

WAREHOUSE RECEIPT PROJECT
ENVIRONMENTAL MANAGEMENT
FRAMEWORK&ENVIRONMENTAL, HEALTH AND SAFETY
GUIDELINES

MINISTRY OF FINANCE AND PLANNING

APRIL 2011

Abbreviations

ACWRS	Agricultural Commodity Warehouse Receipt System
CCA	Coast Conservation Act
CCD	Coast Conservation Department
CEA	Central Environmental Authority
DWC	Department of Wildlife Conservation
EA	Environmental Assessment
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMP	Environmental Management Plan
FFPO	Fauna and Flora Protection Ordinance
GOSL	Government of Sri Lanka
IDA	International Development Association
IEE	Initial Environmental Examination
NEA	National Environmental Act
OP	Operational Policy
PIU	Project Implementation Unit
SMEDeF	Small and Medium Enterprise Development Facility
TOR	Terms of Reference
WB	World Bank

Table of Contents

Abbreviations	i
1. Introduction.....	1
1.1 Background.....	1
1.2 Project Description.....	1
1.2.1 Project Objective.....	1
1.2.2 Project Components	1
1.3 Purpose of the Environmental, Health and Safety Guidelines and Environmental Management Framework	2
2. Environmental Safeguards Policies	4
2.1 National Policies	4
2.1.1 National Environmental Act	4
2.1.2 Other legislation that requires Environmental Assessments	4
2.1.3 Applicability of National Polices	4
2.2 World Bank Policies	5
2.2.1 Environmental Assessment (OP 4.01)	5
3. Anticipated Environmental Impacts, Screening & Mitigation.....	6
3.1 Environmental Impacts	6
3.2 Screening Process	7
3.2.1 Renovation of existing warehouses.....	7
3.2.2 Establishment of new warehouses	7
3.3 Mitigation Measures	8
3.3.1 General measures	8
3.3.2 Environmental, Health and Safety Guidelines	10
3.3.3 Contractual Conditions	14
4. Implementation and Monitoring Arrangements.....	15
4.1 Renovation of existing warehouses.....	15
4.1.1 Minor renovation work	15
4.1.2 Major renovation work.....	15
4.2 Establishment of new warehouses	15
Annex 1.....	17
Annex 2.....	22

1. Introduction

1.1 Background

Funds have been secured from the Multi Donor Trust Fund for Food Price Crisis Response Program to establish pilots in areas that have a critical mass of the crops (grains and pulses). These pilots would then be scaled up, if proven successful. The warehouse receipt mechanism was chosen because it ensures that farmers can store their crops during the glut period; have access to the certified products when needed; use the products as collateral for commercial bank loans through a receipt that would be issued by certified warehouses; obtain access to international markets with standard quality products and ensure food security. This mechanism can have tremendous impact on the rural dwellers, especially those in the North and East, who are just recovering from the war and where agriculture has started to blossom. A Warehouse receipt mechanism that is designed to provide a receipt as an electronic and negotiable financial instrument can also trigger the establishment of a commodity exchange platform, currently lacking in Sri Lanka.

At this stage of the project the typical interventions are known. However, the exact localities are unknown. On that basis, an Environmental, Health and Safety (EHS) Guidelines and Environmental Management Framework (EMF) have been developed, which will serve as a template and mitigatory measures for undertaking environmental management of Project activities to ensure environmental sustainability of the project interventions. Based on the typical physical interventions supported under the Project, which is limited to renovation and establishment of warehouses for food storage, it is not anticipated that the Project will result in any significant adverse and irreversible environmental impacts. Therefore, the Project is classified as a Safeguards Category B activity.

1.2 Project Description

1.2.1 Project Objective

The main objective of the project is to pilot an electronic and negotiable financial instrument framework for warehouse receipts financing system that would facilitate access to finance and access to quality storage by farmers during the whole cycle of production thereby enabling farmers (i) to improve the productivity and quality of their produce, (ii) get better prices by being empowered in the supply chain, and (iii) decrease waste in the supply chain, and hence ensuring food security for the country, the region and in some products even globally. The project will also (iv) moderate the burden of risk taking by the farmers via the introduction of a weather index based insurance program that will add an extra mechanism for reducing risks at the farm level.

1.2.2 Project Components

(a) **Establishment /renovation of 12 warehouses ---\$ 3.8 million.** Renovating initially of 12 warehouses in specific locations for specific crops especially in the north and east provinces that have been under conflict. These warehouses would be located in locations that have a critical amount of crops (grains/pulses) that need to be stored for a short period (3 months) before they

can go on the market. It is during these three months that there is a glut and when the farmers get very low prices for these crops. This would stabilize market prices in this region, lead to increased production for the market thus commercializing their operations and thereby ensuring food security, increased nutrition and incomes.

(b) Product Development (insurance and performance guarantees) -- 1.5million: Develop together with insurance companies an insurance guarantee fund to back the Agricultural Commodity Warehouse Receipt System (ACWRS) and develop a business plan for self-sustainability of the ACWRS. This component will also support the development of insurance products to mitigate weather risks and for high value livestock for farmers. The component would pilot a number of crop and livestock products and would develop other agricultural risk mitigation mechanism and products, etc. For warehouse receipts to be accepted by buyers, sellers, and Banks, there must be a performance guarantee for warehouses. This guarantee provides compensation if stored goods do not match what is specified by the receipt, either due to negligence or fraud by the warehouse. Without such guarantees farmers and traders will be reluctant to store crops and banks will be unwilling to accept receipts as collateral for financing. Performance guarantees are usually in the form of insurance bonds or letters of credit

(c) Capacity Building ,Technical Assistance and awareness Creation--\$0.45 million: These funds will support training, capacity enhancement and TA to village organizations and commercial operators including banks and the commodity marketing players, input suppliers, etc. to develop beneficial partnerships to both parties. Identification of stakeholder awareness needs, development of promotional materials, dissemination of the necessary information through electronic and media, including promotional workshops will be done.

(d) Monitoring and Evaluation--\$ 0.25 million:This will involve the establishment of a baseline survey, annual field based monitoring, impact assessments, etc.

(e) Project Management ---\$ 0.5 million: This component will support the establishment of warehouses, delivery of training and TA. This would include international and domestic technical assistance, training, communications and auditing, etc. There is an already existing PIU that is implementing the World Bank's Small and Medium Enterprise Development Facility (SMEDeF) Project. This intervention will be managed by the same unit, since the intervention directly contributes to the objectives of SMEDeF project and there is a direct link between the two. The same PIU will ensure coordination and judicious use of resources.

1.3 Purpose of the Environmental, Health and Safety Guidelines and Environmental Management Framework

The main purpose of the Environmental, Health and Safety (EHS) Guidelines and Environmental Management Framework (EMF) are to identify potential environmental impacts of the project and to provide broad guidelines and framework outlining measures and processes that need to be adopted by the project and integrated into project implementation to mitigate any adverse environmental impacts.

Projects and Programs financed with International Development Association (IDA) resources or resources managed by IDA need to comply with World Bank Operational Policies. Therefore,

all activities funded under this project will be required to satisfy the World Bank's safeguard policies, in addition to conformity with the relevant legislation of the Government of Sri Lanka (GOSL). Consistent with existing national legislation, the objective of the Guidelines and the Framework is to help ensure that activities under the proposed project will:

- Protect human health;
- Prevent environmental degradation as a result of construction work and operationalizing the warehouses;
- Enhance positive environmental and social outcomes; and
- Ensure compliance with World Bank safeguard policies and relevant national policies.

The document provides the necessary background for environmental dimensions to be built into the design of the renovation and construction activities in order to ensure that project implementation will take place in an environmentally sustainable manner. To aid this process, the EHS Guidelines and EMF set directions and procedures, which is intended to direct the process of planning and managing environmental concerns of project activities.

Compliance with the relevant provisions of the EHS Guidelines and EMF will be a pre-requisite for fund disbursements under the Project. Moreover, the EHS Guidelines and EMF will provide mechanisms for monitoring and post evaluation so that any present or future impact can be identified and resolved quickly.

2. Environmental Safeguards Policies

2.1 National Policies

2.1.1 National Environmental Act

In 1981 GOSL passed the National Environmental Act (NEA) and in 1982, created the Central Environmental Authority (CEA) as a regulatory and enforcement agency. The CEA's statutory and enforcement powers were strengthened significantly in 1988, by an amendment to the NEA. A cabinet level ministry to handle the subject of environment was created in 1990, with the appointment of a Minister of Environment to ensure that environmental issues will be given the required attention. Under provisions of Part IV C of the NEA No. 47 of 1980 as stipulated in Gazette (Extra Ordinary) No. 772/22 dated June 24, 1993 GOSL made Environmental Assessment (EA) a legal requirement for a range of development projects. The list of projects requiring an EA is prescribed in the above Gazette notification.

2.1.2 Other legislation that requires Environmental Assessments

In addition to the NEA, which is the most important legislation governing the process of EA, there are two other relevant legislations under which EA can be required.

Coast Conservation Act (CCA) No.57 of 1981 implemented by the Coast Conservation Department (CCD) and applicable to the coastal zone as defined in the Act. The coastal zone as it pertains to this project is considered to be 300 meters inland from the high water mark. Therefore, any road works within this zone falls under the jurisdiction of CCD. Director of the CCD has the discretion to request for an Environmental Impact Assessment/Initial Environmental Examination (EIA/IEE) from the project proponent if the initial screening reveals significant impacts in the coastal areas by the project.

Fauna and Flora Protection Ordinance (FFPO) No.2 of 1937 (amended in 1993) implemented by the Department of Wildlife Conservation (DWC). This act specifies that any development activity that takes place within one mile of the boundary of a National Reserve declared under the Ordinance require an EIA/IEE. The FFPO follows a similar process as the NEA in conducting scoping, setting the Terms of Reference (ToR), and preparation of EA, review of EA and public consultation and disclosure. The decision of project approval or disapproval is finally granted by the Director of the DWC.

2.1.3 Applicability of National Policies

Renovation of existing warehouses will not require compliance towards the NEA, as the type of activities proposed under the project does not fall within in list of projects that require EA. However, if new warehouses are to be established, the project should ensure that it avoids areas identified in Schedule III.

For new construction of warehouses in the coastal zone, prior concurrence should be obtained from CCD for the selected land and construction activity.

For World Bank financed projects, any works within land under FFPO and Forest Ordinance are not allowed. Therefore, the applicability of FFPO would not arise.

2.2 World Bank Policies

2.2.1 Environmental Assessment (OP 4.01)

The most likely safeguard policy to be triggered under this project will be OP4.01 on Environmental Assessment. The purpose of conducting an environmental assessment (EA) is to identify environmental and social consequences of the proposed sub-projects or components, in order to:

- Ensure the identification of potential environmental issues and social concerns early in the implementation of a proposed project to incorporate necessary safeguards in project design in order to prevent potential adverse impacts by determining appropriate mitigation and compensation measures;
- Minimize risks and enhance positive impacts/benefits;
- Avoid delays and extra costs which may subsequently arise due to unanticipated environmental and social problems;
- Ensure that the concerns of residents and affected communities are addressed; and
- Identify the potential for maximizing environmental resources management and socio-economic benefits to local communities within the scope of the sub-project.

3. Anticipated Environmental Impacts, Screening & Mitigation

3.1 Environmental Impacts

Project will support the renovation and establishment of new warehouses focused on North and East of Sri Lanka. Adverse environmental impacts of renovation activities are minimal since these buildings were already on site, therefore its potential impacts are construction and occupation related. Establishing new warehouses could generate adverse environmental impacts due to site selection, construction and operations. However, such impacts will not be irreversible or cumulative.

The potential environmental impacts of renovation and establishment of warehouses are related to site clearance and debris disposal, which must be disposed off in a designated municipal solid waste disposal landfill within the respective Local Authority area. Disposal of waste water and sewage will also be a problem during occupation of the buildings. Local Authority Ordinances have specific guidelines and regulations for disposal of wastewater and sewage. In addition, storage conditions such as sanitation, lighting, ventilation, waste, pest and employee requirements if not properly planned and established can cause health and safety issues. New constructions will not have a large impact on raw material such as sand, gravel and wood. However, due to cumulative effects of substantive number of infrastructure projects in the North and East, the pressure to raw material sources should be minimized through usage of material extracted through licensed vendors. Overall house-keeping of the site during works will ensure most of the environmental issues that may arise due to project activities are minimized and managed at an acceptable level.

Sri Lanka has a long standing culture of implementation of Building Codes and all buildings require approval from the Local Government Authority of the area. Approval is granted based on compliance with established Building Codes. Past experience has demonstrated that enforcement of Building Codes have been reasonably effective. New warehouse designers should be encouraged to use green building guidelines, contractors and employees during operations phase to manage consumption energy, water, material, etc.

Food warehouses must be built in a non-hazardous environment and maintained in good condition to prevent adulteration of stored food. Employees who work in food warehouses should observe proper hygienic guidelines and sanitation standard operating procedures. Proper employee facilities should be in place, such as toilets, hand washing areas, changing rooms, lunch rooms, etc to prevent contamination of stored food. Proper protocols should be implemented for transportation, receiving and storage of food.

Project will follow the overall EHS Guidelines outlined under the sub-section on mitigation. Adherence to the relevant EHS Guidelines and other specific practices will be a contractual condition for the contractors and/or Government agencies responsible for reconstruction.

In the event that new buildings are supported under the Project, an IEE will be required to be undertaken and approved by IDA prior to construction. The project will not support land filling of low-lying land. The project will not support any construction or material extraction for the project on designated forest reserves and wildlife protected areas.

3.2 Screening Process

3.2.1 Renovation of existing warehouses

If the warehouse selected is fairly intact and only minor construction work is necessary, it is adequate to follow the general mitigation measures and EHS Guidelines provided under the mitigation sub-section.

If the warehouse selected requires substantive construction work and modifications, a limited Environmental Management Plan (EMP) should be prepared prior to commencement of works.

The implementation of general mitigation measures, EHS Guidelines and EMPs should be part of the contract documents.

3.2.2 Establishment of new warehouses

The Annex 1 provides the screening checklist to be completed for new construction of warehouses. Based on the findings of the checklist, a decision will be made if an EMP, an IEE or an EIA will be necessary for the proposed activity. The screening checklist will also identify potential impacts of these activities.

Having identified the potential impacts of the proposed project activities, the next most important step of the process is the identification and development of measures aimed at eliminating, offsetting and/or reducing impacts to levels that are environmentally acceptable during implementation and operation of the project. EMPs provide an essential link between the impacts predicted and mitigation measures and implementation and operation activities. World Bank guidelines state that detailed EMP's are essential elements for Category B projects. While there are no standard formats for EMPs, it is recognized that the format needs to fit the circumstances in which the EMP is being developed and the requirements, which it is, designed to meet. If IEE or EIA needs to be conducted, the terms of reference (TOR) for the assessment and the reports of IEE/EIA have to be cleared by IDA.

The implementation of EMPs (either developed as stand-alone or as part of the IEE/EIA) should be part of the contract documents.

3.3 Mitigation Measures

3.3.1 General measures

Threshold	Typical activities envisaged	Typical environmental concerns	Typical Mitigation/Enhancement Measures to be included
Renovation of existing warehouses	<ul style="list-style-type: none"> • Removal of debris • Repairs, reconstruction and improvements 	<ul style="list-style-type: none"> • Excessive waste generation • Unhealthy indoor air quality • Improper debris disposal • Sourcing of material from unsustainable sources or from sensitive ecosystems • Impacts on cultural property 	<ul style="list-style-type: none"> • Construction waste reduction and providing good indoor air quality, through properly ventilation and materials installation sequencing • If any site excavation is required during renovation that exposes new or existing basement wall construction, install impermeable membranes as appropriate to protect against air/moisture penetration • Debris disposal in safe areas; particularly avoiding sensitive and protected ecosystems; rehabilitation of dump sites after disposal is completed • Sourcing of material with the necessary licenses/ permits/ approvals, completely avoiding protected areas and forest reserves • Use of disaster-resistant techniques and material where possible • Use of quality material • Minimize air and water penetration by using low-emitting sealant for caulking, proper weather-stripping around doors, and rubber gaskets to seal electrical outlets • At a minimum, specify photocell control for all exterior lighting controls. For interior lighting, specify either compact fluorescent lighting or low mercury, T-8/linear fluorescent lamps with electronic ballasts • Provide proper drainage system and waste disposal system • Maximum means for natural ventilation of interior enclosed spaces through designing for cross-breezes • Inclusion of safe and healthy environment using EHS guidelines • Inclusion of good house-keeping techniques to manage the site during construction • Activities on or adjacent to historic buildings / sites are reviewed/ designed by qualified specialists

Threshold	Typical activities envisaged	Typical environmental concerns	Typical Mitigation/Enhancement Measures to be included
Establishment of new warehouses	<ul style="list-style-type: none"> • Land preparation • Removal of debris • Construction work 	<ul style="list-style-type: none"> • Impacts on the land • Soil erosion • Excessive waste generation • Unhealthy indoor air quality • Improper debris disposal • Improper design for the purpose • Sourcing of material from unsustainable sources or from sensitive ecosystems • Impacts on cultural property 	<ul style="list-style-type: none"> • Land should not be low-lying and within the areas identified in the Schedule III of NEA • Avoid scheduling significant site work during the rainy season. • Have a protection plan for top soil and minimize cut and fill requirements • Planning of the building should be done to reduce the removal of trees if existing on the land • Construction waste reduction and providing good indoor air quality, through properly ventilation and materials installation sequencing • Debris disposal in safe areas; particularly avoiding sensitive and protected ecosystems; rehabilitation of dump sites after disposal is completed • Sourcing of material with the necessary licenses/ permits/ approvals, completely avoiding protected areas and forest reserves • Use of disaster-resistant techniques and material where possible • Use of quality material • Minimize air and water penetration by using low-emitting sealant for caulking, proper weather-strippingstripping around doors, and rubber gaskets to seal electrical outlets • At a minimum, specify photocell control for all exterior lighting controls. For interior lighting, specify either compact fluorescent lighting or low mercury, T-8/linear fluorescent lamps with electronic ballasts • Provide proper drainage system and waste disposal system • Maximum means for natural ventilation of interior enclosed spaces through designing for cross-breezes • Inclusion of safe and healthy environment using EHS guidelines • Inclusion of good house-keeping techniques to manage the site during construction • Activities on or adjacent to historic buildings / sites are reviewed/ designed by qualified specialists

Main principles of sustainable warehouse design

- Respects and responds to the unique characteristics of each site while recognizing the interdependence of the entire planet;

- Conserves energy both by minimizing the energy used in the construction process, as well as by specifying energy-efficient systems, fixtures, appliances and controls, and by maximizing natural daylighting within the building;
- Uses environmentally responsible materials that are less toxic, made with recycled materials, manufactured with low embodied energy, and come from renewable, salvaged, and certified sustainable sources;
- Conserves water by reducing consumption and by reclaiming and reusing water, when possible;
- Provides a healthy environment by reducing or eliminating the use or release of toxins and pollutants; and,
- Reduces or eliminates waste by reducing consumption, reusing materials and recycling, and designing for flexibility to reduce the waste generated from future remodeling.

3.3.2 Environmental, Health and Safety Guidelines

The following guidelines are for setting up (including designing) and operationalizing dry food storage warehouses. The design consultants for both the renovations and new construction should ensure that these guidelines are taken into account during the design process.

Area of attention	Guidelines
1. Warehouse grounds	<ul style="list-style-type: none"> • Free from weeds, grass and bush • Free from trash, rodent tracks and burrows • Free from standing water and clogged drains • Walkways and driveways paved and kept in a good condition • Well drained • Located away from potential environmental hazards
2. Warehouse building (external)	<ul style="list-style-type: none"> • Walls and roofs should be painted and maintained in a good condition • Doors and windows should be screened and proofed • Walls and ceilings should be free from cracks and holes • Pipes entering the building should be sealed properly to prevent entry of pests • Roofs should be maintained in a good condition and not leak • Asbestos products such as asbestos-corrugated roofing, , asbestos flat sheets, asbestos cement pipes, asbestos water storage tanks, asbestos cement rainwater gutters should be avoided • No overhead waste drain pipes or other overhead piping shall be used which presents a risk of contamination to foods stored below due to excess condensation. Protective shields may be used to eliminate this risk
3. Warehouse building (internal)	<ul style="list-style-type: none"> • Floors, walls and ceiling should be smooth, clean and maintained in good condition to prevent cross contamination • Windows and doors should seal tightly to prevent entry of pests • No dead spaces around equipment or other structures that would provide habitat for pests and prevent efficient cleaning • Warehouse equipment and furniture should be rust resistant, odor resistant, non-porous, easily cleaned and sanitized, suitably colored, food grade or compatible, non-toxic, located in an area that facilitated easy cleaning and maintenance and free from grease and other chemical or physical

Area of attention	Guidelines
	contaminants
4. Warehouse storage conditions	<ul style="list-style-type: none"> • Storage methods shall be used which will minimize deterioration and prevent contamination of stored food products. Shelves, cabinets, dunnage and pallets shall be used where necessary to protect stored food products from contamination or deterioration. 46cm off ground, 46 cm off wall and 5 cm ceiling clearance • Non crowded with sufficient working aisle space • Clean and sanitary • Food items stored and rotated on a first-in-first-out basis • Maintained at proper temperature and humidity • Free from physical, chemical and microbiological hazards • Dry storage areas should be between 10°C and 21°C – ideal condition for grains are temperatures 4.4°C – 16°C and relative humidity 50% - 60% • Thermometers should be present with on-site temperature logs • Adequate lighting, which is essential for general cleaning, reading and identifying labels and colors, recognizing the condition of the food stored, preventing injuries, inspection of premises and preventing cross contamination of food products • Safety shields on lights or safety type lights shall be used where needed for the protection of food storage.
5. Warehouse ventilation	<ul style="list-style-type: none"> • Good ventilation to prevent excessive heat, steam condensation and /or dust from accumulating within a confined area • Ventilation path should never be from dirty to clean area • Opening should be screen proofed • Should be natural or artificial based on the siting
6. Warehouse storage and handling of hazardous materials	<ul style="list-style-type: none"> • Hazardous chemicals such as pesticides, cleaning solvents, lubricants and other compounds should be safely and securely stored • Access only provided to authorized and trained employees • Properly labeled • Follow manufacturer’s instructions as to the quantity of safe use • Use protective ware when handling hazardous material
7. Warehouse sanitary operations	<ul style="list-style-type: none"> • Sanitary conditions of the warehouse should be acceptable at all times to avoid contamination of food products • Ensure detergents, sanitizers, hazardous materials and other supplies used in safe and effective manner • Cleaning compounds and hazardous materials kept in containers, stored separate from food products • Garbage properly stored and protected from insects, rodents and other pests and disposed in an adequate manner preferably out of site • All liquid waste resulting from cleaning floors, equipment, flushing toilets, handwashing facilities, refrigeration equipment and air conditioners shall be disposed of in a sanitary manner • A permanent cleaning and disinfecting schedule should be developed and enforced • All cleaning workers should be well trained in cleaning and disinfecting procedures, which should be carried out safely • Warehouse chemicals for disinfection <ul style="list-style-type: none"> ○ Chlorine and chlorine-based products

Area of attention	Guidelines
	<ul style="list-style-type: none"> - 100-250mg of available chlorine per liter - 2 minutes exposure time - Rinse after exposure o Lodophors <ul style="list-style-type: none"> - 25-50mg per liter of available iodine - 2 minutes exposure time - Rinse after exposure o Quaternary ammonium compounds <ul style="list-style-type: none"> - 200-300mg per liter\2 minutes exposure time - Rinse thoroughly after exposure
8. Safety from fire	<ul style="list-style-type: none"> • Ensure the warehouse have adequate measure in place avoid fires from occurring • Ongoing monitoring of fire risks and taking action to eliminate or reduce the risk • Ensuring that fire safety measures and means of escape are kept in working order • The training of staff on safety requirements, use of fire safety equipment and practice of emergency evacuation plans • Taking command in the event of a fire, until the arrival of the fire and rescue services
9. Requirements for incoming raw material in food warehouses	<ul style="list-style-type: none"> • Should be within the required temperature of food product • Absence of pesticide residues • Microbial quality • Chemical quality • Absence of physical contaminants • Clean and sanitary transportation conditions • Grade and type • Confirm with regulatory agency's standards • Absence of insects, rodents and bird activity
10. Rotation of stored food in warehouse	<ul style="list-style-type: none"> • Food products should be rotated based on the expiry date and perishability • Old products should be kept in front of new products • All incoming products should be dated • Food containers should not be dusty, faded or discolored
11. Repacking operations in food warehouse	<ul style="list-style-type: none"> • Should be done under strict hygienic and sanitary conditions • All equipment should be clean free from debris and properly sanitized • Packaging should be graded and unadulterated • Audit for quality by ensuing all packaging seams are intact, no foreign contaminants, filled to stated weight or volume • Audit for safety by performing random or systematic sampling of repackaging products for chemical. Physical and microbiological consistency
12. Quarantine in food warehouse	<ul style="list-style-type: none"> • Products spoiled by physical, chemical and microbiological damage, insects, rodents or other causes should be stored in a designated quarantine area • Quarantine items should be disposed of quickly to avoid pest harborage and infestation of stored food • Incoming materials that are damaged and not in accordance with suppliers specifications should be rejected
13. Pest control in food warehouse	<ul style="list-style-type: none"> • Perform regular pest inspections in and around warehouse to a schedule • Be vigilant and on the lookout for burrows, urine tracks, fecal pellets, rub

Area of attention	Guidelines
	<p>marks, gnawing marks, hairs, dead rodents, etc.</p> <ul style="list-style-type: none"> • Pesticides are poisonous and should be administered by a competent person with safety equipment • Pesticides should be placed at marked positions throughout the warehouse and checked regularly • Should not use pesticides with ozone depleting substances such as Methyl Bromide • When in use, rodenticides shall be placed in covered bait boxes where necessary as to prevent spillage or possible contamination of stored food and danger to employees. The bait boxes shall be properly labeled with a warning notice. All rodenticide baits shall be applied in such manner as to prevent contamination of stored food products. • All pesticides and rodenticides used for control of vermin shall be registered pursuant to the Pesticide Control Act No. 33 of 1980 and amendment Act No 6 of 1994 and applied in such manner as to protect stored foods from contamination • When a licensed pest control service is employed, it shall file at the warehouse a diagram of the bait station locations and the rodenticide in use. The operator may designate an employee to be responsible for the pest control program being used
14. Employees code of practice in food warehouse	<ul style="list-style-type: none"> • Good hygienic practices • Good sanitary practices • Suitable safety ware such as clothing, face masks, respirators, weight lifting belts and steel tip boots • Properly trained staff
15. Facilities for the employees	<ul style="list-style-type: none"> • Toilets <ul style="list-style-type: none"> ○ Toilets should not open directly into food storage areas ○ Sewage line should not pass under stored food ○ Warning signs of maintaining sanitary conditions - A sign directing employees to wash their hands before returning to work shall be posted in all toilet rooms ○ Toilets should be equipped with soap, sanitizer and portable water ○ Toilets should be maintained clean and sanitary at all times ○ Toilets should be properly ventilated and maybe fitted with extractor fans • Hand washing <ul style="list-style-type: none"> ○ Suitable located and present in sufficient numbers to ensure safe and hygienic operations ○ Prevent cross contamination of stored food • Changing room <ul style="list-style-type: none"> ○ Prevents employees using street clothes during work ○ Provides a place to change clothes, put on protective gear and store clothes ○ Should be maintained in a good condition ○ Separate from males and females
16. Overall operations and maintenance	<ul style="list-style-type: none"> • Encouraging occupants to turn equipment off when not in use • Reducing the amount of operational waste generated • Conserving water • Recycling

Area of attention	Guidelines
	<ul style="list-style-type: none"> • Prevent growth of mold and fungi and building up of cobwebs through regular cleaning

3.3.3 Contractual Conditions

Annex 2 provides a list of generic contractual conditions that should be part of the contract documents of the construction contractors. However, the requirements should not be limited to these conditions and should be prepared in line with the requirements of the EA and/or EMP for a given site.

The design consultant for new constructions should ensure the design makes provisions of EHS guidelines presented above. In addition, the operator of the facility should also develop facility specific protocols based on the EHS guidelines to be followed and employees code of conduct in managing the facility.

4. Implementation and Monitoring Arrangements

The overall responsibility of managing environmental safeguards requirements highlighted in this document is the responsibility of the Project Implementation Unit (PIU). Specific responsibilities and actions to be taken by the PIU are given under the next sub-sections. Wherever, clearances are necessary, the PIU should ensure that those are obtained prior to moving into the next steps.

4.1 Renovation of existing warehouses

4.1.1 Minor renovation work

- (1) Ensure general mitigation measures and appropriate EHS Guidelines are incorporated in the contract documents
- (2) Monitoring the implementation of it once the contract is awarded.
- (3) Preparing operating protocols of the warehouse and including them in the management agreement with the operator
- (4) Monitoring the implementation of the operating protocols

4.1.2 Major renovation work

- (1) Ensure the design takes the EHS guidelines into account
- (2) Preparing the EMP to be followed during construction
- (3) Inclusion of relevant clauses to construction contractor's documents based on the EMP and other guidelines
- (5) Monitoring the implementation of EMP once the contract is awarded
- (4) Preparing of operating protocols of the warehouse and including them in the management agreement with the operator
- (5) Monitoring the implementation of the operating protocols

4.2 Establishment of new warehouses

- (1) Preparing Environmental Checklist (Annex 1) during the identification stage, verification and providing recommendations for next steps
- (2) Ensure the TORs for IEEs/EIAs are prepared and approved
- (3) Ensure a suitable consultant is recruited to conduct the IEE/EIA, review the reports and get the necessary approvals
- (4) Preparation of EMPs to be followed during construction (only where an IEE or EIA is not necessary)

- (5) Ensure the design takes the EHS guidelines and mitigation measures identified in IEE/EIA into account
- (6) Inclusion of relevant clauses to construction contractor's documents based on the EMP and other guidelines
- (7) Monitoring the implementation of EMP once the contract is awarded
- (8) Preparing of operating protocols of the warehouse and including them in the management agreement with the operator
- (9) Monitoring the implementation of the operating protocols

Annex 1

Checklist to Screen Environmental Impacts of New Construction

This Form is to be used by the designated Environmental Officer of the project implementing agency in screening the site for new construction of warehouses.

Note: One copy of this form and accompanying documentation to be kept in the project implementing agency office and one copy to be sent to the World Bank. No-objection to the recommendations should be sort from the World Bank prior to moving to the next-steps.

Name of the subproject:

Warehouse location (include map/sketch):

Land area:

Estimated cost:

Proposed date of commencement of work:

Site visited: Yes No

Stakeholders consulted:

I. Site Related Issues

No.	ISSUES	YES	NO	DO NOT KNOW
1.	Does the construction site require land acquisition or removal of squatters?			
2.	Will the construction site negatively impact livelihoods of people using the land?			
3.	Is the construction site located within 100 meters from the boundaries of or within any area declared under:			
	○ The National Heritage Wilderness Act			
	○ The Forest Ordinance			
	○ The Flora and Fauna Protection Ordinance			
	○ Whether or not such area wholly or partly within the Coastal Zone as defined in the Coast Conservation Act, No. 57 of 1981.			
4.	Is the construction site located in:			
	○ Any erodible area declared under the Soil			

No.	ISSUES	YES	NO	DO NOT KNOW
	Conservation Act			
	<ul style="list-style-type: none"> ○ Any Flood Area declared under the Flood Protection Ordinance and any flood protection area declared under the Sri Lanka Land Reclamation and Development Corporation Act, No. 15 of 1968 as amended by Act, No. 52 of 1982 			
	<ul style="list-style-type: none"> ○ 60 Meters from the bank of a public stream as defined in the Crown Land Ordinance and having a width of more than 25 meters at any point of its course 			
	<ul style="list-style-type: none"> ○ Any reservation beyond the full supply level of a reservoir 			
	<ul style="list-style-type: none"> ○ Any archaeological reserve, ancient or protected monument as defined under the Antiquities Ordinance 			
	<ul style="list-style-type: none"> ○ Any area declared under the Botanic Gardens Ordinance 			
5.	Is the construction site located in an area with unique natural features (e.g. wetlands)?			
6.	Is the construction site located in an area which could create a barrier for the movement of conservation-worthy wildlife and livestock?			
7.	Is the construction located in an area with religious monuments, structures and/or cemeteries?			
8.	Is the construction located in a polluted or contaminated area?			
9.	Is the construction located in an area with mines?			
10.	Is the construction located in an area susceptible to flooding, landslides or erosion?			
11.	Is the construction located in an area of tourist importance?			
12.	Is the construction located on prime agricultural land?			
13.	Is the construction located in an area of high visual or landscape quality?			
14.	Is the construction located near a waste dump?			

II. New Construction Related Issues

No.	ISSUES	Expected Impacts			
		No	Yes		
			Small	Medium	Large
A.	Zoning and Land Use Planning				
1.	Will the construction affect land use zoning and planning or conflict with previous/ existing land use patterns?				
2.	Will the construction involve significant land disturbance or site clearance?				
B.	Utilities and Facilities				
3.	Will the construction require the setting up of ancillary production facilities?				
4.	Will the construction make significant demands on utilities and services?				
5.	Will the construction require significant levels of accommodation or service amenities to support the workforce during construction (e.g. contractor will need more than 20 workers)				
6.	Does the construction have access to portable water?				
7.	Is the construction located far (>1km) from accessible roads?				
8.	Is the construction located in an area with a wastewater network?				
C.	Water and Soil Contamination				
9.	Will the construction require large amounts of raw materials or construction materials?				
10.	Will the construction generate large amounts of residual wastes, construction material wastes or cause soil erosion?				
11.	Will the construction result in potential soil or water contamination (e.g. from oil, grease and fuel from equipment yards)?				
12.	Will the construction lead to contamination of ground and surface waters by herbicides for vegetation control and chemicals (e.g. calcium chloride) for dust control?				
13.	Will the construction lead to an increase in suspended sediments in streams affected by road cut erosion, decline in water quality and increased sedimentation downstream?				

No.	ISSUES	Expected Impacts			
		No	Yes		
			Small	Medium	Large
14.	Will the construction involve the use of chemicals or solvents?				
15.	Will the construction lead to the destruction of vegetation and soil at the site, burrow pits, waste dumps and equipment yards?				
16.	Will the construction lead to the creation of stagnant water bodies in burrow pits, etc. encouraging mosquito breeding and other disease vectors?				
D.	Fauna and Flora				
17.	Will the construction involve the disturbance or modification of exiting drainage channels (rivers, streams, canals) or surface water bodies (wetlands)?				
18.	Will the construction lead to the destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development?				
19.	Will the construction lead to the disruption /destruction of wildlife through interruption of migratory routes, disturbance of wildlife habitats and noise-related problems?				
E.	Land and Vegetation				
20.	Will the construction lead to long-term or semi-permanent destruction of soils in cleared areas not suited for agriculture?				
21.	Will the construction lead to the interruption of subsoil and overland drainage patterns (in areas of cuts and fills)?				
22.	Will the construction lead to landslides, slumps, slips and other mass movements due to cuts?				
23.	Will the construction lead to erosion of lands adjacent receiving concentrated outflow carried by covered or open drains?				

Recommendations

Responses to any one of the site-related issues is “Yes” - An EIA may has to be conducted or an IEE has to be done; Next step: conduct a scoping with CEA/WB followed by preparation of TOR	
Responses to majority of construction related issues are medium and/or high – An IEE has to be conducted; Next step: preparation of TOR	
Responses to majority of construction related issues are low: Next step: preparation of an EMP	
Responses to majority of construction related issues have no impact: Next step: Ensure the design consultant takes EHS guidelines into consideration and adequate contractor conditions are in place in contractual documents for construction contractor	

Tick the appropriate box

Signed by Environmental Officer of the project:

Name:

Title:

Date:

Signed by the Project Director:

Name:

Title:

Date:

Annex 2

A sample environmental safeguards procedures for inclusion in the technical specification of contracts

I. General

1. The Contractor and his employees shall adhere to all the mitigation measures set down in the Environmental Management and Monitoring Plan and take all other measures required by the Engineer to prevent harm, and to minimize the impact of his operations on the environment.
2. The Contractor shall not be permitted to unnecessarily strip clear the right of way. The Contractor shall only clear the minimum width for construction and diversion roads should not be constructed alongside the existing road.
3. Remedial actions which cannot be effectively carried out during construction should be carried out on completion of each Section of the road (earthworks, pavement and drainage) and before issuance of the Taking Over Certificate:
 - (a) these sections should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
 - (b) water courses should be cleared of debris and drains and culverts checked for clear flow paths; and
 - (c) borrow pits should be dressed as fish ponds, or drained and made safe, as agreed with the land owner.
4. The Contractor shall limit construction works to between 6 am and 7 pm if it is to be carried out in or near residential areas.
5. The Contractor shall avoid the use of heavy or noisy equipment in specified areas at night, or in sensitive areas such as near a hospital.
6. To prevent dust pollution during dry periods, the Contractor shall carry out regular watering of earth and gravel haul roads and shall cover material haulage trucks with tarpaulins to prevent spillage.

II. Transport

7. The Contractor shall use selected routes to the project site, as agreed with the Engineer, and appropriately sized vehicles suitable to the class of road, and shall restrict loads to prevent damage to roads and bridges used for transportation purposes. The Contractor shall be held responsible for any damage caused to the roads and bridges due to the transportation of excessive loads, and shall be required to repair such damage to the approval of the Engineer.
8. The Contractor shall not use any vehicles, either on or off road with grossly excessive, exhaust or noise emissions. In any built up areas, noise mufflers shall be installed and maintained in good condition on all motorized equipment under the control of the Contractor.

9. Adequate traffic control measures shall be maintained by the Contractor throughout the duration of the Contract and such measures shall be subject to prior approval of the Engineer.

III. Workforce

10. The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.

11. The Contractor shall install and maintain a temporary septic tank system for any residential labor camp and without causing pollution of nearby watercourses.

12. The Contractor shall establish a method and system for storing and disposing of all solid wastes generated by the labor camp and/or base camp.

13. The Contractor shall not allow the use of fuelwood for cooking or heating in any labor camp or base camp and provide alternate facilities using other fuels.

14. The Contractor shall ensure that site offices, depots, asphalt plants and workshops are located in appropriate areas as approved by the Engineer and not within 500 meters of existing residential settlements and not within 1,000 meters for asphalt plants.

15. The Contractor shall ensure that site offices, depots and particularly storage areas for diesel fuel and bitumen and asphalt plants are not located within 500 meters of watercourses, and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain. This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet.

16. The contractor shall not use fuelwood as a means of heating during the processing or preparation of any materials forming part of the Works.

IV. Borrow Pits

17. Operation of a new borrow area, on land, in a river, or in an existing area, shall be subject to prior approval of the Engineer, and the operation shall cease if so instructed by the Engineer. Borrow pits shall be prohibited where they might interfere with the natural or designed drainage patterns. River locations shall be prohibited if they might undermine or damage the river banks, or carry too much fine material downstream.

18. The Contractor shall ensure that all borrow pits used are left in a trim and tidy condition with stable side slopes, and are drained ensuring that no stagnant water bodies are created which could breed mosquitoes.

19. Rock or gravel taken from a river shall be far enough removed to limit the depth of material removed to one-tenth of the width of the river at any one location, and not to disrupt the river

V. Earthworks

21. Earthworks shall be properly controlled, especially during the rainy season.

22. The Contractor shall maintain stable cut and fill slopes at all times and cause the least possible disturbance to areas outside the prescribed limits of the work.
23. The Contractor shall complete cut and fill operations to final cross-sections at any one location as soon as possible and preferably in one continuous operation to avoid partially completed earthworks, especially during the rainy season.
24. In order to protect any cut or fill slopes from erosion, in accordance with the drawings, cut off drains and toe-drains shall be provided at the top and bottom of slopes and be planted with grass or other plant cover. Cut off drains should be provided above high cuts to minimize water runoff and slope erosion.
25. Any excavated cut or unsuitable material shall be disposed of in designated tipping areas as agreed to by the Engineer.
26. Tips should not be located where they can cause future slides, interfere with agricultural land or any other properties, or cause soil from the dump to be washed into any watercourse. Drains may need to be dug within and around the tips, as directed by the Engineer.

VI. Historical and Archaeological Sites

27. If the Contractor discovers archaeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:
 - (a) Stop the construction activities in the area of the chance find.
 - (b) Delineate the discovered site or area.
 - (c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Cultural Affairs & National Heritage take over.
 - (d) Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Cultural Affairs & National Heritage immediately (less than 24 hours).
 - (e) Contact the responsible local authorities and the Ministry of Cultural Affairs & national Heritage who would be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out. This would require a preliminary evaluation of the findings to be performed by the archeologists of the Ministry of Cultural Affairs & National Heritage (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, including the aesthetic, historic, scientific or research, social and economic values.
 - (f) Ensure that decisions on how to handle the finding be taken by the responsible authorities and the Ministry of Cultural Affairs & National Heritage. This could include changes in the layout (such as when the finding is an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage.

- (g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Cultural Affairs & National Heritage; and
- (h) Construction work will resume only after authorization is given by the responsible local authorities and the Ministry of Cultural Affairs & National Heritage concerning the safeguard of the heritage.

VII. Disposal of Construction and Vehicle Waste

28. Debris generated due to the dismantling of the existing structures shall be suitably reused, to the extent feasible, in the proposed construction (e.g. as fill materials for embankments). The disposal of remaining debris shall be carried out only at sites identified and approved by the project engineer. The contractor should ensure that these sites (a) are not located within designated forest areas; (b) do not impact natural drainage courses; and (c) do not impact endangered/rare flora. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.

29. In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the Supervisor/Engineer.

30. Bentonite slurry or similar debris generated from pile driving or other construction activities shall be disposed of to avoid overflow into the surface water bodies or form mud puddles in the area.

31. All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris, where necessary, will be considered incidental to the work and should be planned and implemented by the contractor as approved and directed by the Engineer.

32. Vehicle/machinery and equipment operations, maintenance and refueling shall be carried out to avoid spillage of fuels and lubricants and ground contamination. An 'oil interceptor" will be provided for wash down and refueling areas. Fuel storage shall be located in proper bunded areas.

33. All spills and collected petroleum products shall be disposed of in accordance with standard environmental procedures/guidelines. Fuel storage and refilling areas shall be located at least 300m from all cross drainage structures and important water bodies or as directed by the Engineer.

VIII. HIV/AIDS Education

34. The Contractor shall ensure that detection screening of sexually transmitted diseases, especially with regard to HIV/AIDS, amongst laborers is actually carried out and will submit a certificate of compliance to the Engineer.