to any environmentally sensitive area like notified forest area, biosphere reserve, wildlife sanctuary, wetland, etc.?		
3.	What plant variety will be cultivated under APART demonstration?		
4.	Type of silk worm will be reared under APART? (Eri/Muga)		
5.	Status of Land ownership? (Patta land, Lease land, Exonia, Govt. Land, Etc.)		
6.	How many times a year the farmers rear?		
7.	What are the disturbances faced by Farmers in culturing the worms/from pests/insects/animals/birds/tree?		
8.	What action has been taken in case of such disturbances?		
9.	What are the common birds, insects, amphibians etc. found in the field. Any loss of commonly found species?		
10.	Do the farmers use chemicals, pesticides and fertilizers?		
11.	What are those (formaldehyde, bleaching powder, hydrogen peroxide, etc.)?		
12.	From where do they buy the pesticides and what is the amount required?		

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TEXTILES SECTOR (EXISTING)**

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13.	Do the farmers have proper storage facility for the chemicals?		
14.	Do they use any Personal Protective Equipment at the time of handling the chemicals?		
15.	When and what are the types of wastes (both solid and liquid) generated during the entire process?		
16.	What is the amount of waste generated in a day?		
17.	Where the wastes are being disposed?		
18.	What cleaning agents and disinfectants are used by the farmers?		
19.	Do the farmers practice dyeing?		
20.	What types of chemicals are used in dyeing?		
21.	What is the source of energy used for cocoon boiling? Were they able to meet the requirement?		
22.	From where do they collect it (in case of fire woods)?		
23.	What is the source of water they use?		
24.	What is the amount required daily and were they able to meet the daily requirements?		
25.	Where the boiled water is disposed and what is the amount disposed daily?		
26.	Do they follow the safety techniques like wearing masks and gloves during the process?		
27.	Dimension of the rearing house?		
28.	Does the processing house have proper ventilation and high stack facility?		
29.	Are the farmers aware of their health and what are the types of medical facilities provided?		

ANNEXURE 7: ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (BY PROJECT SECTORS)

Sericulture, Handloom and Textile Sector

Sl. No.	Project Stage	Project Activity	Environmental / Operational Impacts	Mitigation Measures
1.	Pre-Construction Stage Impacts	<ul style="list-style-type: none"> • Land requirement • Land filling • Establishment of Village Grazing Reserve (VGR). 	<ul style="list-style-type: none"> • Permanent/ temporary loss of agricultural land and other assets at the project site and its influence area • Impact to the local ecology (flora and fauna) • Change in landuse pattern 	<ul style="list-style-type: none"> • Provision of compensation for the affected people (PAP's) as per the proposed Entitlement Matrix. • In the worst case, there should be a provision for Resettlement and Rehabilitation (R&R) • Use of participatory methods to include affected people in decision making process. • Compensatory measures for restoring the affected flora and fauna should be explored. • Provision should be made as per the existing landuse policies, laws and land rights
2.	Construction Stage Impacts	<ul style="list-style-type: none"> • Upgradation of roads and culverts. 	<ul style="list-style-type: none"> • Generation of noise from construction machineries. • Air pollution (dust and emission) resulting from the movement of construction vehicles and from the construction site. • Surface water quality may get deteriorated due to the runoff from the construction site • Degradation of soil quality. • Loss of Top soil • Transportation of construction materials 	<ul style="list-style-type: none"> • Construction machineries should be fitted with acoustic proof to reduce noise levels. • Construction activities should be avoided near environmental sensitive areas. • Construction activities which causes high noise levels should be performed during the day time • Application of water sprays should be carried out to reduce dust emission • All the vehicles must have valid PUC certificates at all the time during construction phase of the project • Wastewater that is generated from site activities should be collected in settlement tanks / soak pit and should be disposed according to environmental regulations (as per CPCB wastewater discharge standards). • No burning of materials should be carried out on site. • Proper handling and care should be taken of the wastes that are generated at the site to avoid run off. • Top soil should be preserved and it shall be reused for landscaping/ horticulture etc.,

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				<ul style="list-style-type: none"> The contractor should obtain the construction material only from approved quarries / sites. All vehicles transporting construction material shall be covered with Tarpaulin to avoid fugitive dust during transportation
		<ul style="list-style-type: none"> Construction of Community Jali House, Community Resting House, Well-acquainted Grainage House, Mounting cum Cocoon House and Reshom Huts. 	<ul style="list-style-type: none"> Generation of construction and demolition wastes like, metal scrapers, bricks, cement, stones etc. Generation of excavated soils Habitat modification. Transportation of construction materials 	<ul style="list-style-type: none"> Reusing and recycling of the wastes are to be adopted for those other than hazardous wastes which will be removed and managed by licensed vendors. For wastes which could not be reused or recycled, a reputable collector should be employed by the Contractor to remove this waste to landfill. Construction spoils shall be reused to the extent possible as a filling material/ construction purposes. Implementation of Solid Waste Management Plan/Practice. The contractor should obtain the construction material only from approved quarries / sites. All vehicles transporting construction material shall be covered with Tarpaulin to avoid fugitive dust during transportation
		<ul style="list-style-type: none"> Engagement of labours for construction purpose and their settlement (construction labour camps) 	<p>Waste generation from labour camp.</p> <p>Exploitation of land and water resources.</p> <p>Modification of land for their establishment.</p>	<p>Proper toilets and waste disposal areas should be provided to the labours residing at the site.</p> <p>Water for drinking and sanitation purposes should be supplied in order to reduce exploitation of water resources.</p> <p>Uncultivable / barren land should be used as temporary settlement (construction labour camps) for the labours.</p>
3.	<p>Operation Stage Impact</p> <p>Production Enhancement</p>	<ul style="list-style-type: none"> Indigenous species 	<ul style="list-style-type: none"> Selection of silkworm species that cannot adapt to the local climatic conditions will lead to economical loss or will result in low productivity. 	<ul style="list-style-type: none"> Suitable silkworm species should be selected with respect to the climate adaptability. Indigenous species should be promoted by Seed provider centers Promoting interaction with technician of seed provider would be helpful to make a suitable choice as per climate and season

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				<p>requirement.</p> <ul style="list-style-type: none"> • Provide awareness to the farmers about the importance of climate adaptability benefits of ingenious silkworm species
		<ul style="list-style-type: none"> • Use of chemical fertilizer and pesticides 	<ul style="list-style-type: none"> • Use of Chemicals/fertilizer as a disinfectant for destroying pests shall have impact on the quality of the silk and also it has indirect impact on the farmers health over a period of time 	<ul style="list-style-type: none"> • Use of pesticide on mulberry tree to protect it from other pests should be used in limits as per technical guidance • Proper monitoring should be carried out to maintain the proper use of chemicals. • Unlicensed shop dealing with the fertilizers, pesticides and chemicals should be banned.
		<ul style="list-style-type: none"> • Problem due to the birds and animals 	<ul style="list-style-type: none"> • Problem from animals and birds in the farming areas (In case of Muga silk worms some insect eating birds often target the silk worms as their prey. Monkeys damage the feed plant cultivated by the farmers) 	<ul style="list-style-type: none"> • The entire feed plant should be covered with mosquito net to prevent insect eating birds and to protect the feed plant from animals like monkeys and other night dwellers
		<ul style="list-style-type: none"> • Maintaining hygienic conditions. 	<ul style="list-style-type: none"> • Adoption of Sericulture techniques inside the farmer's house leads to allergic diseases to both adults and children. • Unhygienic conditions also lead to contamination of microbes to the pupa and silk worms. 	<ul style="list-style-type: none"> • Proper training on precaution measures to be practiced during sericulture farming should be provided. • The culture area should be kept away from the common living area and it should be away from children.
		<ul style="list-style-type: none"> • Rearing and boiling of cocoons. 	<ul style="list-style-type: none"> • Skin infections due to boiling and handling of the worms. • Exposure to biological and microbiological agents. • Asthma, cough, lung infections. 	<ul style="list-style-type: none"> • Use of personal protective equipment like gloves, goggles, masks, boots, earplugs. • Medical checkup after a certain interval of time.
		<ul style="list-style-type: none"> • Waste disposal 	<ul style="list-style-type: none"> • Disposal of waste water generated after boiling of cocoons is a common problem. • Wastewater containing chemicals dyes and detergents are harmful to the aquatic and terrestrial environment, when disposed in the ponds/ waterbodies or nearby areas • Depletion of DO in the 	<ul style="list-style-type: none"> • Awareness program should be conducted to the farmers for managing solid waste and waste water. • Awareness must be provided to farmers as not to dispose/ drain the waste water in the nearby areas. • Promoting the use of pupae which is left over after reeling (it is rich in protein) as poultry and fish food. • Proper waste management techniques should be followed.

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			<p>waterbodies</p> <ul style="list-style-type: none"> • Destruction of soil microbes and reduction in the natural soil fertility with alteration in permeability of soils. • Persistence of pollutants in soil over longer period also contaminates the ground water. 	<ul style="list-style-type: none"> • Adequate drainage facilities should be provided to both farm and industry. • Training program on ecofriendly culturing techniques and practices.
		• Reeling, boiler, and grainage.	<ul style="list-style-type: none"> • Release of Sulphur, Carbon, Volatile Organic solvents, dust and soot. • Toxic to environment and cause occupational health problems. 	<ul style="list-style-type: none"> • The unit should have adequate ventilation system. • Use of filters or scrubbers to eliminate or reduce particles.
		• Shortage of Storage facilities	<ul style="list-style-type: none"> • The enhanced production of silk may need more storage area/space with reeling / weaving unit and if the demand is not properly met the quality may deteriorate in due course of time 	<ul style="list-style-type: none"> • Proper ventilation must be available at the storage house so that temperature would be in control.
		• Power Requirement for Weaving and Unit operation	<ul style="list-style-type: none"> • Requirement of energy for controlling the room temperature and for boiling operations may lead to power shortage problems 	<ul style="list-style-type: none"> • Alternate energy options such as solar energy, biomass energy should be promoted to meet the energy demand.
		• Weaving and production of cloths.	<ul style="list-style-type: none"> • Generation of noise. 	<ul style="list-style-type: none"> • Restricted operating hours. • Use of personal protective equipment like ear plugs while weaving.
		• Awareness	<ul style="list-style-type: none"> • Lack of awareness among small beneficiaries for sustainable Sericulture practices. 	<ul style="list-style-type: none"> • Provision of awareness and capacity building to the farmers, participating communities, local authorities, extension agents, development practitioners etc., on the promising approaches to minimise environmental impacts due to sericulture practices
4.	Post Construction and Operation Stage Impacts	• Packaging of the silk products.	<ul style="list-style-type: none"> • Packaged wastes generated at community level. 	<ul style="list-style-type: none"> • Use of biodegradable packaging materials. • Recycling of the packing covers.
		• Transportation	<ul style="list-style-type: none"> • Vehicular emission to the ambient atmosphere. 	<ul style="list-style-type: none"> • BS-IV vehicles with valid emission certificate should be used for transportation.
		• Marketing.	<ul style="list-style-type: none"> • Market waste generation. 	<ul style="list-style-type: none"> • Proper waste disposal techniques should be followed in the market.