



Environmental, Climate Change and Social Management Framework

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Abbreviations

BEE	Bureau of Energy Efficiency
CA	Climate Change Assessment
CCMP	Climate Change Adaptation and Mitigation Plan
CPHEEO	Central Public Health and Environmental Engineering Organisation
CRZ	Coastal Regulation Zone
DPR	Detail Project Report
EA	Environment Assessment
EAC	Expert Appraisal Committee
EC	Environmental Clearance
ECBC	Energy Conservation Building Code
ECSMF	Environment, Climate Change and Social Management Framework
EIA	Environment Impact Assessment
EMP	Environmental Management Plan
EP	Environmental Protection
GoI	Government of India
GoO	Government of Odisha
HH	Households
ISR	Initial Screening Report
MoEF	Ministry of Environment and Forest
MSW	Municipal Solid Waste
NAPCC	National Action Plan for Climate Change
OUIDF	Odisha Urban Infrastructure Development Fund
PAF	Project Affected Families
PAP	Project Affected People
PIA	Project Implementation Agency
PMC	Project Management Consultancy
R&R	Rehabilitation and Resettlement
RPDAC	Rehabilitation and Periphery Development Advisory Committee
SA	Social Assessment
SC / ST	Schedule Caste / Schedule Tribe
SEAC	State level Expert Appraisal Committee
SEC	Sensitive Environmental Components
SEIAA	State level Environmental Impact Assessment Authority
SIA	Social Impact Assessment
SMP	Social Management Plan
STP	Sewage Treatment Plant
SWM	Solid Waste Management
RTO	Road Transport Organisation
ULB	Urban Local Bodies
WTP	Water Treatment Plant

INTRODUCTION

OUIDF Objectives

Odisha Urban Infrastructure Development Fund (OUIDF) aims to promote environmentally sound, socially acceptable and economically viable urban infrastructure projects in the state of Odisha. OUIDF believes that each of its projects will improve the living standards of the people and the quality of environment in and around project locations.

Environment

Environmental soundness and climate protection by conserving natural resources, preserving bio-diversity and ecological equilibrium; minimizing release of polluting wastes and integrating mechanisms within projects to maintain and enhance environmental quality of project locations.

Climate Change

Ensure that the projects are climate change resilient and climate friendly.

Social

Social relevance and acceptability by:

- Addressing legitimate concerns of relevant stakeholders, especially project affected people
- Avoiding or minimizing resettlement and rehabilitation due to land acquisition and alienation of government land under different tenure system through appropriate technical and management measures
- Ensuring appropriate resettlement and rehabilitation of project affected people irrespective of legal status with a view to providing sustainable livelihood options that at least restore, if not improve, their standard of living
- Protecting marginalized and vulnerable groups, including the economically and socially disadvantaged
- Minimizing health and safety hazards

Section 1 of the ECSMF outlines typical projects funded by OUIDF and illustrates the relating environmental, climate change and social issues for various sectors. Section 2 gives an overview on the relevant national and state level policies relating to environment, climate change and social issues which the projects funded by OUIDF must adhere to.

Section 3 deals with the categorization of urban infrastructure projects for appraisal by OUIDF based on the project's environment, social and climate change impact.

Section 4 elaborates OUIDF's project cycle for appraising and monitoring and the environmental, climate change and social assessment and management processes therein.

SECTION 1: ENVIRONMENTAL, CLIMATE CHANGE AND SOCIAL ISSUES

- 1.1 OUIDF recognizes the environmental, climate change and social issues related to urban infrastructure projects such as pollution of water bodies or other natural resources, issues related to air pollution or other environmental components, issues of land acquisition and rehabilitation and resettlement etc. and prepares itself to address their Management through a set of management procedures elaborated in its ECSMF.
- 1.2 To evolve its environmental, climate change and social management procedures, OUIDF has carefully examined the portfolio of urban infrastructure projects previously executed and environmental, climate change and social issues arising in each of the projects.
- 1.3 While OUIDF financed projects are expected to improve general living standards within urban localities, they can also have associated impacts on the local environment, climate change and people. OUIDF identifies various environmental, climate change and social issues that can arise in urban infrastructure projects which are listed below.

A. WATER SUPPLY AND SANITATION PROJECTS:

(a) Water Supply:

- 1.4 Water supply projects include laying or rehabilitating the existing water distribution or transmission lines, construction or rehabilitation of pumping / booster stations, construction / augmentation of water treatment plants, purchase of water tankers and construction of overhead tanks. Typical environmental issues that may arise are:
 - Safe drinking water /water quality concerns
 - Over exploitation of water sources
 - Issues related to conflicting water users (in case of new source development)
 - Change in hydrology and drainage patterns due to the construction
 - Water logging due to leakage during operation and maintenance
 - Disturbance to other utility/service lines due to construction activity
 - Disruption to local traffic during construction
 - Impact on public/private properties and other sensitive receptors along the water supply lines during construction
 - High energy demand for pumps in booster stations

- Disposal of excavated soil
- Pollution from construction equipments
- Noise impacts due to pumpsets/ motor / gensets operation.
- Storage of hazardous chemicals such as Chlorine for water treatment
- Disposal of WTP sludge (where WTPs are proposed)

1.5 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction.

1.6 Climate change issues may include changes in rainfall pattern which may affect the availability of the water at the source.

(b) Storm Water Drainage:

1.7 Storm water projects will include construction of open/closed drains, which may cause:

- Changes in landuse, hydrology and drainage patterns due to the construction
- Water logging, change in surface and groundwater quality due to leakages
- Disturbance to other service lines due to digging and construction activity
- Water logging and pollution of the final disposal area due to improper designs and misuse during operation phase.
- Disruption to local traffic during construction
- Disposal of excavated soil
- Pollution from construction equipments
- Impact on public/private properties and other sensitive receptors along the storm water drains during construction

1.8 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction.

1.9 Climate change issues may include changes in weather pattern which may lead to flooding. The drainage system would have to be designed accordingly.

(c) Sewerage:

1.10 Sewerage projects will include laying new or rehabilitating the existing sewerage systems, construction / rehabilitating the pumping stations, constructing / upgrading the sewage treatment plants, construction of

public conveniences (and pay and use latrines. Environmental issues that can arise in these projects are:

- Changes in hydrology and drainage patterns due to the construction
- Surface and groundwater contamination due to leakages
- Environmental issues associated with disposal of sewage
- Performance of existing and proposed treatment schemes
- High energy demand for pumps in pumping stations
- Water logging during operation and maintenance
- Disruption to local traffic during construction
- Disposal of excavated soil during construction
- Disposal of STP sludge and sewer silt during operation and maintenance
- Pollution from construction equipments
- Noise impacts due to pumpsets/ motor / gensets operation.
- Impact on public/private properties and other sensitive receptors along the sewer lines during construction

1.11 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction and during storage and handling of chemicals for STP operation.

1.12 Climate change issues may include changes in rainfall pattern which may affect the water availability for the project. The project would have to be designed accordingly so as to adapt to effects of climate change. Also traces of greenhouse gases like methane would be generated during anaerobic digestion of organic compounds in the Sewerage Treatment Plant.

B. SOLID WASTE MANAGEMENT:

1.13 Solid Waste Management projects include development of compost yards, sanitary land fill or other waste disposal / processing options and purchase of vehicles for transport of solid waste. These projects may cause

- Change in hydrology and drainage due to waste disposal and composting
- Change in surface and ground water quality due to leachate
- Air quality impacts due to the operation of waste disposal or processing facilities
 - Odour of decomposing solid waste
 - Green-house gas emissions
- Public health nuisance during operation of SWM components ranging from collection to ultimate disposal
- Change in urban aesthetics

- Land use changes and associated impacts
 - Issues pertaining to siting of SWM facilities such as proximity to settlements, cultural properties and any other sensitive receptors
 - Pollution from construction equipments
- 1.14 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction
- 1.15 Climate change issues may include changes in temperature and rainfall. This would affect the biological processes involved in processing of solid waste like composting plants. Traces of greenhouse gases might be generated during the processing of organic wastes.

C. TRANSPORTATION:

- 1.16 Transportation projects will include roads, bypasses, parking lots, road over bridges, street furniture, road structures and bus terminals, etc.

a) Roads:

- 1.17 Road projects include construction of new roads, widening of existing roads, improvement of road surfaces, laying of internal roads, construction of traffic islands and road dividers. The environmental issues that may arise in these projects are:
- Change in hydrology and drainage patterns
 - Need for road side drains for densely populated and market areas
 - Increase in air pollution and noise levels due to traffic
 - Disturbance to other utilities/services during construction
 - Impact on sensitive receptors
 - Destruction of roadside microhabitat/vegetation due to widening and construction
 - Community and cultural severance
 - Impact on natural habitats
 - Coastal zone impacts
 - Impact on cultural properties
 - Pollution from construction equipments
 - Construction related impacts
 - Traffic safety
 - Pedestrian safety
 - Safety of roadside dwelling units
 - Impact on economy, and urbanisation
 - Traffic management concerns in densely developed areas

- 1.18 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction.
- 1.19 Climate Change issues would include changes in weather pattern and thereby events like flooding. The drainage system of roads would have to be designed accordingly.

b) Street Furniture:

- 1.20 Street furniture projects will include traffic signals streetlights and sign boards, which may cause environmental issues such as:
- Disturbance to other services/lines
 - Increase in urban congestion
 - Increase in air pollution and noise levels due to congestion
 - Increased power consumption
 - Effect on urban aesthetics

c) Road Structures:

- 1.21 Road structure projects will include construction of subways, road over bridges/ road under bridges, culverts and small bridges. Environmental impacts that may arise are:
- Change in land use, hydrology and drainage patterns due to construction
 - Water logging due to poor drainage facilities
 - Disturbance to other services/lines
 - Pedestrian safety concerns
 - Possible changes in air pollution and noise levels
 - Impact on sensitive receptors
 - Tree cutting
 - Community and cultural severance
 - Coastal zone impacts
 - Impact on cultural properties
 - Pollution from construction equipments
 - Construction related impacts
 - Traffic safety
 - Pedestrian safety
 - Safety of roadside dwelling units
 - Impact on economy
 - Traffic management concerns in densely developed areas

- 1.22 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction.
- 1.23 Climate Change issues would include changes in weather pattern and thereby events like flooding. The drainage system of roads would have to be designed accordingly.

d) Bus Shelters/Terminals / Parking Facilities:

- 1.24 OUIDF will fund construction of bus terminals, bus shelters, workshops, truck terminals, parking facilities, etc. which may cause environmental issues such as:

- Change in land use, hydrology and drainage patterns
- Increase in air pollution and noise levels
- Land contamination due to oil and grease
- Insanitary conditions due to inadequate public conveniences
- Destruction of vegetation due to construction
- Waste water due to bus cleaning
- Increase in traffic density and related impacts
- Traffic management issues
- Pedestrian safety (internal and external)
- Parking
- Proliferation of commercial squatters and associated issues
- Solid and liquid waste disposal
- Construction related impacts

- 1.25 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction.

- 1.26 Climate Change issues would not normally be relevant for this category of project. However the design of the projects should include Energy Efficiency measures as per Energy Conservation Building Code (ECBC) and water conservation measures such as rainwater harvesting.

D. COMMERCIAL COMPLEXES:

- 1.27 Commercial complexes will include markets, vegetable/fish markets and slaughterhouses complexes needed to regularize unauthorized hawking. The environmental issues that may arise are:
- Conflicting land use (such as major shopping complexes in quiet residential / sensitive areas)

- Disturbance to other services/lines due to construction
- Increase in waste generation both solid and liquid
- Disposal of solid and liquid waste generated
- Increase in urban congestion and associated traffic and transportation issues
- Sanitation
- Fire hazards
- Construction related impacts
- Impact due to increased energy consumption for lighting and air-conditioning
- parking woes

1.28 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction.

1.29 Climate Change issues would not normally be relevant for this category of project. However the design of the projects should include Energy Efficiency measures as per Energy Conservation Building Code (ECBC) and water conservation measures such as rainwater harvesting.

E. NON COMMERCIAL/COMMUNITY AMENITIES:

1.30 Construction of crematorium, hospitals and the development of burial grounds. The environmental issues that may arise are:

- Change in land use, hydrology and drainage pattern
- Solid and liquid waste disposal
- Public health and safety
- Sanitation
- Parking
- Impact on energy consumption
- Fire safety

1.31 Social issues may arise in these projects if there is need for acquisition of private land and acquire government land that has been encroached upon. Social issues would also include occupational health and safety issues of the workers during construction.

1.32 Climate Change issues would not normally be relevant for this category of project. However the design of the projects should include Energy Efficiency measures as per Energy Conservation Building Code (ECBC) and water conservation measures such as rainwater harvesting.

F. INTEGRATED AREA DEVELOPMENT:

- 1.33 Under integrated area development will include housing (sites and services), guided urban development and traffic and transport programs whose subcomponents will include combinations of the above projects at various scales. Environmental issues that may be expected are:
- Change in land use, hydrology and drainage patterns due to construction
 - Conflicting land use (such as major shopping complexes in a quiet residential/sensitive areas)
 - Solid & liquid waste disposal
 - Destruction of microhabitat/vegetation
 - Issues associated with uncontrolled proliferation of informal sector
 - Construction related impacts
 - Increased consumption of water
 - Increased waste generation both liquid and solid
 - Increase in energy demand for lighting and air-conditioning
 - Traffic and transportation related issues (including access/connectivity)
- 1.34 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.
- 1.35 Climate Change issues would not normally be relevant for this category of project. Tree cutting and conversion of agricultural land for development will have climate change impact. Design of the projects should include Energy Efficiency measures as per Energy Conservation Building Code (ECBC) and water conservation measures such as rainwater harvesting.

G. IMPROVEMENT / REHABILITATION OF LAKES / WATERWAYS

- 1.36 OUIDF will fund improvement / rehabilitation of lakes / waterways. These include laying of interceptor sewers to avoid entry of wastewater into the water body, desilting sludge deposits, widening, reconstruction of bunds and other improvement works. The environmental issues that may arise are:
- change in land use, hydrology and drainage patterns
 - increase in air pollution and noise levels during construction
 - soil and ground water contamination due to unscientific disposal of desilted sludge and aquatic weeds
 - Impacts on water quality and aquatic life
 - destruction of vegetation due to construction
 - Flooding of adjacent areas
- 1.37 Social issues may arise in these projects if banks of the waterways are occupied by squatters.

- 1.38 Climate issues would include changes in the rainfall / weather pattern and vulnerability to extreme events like cyclone. This may lead to a drought or flooding situation which will affect the water body. Other Climate Change issues would include salt water intrusion due to rise in sea water levels. Climate change adaptation measures needs to be incorporated in the projects accordingly.

SECTION 2: NATIONAL AND STATE POLICY AND REGULATORY FRAMEWORK

- 2.1 While extending term loans to Urban Local Bodies (ULBs), statutory boards, public undertakings and private investors for urban infrastructure projects, OUIDF will ensure compliance to mandatory environmental and social laws and regulations that apply to specific projects. Besides, mandatory laws, regulations and policies will influence management procedures for environmental, climate change and social issues in OUIDF financed projects.

A. REGULATORY FRAMEWORK - ENVIRONMENT

I. CONSTITUTIONAL GUARANTEES

- 2.2 **Article 48-A of the Constitution:** This directive principle states that the State shall endeavour to protect and improve the natural environment
- 2.3 **Article 51-A of the Constitution:** This fundamental duty states that it is the duty of every citizen to protect and improve the natural environment. Courts have tended to enlarge the scope of fundamental rights so that environment dimensions are recognised. When municipal bodies act as borrowers, OUIDF will see to it that checks and balances are properly instituted as these local bodies are subject to constitutional challenge.

II. LAWS AND ACTS

- 2.4 The environmental laws and Acts applicable to OUIDF financed projects are both pollution and natural resource related. Pollution laws in the last decade impose strict controls over industrial and municipal operations. Despite participation by States and other bodies, GOI continues to have the final say on all matters concerning natural resources, even with policies such as the National Forest Policy, 1988 which invites local participation.
- 2.5 **Water (Prevention And Control of Pollution) Act, 1974:** These laws seek to control pollution of water and enhance the quality of water.

- 2.6 **The Water (Prevention And Control of Pollution) Cess Act, 1977:** This Act provides for levy and collection of a cess by local authorities on water consumed by people or industries to augment resources for Pollution Control Boards.
- 2.7 **Air (Prevention and Control of Pollution) Act 1981 and Odisha Air (Prevention and Control of Pollution) Rules 1998:** These laws address the prevention and control of air pollution. Under section 21 of this Act, it is mandatory to obtain consent from Pollution Control Board to establish or operate any industrial operation.
- 2.8 **Environment (Protection) Act, 1986:** Popularly known as EP Act, it is an umbrella legislation that supplements existing environmental regulations. This law essentially links pollution and natural resource issues. Salient features of the Act are the following:
- Section 6 empowers the Government of India to make rules to regulate environmental pollution by stipulating standards and maximum allowable limits to prevent air, water, noise, soil and other environmental pollutants
 - Section 7 prohibits operations that emit pollutants in excess of standards
 - Section 9 regulates handling of hazardous substances and identifies people responsible for discharges and pollution prevention
- Empowered by the EP Act, the Ministry of Environment & Forests (MoEF), Government of India has issued various notifications such as Hazardous Wastes (Management & Handling) Rules, 1989; Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989; Noise Pollution (Regulation and Control) Rules, 2000; Environmental Impact Assessment Notification, 2006 etc.
- 2.9 **Forest (Conservation) Act, 1980:** Forest (Conservation) Act, 1980 was enacted to halt rapid deforestation and governments cannot de-reserve forest land or direct that it be used for non-forest purposes. Municipal projects with activities falling in reserved forest areas need a clearance from MoEF.
- 2.10 **Wildlife Protection Act, 1972:** This Act seeks to protect wildlife, by creating protected areas and controlling trade in wildlife products. If project activities cross over into protected area regimes then requisite permission must be obtained.
- 2.11 **Coastal Regulation Zone (CRZ) Notification, 2011:** This notification under Environment (Protection) Act, 1986 supplements the law on site clearance by

declaring certain zones as CRZ and regulates activities in these zones. The CRZ Notification, 2011 clearly lists out the areas that fall within the categories of I, II, III and IV of CRZ-I and the permissible and non-permissible activities in each zone. The main objectives of the Coastal Regulation Zone Notification, 2011 are:

- To ensure livelihood security to the fishing communities and other local communities living in the coastal areas;
- To conserve and protect coastal stretches and;
- To promote development in a sustainable manner based on scientific principles, taking into account the dangers of natural hazards in the coastal areas and sea level rise due to global warming. Projects attracting this notification shall obtain CRZ clearance for implementation from the State Level or the National Level as required.

III. RULES AND REGULATIONS

2.12 **Manufacture, Storage and Import of Hazardous Chemical (Amendment) Rules, 2000:**

These rules aim at providing control for the generation, storage and Import of hazardous chemicals. According to these rules, the user of hazardous chemicals has to perform the following and dispose the hazardous waste as mentioned in the rules

- Identify the potential hazards of the chemicals and to take adequate steps for the prevention and control of such hazards
- Develop or provide information about the chemical in the form of safety data sheet and
- Label the specified information on container of hazardous chemical and

Chlorine used for disinfection of water is categorised as hazardous chemical as according these rules and usage of these chemicals above 10 tons per year attracts the provisions of these rules.

2.13 **Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016:** These rules address handling of hazardous substances that fall under specified schedules. Projects envisaged by OUIDF will not require handling of specified substances.

2.14 **Noise Pollution (Regulation and Control) Rules, 2000 (amended in 2010):**

The ambient air quality standards in respect of noise for different areas/zones namely industrial, commercial, residential or silence areas/zones are specified in the Schedule of these rules. An area comprising not less than 100 metres around hospitals, educational institutions and courts may be declared as silence area/zone as per these rules. The noise

levels in any area/zone shall not exceed the ambient air quality standards in respect of noise as specified in the Schedule.

- 2.15 **EIA Notification, 2006 (as amended in 2016):** The notification specifies that prior environmental clearance is required for the projects listed in the schedule of the notification before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity. The Schedule of the notification lists eight broad categories of projects that require prior environmental clearance. These projects are categorized in to Category 'A' and category 'B' based on the magnitude and environmental impacts of the project. Clearance is to be obtained from the Ministry of Environment and Forests for Category 'A' projects, and from the State Environment Impact Assessment Authority (SEIAA) for Category 'B' projects. Category 'B' projects will be further classified in to category 'B1' and category 'B2' based on their magnitude and environmental impacts. Category 'B2' projects do not require an EIA study. The scope and ToR of the EIA study for category 'A' and category 'B' projects will be decided by the MoEF and the SEIAA respectively.
- 2.16 **Solid Waste Management Rules 2016:** This notification by Ministry of Environment and Forest lays down the methods of handling Municipal Solid Waste (MSW) and its scientific disposal. It bans incineration of MSW.
- 2.17 **Bio-Medical Waste Management Rules, 2016:** This notification by Ministry of Environment and Forest lays down the method of collection of hospital waste, its transportation and disposal based on scientific methods.
- 2.18 **Fly Ash Notification 1999 as amended in 2015**
As per this notification amended in 2015, no person shall within a radius of five hundred kilometres from coal or lignite based thermal power plants, manufacture clay bricks or tiles or blocks for use in construction activities without mixing at least 25 per cent of ash (fly ash, bottom ash or pond ash) with soil on weight to weight basis. The use of fly/ pond ash as fill material is mandatory in road/flyover embankment construction in the areas where fly/pond ash is available in adequate quantities within economically viable lead.

IV. COMPETENT REGULATORY AGENCIES

- 2.19 **Municipal Bodies:** For most laws applicable to OUIDF projects, municipal authorities (who will be recipients of finances) will have to certify that they are abiding by the law they are entrusted to protect and administer.

- 2.20 **Orissa State Pollution Control Board:** The activities that would cause air emissions and/or effluent discharges and/or hazardous waste disposal needs to be reported to the board and relevant consents/NOC/authorisation is required to be obtained. The board is also mandated to monitor the implementation of consent conditions on a regular basis.
- 2.21 **State/Central Ministry of Environment and Forests:** As per the provisions under EIA Notification, 2006 and subsequent amendments, the MoEF and state environment ministry are responsible for granting environmental clearance to projects depending on the type and capital investments. These agencies are also mandated to monitor the implementation of clearance conditions on a regular basis.

B. REGULATORY FRAMEWORK - CLIMATE CHANGE

- 2.22 **National Action Plan on Climate Change:** India is faced with the challenge of sustaining its rapid economic growth while dealing with the global threat of climate change. India, in 2008, has set up National Action plan on climate change (NAPCC) which outlined policies aimed at sustainable growth and dealing with climate change concerns effectively. NAPCC outlines eight national missions to address various adaptation and Management measures pertaining to Solar Energy, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining Himalayan Ecosystem, Green India, Sustaining Agriculture, and Strategic Knowledge on Climate Change.
- 2.23 **Energy Conservation (Amendment) Act, 2010:** Aims to reduce specific energy consumption in different sectors, and sets up a specialized Bureau of Energy Efficiency to institutionalize energy efficiency measures, monitoring, and measurement at plant and macro-levels.
- 2.24 **Energy Conservation Building Code:** The Energy Conservation Act 2001 that was passed by the Indian Parliament empowered the Central Government to prescribe an Energy Conservation Building Code (ECBC). ECBC was launched in 2007 on a voluntary basis by the Bureau of Energy Efficiency (BEE). ECBC sets minimum energy efficiency standards for design and construction encouraging energy efficient design or retrofit of buildings without constraining the building function, comfort, health, or the productivity of the occupants and appropriate regard for economic considerations. Mandatory Scope Covers commercial buildings with a connected Load in excess of 500kW or when Contract Demand in excess of 600 kVA. ECBC is recommended for all buildings with conditioned area >1000m² and applies to new constructions.

C. REGULATORY FRAMEWORK - SOCIAL

I. MANDATORY

2.25 **The Right to Fair Land Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013:**

The Act regulates land acquisition and provides laid down rules for granting compensation, rehabilitation and resettlement to the affected people in India. The Act has provisions to provide fair compensation to those whose land is taken away, brings transparency to the process of acquisition of land to set up factories or buildings, infrastructural projects and assures rehabilitation of those affected. The Act establishes regulations for land acquisition as a part of India's massive industrialisation drive driven by public-private partnership. This Act provides to compensate both land owners and livelihood losers. The Act goes beyond compensation; it mandates guaranteed series of entitlements to households affected.

II. OUIDF's SOCIAL SAFEGUARD AND ENTITLEMENT FRAMEWORK

2.26 For purposes of this framework, the following definitions will be applicable:

2.27 Projected Affected People (PAP): Any person affected either directly or indirectly by the project and/or project related activity, irrespective of the legal status and would include

- a) patta holders,
- b) encroachers,
- c) squatters,
- d) tenants, leaseholders, sharecroppers,
- e) employees, landless labourers,
- f) vulnerable groups (women, children, landless, marginal and small farmers, scheduled population) and
- g) People losing access to community amenities and resources.

2.28 Project Affected Family (PAF): A family consisting of father, mother, children living together with common kitchen and are affected by the project, irrespective of their legal status resulting in loss of homestead, other assets, sources of income / livelihood, common assets and cultural properties

2.29 Displaced Family: A family ordinarily residing in the project area prior to the date of publication of notification under the provisions of the relevant

Act and on account of acquisition of his/her homestead land is displaced from such area or required to be displaced.

- 2.30 Vulnerable PAPs: Vulnerable PAPs are those living below poverty line, SC / ST families and women headed households.
- 2.31 Cut-off date: Cut-off date is used to determine eligibility of the PAPs. The cut-off date will be the start date of baseline survey. The baseline census survey will identify the residents or users of the land being acquired, transferred and alienated for the project.
- 2.32 **The National Policy on Resettlement and Rehabilitation for Project Affected Families, 2007:** Provides a reference for the social part of the ECSMF. In order to provide a framework for the R&R process in projects where external financing is involved, this ECSMF provides a list of entitlements for project affected people and families. Three broad categories of economic and social impacts that would be mitigated are:
- a) Loss of assets, homestead and land,
 - b) Loss of income or means of livelihood and
 - c) Indirect group oriented impacts due to loss of common properties and resources.
- 2.33 **Odisha Resettlement and Rehabilitation Policy, 2006:** The policy helps to facilitate the resettlement and rehabilitation process by recognising voices of displaced people and ensuring participatory and transparent process. The policy also specifies the rehabilitation assistance specific to the type of project which are broadly categorized as below:
- a) Type A - Industrial Project
 - b) Type B - Mining Project
 - c) Type C - Irrigation Project, National Parks and Sanctuary
 - d) Type D - Urban Project and Linear Project like road, power lines etc
- The category of projects relevant for OUIDF funding would be Type D.
- 2.34 The **rehabilitation grant** for each displaced family applicable for Type D Urban Project and Linear Project as per the 4th biennial revision of rehabilitation grant in monetary terms is as mentioned below:
- a) **Homestead Land:** @ 1/10th of an acre in rural area and @1/25th of an acre in urban area or cash equivalent of Rs. 85000 preferably near growth centres like land by the side of roads and important junctions, land by the side of railway station etc subject to availability. Project Authority may acquire such suitable land under the relevant Act for the purpose.
 - b) **House Building Assistance:** Rs 255000 to each family will be admissible whether settling in a resettlement habitat or elsewhere.

- c) If home/homestead land of any landholder is acquired for linear project or if there is total displacement due to acquisition for such project, the Project Authority shall provide employment to one of the members of such displaced family in the project. Wherever RPDAC decided that such employment is not possible, onetime cash assistance as decided by the Government will be paid by the Project Authority.
- 2.35 **Benefits to landless and homestead less encroachers** common to all categories as per Orissa Rehabilitation and Resettlement Policy, 2006 is mentioned below:
- a) An encroacher family, who is landless as defined in the Orissa Prevention of Land Encroachment Act 1976, is in the possession of the encroached land for a period of at least 10 years continuously prior to the date of notification of under relevant laws declaring intension of land acquisition, will get *ex-gratia* equal to compensation admissible under the Land Acquisition Act 1894 for a similar category of land to the extent of land under his/her possession up to a maximum of 1 standard acre, if the encroachment is unobjectionable.
- b) An encroacher family, who is homesteadless as defined in the Orissa Prevention of Land Encroachment Act 1976, is in the possession of the encroached land for a period of atleast 10 years continuously prior to the date of notification of under relevant laws declaring intension of land acquisition, will get *ex-gratia* equal to similar category of homestead land against the encroached land up to a maximum of 1/10th of an acre in rural areas or 1/25th of an acre in urban area, if the encroachment is unobjectionable. While determining the extent of land for such compensation, the homestead land held by him/her is to be taken into account. The ex gratia would be addition to the actual cost of structures thereon. If the encroachment is found to be objectionable, he will be entitled to the cost of structure only.
- 2.36 The rehabilitation grant is revised by the government every 2 years on the basis of Wholesale Price Index (WPI) with 01-04-2006 as the reference date.

SECTION 3: CATEGORISATION OF URBAN INFRASTRUCTURE PROJECTS WITH RESPECT TO ITS ENVIRONMENTAL, SOCIAL AND CLIMATE CHANGE IMPACT

a) ENVIRONMENTAL CATEGORIES OF PROJECTS

- 3.1 The urban infrastructure projects depending on location and the nature of project activities will have varying impacts on urban environment. The rigor of environmental assessment required to identify and mitigate the impacts largely depends upon the complexities of project activities. To facilitate effective screening, OUIDF shall follow the categorization of projects as per Ministry of Environment & Forests (MOEF) vide Environmental Impact Assessment (EIA) notification 2006 (as amended 2009).
- 3.2 As per the EIA notification 2006, all projects and activities are broadly categorized in to two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man-made resources. The projects not listed in the EIA notification 2006 do not require Environmental Clearance (EC) and can termed as “Environmentally Benign” for the purpose of OUIDF appraisal. The categorization of projects as per EIA notification 2006 relevant for OUIDF funding is shown in Table 1.

Table 1: Categorization of OUIDF relevant projects as per EIA Notification 2006

S No.	Project or Activity (Relevant to OUIDF)	Category with threshold limit	
		(A)	(B)
1(a)	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	All integrated facilities having incineration & landfill or incineration alone	All facilities having land fill only
7 (h)	Common Effluent Treatment Plants (CETPs)	-	All projects
7(i)	Common Municipal Solid Waste Management Facility (CMSWMF)	-	All projects
8 (a)	Building and Construction Projects	-	<=20000 sq.mtrs and <1,50,000 sq.mtrs. of built-up area
8 (b)	Townships and Area Development projects.	-	Covering an area >= 50 ha and or built up area >= 1,50,000 sq .mtrs

- 3.3 The project categorized as ‘A’, including expansion and modernization of existing projects or activities and change in product mix, is deemed to have a significant impact on the environment and shall require prior

environmental clearance from the Central Government in the Ministry of Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) constituted by the Central Government.

- 3.4 The project categorized as 'B', including expansion and modernization of existing projects or activities, is deemed to have a moderate impact on the environment and will require prior environmental clearance from the State territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State level Expert Appraisal Committee (SEAC) constituted by the State Government.
- 3.5 As per EIA notification 2006, the projects categorised as 'B' are further classified as 'B1' and 'B2'. The projects categorized as B1 would require Environmental Impact Assessment Report for its appraisal and would require a Public Consultation process to be followed. The project categorized as 'B2' would be appraised on the basis of the application form and the accompanying pre-feasibility report.
- 3.6 Ministry of Environment and Forests (MoEF) has issued Guidelines dated 24th December 2013 for classification of Project classified as 'B' into 'B1' and 'B2'. The SEAC would give its recommendation for classification of Project to SEIAA using the document as a guide.
- 3.7 A proposed project is classified as environmentally sensitive if it is likely to affect sensitive environmental components (SEC) such as those mentioned in Table 2.

Table 2: List of Sensitive Environmental Components

S. No	Sensitive Environmental Component
1	Religious, heritage historic sites and cultural properties
2	Archaeological monuments/sites
3	Scenic areas
4	Hill resorts/mountains/ hills
5	Beach resorts
6	Health resorts
7	Coastal areas rich in corals, mangroves, breeding grounds of specific species
8	Estuaries rich in mangroves, breeding ground of specific species
9	Gulf areas
10	Biosphere reserves
11	National park and wildlife sanctuaries and reserves
12	Natural lakes, swamps Seismic zones tribal Settlements
13	Areas of scientific and geological interests
14	Defense installations, specially those of security importance and sensitive to pollution
15	Border areas (international)
16	Airport (for solid waste management projects)

S. No	Sensitive Environmental Component
17	Tiger reserves/elephant reserve/turtle nestling grounds
18	Habitat for migratory birds
19	Lakes, reservoirs, dams
20	Streams/rivers/estuary/seas

OUIDF does not support projects that are envisaged to have significant impact on sensitive environmental components like mangroves, breeding grounds for protected species, tiger reserves, elephant reserves, and turtle nesting grounds unless there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs. If the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project shall include mitigation measures acceptable to OUIDF and the policies of the external funding agencies. Such mitigation measures include, as appropriate, minimizing the impact and the loss (e.g., strategic habitat retention and post-development restoration) and establishing and maintaining an ecologically similar protected area. OUIDF accepts other forms of mitigation measures only when they are technically justified.

- 3.8 Generic guidelines for selecting site for a project to minimize impact on the environment are provided in Appendix IV of ECSMF. These guidelines would form one of the guiding documents for the Environmental Assessment of the project.
- 3.9 In addition to addressing environmental issues, OUIDF commits itself to explore opportunities for environmental enhancement in various sub-projects. A sample list of enhancement opportunities is listed out in Table 3 below. OUIDF encourages its borrowers to identify such opportunities and include the same as part of the project components.

Table 3: Potential Environment Enhancement and Climate Protection & Resilient Opportunities in OUIDF Sub-Projects

Project / Sub- Project	Enhancement Opportunities
A. Water Supply	
1.Head Works & Treatment Plants	<ul style="list-style-type: none"> ▪ Development of Parks and controlled and well managed Recreational Facilities for Tourist Attraction and Environmental Improvement ▪ Design considerations to withstand extreme situations – drought and flood ▪ Energy efficient pumpsets
2.Transmission Line	<ul style="list-style-type: none"> ▪ Water supply to enroute villages ▪ Upgrade and maintain the road along the alignment ▪ Development of vegetative belt along the alignment

Project / Sub- Project	Enhancement Opportunities
	<ul style="list-style-type: none"> ▪ Design to withstand flood situation / high water table ▪ Avoiding leakage/ wastage through online monitoring and suitable pipes & joints
3.Storage Reservoirs	<ul style="list-style-type: none"> ▪ Development of Parks / Play Grounds / Green Spaces at Storage Reservoir Complexes ▪ Avoiding leakage/ wastage through online monitoring
4.Water Supply Distribution Lines	<ul style="list-style-type: none"> ▪ Supply of potable water quality monitoring kits to the community for on-site water quality monitoring ▪ Development of foot paths along the distribution lines ▪ Metering the connections ▪ Avoiding leakage/ wastage through online monitoring and suitable pipes & joints
B. Storm Water Drainage	
1.Closed underground Drains	<ul style="list-style-type: none"> ▪ Development of foot paths over the drains to protect the drain and offer add on facilities. ▪ Providing groundwater recharge facilities in the drain to ensure reuse.
C. Sewerage and Sanitation	
1.Treatment Plants & Pumping Stations	<ul style="list-style-type: none"> ▪ Development of Parks and Recreational Facilities for Tourist Attraction and Environmental Improvement ▪ Design of units and pipelines to withstand flood situation / high water table ▪ Reuse of treated effluent ▪ Energy efficient pump sets ▪ Aerobic treatment/ gas flaring
D. Solid Waste Management	
Compost and Landfill Facilities	<ul style="list-style-type: none"> ▪ Development of Parks and Green Spaces for Tourist Attraction and Environmental Improvement ▪ Gas flaring arrangement ▪ Energy generation from waste ▪ Recovery and Recycling of wastes
E. Transportation	
1.Widening & Laying of New Roads	<ul style="list-style-type: none"> ▪ Plantation and development of vegetative belt along the alignment ▪ Rehabilitation plan for quarries/borrow areas ▪ Use of alternate material like flyash for embankments ▪ Providing cycle lanes
/2.Traffic Islands & Dividers	<ul style="list-style-type: none"> ▪ Landscaping and Aesthetic Improvements at the proposed locations
3. Street lighting	<ul style="list-style-type: none"> ▪ Energy efficient lighting / solar powered lighting
F. Bus Shelters & Terminals	
	<ul style="list-style-type: none"> ▪ Development and implementation of Rainwater Harvesting measures ▪ Development of vegetative belt along the boundary
G. Inland Waterways / Lakes, etc.	
	<ul style="list-style-type: none"> ▪ Development of Parks and Recreational Facilities for Tourist Attraction and Environmental Improvement ▪ Protection of boundaries
H. Commercial Complexes	
	<ul style="list-style-type: none"> ▪ Development and implementation of Rainwater Harvesting

Project / Sub- Project	Enhancement Opportunities
	measures <ul style="list-style-type: none"> ▪ Development of vegetative belt along the boundary ▪ Applying ECBC in design and construction ▪ Reusing waste water generated ▪ Use alternate construction materials

b) SOCIAL CATEGORISATION OF PROJECTS

- 3.10 As per the **Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation Act 2013**, whenever land is to be acquired by the Government for public purpose, a Social Impact Assessment (SIA) study is required to be conducted in consultation with the Panchayat, Municipality or Municipal Corporation as the case may be.
- 3.11 The Social Impact Assessment (SIA) would include
- a) assessment as to whether the proposed acquisition serves public purpose;
 - b) estimation of affected families and the number of families among them likely to be displaced;
 - c) extent of lands, public and private, houses, settlements and other common properties likely to be affected by the proposed acquisition;
 - d) whether the extent of land proposed for acquisition is the absolute bare minimum extent needed for the project;
 - e) whether land acquisition at an alternate place has been considered and found not feasible;
 - f) study of social impacts of the project, and the nature and cost of addressing them and the impact of these costs on the overall costs of the project vis-a-vis the benefits of the project.
 - g) take into consideration the impact that the project is likely to have on various components such as livelihood of affected families, public and community properties, assets and infrastructure particularly roads, public transport, drainage, sanitation, sources of drinking water, sources of water for cattle, community ponds, grazing land, plantations, public utilities such as post offices, fair price shops, food storage godowns, electricity supply, health care facilities, schools and educational or training facilities, anganwadis, children parks, places of worship, land for traditional tribal institutions and burial and cremation grounds.
- 3.12 The Government shall constitute **an independent multidisciplinary Expert Group** which shall appraise the Social Impact Assessment (SIA) and make a recommendation as to whether the project serves any public purpose and whether the social costs and adverse social impacts of the project outweigh the potential benefits. These recommendations shall be made within 2 months from its date of constitution.

- 3.13 The appropriate Government may, inspite of a recommendation against the land acquisition by the Expert Group, proceed with the land acquisition. It shall ensure that its reasons for doing so are recorded in writing.
- 3.14 **The National Policy on Rehabilitation and Resettlement of Project Affected People, 2007 and Odisha Resettlement and Rehabilitation Policy, 2006** would form the guiding document for the preparation of resettlement and rehabilitation plan.
- 3.15 The Government shall undertake a socio-economic survey for identification of the people displaced by the project. The list of displaced people shall be finalized by the Rehabilitation and Periphery Development Advisory Committee (R.P.D.A.C) constituted by the Government.
- 3.16 Based on the finalized list of displaced people, the District Collector shall prepare a Rehabilitation and Resettlement Plan with due consultation with the displaced communities. The plan would be placed before R.P.D.A.C for approval. No physical displacement shall be made before the completion of resettlement work as approved by R.P.D.A.C. The certificate of completion of resettlement work would be issued by District Collector.
- 3.17 The Rehabilitation Grant would be provided as per the latest biennial revision of rehabilitation grants in monetary term by the State Government as per the provisions of Odisha Resettlement and Rehabilitation Policy 2006.
- 3.18 For the purpose of its project appraisal, OUIDF categorizes Urban Infrastructure Projects based on their social sensitivity. The projects are categorized as S1, S2 and S3 based on the number of project affected Families (PAF).
- a) S-1 projects are those that would lead to involuntary displacement of 200 PAFs or more.
 - b) S-2 projects are those that would lead to involuntary displacement of less than 200 PAFs or more than 10% of their productive assets are lost.
 - c) S-3 projects are those in which no PAF is physically displaced and less than 10% of their productive assets are lost.

Table 4: Categorization of Projects based on Social Sensitivity

S No	Type of Project	Level of Issue	Implications on OUIDF funding
1	S1	serious social issues expected	The Project would only be appraised by OUIDF once the Social Impact Assessment (as per Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation Act 2013) is appraised by the Expert Group and Land Acquisition is recommended by it. The Disbursement of OUIDF loan would only be made

S No	Type of Project	Level of Issue	Implications on OUIDF funding
			once the Land Acquisition and Rehabilitation and Resettlement process has been completed
2	S2	moderate social issues expected	The Project may be appraised by OUIDF on the condition that a Social Assessment (SA) and Social Management Plan (SMP) would have to provide by the borrower. The Disbursement of OUIDF loan would only be made once the Land Acquisition and Rehabilitation and Resettlement process has been completed.
3	S3	no significant social issue, no R&R issue	The Project may be appraised by OUIDF with no additional measure with regards to social management required.

c) CLIMATE CHANGE CATEGORISATION OF PROJECTS

3.19 The urban infrastructure projects depending on location and the nature of project activities will have varying impacts on climate change. The Climate Change Screening Form (Refer Lending Policy: Annexure VII) would be used to determine whether the project has substantial climate change relevance or not (the definition of relevance criteria is provided in Climate Change Screening Form). If relevant, then a detailed climate change assessment is carried out. This would include climate change adaptation and mitigation assessment.

- a. The assessment and consideration of the aspects in terms of **climate change adaptation** (Climate Proofing) should ensure that the desired developmental impacts of the strategy or measure are not endangered despite the forecasted effects of climate change. Furthermore the assessment should analyse whether the project's capacity for adaptation can be further increased in the framework of the strategy or measure. In this regard the expected climate changes and their consequences for the strategy or measure will be analysed. This includes both direct effects (e.g. more frequent flooding or drying out of agricultural areas) and indirect effects of climate change (e.g. revenue losses in agriculture). The analysis will also examine the longer targeted period of impacts beyond the formal period of the strategy or measure. On this basis options will be developed and implemented to increase the capacity of the target groups or ecosystems to adapt.
- b. The assessment and consideration of the potential for **greenhouse gas reduction** (Emission Saving) serves to avoid substantial greenhouse gas emissions and to tap potentials for reducing greenhouse gases. First, the expected development of greenhouse gases in the project area/sector will be described. This is followed by a presentation of whether the planned

strategy or measures contribute to higher or lower greenhouse gas emissions and if there are potentials for reducing greenhouse gas emissions. On this basis options to contribute to greenhouse gas reduction will be developed and if applicable – taking into consideration the developmental impacts and costs – integrated into the strategy or measure.

- 3.20 In the case of projects with moderate Environmental, Climate Change and Social issues, OUIDF will integrate readily available solutions into the project design.

SECTION 4: OUIDF's ENVIRONMENTAL CLIMATE CHANGE AND SOCIAL MANAGEMENT FRAMEWORK

- 4.1 The project cycle for appraising and monitoring projects forms the background for evaluation and management of environmental, climate change and social issues that could arise within projects that are scrutinised and funded by OUIDF. This section elaborates the project cycle of the OUIDF and the environmental, climate change and social assessment and management processes therein.

OUIDF Project Preparation and Appraisal Process

I. PROJECT SCREENING

- 4.2 Details required in the Loan Application Form along with environment, climate change and social screening form will be filled and submitted to OUIDF by the borrower in the Loan Application Form. (See Annexure 1 of the Lending Policy). On receiving a completed Loan Application form from the borrower, OUIDF will assess the creditworthiness of the borrower. Besides this, the financial and economic rate of return; environmental, climate change and social impacts and risks will be also be assessed for the project. The assessment will form part of the Initial Screening Report (ISR – Annexure 2 of the Operating Manual) and will decide whether or not the project should be taken up for detailed appraisal. The ISR will determine the environmental, social and climate change category of the project (as per the categorization criteria defined in ECSMF). It will also comment on the adequacy of the Environmental Assessment (EA) carried out for the project, if any; assess the regulatory risks and suggest further course of action required to comply with the ECSMF.
- 4.3 The borrower will prepare a Detailed Project Report (DPR). The DPR would include Environmental Assessment (EA), Environmental Management Plan (EMP), Social Assessment (SA), Social Management Plan (SMP), Climate

Change Assessment (CA) and Climate Change Adaptation and Mitigation Plan (CMP) for projects respectively as per the outlines provided in the framework. For guidance, OUIDF has laid down Sample Environmental Management Plan for few urban projects to mitigate these issues. While preparing the EMP/SMPs for specific projects, the sample EMPs as well as the list of issues relevant to the project needs to be considered (see Appendices 1, 2 and 3).

- 4.4 On receiving the DPR from the borrower, OUIDF will assess whether the environmental, social and climate change issues are adequately addressed. If inadequate, borrowers will be intimated about the need for improvement of the DPR. On receiving a DPR complete in all aspects, OUIDF will then clear the DPR for detailed appraisal.
- 4.5 In case the borrower has completed the Rehabilitation and Resettlement (R&R) prior to applying the loan, then OUIDF will request the borrower to produce an R&R completion report or any other report prepared for the R&R activity. These documents will be reviewed by OUIDF for its compliance with this ECSMF. Necessary actions (if any) with regard to the additional compensation or detailed R&R study will then have to be carried out by the borrower prior to the sanctioning of loan.

II. PROJECT APPRAISAL

- 4.6 During Project Appraisal, environmental, climate change and social aspects will be cross-checked against the standards set in the ECSMF for the type of environmental, climate change and social issues, adequacy of environmental, climate proofing and social management measures provided, cost of implementing the environmental, climate proofing and social management measures including scope for enhancement opportunities in terms of environmental, climate proofing and social aspects in the project area. Field investigations to verify various components will be carried out by OUIDF when necessary.
- 4.7 OUIDF will discuss any further changes or modifications that have to be made to the environmental, climate change and social components of the DPR with the borrower. OUIDF will finalise the environmental and social appraisal report as part of the Project Appraisal Report. The appraisal report will be submitted for approval with a recommendation to accept the project as submitted; or accept with modifications; or reject it.

4.8 During the appraisal stage, the environmental appraisal shall focus on the following aspects:

- Adequacy of the EA as per the ECSMF including analysis of alternatives if relevant
- Compliance with regulatory requirements and clearances
- Comprehensiveness of the EMP in the light of the project specific environmental issues
- Integration of environmental measures into the design wherever relevant
- Arrangements for implementation of EMP, including institutional capacity and contractual provisions
- Inclusion of EMP budgets in the project cost
- EMP monitoring and reporting arrangements
- Climate change adaptation and mitigation measures, if necessary inclusion in the EMP
- Need for any legal covenant to address any specific environmental risks including regulatory risks
- Public consensus on the project and locations/ sites involved.
- Review of clearance requirements for EA/EMPs for projects

III. LOAN SANCTION/DISBURSEMENT

4.9 Prior to Loan sanction and disbursement, OUIDF shall verify whether the environmental, climate change and social components are adequately addressed in the DPR.

IV. PROJECT MONITORING, AUDIT AND RECOVERY

4.10 OUIDF monitors all projects that it finances to ensure conformity to standards during construction, operation and maintenance. Monitoring of Environmental, climate and Social components will be carried out through environmental and social compliance reports that form part of Quarterly Progress Reports for B1, B2, S1 and S2 projects. Based on verification of progress reports, field visits, these compliance reports and compliance to other loan disbursement conditions, subsequent instalments will be disbursed by OUIDF.

4.11 OUIDF will ensure that the borrower has made adequate internal arrangements to monitor the EMP/SMP implementation for projects and submit regular progress reports including environmental, climate proofing and social compliance reports to OUIDF.

V. CAPACITY BUILDING OF BORROWERS

- 4.12 OUIDF envisages capacity building of its borrowers who will include Urban Local Bodies, Statutory Boards, Public Undertakings and Potential Private Operators in order to ensure that the ECSMF is effectively operationalised. This will be accomplished by organising training programs.
- 4.13 Based on the experiences gained, OUIDF will modify its training efforts and will make it more practical. The training will focus on the environmental, climate change and social issues. The contents will basically focus on the ECSMF profile, concept, regulatory requirements, Environment, Climate Change and Social priority issues, project cycle of OUIDF, outline of EA / SA and report formats in respect of the Environmental and climate change adaptation and mitigation aspects. In respect of social aspects the course content will focus on the R & R policies and procedures, national requirements, land acquisition process, identification of PAPs, Social entitlement frameworks, social assessment, risk assessment and management skills.

Appendix 1: Sample Environmental Management Plan (EMP)

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
I. Water Supply Projects				
A. Development and Design Phase				
Water abstraction due to construction of barrage	River water user and riparian conflicts	<ul style="list-style-type: none"> ▪ Obtain clearance for construction of barrage from State Department of Environment and Forests. ▪ Obtain permission from Central Water Commission (CWC) for inter-state rivers. ▪ Regulate the extraction of water to reduce the effect on downstream users. 	Project Implementing Agency / ULB	Project Implementing Agency (PIA)/ ULB
Land acquisition	loss of tree cover	<ul style="list-style-type: none"> ▪ Site selection to be based on proper design considerations and study of the geology, hydrology and topography of the area to minimize the impacts. ▪ Undertake afforestation programs to compensate the loss of tree cover 	Revenue Department, GoO, ULB and Project Implementing Agency	Project Implementing agency / ULB
	Encroachment into sensitive areas such as forests, wildlife habitations etc especially in case of laying transmission mains	<ul style="list-style-type: none"> ▪ Ensure proper alignment. In case of encroachments ensure minimum disturbance and destruction. Obtain permission from respective authorities such as State Department of Environment and Forests. 	Project Implementing agency / ULB	Project Implementing agency / ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
Project Development and Design	Failure of the barrage/ reservoir structures, and flooding of nearby areas.	<ul style="list-style-type: none"> Proper design of the structure taking into consideration terrain and soil characteristics, hydrology and geology. 	Design Consultant/ Project Implementing Agency	Project Implementing Agency in co-ordination with Dept. of Mines and Geology
B. Construction Phase				
Excavation, cutting and filling operations	Flooding and water contamination due to improper disposal of construction and demolition of waste.	<ul style="list-style-type: none"> Immediately transport accumulated construction waste to a site identified by the ULB/Project Implementing Agency 	Contractor / PIA	Project Management Consultant / ULB
	Damage to standing crops due to construction activities.	<ul style="list-style-type: none"> Construction activities shall be planned so as not to damage any crops. In case if it is inevitable provide monetary compensation to the owners Immediately transport accumulated construction waste to a site identified by the ULB and PPMS. 	Contractor / PIA	PMC / ULB
	Induced erosion and flooding of nearby areas	<ul style="list-style-type: none"> Creation of soil barriers or mounds and adequate temporary drainage arrangements should be provided. 	Contractor / PIA	PMC / ULB
	Noise, vibration and dust from construction activities.	<ul style="list-style-type: none"> Use of less noise generating equipment for all activities; provision for personal protective equipment, ear muffs, etc. during construction; and avoiding construction activities during nights. Sprinkling of water and removal of excess matter/construction debris from the site as soon 	Contractor / PIA	PMC / ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
		as possible.		
	Safety hazards to labourers and nearby resident population.	<ul style="list-style-type: none"> Adequate safety precautions such as helmets, safety shoes, gloves, etc. should be provided to the labourer and provide appropriate signage near the construction activities to sensitize the community and minimize accidents 	Contractor / PIA	PMC / ULB
Laying of water distribution network	Spillage of fuel and oil	<ul style="list-style-type: none"> Store tanks and drums for excess capacity; forbid pouring into soils or drains; enforce adequate equipment maintenance procedures 	Contractor / PIA	PMC / ULB
	Noise and vibration disturbances to residents and businesses	<ul style="list-style-type: none"> Establish schedule and other specific restrictions; limit work to daylight hours as possible; use of less noise generating equipment, proper maintenance 	Contractor / PIA	PMC / ULB
	Dust generation	<ul style="list-style-type: none"> Water sprinkling, removal of excess materials, cleaning of sites upon completion of activities. 	Contractor / PIA	PMC / ULB
	Reduced pedestrian and vehicle access to residences and businesses	<ul style="list-style-type: none"> Establish work sequence and methods to minimize access disruption; provide alternative safe access as possible; temporary bridges and crossings, detours and walkways. 	Contractor / PIA	PMC / ULB
	Temporary water supply interruptions	<ul style="list-style-type: none"> Establish coordination procedures for cut-off; minimize time for replacement operations; and appropriate scheduling as necessary. 	Contractor / PIA	PMC / ULB
	Increased traffic inconvenience (emissions, congestions, longer travel times)	<ul style="list-style-type: none"> Use alternate traffic routing; ensure coordination with local authorities; routine control and maintenance of equipment. 	Contractor / PIA	PMC / ULB and Traffic Police
Construction camps	Health impacts due to absence of housing and sanitation	<ul style="list-style-type: none"> The Private Contractor should ensure provision of appropriate housing, water supply, and sanitation facilities to construction labour. 	Contractor / PIA	PMC / ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
	facilities in labour camps.			
	Health impacts to nearby resident population due to labor camps.	<ul style="list-style-type: none"> The Private Contractor should ensure provision of appropriate housing, water supply, and sanitation facilities to construction labour. The PC should also provide for adequate access to medical facilities. 	Contractor / PIA	PMC / ULB
C. Operation Phase				
Storage of water	Flooding of the downstream areas; soil erosion; water logging of low-lying areas etc.	<ul style="list-style-type: none"> Ensure proper technical design of the storage reservoir to minimize seepage and chances of possible failure of the structure. 	Contractor / PIA	ULB/ State Pollution Control Board
	Increase moisture content in soil, which affects the structures/foundation of buildings in nearby areas.	<ul style="list-style-type: none"> Ensure proper site selection. Ensure proper design, construction and operation of the structure and system to minimize seepage and appropriate implementation techniques. In case of failure of nearby building structures / foundations, monetary compensation shall be provided 	Design Consultant, Contractor and PIA	ULB
	Increase in groundwater levels; change in crop pattern shifting to more water intensive crops/horticulture crops; change in farm ownership and cropping pattern.	<ul style="list-style-type: none"> Empowering local cultivators and labourers for sustainable practices 	Irrigation Department and Department of Agriculture	Agriculture Department in co-ordination with Local NGOs,/ CBOs
Increased levels	Generation of	<ul style="list-style-type: none"> Provide sewerage system with sufficient 	Contractor and	ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
of water supply	additional quantity of wastewater leading to contamination of surface/sub-surface sources, if not adequately treated.	<p>treatment capacity to suffice to increased water supply levels</p> <ul style="list-style-type: none"> Plan and cost for adequate centralized/decentralized sewage disposal and treatment, and sanitation facilities. 	PIA	
Operation of water treatment facilities	Safety hazards from chlorination process, accidents in handling chlorine cylinders and operation of plants	<ul style="list-style-type: none"> Install chlorine leak detectors; require protection and emergency response equipment for operators. Provide safety equipments to operating staff and training in handling the plant and chlorine cylinder 	Contractor and PIA	ULB
Operation of water treatment facilities	Soil and water contamination sludge disposal	<ul style="list-style-type: none"> Use only approved, appropriate disposal sites 	ULB/ PIA	State Pollution Control Board
Collection and Pumping	High energy demand for pumping operation.		Design Consultant/ PIA	

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
II. Sewerage and Sanitation Projects				
A. Design and Development Phase				
Land Acquisition	Loss of tree cover	<ul style="list-style-type: none"> undertake afforestation in nearby areas 	PIA	ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
Treated Water Disposal into nearby stream	Pollution of stream water and other water bodies receiving STP discharges due to reduction in efficiency or non working of STP	<ul style="list-style-type: none"> Ensure efficient working condition. - Choice of treatment process, construction technique, equipment and skilled operation and supervision critical to maintain effluent quality compliance. The treated water quality shall comply with the standards laid down by the state pollution control board for disposal onto the land, water body or for irrigation use. 	ULB / PIA	State Pollution Control Board
Sludge Disposal	Disposal of sludge leading to contamination of land and water.	<ul style="list-style-type: none"> Providing adequate and safe sludge disposal facilities 	Design Consultant, ULB / Project Implementing Agency	State Pollution Control Board
Provision for Accidental leakages / bursts	Flooding of the nearby areas with untreated sewage in event of accidental leakages or bursts	<ul style="list-style-type: none"> The Design Consultants should design for bypass arrangements, to discharge untreated sewage. 	Design Consultants and PIA	ULB
	Low lying areas in the site, which can get flooded during monsoons	<ul style="list-style-type: none"> Provide proper drainage arrangements so that the water does not stagnate on the site 	Contractor and PIA	PMC/ ULB
Location of STP	Nuisance hazards to neighboring areas.	<ul style="list-style-type: none"> Careful planning and design of STP with adequate buffer zones. Future growth of the surrounding areas shall be considered. 	Design Consultant, PIA and ULB	ULB/ State Pollution Control Board
Developing sewage pumping station	Noise and odour nuisance to surrounding areas.	<ul style="list-style-type: none"> Select appropriate location away from sensitive locations such as schools and hospitals. 	Design Consultant/ ULB	ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
		<ul style="list-style-type: none"> ▪ Provide sufficient buffer areas ▪ Follow standard codes for selection pumps and other apparatus. Use less noise making and easy to operate equipment. 		
B. Construction Phase				
Excavation, cutting and filling operations	Soil and water contamination by improper disposal of construction and demolition waste.	<ul style="list-style-type: none"> ▪ Ensure immediate transportation of accumulated waste to an identified site. ▪ 	Contractor / PIA	PMC / ULB
	Damage to standing crops due to construction activities.	<ul style="list-style-type: none"> ▪ Construction activities shall be planned so as not to damage any crops. In case if it is inevitable provide monetary compensation to the owners ▪ Immediately transport accumulated construction waste to a site identified for the purpose. 	Contractor / PIA	PMC / ULB
	Temporary flooding due to excavation during monsoons.	<ul style="list-style-type: none"> ▪ Provide suitable arrangements for drainage control. 	Contractor / PIA	PMC & ULB
	Noise, vibration and dust from construction activities.	<ul style="list-style-type: none"> ▪ Use of less noise generating equipment for all activities, provision for personal protective equipment, ear muffs, etc. for construction; avoid construction activities during nights; and sprinkle water on site and remove excess matter from the site as soon as possible. 	Contractor / PIA	PMC & ULB
	Safety hazards to labor.	<ul style="list-style-type: none"> ▪ Provide adequate safety precautions such as helmets, safety shoes, gloves, etc. 	Contractor / PIA	PMC & ULB
Laying of sewer	Spillage of fuel and oil	<ul style="list-style-type: none"> ▪ Store tanks and drums for excess capacity; 	Contractor / PIA	PMC & ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
network		forbid pouring into soils or drains; enforce adequate equipment maintenance procedures		
	Noise and vibration disturbances to residents and businesses	<ul style="list-style-type: none"> Establish schedule and other specific restrictions; limit work to daylight hours as possible; use of less noise generating equipment, proper maintenance 	Contractor / PIA	PMC & ULB
Laying of sewer network	Dust generation	<ul style="list-style-type: none"> Water sprinkling, removal of excess materials, cleaning of sites upon completion of activities. 	Contractor / PIA	PMC & ULB
	Reduced pedestrian and vehicle access to residences and businesses	<ul style="list-style-type: none"> Establish work sequence and methods to minimize access disruption; provide alternative safe access as possible; temporary bridges and crossings, detours and walkways. 	Contractor / PIA	PMC & ULB
	Temporary water supply interruptions	<ul style="list-style-type: none"> Establish coordination procedures for cut-off; minimize time for replacement operations; and appropriate scheduling as necessary. 	Contractor / PIA	PMC & ULB
	Increased traffic inconvenience (emissions, congestions, longer travel times)	<ul style="list-style-type: none"> Use alternate traffic routing; ensure coordination with local authorities; routine control and maintenance of equipment. 	Contractor / PIA	PMC / ULB and Traffic Police
Construction Camps	Health impacts due to absence of housing and sanitation facilities in labour camps.	<ul style="list-style-type: none"> Provision of appropriate housing, water supply, and sanitation facilities. 	Contractor / PIA	PMC & ULB
	Impacts on surrounding	<ul style="list-style-type: none"> Provide proper temporary drainage and solid waste collection and disposal facilities at the 	Contractor / PIA	PMC & ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
	environment due to improper drainage and solid waste management facilities in construction camps.	construction site.		
C. Operation Phase				
Collection and Pumping	High energy demand for pumping operation.	<ul style="list-style-type: none"> ▪ 	Design Consultant/PIA	
Treatment and Disposal	<p>Impairment of receiving water quality in surface/sub-surface source due to inadequate /inefficient treatment.</p> <p>Contamination groundwater supplies due to leaching and impact on soil and agriculture</p>	<ul style="list-style-type: none"> ▪ Monitor the treated sewage/effluent quality and ensure compliance with PCB standards for effluent disposal into surface water bodies, on land or for the agricultural use. ▪ The treated water quality shall comply with the standards laid down by the state pollution control board for disposal onto the land, water body or for irrigation use. 	Operator/ PIA/ ULB	State Pollution Control Board
Treatment and Disposal	Problems arising due to bad odour, insects, polluted air, noise pollution, etc.	<ul style="list-style-type: none"> ▪ Provide buffer zones in the form of green belt around the STP; to be ensured during the design and development phase itself. 	Operator/ PIA/ ULB	State Pollution Control Board
	Indiscriminate disposal of sludge	<ul style="list-style-type: none"> ▪ Prepares a sludge disposal plan and adheres to the same. 	Operator/ PIA/ ULB	State Pollution Control Board

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
	leading to contamination of land and soil.			
	Health and safety of workers due to the release of toxic gases and hazardous material.	<ul style="list-style-type: none"> Ensure safe operation and maintenance practices are followed, and plans for emergencies are in place. 	Operator/ PIA/ ULB	ULB
	Reduced land values in nearby areas and aesthetics affected.	<ul style="list-style-type: none"> Adequate buffer zones during development and construction phase should mitigate the affect considerably. 	ULB	ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
III. Solid Waste Management & Disposal				
A. Development and Design Phase				
Land acquisition	Loss of tree cover.	<ul style="list-style-type: none"> Undertake afforestation programs to compensate to loss of tree cover 	ULB	ULB
	Encroachment into sensitive areas such as forests, wildlife habitations etc especially in case of laying transmission mains	<ul style="list-style-type: none"> Ensure proper Site. In case of encroachments, ensure minimum disturbance and destruction. Obtain permission from respective authorities such as Department of Ecology, Environment and Forests 	ULB	State Pollution Control Board
Design and Development	Nuisance hazards to neighbouring areas.	<ul style="list-style-type: none"> Ensure proper design and adequate buffer zones to comply with MSW Rules, 2000. 	Design Consultant/ PIA/ ULB	ULB
	Contamination of groundwater due to	<ul style="list-style-type: none"> Ensure appropriate design provisions are made for liners, leachate collection and treatment 	Design Consultant/PIA	ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
	leaching.	facilities to prevent percolation of leachate.		
	Reduced land values in nearby areas and impacts aesthetics affected.	<ul style="list-style-type: none"> Adequate buffer zones during development shall be provided to mitigate the affect considerably. 	Design Consultant/ ULB	ULB
B. Construction Phase				
Excavation activities	Noise and dust due to vehicle movement and other activities.	<ul style="list-style-type: none"> Construction of pucca roads and provision of green cover; use of less noise generating equipment for all activities; and provision for personal protective equipment, ear muffs, etc. for landfill/compost construction employees. Approach road shall be constructed before starting the work, to reduce the dust and vehicular pollution 	Contractor and PIA	PMC & ULB
	Safety hazards to labour.	<ul style="list-style-type: none"> Adequate safety precautions such helmets, safety shoes, gloves, etc. should be provided to the labour. 	Contractor and PIA	PMC & ULB
C Operation Phase				
Disposal of solid waste	Nuisance due to odour and influx of insects, rodents, flying birds.	<ul style="list-style-type: none"> Provide adequate buffer zone around the landfill site with thick vegetative cover. Waste shall be dumped at the designated place and shall not allow the waste to accumulate near the waste reception area. 	Operator/ PIA	ULB and State Pollution Control Board
	Emission of toxic gases from landfill site.	<ul style="list-style-type: none"> Provision of landfill gas management system. 	Operator/ PIA	ULB and State Pollution Control Board
	Health and safety of workers due to the release of toxic gases and hazardous	<ul style="list-style-type: none"> Proper and timely compaction of waste and provision of protective material to landfill employees. 	Operator/ PIA	ULB and State Pollution Control Board

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
	materials during the operation of the facility.			
	Contamination of groundwater	<ul style="list-style-type: none"> Proper maintenance of leachate collection facilities shall be done. Leachate shall be treated to the standards of TNPCB before disposal. 	Operator/ PIA	ULB and State Pollution Control Board
	Public health and safety hazards to workers from odor, smoke from fire and diseases transmitted by flies, rodents, etc.	<ul style="list-style-type: none"> Ensure proper compaction and regular covering of waste, and provide adequate buffer from the nearby areas by means of green cover. 	Operator/ PIA	ULB
IV. Storm water Drainage				
A. Construction Phase				
Desilting and side protection activities	Soil and water contamination due to improper disposal of desilted material, construction and demolition waste.	<ul style="list-style-type: none"> Proper disposal site shall be selected so as not to disrupt drainage lines and water bodies. In case of the nallas carrying sewage, the silt shall be disposed carefully at an identified site. The site shall be identified in co-ordination with TNPCB Ensure immediate disposal of accumulated waste. 	Contractor / PIA	PMC / ULB
	Temporary flooding during construction activity.	<ul style="list-style-type: none"> Desilting activity shall be scheduled during non-flooding season. Provide suitable arrangements for drainage control. 	Contractor / PIA	PMC / ULB
	Noise, vibration and dust from construction activities.	<ul style="list-style-type: none"> Use of less noise generating equipment for all activities, provision for personal protective equipment, ear muffs, etc. for construction; avoid construction activities during nights; 	Contractor / PIA	PMC / ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
		and sprinkle water on site and remove excess matter from the site as soon as possible.		
	Health hazards due to hazardous nature of silt Safety of labour.	<ul style="list-style-type: none"> Provide adequate safety precautions such as helmets, safety shoes, gloves, etc. 	Contractor / PIA	PMC / ULB
	Impairment of receiving water quality due to construction activity	<ul style="list-style-type: none"> Ensure proper cleaning of construction material and completion of the work before opening to operation 	Contractor / PIA	PMC / ULB
Construction Camps	Health impacts due to absence of housing and sanitation facilities in labour camps.	<ul style="list-style-type: none"> Provision of appropriate housing, water supply, and sanitation facilities. 	Contractor / PIA	PMC / ULB
	Impacts on surrounding environment due to improper drainage and solid waste management facilities in construction camps.	<ul style="list-style-type: none"> Provide proper temporary drainage and solid waste collection and disposal facilities at the construction site. 	Contractor / PIA	PMC / ULB
Operation Phase				
Disposal of storm water	Impairment of receiving water quality due to mixing of wastewater.	<ul style="list-style-type: none"> Avoid mixing of wastewater from households, commercial, industrial and other establishments. Proper sewerage system is necessary to avoid mixing of wastewater. . 	ULB	State Pollution Control Board
	Nuisance due to clogging of drains,	<ul style="list-style-type: none"> Ensure timely desilting of drains Create awareness among people not to throw 	ULB	ULB in co-ordination with local NGOs

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
	formation of mosquito breeding grounds etc	garbage and other waste into the drains		
V. Roads and Transportation Projects				
A. Design and Development Phase				
Clearing of trees	Loss of vegetation and trees along the alignment	<ul style="list-style-type: none"> ▪ Permission from the local/district authorities for tree cutting, ▪ Minimize tree cutting as far as possible and adequate care should be taken while cutting, ▪ Top earth should be refilled and compacted wherever tree cutting is done. 	ULB	ULB
Severances	Severances to utilities	<ul style="list-style-type: none"> ▪ Permission from respective departments to shift utilities ▪ Prior information to affected people ▪ Provisions such as foot over bridge with hand rails in the residential areas 	Respective Departments/ ULB	ULB
B. Construction Phase				
Excavation, cutting and filling operations	Silt runoff from construction operations and chemicals used in construction activities.	<ul style="list-style-type: none"> ▪ Careful construction activity planning, monitoring and proper resurfacing. Provide adequate runoff and drainage control. 	Contractor / PIA	PMC / ULB
	Soil and water contamination by improper disposal of construction waste.	<ul style="list-style-type: none"> ▪ Provide proper arrangements for collection and disposal of construction waste. 	Contractor / PIA	PMC / ULB
	Increased dust levels due to excavation activities and accumulation of excavated earth..	<ul style="list-style-type: none"> ▪ Ensure immediate transportation of accumulated waste or frequent watering of excavated earth, and transportation and disposal of excess earth to the designated disposal site. 	Contractor / PIA	PMC / ULB

Activity	Potential Negative Impact/Concern	Management Measures	Responsible Agency for Management	Monitoring Agency
	Noise, vibration and dust from construction activities.	<ul style="list-style-type: none"> Use of less noise generating equipment for all activities; provision for personal protective equipment, ear muffs, etc. for construction; avoiding construction activities during nights; sprinkling of water and removal of excess matter from the site as soon as possible. 	Contractor / PIA	PMC / ULB
	Road blocking and temporary flooding due to excavation during monsoons.	<ul style="list-style-type: none"> Provide alternate arrangements for traffic diversion and suitable provision for drainage control. 	Contractor / PIA	PMC / ULB
	Safety of workers .	<ul style="list-style-type: none"> Adequate safety precautions such as helmets, safety shoes, gloves, etc. should be provided to the labour. 	Contractor / PIA	PMC / ULB
Construction camps	Health impacts due to absence of housing and sanitation facilities in labor camps.	<ul style="list-style-type: none"> Provision of appropriate housing, water supply, and sanitation facilities. 	Contractor / PIA	PMC / ULB
C. Operation Phase				
Road use	Increased noise and air pollution from increased traffic volume.	<ul style="list-style-type: none"> Planting of trees as noise barriers at sensitive receptors 	ULB / Traffic Police / RTO	ULB in co-ordination with State Pollution Control Board
	Safety of residents and pedestrian road users.	<ul style="list-style-type: none"> Provide pedestrian crossing wherever necessary. 	ULB / Traffic Police / RTO	Police Department in co-ordination with RTO and ULB

Appendix 2: Sample Social Assessment Report Outline

SAR OUTLINE FOR S-1 CATEGORY PROJECTS

Executive Summary

- Provide an outline of magnitude of potential impacts, significant findings of census and socio-economic survey and provide a brief account of proposed Management measures including the timetable, budget and its sources and institutional arrangements for implementation.

Introduction about the project

- Brief introduction about the project and its location
- Description of project components causing land acquisition and resettlement. Overall estimates of land acquisition and resettlement

Minimizing resettlement

- Describe alternatives considered for minimizing resettlement
- Describe the mechanism to minimize resettlement to the extent possible, during project implementation

Objective

- Objectives of the resettlement plan

Census and socio-economic surveys

- Identify all categories of impacts (loss of land and assets; loss of livelihood; impacts on groups and communities)
- Socio economic characteristics of the PAPs
- Magnitude of impact
- Details of vulnerable group
- Provision to update information on the PAPs
- Inventory of common property resources to which PAPs have access
- Details of common property resources that will be affected
- Details of community organisation
- Summarize process for consultations on the results of the census surveys
- Describe need and mechanism to conduct updates, if necessary

Legal framework

- Describe the legal and administrative procedures adopted

Resettlement policies and framework

- Describe the policy and approach in ESF
- Describe eligibility criteria and cut-off date
- Describe method of valuation used for affected structures, land, trees and other assets
- Describe entitlements category wise
- Provide entitlement matrix

Resettlement sites

- Does the project need residential / commercial (small businesses) relocation sites? Have these been identified in consultation with the PAPs and Hosts?
- Give layouts and designs of residential sites
- Describe the specific process of showing the sites to the PAPs and obtaining their opinion on them.
- Describe the technical and feasibility studies conducted to determine the suitability of the proposed sites.
- Is the land quality / area adequate for allocation to all of the PAPs eligible for allocation of agricultural land, under land for land option?
- Describe mechanisms for (i) procuring, (ii) developing and (iii) allotting resettlement sites
- Provide detailed description of the arrangements for site development for agriculture, including funding of development costs.
- Provide time table for relocation
- Provide details of services requiring augmentation in host communities and how it would be addressed

Institutional arrangements

- Identify and discuss the institutions responsible for delivery of each item/activity in the entitlement policy
- Describe the project resettlement unit -- functions and organizational structure of the unit and coordination relationship
- State how coordination issues will be addressed in cases where resettlement is spread over a number of jurisdictions.
- Identify who will coordinate all agencies - with the necessary mandate.
- State when the project resettlement unit will be staffed and appointment of NGOs, to assist in project implementation, will take place
- Describe plans for training and development of staff in the resettlement unit/local agencies / NGOs.
- Discuss initiatives taken to improve the long term capacity or resettlement institutions

Income restoration

- Briefly spell out three main income restoration strategies for each category of impacts, and describe the institutional, financial and technical aspects
- Describe the process of consultation with project affected people (PAPs) to finalize strategies for income restoration.
- How do these strategies vary with the area/locality of impact?
- Are the compensation entitlements sufficient to restore income streams for each category of impact? What additional economic rehabilitation measures are necessary?
- Does income restoration require change in livelihoods, development of alternative farmlands, etc, or involve some other activities which require a substantial amount of time for preparation and implementation?
- How are the risks of impoverishment proposed to be addressed?
- Are choices and options built into the entitlements? If so, what is the mechanism for risk and benefit analysis of each option? What is the process of ensuring that PAPs have knowledge about alternatives and can make informed decisions? Is there a mechanism to

encourage vulnerable groups among PAPs to choose lower risk options, such as support in kind rather than cash?

- What are the main institutional and other measures taken for the smooth implementation of the resettlement programs?

Implementation schedule

- List and briefly describe the chronological steps in implementation of the resettlement, including identification of agencies responsible for each step of the program
- Prepare a month-wise implementation schedule of activities to be undertaken as part of the resettlement implementation (Gantt chart).
- Describe the linkages between resettlement implementation and initiation of civil works for each of the project components.

Costs and budgets

- Clear statement of financial responsibility and authority.
- Ensure that the cost of resettlement is included in the overall project costs.
- Identify components, if any, to be funded by the Bank.
- Resettlement costs should be a part of annual involvement plans.
- Prepare a cost-wise, item-wise budget estimate for the entire direction of resettlement implementation, including administrative expense, monitoring and evaluation and contingencies.
- List the sources of funds and describe the flow of funds.
- Describe the specific mechanisms to adjust cost estimates by the inflation factor.
- Describe provisions to account for physical and price contingencies.

Participation and consultation

- Describe the process of consultation/participation in resettlement preparation and planning.
- Describe the various stakeholders.
- Describe the plan for disseminating information to project affected people (PAPs), such as provisions for a booklet to inform PAPs and other stakeholders.
- Describe examples of outcomes of participation and consultation, such as how local beneficiaries' views have influenced the design process, entitlements and support mechanisms, or other issues.
- Have workshops been conducted, or are they planned? Who are the participants, and what are the expected outcomes?

Grievance redressal

- Describe the step-by-step process for registering and addressing grievances.
- Provide specific details regarding registering complaints, response time, communication modes, etc.
- Describe the mechanism for appeal.
- Describe the provisions to approach civil courts in case other provisions fail.

Monitoring and evaluation

- Describe the internal monitoring process
- Define key monitoring indicators. Provide a list of monitoring indicators which would be used for internal monitoring.
- Describe institutional (including financial) arrangements.
- Describe frequency of reporting and content for internal monitoring.
- Describe process for integrating feedback from internal monitoring into implementation.
- Describe financial arrangements for external monitoring and evaluation, including process for awarding and maintenance of contracts for the duration of resettlement.
- Describe methodology for external monitoring.
- Define key indicators for external monitoring, focusing on outputs and impact.
- Describe frequency of reporting and content for external monitoring.
- Describe process for integrating feedback from external monitoring into implementation.

Appendix 3: Sample Social Management Plan

Social Assessment	YES	NO	If Yes, Specify Details	Social Management Measure	Costs
1. Is there loss of dwelling land and structure?			i. Total area of land acquired ii. Total no.of HHs losing their dwelling land and structure	i. No.of HHs (with valid title) to be given developed plots and house ii. No.of HHs to be given cash compensation iii. No. of squatters to be given developed plots and house iv. No .of HHs to be given shifting allowance v. No. of HHs to be given transitional assistance	
2. Is there loss of agricultural land and structure?			i. Total agricultural area acquired ii. Total no.of HHs losing their land and structure iii.Total no.of tenant / leaseholder / sharecroppers losing their tenancy iv. Total no. of agricultural labourers losing their livelihood	i. No.of HHs (with valid title) to be given alternative land ii. No.of HHs (with valid title) to be given cash compensation iii. No. of individuals to be given cash compensation iv. No. of individual tenants / leaseholder / sharecroppers to be given cash assistance v. No. of individuals to be given notice for harvesting vi. No. of individuals to be given cash compensation for non perennial crops vii. No. of individuals to be paid cash compensation for perennial crops viii. No. of individuals to be paid cash assistance for loss of agricultural labour	
3. Is there loss of commercial/ industrial/ Institutional land and structure?			i. No. of HHs (with valid title) losing their land and structure ii. No.of tenants/ leaseholders losing their land and structure iii. No.of squatters / encroachers losing their land and structure iv. No. of employees losing their	i. No. of units (with valid title) to be given alternative land ii. No. of units (with valid title) to be given cash compensation iii. No. of units (with valid title) to be given livelihood assistance iv. No. of tenants to be given livelihood assistance	

Social Assessment	YES	NO	If Yes, Specify Details	Social Management Measure	Costs
			livelihood	v. No. of tenants to be given shifting assistance vi. No. of squatters to be given developed plot and built shop vii. No. of squatters / encroacher to be given cash compensation viii. No. of squatters to be given shifting assistance ix. No. of squatters to be given livelihood assistance x. No. of employees to be given livelihood assistance	
4. Are there losses to host communities?			i. Specify the type of losses ii. No. of communities losing their amenities/ services	i. Money to be spent on restoration of losses due to resettlement ii. Money to be spent on restoration of amenities	
5. Is there any impact on indigenous people?			i. No. of HHs		
6. Is there any induced development?					
7. Was the land acquired / bought / transferred prior to the present ownership of ULBs?			i. When was this done ? ii. Total area of land acquired / bought / transferred iii. Usage of land earlier to ULBs possession iv. Amount paid as compensation v. Total no.of HHs from whom it was bought vi. No. of HHs evicted from the land	i. No. of HHs (with valid title) to be given land for land ii. No. of HHs to be given cash compensation iii. No of HHs to be given livelihood assistance iv. No. of squatters to be given developed plots and house / shop v. No. of squatters / encroachers to be given cash compensation vi. No .of squatters to be given livelihood assistance	

Appendix 4: Generic Guide lines for Selection of Site for Various Sub Projects

Project/ Sub-Project	Site Selection Criteria	Remarks
A. Water Supply		
1.Head Works and Intake Structures	<ul style="list-style-type: none"> • Ensure that the raw water quality is good at the site • Avoid intake well at fish breeding grounds and other ecologically sensitive locations • Ensure that the site requires minimum or no cutting of trees and other vegetative cover 	Confirm to the siting guidelines of water supply projects by CPHEEO
2.Water Treatment Plants	<ul style="list-style-type: none"> • Ensure that the site is as close to the intake works as possible • Avoid land acquisition in the forest areas, private lands or damage to structures • Ensure that site is not in a low-lying or flood prone area • Ensure that the site requires minimum or no cutting of trees and other vegetative cover 	Confirm to the water treatment plant siting guide lines by CPHEEO
3.Transmission Mains	<ul style="list-style-type: none"> • Ensure that the alignment does not pass through ecologically sensitive areas such as forest areas, national parks or sanctuaries, cultural properties, etc. • Ensure that the alignment doesn't require acquisition of private agriculture lands or properties • Ensure that the laying and operation of alignment doesn't affect the agriculture lands, farming operations, standing crops and their yield. 	Confirm to the requirements of CPHEEO manual on Water Supply and Treatment
4.Pumping / Booster Stations	<ul style="list-style-type: none"> • Ensure that the site is not in a low lying or marshy area • Avoid acquisition of forest or private lands • Ensure that the site requires minimum or no cutting of trees and other vegetative cover • Ensure that, no dense habitations or sensitive features such as schools, religious places or institutions are located in the vicinity • Ensure that the no existing land use is affected. 	Confirm to the requirements of CPHEEO manual on Water Supply and Treatment
6.Over Head Tanks	<ul style="list-style-type: none"> • Ensure that site is not located in a Marshy or low lying or soil of low bearing capacity 	Confirm to IS 11682:1985
7.Water Tankers	<ul style="list-style-type: none"> • Not Applicable 	

Project/ Sub-Project	Site Selection Criteria	Remarks
B. Sewerage/ Sanitation		
1. Public Conveniences & Pay and Use Latrines	<ul style="list-style-type: none"> • Ensure that site is not located in Marshy or low-lying area • Ensure that the GW level is sufficiently deep to avoid ground water contamination • Ensure that no drinking water sources (surface or ground water) are located within 20 m radius of the facility • Avoid a site that involves cutting / felling of trees • Avoid a site that requires relocation of population (pucca or kutcha houses or slums / squatters or encroaches) 	Confirm to IS 1231:1987 for siting and safety distance from other services
2.Sewage Treatment Plant	<ul style="list-style-type: none"> • Ensure that the site is not located on a low-lying or Marshy area • Ensure that, no dense habitations or sensitive features such as schools, religious places or institutions are located in the vicinity of the treatment plant • Ensure that the plant site is not close to any water body or water supply source • Avoid a site that involves cutting / felling of trees • Avoid a site that requires relocation of population (pucca or kutcha houses or slums / squatters or encroaches) • Avoid a site that has a risk of discharging wastewater into surface water bodies or other drinking or irrigation water sources 	Confirm to the sewerage treatment plant siting guide lines by CPHEEO
3.Pumping Stations	<ul style="list-style-type: none"> • Ensure that the site is not in a low lying or marshy area • Avoid acquisition of forest or private lands • Ensure that the site requires minimum or no cutting of trees and other vegetative cover • Ensure that, no dense habitations or sensitive features such as schools, religious places or institutions are located in the vicinity 	Confirm to the requirements of CPHEEO manual on Sewerage Treatment

Project/ Sub-Project	Site Selection Criteria	Remarks
4.Trunk Sewers / Out falls	<ul style="list-style-type: none"> • Ensure that the alignment doesn't pass through ecologically sensitive areas such as forest areas, national parks or sanctuaries, cultural properties, etc. • Ensure that the alignment doesn't require acquisition of private agriculture lands or properties • Ensure that the laying and operation of alignment doesn't affect the agriculture lands, farming operations, standing crops and their yield. • Ensure that the outfall sewer discharges the treated water at a safe distance in the receiving water body or medium 	Confirm to the requirements of CPHEEO manual on Sewerage Treatment
5. Septic tanks	<ul style="list-style-type: none"> • Ensure that site is not located in Marshy or low-lying area • Ensure that the GW level is sufficiently deep to avoid ground water contamination • Ensure that no drinking water sources (surface or ground water) are located within 20 m radius of the facility • Avoid a site that requires relocation of population (pucca or kutcha houses or slums / squatters or encroaches) 	<p>Conform to IS 2470 (Part 1): 1985 for design, criteria and construction guidelines</p> <p>Conform to IS 2470 (Part2) :1985 for installation of septic tanks</p>
C.SOLID WASTE MANAGEMENT		
Compost Yards & Landfill Sites	<ul style="list-style-type: none"> • Ensure that site is not located in Marshy or low-lying area • Ensure that the GW level sufficiently deep to avoid ground water contamination • Ensure that no drinking water sources (surface or ground water) are located within 500 m radius of the facility • Avoid a site that requires relocation of population (pucca or kutcha houses or slums / squatters or encroaches) • Ensure that the soil is not permeable 	Follow Municipal Solid Waste (Management & Handling) Rules, 2000 of Ministry of Environment and Forests