

Sustainable Municipal Infrastructure Financing in Tamil Nadu-II Program (SMIF-TN-II)

Environmental Climate Change and Social Management Framework (ECSMF)

(Approved by the Government of Tamil Nadu vide G.O.(Ms). No. 51,
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Tamil Nadu Urban Infrastructure Financial Services Limited

TNUIFSL

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ACRONYMS

AMC	Asset Management Company
BP	Bank Procedures
BP	Bank Procedures
CC	Climate Change
CMA	Commissionerate of Municipal Agency
CMD	Chairperson & Managing Director
CMWSSB	Chennai Metropolitan Water Supply and Sewerage Board
CPR	Common Property Resource
CRZ	Coastal Regulation Zone
DPR	Detailed Project Report
E&S	Environmental and Social
EAP	External Aided Project
EAR	Environmental Assessment Report
	Environmental, Climate Change and Social Management
ECSMF	Framework
EFA	External Funding Agency
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESAR	Environmental and Social Assessment Report
ESF	Environmental and Social Framework
ESR	Environmental and Social Report
ESSM	Environmental and Social Safeguards Manager
FI	Financial Institution
GF	Grant Fund
GOI	Government Of India
GoTN	Government of Tamil Nadu
GRC	Grievance Redressal Committee
HDFC	Housing Development Finance Corporation
HH	Household
IA	Implementing Agency
ICICI	Industrial Credit and Investment Corporation of India Limited
IDA	International Development Agency
IL&FS	Infrastructure Leasing and Financial Services Limited
ISR	Initial Screening Report
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt fur Wiederaufbau (German Development Bank)
MA	Multilateral Agencies
MA&WS	Municipal Administration and Water Supply
MoEF	Ministry of Environment and Forests
MRTS	Mass Rapid Transport System
MSWM	Municipal Solid Waste Management
MUDF	Municipal Urban Development Fund
NGO	Non Governmental Organization

OD	Operational Directives
OP	Operational Policies
PAF	Project Affected Family
PAP	Project Affected Person
PIA	Project implementation Agency
PMC	Project Management Consultant
PMG	Project Management Group
PMU	Project Management Unit
R&R	Resettlement and Rehabilitation
RMP	Risk Management Plan
ROB	Road Over Bridge
ROW	Right of Way
RP	Resettlement Plan
RUB	Road Under Bridge
SAR	Social Assessment Report
SEC	Sensitive Environmental Components
SMIF	Sustainable Municipal Infrastructure Financing
SSR	Social Status Report
STP	Sewerage Treatment Plant
SWM	Solid Waste Management
TC	Trustee Company
TN	Tamil Nadu
TNPCB	Tamil Nadu Pollution Control Board
TNSCB	Tamil Nadu Slum Clearance Board
TNUDF	Tamil Nadu Urban Development Fund
TNUDP	Tamil Nadu Urban Development Project
TNUIFSL	Tamil Nadu Urban Infrastructure Financial Services Limited
TNUIP	Tamil Nadu Urban Infrastructure Project
TOR	Terms of Reference
TRAMP	Traffic and Transport Program
TWADB	Tamil Nadu Water and Drainage Board
ULB	Urban Local Body
WB	World Bank
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

BACKGROUND

The Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) has been set up to manage a Trust fund — Tamil Nadu Urban Development Fund (TNUDF). The Trust has been established to fund urban infrastructure projects in Tamil Nadu. The deployment of funds will be on the basis of a management contract and will be managed by TNUIFSL. Eligible borrowers include Urban Local Bodies (ULBs), Statutory Boards, Public Undertakings and potential Private Investors. TNUIFSL has implemented projects by applying the Environmental and Social Report (ESR). Based on the experience, it is found that the ESR requires updating and revision. There have been some additions to the laws on environment and on social policies, subsequent to the ESR was originally drafted. These have necessitated the review of the ESR to make it in line with the current practices and based on this Environmental and Social Framework (ESF) was evolved specifically for World Bank assisted Third Tamil Nadu Urban Development Project (TNUDP III). ESF document was approved by Government of Tamil Nadu by Government Order Ms.No 115 dt dated 06.10.2006 of MAWS Department. Further, ESF was applied for JICA assisted Tamil Nadu Urban Infrastructure Project (TNUIP) and KfW assisted Sustainable Municipal Infrastructure Financing in Tamil Nadu (SMIF-TN) also. The ESF document has now been further revised by incorporating the provision of KfW Entwicklungsbank Guidelines for conducting business in an environmentally, socially and climate friendly manner ("Sustainability Guideline") January 2011 and by taking into consideration of Climate Change (CC) aspects for the urban infrastructure projects taken up under External Aided Projects. The revised ESF document is renamed as Environmental, Climate Change and Social Framework (ECSMF).

1. The fund has been managed by a Corporate Trustee Company (TC) with shareholdings from Government of Tamil Nadu (GoTN) and three leading Financial Institutions - ICICI, HDFC and IL&FS. To fund project development activities, a new Grant Fund (GF) has been established.
2. TNUDF will channel increased financial resources, including private financing, into high priority infrastructure investments. Specifically the fund would:
 - finance viable urban infrastructure projects;
 - mobilise resources from capital markets;
 - facilitate participation of private sector in infrastructure development through direct investment and joint delivery mechanism of infrastructure services;
 - would earn returns for contributors and ensure sustainability of the fund;
 - improve financial management of ULBs, enabling them to access debt finance from markets
3. The projects financed would:
 - ensure that the investments are commensurate with service demands;
 - earn stipulated economic and financial returns;

- ❑ be institutionally viable so that the borrowers are capable of implementing the management arrangements to do so ;
 - ❑ ensure that no adverse environmental, Climate Change and social impacts take place or that the borrower will be taking measures to avoid or adapt & minimise such impacts in consonance with the Environmental, Climate Change and Social Framework (ECSMF) - Originally named as Environmental and Social Framework - ESF).
4. Typical urban infrastructure projects eligible for funding would include water supply, sanitation, solid waste management, roads, transportation, sites and services, area development and other remunerative/non-remunerative urban infrastructure projects. Power and telecommunication projects are excluded because of the magnitude of such projects in relation to the size of the fund as well as the regulatory issues involved.
 5. Recognising the Environmental, Climate Change and Social issues that can arise in urban infrastructure projects, TNUIFSL has evolved an Environmental Climate Change and Social Management Framework (ECSMF). The ECSMF provides an overall framework to TNUIFSL in identification, assessment and management of environmental, Climate Change and social concerns at the sub project level. The ECSMF outlines the policies, assessments and procedures that will enable TNUDF to ensure that a subproject that it funds is developed in accordance with ECSMF and is adequately protected from associated risks. The ECSMF also aims to sensitise borrowers to assessment and management of environmental, climate change and social issues arising in urban infrastructure projects.
 6. The ECSMF is a revised and updated framework by TNUIFSL. The process of preparing this report included desk research on the legal and institutional framework, analysis of priority issues in the infrastructure sector, consistency checks with operational policies of the World Bank and other multilateral agencies.
 7. Objectives of ECSMF are
 - to incorporate Environmental, Social and Climate standards into the planning, appraisal, implementation and monitoring of measures in externally aided projects;
 - to promote transparency, predictability and accountability in the decision-making processes of environmental and social impact assessments (ESIA) and climate change assessments;
 - to improve the assessment of economic risks associated with projects by taking into account the Environmental, Climate and Social aspects.
 8. The Environmental, Climate Change and Social Management Framework (ECSMF) for TNUIFSL consists of an Executive Summary; and an Environmental, Climate Change and Social Assessment Framework and Environmental Climate Change guidelines for borrowers of TNUDF loans
 9. The Board of Directors of TNUIFSL, will formally approve the ECSMF.

TNUIFSL POLICY STATEMENT

10. TNUIFSL has adopted the Environmental Climate protection and Social Policy of the TC to promote environmentally sound, socially acceptable and commercially viable urban infrastructure projects. TNUIFSL believes that each of its projects will improve the standard of living of the people in and around the project locations.
11. The Policy statement of the TC and TNUIFSL commits to ensure
 - environmental soundness by conserving natural resources, preserving bio-diversity and ecological equilibrium; minimising release of polluting wastes and Integrating mechanisms within projects to maintain and enhance environmental quality of project locations.
 - that the sub-projects are climate resilient and climate friendly.
 - social reliability by avoiding or minimising resettlement, ensuring appropriate resettlement and rehabilitation of project affected persons irrespective of their legal status; and addressing legitimate concerns of relevant stakeholders.
12. TNUDF expects that most of the projects that it funds will be small and medium urban infrastructure projects.
13. While adopting the environmental, climate change and social policy of the TNUDF-TC, TNUIFSL has reflected its commitment through detailed operational procedures illustrated in its ECSMF.

ENVIRONMENTAL, CLIMATE CHANGE AND SOCIAL ISSUES

14. To evolve its environmental, climate change and social management procedures for mitigating these issues, TNUIFSL has carefully examined the portfolio of possible urban infrastructure projects.
15. Based on the magnitude and implications of environmental issues that can arise in the projects an indicative categorization of various types of urban infrastructure projects has been prepared based on their environmental sensitivity. This indicative categorization has been developed to serve as a guidance tool. It is expected that adequate judgment will be applied to determine the category while preparing the DPRs and undertaking EAs. Guidance has also been provided for categorization for those projects, which are not categorized upfront.

16. TNUIFSL has categorised urban infrastructure projects into three categories viz. E-1, E-2 and E-3 (guidelines for categorization presented in Part II Table 1.2).
17. Based on the number of PAPs who may be affected by the project and magnitude of social impact, TNUIFSL has categorised projects as either S-1, S-2 or S-3 projects.

NATIONAL AND STATE POLICY AND REGULATORY FRAMEWORK

Regulatory Framework - Urban Infrastructure Projects

18. ULBs, are distinct from other undertakings due to their “body politic” character. The 74th Constitutional Amendment Act, 1992 empowers municipal bodies to take necessary steps for management of areas under them, including protection of environment. ULBs are considered “state“ as per Article 12 of the Constitution. This implies that municipal bodies can be proceeded against under a writ, for violations to Fundamental Rights or Directive Principles, as their actions are state actions.
19. The Tamil Nadu Town and Country Planning Act, 1971 appoints Local Planning Authorities (LPA) and empowers them to plan for an urban area and/or designated areas. This law empowers LPAs to assess, levy and recover development charges. The Act envisages three classes of authorities: regional planning authorities; local planning authorities; and new town development authorities and the constitution of a Town and Country Planning Board.
20. The Tamil Nadu Municipalities Law and Building Bye Laws derived from the Tamil Nadu District Municipalities Act, 1920 extends to the whole of the Presidency of Madras except the City of Madras. The law essentially deals with establishment, constitution and government of District Municipalities and authorities; taxation and finance; public health, safety and convenience.

Regulatory Framework- Environment

21. The environmental laws, rules, policies, notifications applicable to TNUDF financed projects are both pollution and natural resource related and are given below. :
 - Water (Prevention And Control of Pollution) Act, 1974 and Tamil Nadu Water (Prevention And Control of Pollution) Rules, 1974
 - The Water (Prevention And Control of Pollution) Cess Act, 1977
 - Environment (Protection) Act, 1986
 - Forest (Conservation) Act, 1980
 - Wildlife Protection Act, 1972
 - Coastal Regulation Zone (CRZ) Notification, 2011
 - Chennai Metropolitan Area Ground water (Regulation) Amendment Act, 2002
 - Air (Prevention and Control of Pollution) Act 1981 and Tamil Nadu Air (Prevention of Control of Pollution) Rules 1983
 - Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989

- Hazardous Waste (Management and Handling) Rules, 1989
 - Municipal Solid waste (Management & Handling) Rules 2000
 - Bio Medical Waste (Management & Handling) Rules 1998
 - EIA Notification 2006 as amended in 2009
 - Flyash Notification 1999 as amended in 2003
 - National Conservation Strategy and Policy Statement on environment and Development, 1992
 - Policy Statement for Abatement of Pollution 1992
22. World Bank's Operational Policy [4.01](#) outlines Bank policy and procedures for Environmental Assessment (EA) of Bank investment lending operations and related types of environmental analysis. The other Operational Policies of the World Bank that could be triggered in TNUDF's projects are [OP 4.04](#) on Natural Habitats, [OP 4.11](#) on Physical cultural resources and [OP 4.36](#) on Forests. Projects that are expected to have impact on cultural properties or natural habitats or forests will be categorised as E1 and management plans will be prepared as required.
23. Sustainability guideline of KfW (January 2011) describes principles and procedures to assess the environmental, social and climate impacts during the preparation and implementation of measures financed by KfW. This KfW guideline has been duly considered in ECSMF thus bringing in Climate Change adaptation and mitigation aspects into the framework.

Regulatory Framework - Social

24. Mandatory Social Laws are:
- Land Acquisition Act, 1894 as amended in 1984
 - [The Land Acquisition, Rehabilitation and Resettlement Bill 2011](#)
 - TN Highways Act 2001
 - Government Order No. 885 of the Revenue Department dated 21.09.95 describing procedures for acquisition through negotiation
 - Board Standing Orders (Standing Orders of the Commission for Revenue Board) based on the Revenue Act 1884 of the Madras Presidency (for Rayatwari states), regarding assignment of land, lease and cancellation and encroachments.
 - Tamil Nadu Land Encroachment Act, 1905
 - The Tamil Nadu Slum Areas (Improvement and Clearance) Act, 1971 Policies
 - National Policy on Resettlement and Rehabilitation for Project Affect Families, 2003
25. The World Bank OP and BP 4.12 describes Bank policy and procedures on involuntary resettlement as well as conditions that borrowers are expected to meet in operations involving resettlement. The objective of the Bank's policy is to ensure that populations displaced by a project also benefit from the project and that livelihoods and standards of living are improved, or at least restored to earlier levels. TNUDF as a borrower of credit would ensure that Bank policies are followed.

TNUIFSL's SOCIAL ENTITLEMENT FRAMEWORK

26. The National Policy on Resettlement and Rehabilitation for Project Affected Families – 2003 that came into effect from 17th February 2004, provides a reference for the social part of the ECSMF.
27. TNUIFSL will ensure that the Policies and procedures described in the ECSMF will be applicable to all External Aided Projects. This ECSMF provides a list of entitlements for project affected persons and families. Detailed exposition of the social entitlement framework is provided in Appendix 7. Three broad categories of economic and social impacts that would be mitigated are
 - a) Loss of assets, homestead and land and other fixed assets,
 - b) Loss of income or means of livelihood and
 - c) Indirect group oriented impacts due to loss of common properties and resources.

<h2>TNUIFSL'S ENVIRONMENTAL CLIMATE CHANGE AND SOCIAL ASSESSMENT FRAMEWORK</h2>
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28. TNUDF, as a financial intermediary, ensures the financial viability of each project that it funds. TNUIFSL catalyses municipalities into attracting private investments on their own. The project cycle for appraising and monitoring projects forms the background for assessment and management of environmental, climate change and social issues that could arise within projects financed by TNUDF.

TNUIFSL Project Cycle

29. During screening and scoping of projects, levels of detail to which each aspect of a project needs to be assessed, will be determined. After a project has gone through successful appraisal and approval, TNUIFSL will monitor construction, operation and maintenance phases.
30. During project screening, TNUIFSL will assess the eligibility of a project based on TNUDF's lending policies. The assessment will form part of the Initial Screening Report (ISR) and will decide whether or not the project should be taken up for detailed appraisal. The borrower will prepare and submit a Detailed Project Report (DPR) to TNUIFSL. The ESS Manager/specialists, will advise the borrower on the requirements of ECSMF and will also review the adequacy of environmental , climate protection and social reports (ESRs) such as Environment Management Plans (EMPs) and Resettlement Action Plans (RAPs) prepared as part of the DPR. ESRs related to the sub-projects will form an integral part of the Detailed Project Report.
31. During Project Appraisal, TNUIFSL along with the borrower vets the DPR. Environmental Climate Change and social aspects will be cross checked against

standards set in the ECSMF. The appraisal report will be submitted for approval with a recommendation to accept the project as submitted; accept with modifications; or reject it.

32. After requisite approvals for projects that fall under the E1 and/or S1, the DPRs along with the environmental and social assessment reports will be sent to the respective funding agency as required. After obtaining their concurrence TNUIFSL signs the loan agreement with the borrower which includes the terms and conditions such as rate of interest; repayment schedule; security/guarantee; and environmental and social commitments with the borrower.
33. TNUIFSL will undertake annual audits, through ECSMF auditor, of its portfolio to review the status of ECSMF compliance. While all projects of E-1 and/ or S-1 category will be audited, TNUIFSL will sample 25% of the E-2 and/ or S-2 projects. The remaining E-2 and/ or S-2 projects and all E-3 and/ or S-3 projects will be audited through compliance reports submitted by the borrowers.

ORGANISATIONAL SUPPORT STRUCTURE

34. In order to ensure that the policy obligations and associated procedures in the ECSMF are operationalised, besides fixing responsibility in the process, a better organizational support structure has been established for TNUIFSL.

Organisational Structure

35. TNUIFSL has deployed professionals headed by a Chairperson and Managing Director (CMD). It has three divisions viz. the Project wing, Consultancy wing and Financial wing supported with ESS Managers to ensure implementation of ECSMF.

Responsibility Allocation Framework

36. TNUIFSL will ensure sensitivity to environmental, climate change and social aspects of various projects among its project appraisal and management staff. To ensure this, TNUIFSL has appointed ESS managers to address all the environmental, climate change and social concerns related to urban infrastructure projects.
37. The ESS managers/specialists will be responsible to approve the categorization of the project after reviewing the report and will check the inclusion and adequacy of the environmental management plan, climate change adaptation and mitigation plan, assigning of responsibility and whether its cost is included in the project.
38. TNUIFSL will oversee appraisal, investments and resources of the projects in addition to specific environmental, climate change and social assessment and management issues by officials in various cadres assisted by the ESS managers/specialists and will interface with Multilateral Agencies.

39. An external Agency will be appointed as ECSMF auditor who will undertake the annual review of the ECSMF performance through environmental, climate change and social audit of sample projects and suggest improvements to the ECSMF.

Capacity Building

TNUIFSL 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. The training program for various role players will include an orientation on the ECSMF in addition to other programs in Municipal Finance, Urban Planning, Project Management and Engineering and Public Health as required.

TNUDF's POLICY STATEMENT

Tamil Nadu Urban Infrastructure and Financial Services (TNUIFSL), set up to manage the Tamil Nadu Urban Development Fund (TNUDF), aims to promote environmentally sound, socially acceptable and economically viable urban infrastructure projects in the state of Tamil Nadu. TNUIFSL, like the Trustee Company (TC) of the TNUDF, believes that each of its projects will improve the living standards of the people and the quality of environment in and around projects location.

The TC of TNUDF and TNUIFSL intend to promote environmentally sound, climate resilient and socially acceptable urban infrastructure projects by integrating environmental and social considerations in to their lending operations. The institutions commit all projects to ensure the following.

Environment

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

Climate Change

Ensures that the sub-projects are Climate resilient and Climate friendly.

Social

Social relevance and acceptability by:

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

While adopting the above environmental and social policy of the TNUDF, TNUIFSL has reflected its own commitments through detailed operational procedures illustrated in its Environmental, Climate Change and Social Framework (ECSMF).

SECTION 1

ENVIRONMENTAL, CLIMATE CHANGE AND SOCIAL ISSUES

- 1.1 TNUIFSL manages funds for the TNUDF. TNUDF extends term loans to Urban Local Bodies (ULBs), Statutory Bodies, Public Undertakings, and Private Investors for urban infrastructure projects in the state of Tamil Nadu.
- 1.2 TNUIFSL recognizes the environmental 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 mitigation through a set of management procedures elaborated in its ECSMF.
- 1.3 TNUIFSL will ensure that the policies and procedures described in the ECSMF will be applicable to all External Aided Projects. This ECSMF provides a list of entitlements for project affected persons and families. Detailed exposition of the social entitlement framework for External Aided Projects is provided in Appendix 7.
- 1.4 To evolve its environmental and social management procedures, TNUIFSL has carefully examined the portfolio of urban infrastructure projects previously executed by TNUDF and environmental and social issues arising in each of the projects. TNUDF projects in the past have encompassed several sub-projects including roads, bridges, street lights, solid waste Management, storm water drains, bus stations, and markets in various municipalities in Tamil Nadu.

TYPICAL MUNICIPAL INFRASTRUCTURE PROJECTS

- 1.5 TNUDF finances the following categories of urban infrastructure projects
 - Water Supply and Sanitation
 - Solid Waste Management
 - Transportation including urban roads and traffic management
 - Commercial Complexes
 - Non commercial/Community Amenities
 - Integrated area development
 - Improvement / Rehabilitation of Lakes / waterways

- 1.6 While TNUDF financed projects are expected to improve general living standards within urban localities, they can also have associated impacts on the local environment and people. TNUIFSL identifies various environmental, climate change and social issues that can arise in urban infrastructure projects which are listed below.

I. WATER SUPPLY AND SANITATION PROJECTS:

(a) Water Supply:

- 1.7 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.
 - health and safety concerns of workers while laying the pipelines
 - storage of hazardous chemicals such as Chlorine for water treatment
 - disposal of WTP sludge (where WTPs are proposed)
- 1.8 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

(b) Storm Water Drainage :

- 1.9 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
- health and safety concerns while working in closed drains
- ± impact on public/private properties and other sensitive receptors along the storm water drains during construction

1.10 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

(c) Sewerage:

1.11 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.
- health and safety concerns while working in closed drains/pipes
- ± impact on public/private properties and other sensitive receptors along the sewer lines during construction
- ± health and safety issues associated with storage and handling of chemicals for STP operation

1.12 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

II. 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
- health and safety concerns of workers handling wastes

1.14 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

III. TRANSPORTATION :

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

a) Roads :

1.16 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
- health and safety concerns of workers
- pollution from construction equipments
- impact on sensitive receptors
- construction related impacts
- traffic safety
- pedestrian safety
- safety of roadside dwelling units
- impact on economy, and urbanisation
- traffic management concerns in densely developed areas

1.17 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

b) Street Furniture :

1.18 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 :

1.19 Road structure projects to be funded by TNUIFSL will include construction of subways, road overbridges/ road under bridges (*ROBs/RUBs*), culverts and small bridges. Environmental impacts that may arise are:

- change in landuse, 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
- health and safety concerns of workers
- 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

1.20 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

d) Bus Shelters/Terminals / Parking Facilities:

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

- change in landuse, 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

1.22 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

IV COMMERCIAL COMPLEXES:

1.23 Commercial complexes will include shopping complexes, vegetable/fish markets and slaughterhouses, marriage halls, town halls, lodges, dormitories and tourist complexes. The environmental issues that may arise are:

- conflicting land use (such as major shopping complexes in a 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

1.24 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

V NON COMMERCIAL/COMMUNITY AMENITIES:

1.25 Construction of parks and playgrounds, community centers, institutions and hospitals and the development of burial grounds. The environmental issues that may arise are:

- change in landuse
- solid and liquid waste disposal
- public health and safety

- sanitation
- parking
- impact on energy consumption
- fire safety

1.26 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

VI INTEGRATED AREA DEVELOPMENT:

1.27 Under integrated area development will include housing (sites and services), guided urban development and traffic and transport programs (TRAMPS) 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)

1.28 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

VII IMPROVEMENT / REHABILITATION OF LAKES / WATERWAYS

1.29 TNUDF 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 landuse, 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

1.30 Social issues may arise in these projects if banks of the waterways are occupied by squatters

CATEGORISATION OF URBAN INFRASTRUCTURE PROJECTS

I. ENVIRONMENTAL CATEGORIES OF PROJECTS

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, TNUIFSL has categorized the projects into different categories – E1, E2 and E3 linked to severity of impacts and regulatory requirements.

1.31 The E1, E2 and E3 categories are defined as follows.

- a. E-1 projects are those wherein TNUIFSL foresees major environmental impacts thus necessitating Environmental Assessment Reports (EAR). A proposed project is classified as E1 if it is likely to affect sensitive environmental components (SEC) such as those mentioned in Table 1.1. *Those projects/activities, which require environmental clearance as per the EIA notification published by Ministry of Environment and Forests will also be categorized as E1.*

Table 1.1 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)
17	Tiger reserves/elephant reserve/turtle nestling grounds
18	Habitat for migratory birds
19	Lakes, reservoirs, dams
20	Streams/rivers/estuary/seas

TNUIFSL 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 TNUIFSL 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. TNUIFSL accepts other forms of mitigation measures only when they are technically justified.

- b. E-2 projects are expected to have only moderate environmental issues. A project is categorized as E2 if its potential adverse environmental impacts are less adverse than those of E1 projects. These impacts are mostly generic in nature and in most cases mitigation can be designed more readily than for E1 projects. Although the scope of assessment for an E2 project is project specific and examines the project's potential negative and positive environmental impacts, it recommends measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.
- c. No environmental issues are expected in E-3 projects and can be termed 'environmentally benign'. Hence no environmental assessment is required for an E3 project beyond screening.

1.32 Based on the experience gained from the projects executed, an indicative categorization of various types of urban infrastructure projects is provided in **Table 1.2** based on their environmental sensitivity. This indicative categorization has been developed to serve as a guidance tool. It is expected that adequate judgment will be applied to determine the category while preparing the DPRs and undertaking EAs.

1.33 Projects other than those listed in table 1.2 will be categorised as discussed in section 1.32. The ESS managers/specialists of TNUIFSL will verify and approve the categorization based on its environmental sensitivity. The ESS managers/specialists can decide upward scaling of categories such as from E2 to E1. However scaling down of categories can be carried out only after ascertaining submitting relevant justifications for the same. Else The ESS managers/specialists can decide upward scaling of categories such as from E2 to E1 or scaling down of categories such as E1 to E2 or E2 to E3 only after ascertaining submitting relevant justifications for the same.

Table 1.2: GUIDELINES FOR ENVIRONMENTAL CATEGORISATION OF PROJECTS

Project	Environmental Category¹
I) Water Supply & Sewerage	
A. Water Supply	
1. Water supply augmentation	E-2 ²
2. Water supply distribution lines	E-2
3. Water tankers	E-3
4. Overhead tanks	E-3
5. Water treatment plants	E-1
6. Ugradation of existing Headworks	E-3
7. Generators	E-3
8. River Intake Works	E-1
B. Stormwater Drainage	
1. Open drains	E-2
2. Closed / Underground drains	E-2
C. Sewerage / Sanitation	
1. Only Sewer Net Work	E-2 ³
2. Sewerage Network and Pumping Stations	E-2 ³
3. Sewerage Network, Pumping Station and Treatment Plant	E-1
4. Public conveniences	E-2
5. Pay & use latrines	E-2
6. Septic tanks	E-2
II) Solid Waste Management	
A. Landfill Sites	E-1
B. Compost Yard	E-1
C. Solid Waste Mgmt, including Collection & Transportation Vehicles	E-2
III) Transportation	
A. Roads	
1. New Roads	E-1
2. Widening of roads outside ROW	E-1
3. Widening of roads within ROW affecting Environmental Sensitive Components	E-1
4. Widening of roads within ROW without affecting Environmental sensitive components	E-2
5. Improvement of surface	E-2
6. Traffic islands	E-3
7. Road divider	E-3

1

Any project envisaged to have impact on any of the sensitive environmental components (as identified in Table 1.1) will be categorised as E1 irrespective of the category identified in this Table 1.2.

² In case of development of new sources, head works, intake works/channels, the project will be categorized as E-1

³ Projects without adequate treatment and disposal facilities (meeting the requirements of TNPCB or other applicable laws) to cater to the sewage collected due to the extension of sewerage system or network shall be categorised as E1.

Project	Environmental Category¹
8. Other Traffic and Transport Management measures	E-3
9. Foot paths	E-3
B. Street Furniture	
1. Traffic signals	E-3
2. Street lights	E-2
3. Sign boards	E-3
C. Road Structures	
1. Subways	
- Pedestrian	E-2
- Cycle lanes	E-2
- Fast moving	E-2
2. ROBs/RUBs	E-1
3. Culverts	E-2
4. Small Bridges	E-2
D. Terminals / Shelter⁴	
1. Bus Shelters	E-2
2. Bus Terminals/Stands	E-2
3. Truck Terminals	E-2
4. Workshops	E-2
5. Parking Complexes	E-2

⁴ ECSMF / FEB 2016

¹² In case of construction of new bus/truck terminals, the project will be categorized as E1

Project	Environmental Category
E. Fleet Expansion	E-2
F. Construction & Maintenance equipment	E-3
G. Inland Water Ways / Lakes / Water Bodies	E-1
IV. Commercial Complexes	
A. Shopping /Office complexes < 1,50,000 sq.m	E-2
B. Shopping /Office complexes > 1,50,000 sq.m	E-1
C. Vegetable/Fish markets	E-2
D. Slaughter houses	E-1
E. Marriage halls	E-2
F. Lodge / Dormitory	E-2
G. Municipal Community complexes complexes < 1,50,000 sq.m	E-2
H. Municipal Community complexes complexes > 1,50,000 sq.m	E-1
V. Non Comm ./ Community Amenities	
A. Parks	E-3
B. Playgrounds	E-3
C. Maternity and Child Centers	E-2
D. Educational institution/Reading Room	E-2
E. Burial Grounds	E-2
F. Electric Crematorium	E-2
VI. Integrated Area Development	
A. Housing (Sites & Services)	E-1
B. Guided Urban Development	E-1
C. TRAMP	E-1
VII. General :	
A. Computer Facilities	E-3
B. Weigh Bridge	E-3

In addition to addressing environmental issues, TNUIFSL commits itself to explore opportunities for environmental enhancement in various sub-projects. A sample list of enhancement opportunities is listed out in table 1.3 below. TNUIFSL encourages its borrowers to identify such opportunities and include the same as part of the project components..

Table 1.3 Potential Environment Enhancement and Climate Protection & Resilient Opportunities in TNUIFSL 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 ▪ 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 pumpsets ▪ Aerobic treatment/ gas flaring
D. Solid Waste Management	
Compost and Landfill	<ul style="list-style-type: none"> ▪ Development of Parks and Green Spaces for Tourist Attraction

Facilities and Environmental Improvement

- Gas flaring arrangement
- Energy generation from waste
- Recovery and Recycling of wastes

E. Transportation

1. Widening & Laying of New Roads

- 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

- Landscaping and Aesthetic Improvements at the proposed locations

3. Street lighting

- Energy efficient lighting / solar powered lighting

F. Bus Shelters & Terminals

- Development and implementation of Rainwater Harvesting measures

- Development of vegetative belt along the boundary

G. Inland Waterways / Lakes, etc.

- Development of Parks and Recreational Facilities for Tourist Attraction and Environmental Improvement

- Protection of boundaries

H. Commercial Complexes

- Development and implementation of Rainwater Harvesting measures

- Development of vegetative belt along the boundary
- Applying ECBC in design and construction
- Reusing waste water generated
- Use alternate construction materials

II. SOCIAL CATEGORISATION OF PROJECTS

1.34 Based on the number of Project Affected Persons (PAPs) by the project and magnitude of impact, projects have been categorised as either S-1, S-2 or S-3 projects.

- a) S-1 projects are those that will affect 200 PAPs (30 – 40 Households) or more or if PAPs are physically displaced and will require a detailed Social Assessment Report (SAR) that would include a resettlement plan.
- b) S-2 projects are those in which no PAP is physically displaced and less than 10% of their productive assets are lost (or) less than 200 PAPs are affected. In this case the borrower can submit a Social Management Plan (SMP) that would include an abbreviated resettlement plan.
- c) S-3 projects, on the other hand will not have any households affected at all i.e. they can be classified as ‘socially benign’. However, the borrower will have to submit a Social Status Report (SSR).

1.35 Table 1.4 provides TNUIFSL's categorisation of urban infrastructure projects based on their social sensitivity.

Table 1.4: CATEGORISATION OF PROJECTS BASED ON SOCIAL SENSITIVITY

Category	Description		Type of project
	Level of issues	Management measures	
S-1	serious social issues expected	project specific SAR along with a RP essential	200 PAPs are affected
S-2	moderate social issues expected	adopt generic design guidelines and norms in ECSMF along with a project specific abbreviated plan essential	< 200 PAPs are affected.
S-3	no social issues expected hence socially benign	no social mitigation measures required, need to submit SSR	No PAPs are affected

1.36 In the case of projects with moderate environmental and social issues, TNUIFSL will integrate readily available solutions into the project design.

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, TNUDF will ensure compliance to mandatory environmental and social laws and regulations that apply to specific projects. Besides, mandatory laws, regulations and policies, which are prescriptive will influence management procedures for environmental and social issues in TNUDF financed projects.

REGULATORY FRAMEWORK – URBAN INFRASTRUCTURE PROJECTS

I. CONSTITUTIONAL PROVISIONS

- 2.2 ULBs, are distinct from other undertakings due to their “body politic“ character. It constitutes the urban democratic grassroots in India. Apart from their statutory status, and mention in Entry 5 of List II of the 7th schedule of the Constitution, they have now been given due constitutional recognition. This is in the form of the 74th Constitutional Amendment Act, 1992, which has inserted provisions in an attempt to decentralise administration and decision making. The 74th amendment empowers municipal bodies to take necessary steps for management of areas under them, including protection of environment (see **Appendix 1** for Articles inserted in Constitution). ULBs are considered as “state“ as per Article 12 of the Constitution. This implies that municipal bodies can be proceeded against under a writ, for violations to Fundamental Rights or Directive Principles, as their actions are state actions.
- 2.3 ULBs in specific projects will act in dual strains, i.e. both project sponsorship /execution and project approvals/ permissions/ monitoring. As a regulatory body, ULBs will also be responsible for ensuring environmental and social compliance. Their local government status can expose them to distinct legal recourse, action and claiming of reliefs.
- 2.4 When acting as regulatory authorities, there is an in-built duty to provide quality amenities and urban facilities and to ensure that these systems function on a sound environmental and social base. A framework enabling the setting up of infrastructure amenities and delineating powers and responsibilities is found in various State laws.

II. TAMIL NADU TOWN AND COUNTRY PLANNING ACT, 1971

- 2.5 This Act appoints local planning authorities and empowers them to plan for an urban area and/or designated areas. Typically this involves preparation/implementation of Master Plans specifying uses to which land can be put to. Such zoning ensures

functional and ordered development. The plan delineates land for residential, industrial, commercial, agricultural and recreational purposes or forests and mineral exploitation; demarcates objects and boundaries of archaeological/historical interest; and identifies new towns/cities, transportation and communication facilities, water supply, drainage, sewerage, sewage disposal and other public utilities and amenities. This law empowers local planning authorities to assess, levy and recover development charges.

- 2.6 The Act envisages three classes of authorities: regional planning authorities; local planning authorities; and new town development authorities and the constitution of a Town and Country Planning Board.

III. TAMIL NADU MUNICIPALITIES LAW AND BUILDING BYE LAWS

- 2.7 The relevant legislation is the Tamil Nadu District Municipalities Act, 1920. This law extends to the whole of the Presidency of Madras except the City of Madras. It is under this law that local bodies are empowered to provide and maintain public amenities and facilities.

- 2.8 The law essentially deals with :

- Establishment, constitution and government of District Municipalities and authorities
- Taxation and Finance
- Public Health, Safety and Convenience

- 2.9 The law delineates constitution/election of urban local bodies and demarcates powers and responsibilities of these authorities. This law vests properties to be administered in local bodies. The law also vests “works” such as waterworks, lighting, public drainage and garbage disposal. Other activities include maintenance and repair of streets, regulating construction through building regulations and providing other amenities. With zonation as laid down in the Master Plan, building regulations provide for development in consonance with floor space indexes and other rules. ULBs also have powers of inspection and monitoring (See **Appendix 2** for main features of this legislation).

IV. DEVELOPMENT CONTROL RULES FOR MADRAS METROPOLITAN AREA: ILLUSTRATION UNDER THE TOWN AND COUNTRY PLANNING ACT, 1971

- 2.10 Chennai, apart from being a major Metropolitan city, is the only town that has prepared Control Rules under the Town and Country Planning Act, 1971. With its status as an important borrower, it is essential to understand these control rules. Other major cities such as Madurai and Coimbatore are also in the process of developing Master Plans.

2.11 The rules have been developed under Section 9-C, Chapter II-A of the above Act, which prescribes that the Chennai Metropolitan Development Authority shall carry out a survey of Chennai Metropolitan Area and prepare a Master Plan. The contents of the Master Plan are found in these rules detailing policies and programmes for the overall development of Chennai. The plan emphasises regulation of land and building use.

REGULATORY FRAMEWORK - ENVIRONMENT

I. CONSTITUTIONAL GUARANTEES

a) Article 48-A of the Constitution

2.12 This directive principle states that the State shall endeavor to protect and improve the natural environment

b) Article 51-A of the Constitution

2.13 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, TNUIFSL will see to it that checks and balances are properly instituted as these local bodies are subject to constitutional challenge.

II. LAWS AND ACTS

2.14 The environmental laws and Acts applicable to TNUIFSL 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.

a) Water (Prevention And Control of Pollution) Act, 1974 and Tamil Nadu Water (Prevention And Control of Pollution) Rules, 1974

2.15 These laws seek to control pollution of water and enhance the quality of water. Under this law, it is mandatory to obtain consent for discharge of effluents and pay consent fees to Tamil Nadu State Pollution Control Board (TNSPCB) for any municipal projects causing water pollution.

b) The Water (Prevention And Control of Pollution) Cess Act, 1977 :

2.16 This Act provides for levy and collection of a cess by local authorities on water consumed by persons or industries to augment resources for Pollution Control Boards.

c) Air (Prevention and Control of Pollution) Act 1981 and Tamil Nadu Air (Prevention of Control of Pollution) Rules 1983

2.17 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.

d) Environment (Protection) Act, 1986

2.18 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 persons 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.

e) Forest (Conservation) Act, 1980

2.19 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.

f) Wildlife Protection Act, 1972

2.20 This Act seeks to protect wildlife, by creating protected areas and controlling trade in wildlife products. If TNUIFSL activities cross over into protected area regimes then requisite permission must be obtained.

g) Coastal Regulation Zone (CRZ) Notification, 2011

2.21 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.

h) Chennai Metropolitan Area Ground water (Regulation) Amendment Act, 2002

2.22 This amendment to the original act was made to impose provision of rainwater harvesting in every building either private or government to augment ground water storage in such manner as may be prescribed. The act also mentions that water bodies, including ponds, lakes, tanks and the like, whether public or private should be used only for the purpose of storage of water and not for any other purposes. These provisions are also included in the Panchayats Act and the Municipal Act.

III. RULES AND REGULATIONS

a) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989

2.23 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.

b) Hazardous Waste (Management and Handling) Rules, 1989

2.24 These rules address handling of hazardous substances that fall under specified schedules. Projects envisaged by TNUIFSL will not require handling of specified substances.

c) Noise Pollution (Regulation and Control) Rules, 2000

2.25 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.

d) EIA Notification, 2006 (as amended in 2009)

2.26 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.

e) Municipal Solid waste (Management & Handling) Rules 2000

2.27 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.

f) Bio-Medical Waste (Management & Handling) Rules 1998

2.28 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.

g) Tamil Nadu Timber Transit Rules, 1968

2.29 The Rule States "No person shall move timber into or from, or within the State by land, water or air unless such timber is accompanied by a permit prescribed therefor under rule 4". This is applicable in sub projects such as roads where cutting of trees are involved.

h) Fly Ash Notification 1999 as amended in 2003

2.30 As per this notification amended in 2003, no person shall within a radius of hundred kilometers 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. OPERATIONAL POLICIES AND DIRECTIVES OF THE WORLD BANK

a) Environmental Assessment - OP/BP 4.01 Requirements

2.31 Operational Policy 4.01 (OP 4.01) is one of the ten safeguard policies of the World Bank, which provides the Environmental Assessment (EA) guidance for the lending operations. The OP 4.01 requires the borrower to screen projects upstream in the project cycle for potential impacts. Thereafter, an appropriate EA approach to assess,

minimize / enhance and mitigate potentially adverse impacts is selected depending on nature and scale of project. The EA needs to be integrated in the project development process such that timely measures can be applied to address identified impacts. The policy requires consultation with affected groups and NGOs to recognise community concerns and the need to address the same as part of EA.

- 2.32 TNUIFSL has adopted the principles of the above policy and has evolved a management framework to address the environmental issues in its lending operations

b) Physical Cultural Resources - OP 4.11

- 2.33 The World Bank's Operational Policy 4.11 aims at preserving and avoiding the elimination of structures/ natural features and landscapes having archaeological (prehistoric), paleontological, historical, religious and unique natural values. Physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices and the Bank will in turn assist to mitigate impact and for protection and enhancement of physical cultural resources encountered in the project . Wherever, projects to be funded by TNUDF encounter cultural resources, suitable mitigation / management plan will be prepared within the Environmental Assessment and implemented as part of the project.

c) Natural Habitats – OP/BP 4.04

- 2.34 Operational Policy 4.04 sets out the World Bank's policy on supporting and emphasising the precautionary approach to natural resource management, take into account the conservation of biodiversity, and ensure opportunities for environmentally sustainable development. As per this policy, projects that involve significant conversion or degradation of critical natural habitats are not supported by the Bank.

Projects involving non critical habitats are supported if no alternatives are available and if acceptable mitigation measures are in place.

Projects to be funded by TNUDF are less likely to cause negative impacts to natural habitats, excepting in projects such as development of water sources from very long distances running through natural habitats, or sewer outfalls running through sensitive areas, new road alignments passing through natural habitats. In such situations, the projects shall be categorised as E1 and appropriate EA shall be carried out to prepare EMP to mitigate the impacts of the project.

d) Forests – OP/BP 4.36

- 2.35 Forest Policy (OP/BP 4.36) aims to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty, and encourage economic development for protection of forests through consideration of forest related impacts of all investment operations, ensuring restrictions for operations affecting critical forest conservation areas, and improving commercial forest practice through use of modern certification systems. . In the context of TNUDF

operations, these issues are relevant for the projects that pass through or require diversion of forest land.

V. Sustainability Guideline of the KfW Entwicklungsbank (January 2011):

2.36 The SG of KfW describes principles and procedures to assess the environmental, social and climate impacts during the preparation of measures financed by KfW. According to the guidelines, all funding activities of KfW must be subject to an ESIA and a climate change assessment as defined in this guideline. SG of the KfW has been adequately considered while updating the ESF into ECSMF to include the climate change perspective with a view to ensuring climate resilience and mitigation measures during planning and implementation of urban infrastructure projects. The Sustainability Guidelines of KfW is provided in the Annexure “ 12”.

VI. COMPETENT REGULATORY AGENCIES

a) Municipal Bodies

2.37 For most laws applicable to TNUDF 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. In case of other borrowers, clearances specified in the Acts would have to be obtained before sanctions.

b) Tamil Nadu Pollution Control Board

2.38 The activities that would cause air emissions and/or effluent discharges and/or hazardous waste disposal needs to be reported to the TNPCB and relevant consents/NOC/authorisation is required to be obtained. TNPCB is also mandated to monitor the implementation of consent conditions on a regular basis.

c) State/Central Ministry of Environment and Forests

2.39 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.

2.40 Table 2.1 illustrates the applicable laws and regulations for various urban infrastructure projects being implemented by TNUIFSL and compliance requirements for each of these laws or regulations. The EA for individual projects is expected to review the regulatory requirements in a more comprehensive manner. The Table 2.1 will be updated as and when the new legislations relevant to the project are enacted.

2.41

Table 2.1 Environmental Laws and Regulations Applicable for TNUDF's Projects and their obligations

Project	Applicable Legislations	Obligations¹	Responsibility¹
I) Water Supply & Sewerage			
A. Water Supply			
1. Water Supply Augmentation	None	Approval from Water Resources Organisation /Public Works Department	ULB/Implementing Agency
2. Water Supply Distribution Lines	None		
3. Water Tankers	None		
4. Overhead Tanks	None		
5. Water Treatment Plants	Water (P&CP) Act, 1974 Hazardous Chemicals Rules, 1989 Hazardous Waste Mgt. Rules 2008	Secure the following from TNPCB 1 Consent to Establish 2 Consent to Operate	ULB / Project Implementing Agency ULB / Operating Agency
6. Upgradation of Head Works	Groundwater Regulation Act 2002	Ensure that the water of the Tanks / water bodies is as per the act and augment ground water level	ULB / Project Implementing Agency
7. Generators	Air Act,1981& Noise Rules as per EPAAct,1986	Ensure Air and Noise quality is within the stipulated limits of TNPCB	ULB / Project Implementing Agency ULB / Operating Agency
8. River Intake Works	None	Approval from Public Works Department	Implementing Agency
B. Stormwater Drainage			
1. Open drains	None		
2. Closed / Underground drains	None		

Project	Applicable Legislations	Obligations¹	Responsibility¹
C. Sewerage / Sanitation			
1. Only Sewer Net Work	None		
2. Sewerage Network and Pumping Stations	Air Act, 1981 & Noise Rules as per EP Act, 1986	Ensure Air and Noise quality is within the stipulated limits of TNPCB	Contractor during construction and ULB / operating agency during operation
3. Sewerage Network, Pumping Station and Treatment Plant	Water (P&C) Act, 1974 Hazardous waste Management Rules 2008 Air (P&CP) Act, 1981 & Noise Rules as per EP Act, 1986	Secure the following from TNPCB for treatment plant NOC Consent to Establish Consent to Operate, and Ensure Air and Noise quality is within the stipulated limits of TNPCB	ULB / Project Implementing Agency ULB / Operating Agency Contractor during construction and ULB / operating agency during operation
4. Public conveniences	None		
5. Pay & use latrines	None		
6. Septic tanks	None		
II) Solid Waste Management			
A. Landfill Sites	MSW Rules, 2000 Air (P&C) Act 1981, Water (P&CP) Act 1974 and EPA EIA Notification, 2006 amended in 2009	Obtain Environmental Clearance from SEIAA Ensure Air, water (surface and ground) and Noise Quality is within stipulated limits of SPCBs/CPCB	ULB / Project Implementing Agency ULB / Operating Agency
B. Compost Yard	MSW Rules, 2000 Air (P&CP) Act 1981, Water (P&CP) Act 1974 and EP Act	Secure NOC/ authorisation from TNPCB	ULB / Project Implementing Agency

Project	Applicable Legislations	Obligations ¹	Responsibility ¹
	1986	Ensure Air, water(surface and ground) and Noise Quality is within stipulated limits of SPCBs/CPCB	ULB / Operating Agency
C. Vehicles	Vehicle emission norms	Ensure that the vehicles conform to the emission norms	ULB / Project Implementing Agency
III) Transportation			
A. Roads			
1. Widening of roads	Tamil Nadu Timber Transit Rules, 1968 Water (P&CP) Act, 1974, Air (P&CP) Act 1981, Forest Act, CRZ Notification and EPA EIA Notification, 2006 amended in 2009	Obtain Permit wherever cutting of trees is involved to transport timber under Rule, 4 Environmental Clearance from MOEF	ULB / Project Implementing Agency
2. New roads			
3 Improvement of surface			
4. Traffic islands			
5. Road divider			
6. Foot paths			
B. Street Furniture			
1. Traffic signals	None		
2. Street lights	None		
3. Sign boards	None		
C. Road Structures			
1. Subways			
- Pedestrian	None		
- Cycle	None		

Project	Applicable Legislations	Obligations¹	Responsibility¹
- Fast moving	None		
2. ROBs	Air (P&CP) Act 1981, Noise Rules Fly Ash Notification	Ensure water, air and Noise quality is within the stipulated limits of TNPCB	
3. Culverts	None		
4. Small Bridges	None		
D. Terminals / Shelter			
1. Bus Shelters	None		
2. Bus Terminals/Stand	Water (P&CP) Act, 1974 Air (P&CP) Act, 1981& Noise Rules as per EP Act, 1986 EIA Notification	Environmental clearance from SEIAA(> 20,000sq.m) Secure NOC from TNPCB	Contractor during construction and ULB / operating agency during operation
3. Truck Terminals	Water (P&CP) Act, 1974 Air (P&CP) Act, 1981& Noise Rules as per EP Act, 1986	Ensure water, air and Noise quality is within the stipulated limits of TNPCB	Contractor during construction and ULB / operating agency during operation
4. Workshops	Water (P&CP) Act, 1974 Air Act, 1981& Noise Rules as per EP Act, 1986	Ensure water, air and Noise quality is within the stipulated limits of TNPCB	Contractor during construction and ULB / operating agency during operation
5. Parking Complexes	Air (P&CP) Act, 1981& Noise Rules as per EP Act, 1986	Ensure air and Noise quality is within the stipulated limits of TNPCB	Contractor during construction and ULB / operating agency during operation
E. Fleet Expansion	Water (P&CP) Act, 1974 Air (P&CP) Act, 1981& Noise Rules as per EP Act, 1986 Vehicular Exhaust standards	Ensure vehicular exhaust and Noise quality is within the stipulated limits of TNPCB	Contractor during construction and ULB / operating agency during operation
F. Construction & Maintenance equipment	None		
G. Inland Water Ways / Lakes / Water Bodies	Water (P&CP) Act, 1974&EP Act, 1986	Ensure water, air and Noise quality is within the stipulated limits of TNPCB	Contractor during construction and ULB / operating agency during operation

Project	Applicable Legislations	Obligations ¹	Responsibility ¹
			operation
IV. Commercial Complexes			
A. Shopping /Office complexes < 1,50,000 Sq.m	Water (P&CP) Act, 1974 EIA Notification 2006 as amended in 2009	Obtain environmental clearance from SEIAA (>20,000 sq.m)	
B. Shopping /Office complexes > 1,50,000 Sq.m	Water (P&CP) Act, 1974 EIA Notification 2006 as amended in 2009	Obtain environmental clearance from SEIAA	ULB or Project Implementing Agency
C. Vegetable/Fish markets	Water Act, 1974	Ensure water, Noise quality is within the stipulated limits of TNPCB	ULB or Project Implementing Agency
D. Slaughter houses	Prevention of Cruelty to Animals Act (PETA) of 1960 Prevention of Cruelty to Animals(Slaughter Houses) Rules, 2001 Water (P&CP) Act, 1974	Secure consent to establish and operate from TNPCB	ULB or Project Implementing Agency
E. Marriage halls	Water (P&CP) Act, 1974	Secure consent to establish and operate from TNPCB	ULB or Project Implementing Agency
F. Lodge / Dormitory	Water (P&CP) Act., 1974	Secure consent to establish and operate from TNPCB	ULB or Project Implementing Agency
G. Municipal Community complexes (< 1,50,000 Sq.m)	EIA Notification 2006 as amended in 2009 Water (P&CP) Act., 1974 Air (P&CP) Act., 1981	Obtain environmental clearance from SEIAA (> 20,000 sq.m)	ULB or Project Implementing Agency
H. Municipal Community	Water (P&CP) Act, 1974	Obtain environmental	ULB or Project Implementing Agency

Project	Applicable Legislations	Obligations¹	Responsibility¹
complexes > 1,50,000 Sq.m	EIA Notification 2006 as amended in 2009	clearance from SEIAA	
V.Non Comm./Community Amenities			
A. Parks	None		
B. Playgrounds	None		
C. Maternity and Child Centers	None		
D. Educational institution/Reading Room	None		
E. Burial Grounds	None		
F. Electric Crematorium	Water (P&CP) Act., 1974, and Air (P&CP) Act, 1981	Secure consent to establish and operate from TNPCB	
VI. Integrated Area Development			
A. Housing (Sites & Services)	Water (P&C) Act,1974, Air (P&CP) Act, 1981 &EP Act 1986 EIA notification, 2006 amended in 2009	Obtain environmental clearance from SEIAA (>20,000 sq.m)	ULB or Project Implementing Agency
B. Guided Urban Development	Water Act,1974&EP Act1986	Secure consent to establish and operate from TNPCB	ULB or Project Implementing Agency
C. TRAMP	EP Act,1986 Water (P&C) Act,1974, Air (P&CP) Act, 1981 &EP Act	Secure consent to establish and operate from TNPCB	ULB or Project Implementing Agency

Project	Applicable Legislations	Obligations¹	Responsibility¹
	1986		
VII. General :			
A. Computer Facilities	None		
B. Weigh Bridge	None		
<p>1. For Category E1 or E 2 projects, the obligations and responsibilities as identified in the EAR or generic EMP shall be adhered to, by the respective agencies</p> <p>2. The Operational policies / guidelines of the External Funding Agencies mentioned in sections 2.31 to 2.36 are applicable to all the projects in addition to the above regulations/ legislations.</p>			

REGULATORY FRAMEWORK – CLIMATE CHANGE

2.41 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 mitigation measures pertaining to Solar Energy, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining Himalayan Ecosystem, Green India, Sustaining Agriculture, Strategic Knowledge on Climate Change.

2.42 ENERGY CONSERVATION ACT, 2001

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

2.43 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.

REGULATORY FRAMEWORK - SOCIAL

I. MANDATORY

a) Land Acquisition Act, 1894 as amended in 1984

2.44 This Act enables the State to acquire private land for public purpose and has provisions for acquisition for industrial purposes. The Act ensures that no person is deprived of land except under law and entitles affected persons (landowner, tenant or licensee) to a hearing before acquisition, with due and adequate compensation made thereafter.

2.45 Only land owners, tenants and licensees are possible compensation recipients. The landless, agricultural and non-agricultural labourers, artisans, forest produce collectors are excluded. The Act deals with cash compensation and provides several methods of valuing compensation. Several

States are using negotiations as a means to fix compensation and acquire land. Grievance/ Redressal mechanisms are also in place and affected persons may seek the intervention of the High Court and Supreme Court.

b) [The Land Acquisition, Rehabilitation and Resettlement Bill 2011](#)

This bill is a comprehensive Bill considering the Land Acquisition and Rehabilitation and Resettlement (R&R) . Once passed the provisions of the Act will be complied with.

c) Government Order dated 21.09.95 from the Commissioner of Land Administration regarding acquisition through negotiation

2.46 The Tamil Nadu Government Order provides for acquisition of land through negotiation and assessment of land value by a committee. The District Collector has powers to approve amounts less than Rs. 15 lakhs. Approval for amounts above this has to be sought from the Government of Tamil Nadu. The reason for resorting to private negotiation is to implement schemes within a time bound schedule, arrive at an acceptable value, preempt protracted court cases, which only delay all processes. Guidelines have been framed for purchase of lands under private negotiation. Implementing and operating agencies for such a scheme are a District level and a State level negotiating committee with ancillary monitoring powers.

d) Board Standing Orders (Standing Orders of the Commission for Revenue Board) based on the Revenue Act 1884 of the Madras Presidency (for Rayatwari states).

2.47 The Board Standing Orders based on the Revenue Act, 1884 of the Madras Presidency broadly states policy on Government owned lands. This policy covers assignment of land, lease and cancellations and encroachments.

e) Government of Tamil Nadu (Resettlement and Rehabilitation) Policy applicable to Involuntary Resettlement under the Tamil Nadu Urban Development Project

2.48 GoTN has been implementing the TNUDP project since 1988. With a view to providing R&R compensation and assistance to PAPs, GoTN has laid down these policy guidelines considering relevant legislation and the World Bank guidelines.

2.49 Key points in the policy :

- Ensures that all PAPs will be resettled and rehabilitated with the aim of improving their livelihoods and standards of living or atleast restored to earlier levels and in such a manner that PAPs have a share in project benefits
- When PAPs lose land/structures and will be displaced and/or economically affected adversely, detailed planning will be made along with implementation arrangements in an operational Resettlement Plan

- Defines PAPs, lists entitlements, details peoples' participation, supervision by NGOs and supervision and monitoring
- Mentions an implementation schedule that would be broken up into specific activities and coordinated with the chronogram of construction
- The cost would be part of the overall project budget and adequate provision would be made for contingencies and inflation

2.50 Relevant provisions in this policy prepared by GoTN have been incorporated into TNUIFSL's management procedures keeping in view the practical issues related to urban infrastructure projects.

F) Tamil Nadu Highways Act - 2001

2.51 This Act provides for the declaration of certain highways to be State Highways, restriction of ribbon development along such highways, prevention and removal of encroachment thereon, construction, maintenance and development of highways, levy of betterment charges and for matters connected therewith and incidental thereto.

2.52 This Act enables where any land is vested in the Government under section 16(1), the Government may, by order, direct any person who may be in possession of the land to surrender or deliver possession thereof to the Collector or any person duly authorised by him in his behalf, within thirty days of the service of the order.

2.53 If any person refuses or fails to comply with an order made under section 16(2), the Collector may take possession of the land, and may for that purpose, use such force as may be necessary.

2.54 This Act also provides negotiation settlements for the land acquisition. The GoTN has designated District Collectors as the authority for negotiated settlements.

2.55 In the Highways Act, no provision is made for loss of income / employment or business. Further, no provisions are made for compensation for tenants and leaseholders. There is also no provision for payment of compensation in full, prior to dispossession of land.

II. WORLD BANK OP 4.12 ON INVOLUNTARY RESETTLEMENT

2.56 This policy describes Bank policy and procedures on involuntary resettlement as well as the conditions the borrowers are expected to meet in operations involving resettlement. The objective of the Bank's policy is to ensure that populations displaced by a project also benefit from the project and that livelihood and standards of living are improved, or at, least restored to earlier levels. TNUDF as a borrower of credit would ensure that Bank policies are followed.

III. TNUIFSL's SOCIAL SAFEGAURD AND ENTITLEMENT FRAMEWORK

2.57 The National Policy on Resettlement and Rehabilitation for Project Affected Families – 2003 that come into effect from 17th February 2004 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 persons and families. Detailed exposition of the social safeguard and entitlement framework for external financed projects is provided in Appendix 7. 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.

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

2.59 Projected Affected Persons (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) Persons losing access to community amenities and resources.

2.60 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

2.61 Vulnerable PAPs: Vulnerable PAPs are those living below poverty line, SC / ST families and women headed households.

2.62 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 in favour of the project. In case the clearance of encroachment and squatting had taken place.

IV. Key Principles of ECSMF:

Payment of Compensation prior to Dispossession of Assets. Before taking possession of acquired lands and structures and before start of civil works construction, the compensation

award will be paid. Any additional assistance will be awarded within six months from the date of payment of compensation. Forced evictions are not performed.

- **Provision of interest:** In case of delay in payment of compensation after issuance of notification under section 15(2) of Highways Act, an interest at the rate of 12% per annum will be paid to the PAP till the date of payment of full compensation.
- **Lack of ownership does not imply lack of compensation rights:** The presence of squatters poses particular challenges. The ECSMF recognizes affected PAPs with informal or unregistered title, including usufruct rights (permanent or temporary use), rights of access to commons, and others. The lack of legal tenure to land or assets will not be regarded as a criterion for withholding financial compensation or assistance in relocation”.
- **All compensation will be at replacement cost:** The principle of paying the compensation at replacement cost for assets acquired is to enable the PAP to acquire replacement assets of similar area and characteristics at current market prices. To ensure compensation at replacement cost, the compensation should be paid at a value higher than the guideline value as specified in the ECSMF. Registration cost (currently at 9% or prevailing rate) will be paid in addition to compensation.
- **Income rehabilitation:** The ECSMF recognises that all PAPs who are severely affected by significant loss of their productive assets and/or incomes and livelihood due to the proposed project should be suitably rehabilitated by way of providing subsistence allowance at the prevailing rates as the case may be.
- **Land for Land:** In case of land for land for arable land, the replacement land shall be of equivalent productive value and / or characteristics at a location acceptable to PAPs. If replacement land at a location acceptable to PAPs is not available, cash compensation representing replacement cost should be provided. In case of land for land, for residential and commercial sites, the implementing agency shall provide PAPs the appropriate plot of land with basic services and facilities at least at the pre-project level.
- PAPs will be given choices regarding the entitlements provided. If land-for-land is chosen by the PAP, the land should be equivalent to the extent lost subject to a Maximum of 1 ha of irrigated land or 2 ha of dry land subject to availability of suitable land in the district. (Refer to the entitlement framework in Annex 7).

V. Impacts and Entitlements

- The entitlements for different types of impacts and category of PAPs is provided in the entitlement matrix in Appendix 7.

IMPLICATIONS

I. MUNICIPAL BODIES AS BORROWERS AND REGULATORS

2.63 The dual nature of municipal bodies brings with it distinct implications. As a government agency, its duty is to set up amenities and facilities, to monitor operations and be in charge of

approvals. In a project sponsor mode, those same regulations will apply to its operations but in case of violation the repercussions are far greater.

II. CONSUMER PROTECTION

2.64 While the legal framework did not deal with the issue of consumer protection, this area of law has developed rapidly. If municipalities provide sub standard infrastructure or there are deficiencies in service, an affected consumer can take legal action. It will be ensured that the services provided will subscribe to high standards of quality

III. ENVIRONMENT

2.65 Compliance with environmental management, Climate change adaptation and mitigation requirements laid down by the policy, legal and regulatory framework need to be carefully looked into in projects that are envisaged to be financed by TNUDF. Hence it will be essential for the borrower to clearly separate the project execution function and regulatory function. Categorisation of projects will be done so that assessments can be done speedily and remedial measures can be adopted.

IV. SOCIAL

2.66 Land acquisition is not expected in a majority of TNUDF financed projects. Some projects like road widening, sewage or water treatment plants, pumping stations, landfill sites, may require land resulting in land acquisition or relocation of squatters which would necessitate resettlement plans. Provisions for acquiring land through private negotiations, ensures that delays in acquiring land from private individuals are minimised. However cumbersome procedures for mutation of land from different government departments need to be simplified.

SECTION 3

TNUIFSL's ENVIRONMENTAL CLIMATE CHANGE AND SOCIAL ASSESSMENT FRAMEWORK

- 3.1 TNUDF, as a financial intermediary, will check the financial viability of each project that it funds. TNUIFSL will catalyse municipalities into attracting private investments on their own. The project cycle for appraising and monitoring projects forms the background for evaluation and management of environmental and social issues that could arise within projects that are scrutinised and funded by TNUDF. This section elaborates the project cycle of the TNUIFSL and the environmental and social assessment and management process therein. A risk evaluation and management process that is in consonance with the project cycle has also been elucidated.

TNUIFSL Project Preparation and Appraisal Process

- 3.2 The key task of TNUIFSL will be to appraise project proposals submitted by ULBs, Statutory Bodies, Public Undertakings and Private Investors; to ensure compliance with its operational procedures; consistence with risk management mechanisms; and, enforce loan recovery mechanisms. During screening and scoping of projects, the levels of detail to which each aspect of a project needs to be assessed will be determined. After a project has gone through successful appraisal and approval, TNUIFSL will monitor the construction, operation and maintenance phases.
- 3.3 The project cycle of TNUIFSL and the interface with the ECSMF requirements are discussed in detail in the following sections. The same is summarized in Table 3.1.

I. PROJECT SCREENING

- 3.4 Upon receipt of request for funding, TNUIFSL will assess the eligibility of the project based on TNUDF's lending policies. The scale and sensitivity of associated issues in a project would determine the categorisation of the project from an environmental and social perspective. The scope of the project document i.e. if it should include EAR and/or SAR, environmental management designs etc. would then be identified. A Loan Application form will be issued to the Borrower for specific project details will include environmental and social screening formats provided in the **Appendices 3 and 4**. The appendices containing information on possible environmental and social issues in urban infrastructure projects and EAR/SAR (which includes a Resettlement and Rehabilitation Action Plan) for E-1 and S-1 projects, EMP format, generic environmental management measures and catalogue of environmental management measures for E-2 projects and SMP (which includes an abbreviated resettlement plan) format for S-2 projects and the social entitlement framework for S-1 and S-2 projects may also be provided to the applicant at this stage.

- 3.5 Details required in the Loan Application Form along with environment and social screening form will be filled and submitted to TNUIFSL by the borrower in the Loan Application Form. On receiving a completed Loan Application form from the borrower, TNUIFSL will assess the creditworthiness of the borrower. Besides this, the financial and economic rate of return; proportion of Loan to the Grant Fund; environmental and social impacts; and risks will be also be assessed for the project. The assessment will form part of the Initial Screening Report (ISR) and will decide whether or not the project should be taken up for detailed appraisal. The ISR will determine the Environmental and social category of the project (as per the categorization criteria defined in the Environmental and Social Framework). It will also comment on the adequacy of the EA carried out for the project, if any; assess the regulatory risks and suggest further course of action required to comply with the ECSMF⁵
- 3.6 The borrower will prepare a Detailed Project Report (DPR) including EA, EMP and SA, SMP for E-1 and S-1 projects respectively as per the outlines provided in the framework. In case of E-2 and S-2 projects, the EMP/SMP required as part of the DPR shall be prepared. For guidance, TNUIFSL has laid down Sample Environmental Management Plan for few urban projects in **Appendix 5**, to mitigate these issues. While preparing the EMP/SMPs for specific E-2 and S-2 projects, the sample EMPs as well as the list of issues relevant to the project needs to be considered.
- 3.7 While initiating the DPR, borrower with the help of the design consultants will prepare and present a scoping note, highlighting the site specific environmental and social issues of the project to TNUIFSL. The ESS managers/specialists will review the scoping note and will advise the borrower / design consultant on the specific requirements of Environmental and Social Assessment report of the project, which shall form part of the DPR.
- 3.8 If the DPR is prepared with TNUIFSL's assistance, the ESS managers/specialists will categorize project as per ECSMF and indicate the level of Environmental and Social Assessment required for the project in the Terms of Reference to be issued to the design consultant. The TOR will exclusively state the level expertise required from the design consultant and also will include the respective specialists in the core team for evaluation of proposals (a generic ToR for EA is included in **Appendix 6**). The Social Safeguard and Entitlement Framework is provided in the **Appendix 7**. A brief outline of the contents of Social assessment report and Social Management Plan are provided in **Annexure 8 and 9** respectively for guidance.
- 3.9 On receipt of the proposals, the ESS managers/specialists will evaluate the completeness of the methodology for ESA and its suitability for the project requirements. The ESS managers/specialists will also review the project activities at every stage of the design, so

⁵ In case of deficiencies in EA, TNUIFSL will provide the borrower ECSMF necessary guidance for conducting EA studies.

that the environmental and social considerations as per the ECSMF are adequately reflected in the DPR.

- 3.10 On receiving the DPR from the borrower, TNUIFSL will assess whether the environmental and social 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, the TNUIFSL will then clear the DPR for detailed appraisal.
- 3.11 In case the borrower has completed the R & R prior to applying the loan, then TNUIFSL 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 TNUIFSL 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

- 3.12 During Project Appraisal, TNUIFSL will look into eligibility criteria for projects and borrowers; suitability of site; availability of inputs; appropriateness of, and proven experience with, the technology offered; engineering designs; and construction, operation and maintenance arrangements. Economic aspects will also be reviewed which include cost estimates; financial operating plan; economic and financial viability; and adequacy of proposed financing. Organisational aspects will be reviewed in terms of institutional, legal and contractual framework; risk analysis; necessary clearances from regulatory agencies; and required covenants. Environmental and social aspects will be cross-checked against the standards set in the ECSMF for the type of environmental and social issues, adequacy of environmental and social management measures provided, cost of implementing the environmental and social management measures including scope for enhancement opportunities in terms of environmental and social aspects in the project area. Field investigations to verify various document components will be carried out by TNUIFSL when necessary.
- 3.13 TNUIFSL will discuss any further changes or modifications that have to be made to the environmental and social components of the DPR with the borrower. TNUIFSL 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.
- 3.14 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. (Guidelines for site selection is provided in **Appendix 10**).

- 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
- 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 E1 category projects

3.15 Procurement Guidelines of the World Bank as well as Tamil Nadu Transparency in Tenders Act, 1998 & The Tamil Nadu Transparency in Tenders Rules, 2000 and The Tamil Nadu Transparency in Tenders (Public Private Partnership Procurement) Rules 2012 as applicable will be followed for procurement of works. While developing the bid documents in addition to the references to various acts relating to environment and labour, the Environmental Management Plan and Climate Change Adaptation & Mitigation Plan prepared for the project will also form part of the bidding document and the implementation of the same will be monitored by TNUIFSL

III.LOAN SANCTION/DISBURSEMENT

3.16 Prior to Loan sanction and disbursement, the environmental and social components of the DPR have to be approved by the appropriate authority. All E1 and/or S1 sub-projects will be cleared by TNUIFSL/ EFAs as required after the EMP and SMP has been cleared by TNUIFSL. TNUIFSL will ensure that any comments/suggestions of the EFAs for such projects (E1and/or S1) are addressed adequately while finalizing the DPR. TNUIFSL will ensure EFAs policy on public disclosure.

3.17 After requisite approvals and concurrence are obtained, TNUIFSL will brief the basic terms of agreement such as rate of interest; repayment schedule; security/guarantee; and environmental, climate change and social commitments to the borrower. TNUIFSL will discuss implementation of environmental, climate change and social management measures of DPR with the borrower. The Resettlement Plan as approved in the DPR will be implemented by ULB, if the project is sponsored by ULB. The RP will be implemented by Private Borrower if the project is implemented by Private Borrower. The funding for resettlement would be made out of Grant Fund (GF) in case of ULB sponsored projects. The environmental, climate change and social commitments will be then translated into covenants as part of the Loan Agreement. TNUIFSL then prepares and signs the loan agreement with the borrower. The loan will be then disbursed on confirmation that the ULB has included the implementation of the EMP/SMP suggested in the EAR as a contract

condition in the TOR for project implementation and in the agreement with the prospective contractors.

3.18 GRIEVANCE REDRESS MECHANISM

Despite best efforts to arrive at fair rewards in project involving involuntary resettlement, there shall always be a few unsatisfied PAPs. The PIA will make efforts at project level to first resolve through negotiations. The negotiations will preferably be arranged at project site among the stakeholders, PAPs and concerned project officer for the resolution of the grievance in minimum possible time.

3.19 GRIEVANCE REDRESS COMMITTEE (GRC):

Initially any aggrieved PAP will be directed to approach GRC, controlled by the appropriate authority (Municipal Commissioner in case of ULBs), which is constituted by the PIA. It will consist of a panel of three Members, one of whom shall be the PIA representative from the sub-project. The others will include representative of the residents of the area / local body who are publicly known to be persons of integrity, good judgment and command respect; and a representative of local NGO/CBO . If the grievance of the PAP is not addressed by PIA, subsequently it will refer to District Collector, during the Collectors weekly grievance redress day. If the PAP is still unsatisfied with the decisions taken by the project and the Collector, he would as a last recourse can appeal in the court of law.

The PIA representative of the GRC shall:

- Convene meetings of the committee as necessary at such place or places in the PIA as he considers appropriate; and
- Conduct the proceedings in an informal manner as he considers appropriate with the object to bring an amicable settlement between the parties;

The report of the members shall be recorded in writing and attested copies thereof shall be provided to the parties. All expenses incurred in arranging grievance negotiations and meetings of GRC as well as logistics required, shall be arranged by Project Implementing Agency (PIA).

3.20 PUBLIC CONSULTATION AND PARTICIPATION

In all sub-projects involving resettlement, and prior to the preparation of Resettlement Action Plans, the PAPs will be informed of the project objectives, likely impacts and essential provisions of Resettlement Policy through the following activities:

- Information campaigns using media, posters or information leaflets;
- Holding public meetings;
- Arranging interviews with the PAPs & their stakeholders groups;

- Formation of focus groups involving key stakeholders, like local leaders, women, the poor, etc;
- Setting up various committees for planning, implementation and monitoring purposes;
- Involvement of the PAPs in grievance redress process, and;
- Introduction of a social preparation phase;

In order to discuss and seek opinion / suggestion from the PAPs / their representatives shall be formally invited to participate in various meetings regarding resettlement issues as convened by PIA.

Similarly for all projects categorised as E1, and those project involving sites for establishment of project components, the public / stakeholders would be apprised of the project activities, benefits etc through public consultation in a transparent manner in line with the MoEF requirement and through disclosure of the impact assessment and management measures identified to ensure public consensus for the project proposal. The Appendix 5 with ToR for EA may also be referred to.

3.21 **PUBLIC DISCLOSURE**

The PIAs will publicly inform the PAPs about the details of resettlement activities as included and to be implemented as a component of a development sub-project. Such information shall be made public and to be formally provided to each household in affected area, for checking and inviting their opinion / concurrence, and will include the following:

- Likely impacts (Positive and negative);
- Cut-off date for purpose of declaring entitlements to compensation and assistance;
- Entitlements and eligibility criteria;
- Mode of compensation payments;
- Options for resettlement and rehabilitation assistance available;
- Project implementation schedule;
- Complaint and grievance redress mechanisms, and;
- Name / contact address of concerned offices / officers;

The TNUIFSL will assist the PIA in determining various steps and stages in information sharing and community consultation, in order to avail the project benefits as well as to solicit public reactions and suggestions leading to a more acceptable resettlement project, endorsed both by the affected community in particular and the public in general. The public participation may range from informal meetings with the affected communities to issuing the press releases / leaflets, inviting from the public their comments on the project and various options proposed for resettlement planning and subsequent operations.

Payment of compensation and other assistance in full will be completed prior to dispossession of assets and award of civil works contract.

IV PROJECT MONITORING, AUDIT AND RECOVERY

- 3.22 TNUIFSL 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 E-1 and/ or S –1 projects. Based on verification of progress reports, field visits, these compliance reports and compliance to other loan disbursement conditions, subsequent installments will be disbursed by TNUIFSL.
- 3.23 TNUIFSL will ensure that the borrower has made adequate internal arrangements to monitor the EMP/SMP implementation for E2/S2 category projects and submit regular progress reports including environmental and social compliance reports to TNUIFSL.
- 3.24 TNUIFSL will undertake annual audits, through ECSMF auditor, of its portfolio to review the status of ECSMF compliance. While all projects of E-1 and/ or S-1 category will be audited, TNUIFSL will sample 25% of the E-2 and S-2 projects. The remaining E-2 and S-2 projects and all E-3 and S-3 projects will be audited through compliance reports submitted by the borrowers. The Terms of Reference for ECSMF audit is attached as **Appendix 11**.
- 3.25 The ESS manager of TNUIFSL will review these audit reports and identify technical, managerial, policy or regulatory issues with regards to the compliance of the EA or SA reports. The identified technical issues will be duly incorporated in the subsequent projects, policy and regulatory issues will be debated internally by the TNUIFSL and determine the need for appropriate interventions. These interventions could include appropriate revision of ECSMF document or suitable analytical studies to influence policy or programs of the state.

Table 3.1: TNUIFSL’s PROJECT APPRAISAL PROCESS

MILE STONES	Objectives	PROCESS	RESPONSIBILITY	DECISION/ PRODUCT
1. Project Screening	To appraise the borrower about TNUDF’s lending requirements	a. Discussions with borrower to <ul style="list-style-type: none"> - assess eligibility of project based on TNUDF's lending policies - categorise project from environmental and social perspective - identify scope of project report b. Issue Loan Application form for ISR c. Issue Environment and Social screening format d. Appraise the borrower of ECSMF requirements	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Decision to proceed or not with an Initial Screening Report (ISR) • Loan Application Form issued • Appropriate Information for DPR issued
	<ul style="list-style-type: none"> • Prepare Initial Screening report 	a. Receive Loan Application form along with Environmental and social screening formats b. Assess <ul style="list-style-type: none"> - creditworthiness of borrower - financial/economic rate of return - loan : grant proportion - environmental climate change and social impacts - determine the level of EA required - project/borrower/other risks 	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Initial Screening report • Decision whether or not to take up project for detailed appraisal
	<ul style="list-style-type: none"> • Receive DPR⁶ from borrower 	a. Desk review <ul style="list-style-type: none"> - check project report against checklist - time period for appraisal specified 	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Project Report received
2. Project Appraisal	<ul style="list-style-type: none"> • Appraise DPR 	a. Detailed appraisal. Site investigation if necessary, to assess	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Project Appraisal Report with

⁶ In case the DPR is prepared with TNUIFSL’s assistance, the ESS manager will ensure that all environmental and social aspects of the projects are adequately covered in the DPR as per the requirements of ECSMF.

MILE STONES	Objectives	PROCESS	RESPONSIBILITY	DECISION/ PRODUCT
		<ul style="list-style-type: none"> - suitability of site - availability of inputs - technical and engineering designs - construction, operation and maintenance arrangements - environmental, climate change and social assessment and adequacy of EMP/SMPs - economic and financial viability - financial and operating plan - institutional and legal framework -contractual framework -risk analysis/allocation -clearances from regulatory agencies 		decision to <ul style="list-style-type: none"> - accept project as submitted - accept with modifications reject
3. Loan Sanction/Disbursement	<ul style="list-style-type: none"> • Approvals from appropriate authorities 	a. Send Detailed Project Report for approval	<ul style="list-style-type: none"> • TNUIFSL 	<ul style="list-style-type: none"> • Approval of the project
	Concurrence from PFAs	a. Obtain concurrence from PFAs for project report (for all E land /or S1 projects and other projects as required)	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • EFA's concurrence for project report
	<ul style="list-style-type: none"> • Issue of Sanction letter 	a. Discuss Terms of Agreement (TOA) for the project <ul style="list-style-type: none"> - interest rate - repayment schedule -security/guarantees - environmental and social commitment 	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Sanction Letter issued
	<ul style="list-style-type: none"> • Finalize Loan Agreement 	a. Prepare and sign Loan Agreement b. Disburse first installment	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Loan Agreements signed • First Installment disbursed

MILE STONES	Objectives	PROCESS	RESPONSIBILITY	DECISION/ PRODUCT
4.Project Monitoring Audit and Recovery.	Ensure conformity to standards during construction, operation & maintenance	a. Prepare quarterly progress reports b. Field visits as required	<ul style="list-style-type: none"> • Borrower • TNUIFSL 	<ul style="list-style-type: none"> • Quarterly Progress reports
	Ensure compliance to loan disbursement conditions	a. Disburse subsequent installments b. Prepare Project completion report	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Compliance report • Project completion report
	<ul style="list-style-type: none"> • Ensure Implementation of agreed EMP / RAP 	a. Prepare quarterly progress reports b. Field visits as required	<ul style="list-style-type: none"> • Borrower • TNUIFSL 	<ul style="list-style-type: none"> • Quarterly Progress reports
	<ul style="list-style-type: none"> • Audit project, if sampled 	a. Audit projects with the help of External/ Corporate consultants.	<ul style="list-style-type: none"> • TNUIFSL • ECSMF auditors 	<ul style="list-style-type: none"> • Audit report (if sampled)
	<ul style="list-style-type: none"> • Ensure no defaults occur in repayments 	a. Enforce loan recovery mechanism	<ul style="list-style-type: none"> • TNUIFSL • Borrower 	<ul style="list-style-type: none"> • Recovery of payments

SECTION 4

ORGANISATIONAL SUPPORT STRUCTURE

- 4.1 In order to ensure that the policy obligations and associated procedures in the Environmental, Climate Change and Social Management Framework (ECSMF) are operationalised, TNUIFSL has outlined an organisational support structure. Besides fixing responsibility, the organisational support structure also outlines capacity building essential for borrowers.

Organisational Structure

- 4.2 TNUIFSL has consciously been designed as a lean organisation with minimal overheads. The personnel and support systems are to be incrementally geared up as business expands.
- 4.3 TNUIFSL will oversee appraisal, investments and resources of the projects and will interface with Multilateral Agencies through its personnels from projects, finance and consultancy wings. The specific environmental, climate change and social and management issues related to various projects will be handled by ESS Managers/Specialists.

Responsibility Allocation Framework

- 4.4 Majority of the projects to be financed are expected to be environmentally and socially benign projects (E-3 and S-3 categories) or those where best practices available can be easily applied (E-2 and S-2 categories - refer Section 3). Very few projects with severe environmental and social complexities (E-1 and S-1 categories) will be financed.
- 4.5 TNUIFSL will ensure sensitivity to environmental and social aspects of various projects among its project appraisal and management staff. TNUIFSL has clearly delineated the functions of professionals within the organisation.
- 4.6 The ESS Managers will help the CMD and other heads of the Project, finance and consultancy wings in project specific environmental, climate change and social assessment and management issues
- 4.7 The ESS managers will be responsible to approve the categorization of the project after reviewing the report and will check the inclusion and adequacy of the environmental mitigation and management plan, assigning of responsibility and whether its cost is included in the project cost. ESS managers will also assess the capability of the borrower in implementing the plan and identify institutional strengthening measures if required.
- 4.8 The Project wing will carryout appraisal of projects. The ES S managers will act as members of the Internal Review Committee of TNUIFSL for environmental and social

categorisation of projects and evaluating the adequacy of DPR with respect to the requirements of ECSMF.

- 4.9 The ECSMF auditors with the support of the ESS managers will undertake the annual environmental and social audit of all TNUDF financed projects. The Terms of Reference for auditing consultants is furnished in **Appendix-11**.

Capacity Building

- 4.10 TNUIFSL envisages capacity building and 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 which will be coordinated by the ESS Manager.
- 4.11 The training program for various role players will include an orientation program on the ECSMF, Municipal Finance, Urban Planning, Project Management and Engineering and Public Health. Course outline for various modules, the duration and the participation envisaged has been illustrated in **Table 4.1**.
- 4.12 The training program is to be co-ordinated and anchored within a training institution in Tamil Nadu (such as Tamil Nadu Institute of Urban Studies) and other local and National Institutions and individuals experienced in various aspects of urban infrastructure projects, will be called upon through an open bid to develop and conduct courses on various modules.
- 4.13** Based on the experiences gained, TNUIFSL 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 TNUIFSL, 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 and EFA requirements, Land Acquisition process, identification of PAPs, Social entitlement frameworks, social assessment, RP techniques, Risk Assessment and management skills. The generic training program is elaborated in **Table 4.1**
- 4.14 In addition to the above, TNUIFSL will make a conscious effort to mainstream the environmental and social topics with the main training program of EFA projects. The ESS managers and the capacity building consultant will explore such options of mainstreaming Environmental, Climate Change adaptation and mitigation and social issues. The program will be structured in such a way that it clearly brings out the value addition and enhancement benefits of proper management of environmental, climate change adaptation and mitigation and social issues.

4.15 As part of the capacity building exercise, TNUIFSL also aims at developing decentralized local capacity on managing environmental and social issues associated with various projects. In order to achieve the above objective, the ESS manager with the help of capacity building consultants and other local resource persons will develop a network of technical man power resources such as staff from universities / research institutions, civil society organisations, etc. These persons will be trained during the course of implementation of EFA projects, so that they can provide support to the ULBs in implementing EAR / SAR recommendations and also offer support on an ongoing basis.

**Table 4.1:
GENERIC TRAINING PROGRAMME (2013- 2018)**

Programs	Contents			Duration / Schedule	Participants
<p align="center">Program 1</p> <p>Orientation Program / Workshop for Project Development agency/ Project Implementing agency</p>	<p>Module 1 – ECSMF Profile</p> <ul style="list-style-type: none"> • TNUIFSL Concept • ECSMF Concept • Regulatory Requirements-E&S Priority Issues • Project Cycle of TNUIFSL • EA/SA Process Outline • Reports & Formats 	<p>Module 2 Environmental Assessment Process</p> <ul style="list-style-type: none"> • Environmental Laws & Regulations • Climate Change related Regulations. • EIA process • Identification of Environmental Impacts • Impact Identification Methods • Identification Mitigation Measures • Formulation of Environmental Management Plan • Climate Change adaptation and Mitigation Plans • Implementation and Monitoring • Institutional Mechanism 	<p>Module 3 Social Assessment Process</p> <ul style="list-style-type: none"> • R&R policies and procedures • National & MA requirements • LA process • Identification of PAPs • Social Entitlement Frameworks • Social Assessment • RAP Techniques 	<p>1½ day (1st, 3rd and 5th year of the project)</p>	<ul style="list-style-type: none"> • Heads of Statutory Boards, Public Undertakings and other monitoring agencies such as CMA, CMDA, TNPCB etc. • Municipal Commissioners of the potential ULBs borrowing loan. • Engineering/Public Health personnel from the ULBs borrowing loan. • Engineering personnel from Statutory Boards, Public Undertakings and potential private operators / consultants.

**Table 4.1:
GENERIC TRAINING PROGRAMME (2013- 2018)**

<p align="center">Program -2 Workshop on Sectoral Environmental and Social Assessment</p>	<p>Module I - ECSMF Concept</p> <ul style="list-style-type: none"> • TNUIFSL Concept • ECSMF Concept • Regulatory Requirements-E&S Priority Issues • Project Cycle of TNUIFSL • EA/SA Process Outline • Reports & Formats <p>Module II - Generic Modules applicable be developed for Water Supply and Sanitation, Solid Waste Management, Transportation including urban roads and traffic management, Commercial Complexes, Non commercial/Community Amenities, Integrated area development, and Improvement / Rehabilitation of Lakes / waterways</p> <ul style="list-style-type: none"> • Regulatory Requirements-E&S Priority Issues • EA/SA Process Outline • Identification of Environmental Impacts • Identification Mitigation Measures • Formulation of Environmental Management Plan • Climate Change adaptation and mitigation • Implementation and Monitoring • Social Entitlement Frameworks • Social Assessment • RAP Techniques • Case Studies 	<p>Module III – Open Forum Feed back and comments from the Participants.</p>	<p>1½ days (every alternate years) (Introduction will be common to all and participants will be split according to their respective sectors)</p>	<ul style="list-style-type: none"> • Municipal Commissioners of the potential ULBs implementing the project. • Engineering/Public Health personnel from the ULBs implementing the project. • Engineering personnel from Statutory Boards, Public Undertakings and potential private operators / consultants.
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**Table 4.1:
GENERIC TRAINING PROGRAMME (2013- 2018)**

<p align="center">Program - 3 Experience Sharing</p>	<p>Module – Experiences and Best Practices</p> <ul style="list-style-type: none"> • Experiences on implementation of ECSMF in implemented projects. • Best Practices • Site visits to project towns/sites. 	<p>2 Days (3rd and 5th year of the project)</p>	<ul style="list-style-type: none"> • Municipal Commissioners of the potential ULBs, which has implemented the project and those in the implementation, process. • Engineering/Public Health personnel from the ULBs which has implemented the project and those in the implementation process.
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74TH AMENDMENT
INSERTION OF 243 W, 243 X, 243 Y & 243 ZD CONSTITUTION ARTICLES

243 W. Subject to the provisions of this Constitution, the Legislature of State may, by law, endow—

- a) The Municipalities with such powers and authority as may be necessary to enable them to function as institutions of self-government and such law may contain provision for the devolution of powers and responsibilities upon Municipalities, subject to such conditions as may be specified therein, with respect to
 - i) preparation of plans for economic development and social justice;
 - ii) performance of functions and implementation of schemes as may be entrusted to them including those in relation to the matter listed in the Twelfth Schedule;
- b) The Committees with such powers and authority as may be necessary to enable them to carry out the responsibilities conferred upon them including those in relation to the matters listed in the Twelfth Schedule.

"TWELFTH SCHEDULE"

1. Urban planning including town planning.
2. Regulation of land-use and construction of buildings.
3. Planning for economic and social development.
4. Roads and bridges.
5. Water supply for domestic, industrial and commercial purposes.
6. Public health, sanitation conservancy and solid waste management.
7. Fire services.
8. Urban forestry, protection of the environment and promotion of ecological aspects.
9. Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded.
10. Slum improvement and upgradation.
11. Urban poverty alleviation.
12. Provision of urban amenities and facilities such as parks, gardens, playgrounds.
13. Promotion of cultural, educational and aesthetic aspects.
14. Burials and burial grounds; cremations, cremation grounds and electric crematoriums.
15. Cattle pounds; prevention of cruelty to animals.
16. Vital statistics including registration of births and deaths.
17. Public amenities including street lighting, parking lots, bus stops and public conveniences.
18. Regulation of slaughter houses and tanneries."

243 X. The Legislature of a State may, by law—

- a) Authorise a Municipality to levy, collect and appropriate such taxes, duties tolls and fees in accordance with such procedure and subject to such limits;
- b) Assign to a Municipality such taxes, duties, tolls and fees levied and collected by the State Government for such purposes and subject to such conditions and limits;

- c) Provide for making such grants-in-aid to the Municipalities from the Consolidated Fund of the State; and
- d) Provide for constitution of such Funds for crediting all moneys received, respectively, by or on behalf of the Municipalities and also for the withdrawal of such moneys therefrom, as may be specified in the law.

243 Y(1)The Finance Commission constituted under Article 243-1 shall also review the financial position of the Municipalities and make recommendations to the Governor as to —

- a) The principles which should govern —
 - i) the distribution between the State and the Municipalities of the net proceeds of the taxes, duties, tolls and fees leviable by the State, which may be divided between them under this Part and the allocation between the Municipalities at all levels of their respective shares of such proceeds;
 - ii) the determination of the taxes, duties, tolls and fees which may be assigned to, or appropriated by, the Municipalities;
 - iii) the grants-in-aid to the Municipalities from the Consolidated Fund of the State;
- b) The measures needed to improve the financial position of the Municipalities;
- c) Any other matter referred to the Finance Commission by the Governor in the interests of sound finance of the Municipalities.

(2) The Governor shall cause every recommendation made by the Commission under this article together with an explanatory memorandum as to the action taken thereon to be laid before the Legislature of the State.

243 ZD (1)There shall be constituted in every State at the district level a District Planning Committee to consolidate the plans prepared by the Panchayats and the Municipalities in the district and to prepare a draft development plan for the district as a whole.

(2) The Legislature of a State may, by law, make provision with respect to —

- a) The composition of the District Planning Committees;
- b) The manner in which the seats in such Committees shall be filled:

Provided that not less than four-fifths of the total number of members of such Committee shall be elected by, and from amongst, the elected members of the Panchayat at the district level and of the Municipalities in the district in proportion to the ratio between the population of the rural areas and of the urban areas in the district;

- c) The functions relating to district planning which may be assigned to such Committees;
- d) The manner in which the Chairpersons of such Committees shall be chosen.

(3) Every District Planning Committee shall, in preparing the draft development plan, —

- a) have regard to —

- i) matters of common interest between the Panchayats and the Municipalities including spatial planning, sharing of water and other physical and natural resources, the integrated development of infrastructure and environmental conservation;
 - ii) the extent and type of available resources whether financial or otherwise;
- b) Consult such institutions and organisations as the Governor may, by order, specify.
- (4) The Chairperson of every District Planning Committee shall forward the development plan, as recommended by such Committee, to the Government of the State.*

SALIENT FEATURES OF THE TAMIL NADU DISTRICT MUNICIPALITIES ACT, 1920

Part I - Preliminary

It deals with definitions and extents of jurisdiction which is to the whole of the Presidency of Madras, except the city of Madras.

Part II - Establishment, Constitution and Governments of District Municipalities

Chapter II - Chapter V deal with Municipal Authorities and their incorporation, elections, qualifications of members powers in respect of property contracts.

Part III - Taxation and Finance

Chapter VI deals with the levy of taxes such as property tax, profession tax, pilgrim tax.

Part IV - Public Health, Safety and Convenience

Chapter VII - Chapter XIII deal with resting of public works and utilities with municipal authorities included are works, lighting, drainage, scavenging, streets, building regulations, wells, huts, nuisance, factories, burial provisions, disease control.

Part V - Subsidiary Legislation and Penalties

Chapter XIV - Chapter XV deals with the State Governments rule making power and publication of rules, bye - laws and regulations.

Part VI - Procedure and Miscellaneous

Chapter XVI deal with licenses and permissions, summoning powers, notices, appeals, powers of inspection, legal proceedings and ancillary provisions.

Schedules - deal with Taxation and finance rules, purposes for which premises may not be used, list of dangerous diseases, penalties

Environmental screening Form

PART A (to be prepared by Urban Local Body for each sub – project loan)

Name of the applying urban local body :

Project location :

Sub project :

Project Components		
S.No	Component	Remarks
1	Brief description of the project proposal	
2	Number of project sites and Project components	
3	Alignment length	
4	Location of the Project Sites & Current Use	
5	Nearby landuses and distance – residences, schools, hospitals, drinking water source, upstream and downstream uses of rivers etc	
Proximity of the Site to Water Bodies		
S.No	Component	Remarks
6	Distance of sites from Sea	
7	MSL of Project Sites	
8	Distance from nearest Water Body (River, Canal, Lake, Streams etc.,)	
9	MFL of the Project Sites	
10	Distance of nearest drinking water source	
Climate Change related Parameters (General)		
S.No	Component	Remarks
10	Mean Temperature in the project town	
11	Annual Rainfall in the project town	

Project Components				
S.No	Component	Remarks		
12	Monsoon Period in the project town			
13	Nearest Weather Warning System			
Biological Environment				
Sl. No	Components	Yes	No	Remarks / Identified Problems
1	Are there according to background research / observations any threatened / endemic species in the project area that could be affected by the project?			
2	Will the project directly ⁷ or indirectly affect: 1.1 Natural forest types? 1.2 Mangroves / wetlands / Estuaries 1.3 Other SEC's as Listed in ECSMF			
3	Will the project involve tree cutting?			
4	Will there be any potential risk of habitat fragmentation due to the clearing activities? (eg. Hindrance to the local bio diversity like disturbing the migratory path of animals/ birds etc.)			
Physical Environment				
Sl.no	Components	Yes	No	Remarks / Identified Problems
5	Water quantity? Estimated usage of water quantity for the project			

7

Direct impacts are those which are induced directly by the project (e.g. Impact on water quality, air and noise etc...) where as the Indirect impacts are those which are indirectly induced by the project (e.g. Traffic diversion during project construction etc...)

Project Components				
S.No	Component	Remarks		
6	Will the project affects the River flow pattern, stream pattern or any other irrigation canal?			
7	Is the project area is free from flood prone area/ low-lying area, if yes what is the average flood level recorded for recent years?			
Geology / Soils				
Sl.no	Components	Yes	No	Remarks / Identified Problems
8	Does the project activity involve cutting and filling/ blasting etc...?			
9	Will the project cause physical changes in the project area (e.g., changes to the topography) due to excavation, earthwork etc...?			
10	Will local resources, such as rocks, sand, gravel, or groundwater be used? Estimated quantity of materials required?			
Pollution				
Sl.no	Components	Yes	No	Remarks / Identified Problems
11	Will the project use or store dangerous substances (e.g., large quantities of hazardous materials like Diesel, Petroleum products etc...)?			
12	Will the project produce solid or liquid wastes?			
13	Will the project cause air pollution?			
14	Will the project generate noise?			

Project Components				
S.No	Component	Remarks		
15	Will the project generate water pollution (water bodies/ groundwater)?			
16	Will the project cause construction Hazard to workers/ residents			
Climate Change Adaptation and Mitigation Measures				
Sl.no	Components	Yes	No	Remarks / Identified Problems
10	Energy Consumption during operation phase			
12	Is the project design included use of energy saving machineries, equipments for the sub-project,			
13	Is the project design included energy saving measures in the distribution/collection systems			
14	Is the project considering energy recovery options?			
15	Is the project considering waste minimisation or waste reuse/recycle options?			
14	Is the project structures are designed considering the maximum flood levels of the project site.			
15	Is the project design has considered RWH structures.			
16	Is the project design has considered extreme events, drought, flood, natural disasters			

- Any other features of the projects that could influence ambient environment:
- Has any Environmental Assessment (EA) been carried out (if yes, please provide the EA documents along with the form)

Date: _____

Signature and name of the officer responsible

Note:

1. Environmental Screening sheet must be completed by all Urban Local Bodies/ Government Department applying for a loan from Tamil Nadu Urban Development Fund (TNUDF).
2. Provide maps with the geographical location of the project; and an appropriately-scaled map clearly showing the project area and project sites with land use, existing buildings, infrastructure, vegetation, adjacent land use, utility lines, access roads and any planned construction.

Social Screening Form

PART A (to be prepared by Urban Local Body for each sub – project loan)

Name of Applying Urban Local Body:

Name of the Sub-component:

Name of Sub-project:

Geographical areas covered by Sub-Project :

Implementing Agency:

Name and address of Officer responsible:

Land Use, Resettlement, and/or Land Acquisition				
Sl.no	Components	Yes	No	If Yes provide details
1	Does the sub-project involves acquisition of private land?			
2	Alienation of any type of Government land including that owned by Urban Local Body?			
3	Clearance of encroachment from Government/ Urban Local body Land?			
4	Clearance of squatting from Government/ Urban Local Body Land?			
5	Number of structures, both authorized and/or unauthorized to be acquired/cleared/			
6	Number of household to be displaced?			
7	Details of village common properties to be alienated Pasture Land (acres) Cremation/ burial ground and others specify?			
8	Describe existing land uses on and around the project area (e.g., community facilities, agriculture, tourism, private property)?			
9	Will the project result in construction workers or other people moving into or having access to the area (for a long time period and in large numbers compared to permanent residents)?			

10	Are financial compensation measures expected to be needed?			
Loss of Crops, Fruit Trees, Household Infrastructure and livelihood				
Sl.no	Components	Yes	No	If Yes provide details
11	Will the project result in the permanent or temporary loss of			
11.1	Crops?			
11.2	Fruit trees / coconut palms? Specify with numbers			
11.4	Loss of Agriculture Land? Specify with numbers			
11.5	Petty Shops			
11.6	Vegetable/Fish/Meat vending			
11.7	Cycle repair shop			
11.8	Garage			
11.9	Tea stalls			
11.10	Loss of Grazing			
11.11	Loss of access to forest produce (NTFP)			
11.12	Any others - specify			
Welfare, Employment, and Gender				
Sl.no	Components	Yes	No	If Yes provide details
12	Is the project likely to provide local employment opportunities, including employment opportunities for women?			
13	Is the project being planned with sufficient attention to local poverty alleviation objectives?			
14	Is the project being designed with sufficient local participation (including the participation of women) in the planning, design, and implementation process?			
Historical, Archaeological, or Cultural Heritage Sites				
Sl.no	Components	Yes	No	If Yes provide details
Based on available sources, consultation with local authorities, local knowledge and/or observations, could the project alter:				

15	Historical heritage site(s) or require excavation near the same?			
16	Archaeological heritage site(s) or require excavation near the same?			
17	Cultural heritage site(s) or require excavation near the same?			
18	Graves, or sacred locations or require excavations near the same?			

Date: _____

Signature and name of the officer responsible

Note:

1. Social screening sheet must be completed by all urban local bodies/ government department applying for a loan from Tamil Nadu Urban Development Fund (TNUDF) for any sub-projects involving land alienation of any Government land under different tenure including “Poramboke” land “owned” by the Urban Local Body or any other Government institution/department/organization which are alienated in favour of project activity, when encroachments/encroachers are cleared and when community assets such as places of worship, burial/cremation grounds etc., are required to be cleared from the execution of project activity.
2. The land details for the project components shall be annexed with details such as location, survey numbers, extent available and required, land use classification, current land use, land ownership, alienation/acquisition status along with FMB extracts while submitting the Social Screening Form.

Terms of Reference to prepare Environmental Assessment Report for E I Projects

1.0 *Brief Introduction*

A brief introduction to the project shall be provided in this section.⁸

.A brief description of the project area / city and salient features of the city shall be presented in this section, such as geographic location, climate, rainfall, soil profile, wind direction, existing drainage system, need for the proposed project etc.

2.0 *The Project Objectives and Need*

A brief profile of the status of existing infrastructure in the project city with respect to the proposed project, service levels, problems & issues and salient features of the proposed project shall be discussed in this section along with the environmental implications of the proposed project by covering the following objectives.

- Establish the environmental baseline in the study area
- identify and assess the adverse environmental impacts; and provide requisite measures to address these impacts
- identify the opportunities for environmental enhancements in the project area and provide requisite guidance/plans in this regard
- Identify and assess the climate change related aspects of the project
- Wherever relevant integrate the measures (mitigation and enhancement related) in the project planning and design;
- Develop appropriate management plans and codes of practices for implementing, monitoring and reporting of the environmental mitigation and enhancement measures suggested.

The EA shall be carried out in line with the Government of India (GoI)'s regulations (EIA Notification), and to suit ECSMF.

The EA shall comprise filling the screening format, Environmental screening, Project EA, and the Environmental Management Plans (EMPs), Climate Change Assessment and Adaptation & Mitigation measures. The EA shall be carried out in a consultative manner through "Stakeholder Consultations", at various stages, with the affected communities, NGOs, selected government agencies and other stakeholders.

3.0 *Scope of Work*

The following are the tasks to be performed by the consultants while conducting Environmental Assessment for the project including nature, scale and magnitude of impacts that the project is likely to cause on environment.

⁸

Sections in Italics will be project specific and shall have to be filled by the project development agency.

Task 1 Description of Project

A succinct description of the proposed project shall be provided covering: (a) status analysis of the existing infrastructure (b) description of each of the proposed components, activities and sub-activities. The task shall also bring out the rationale, the need for the proposed project and list out the various benefits of project implementation. As part of this activity, the consultant shall provide necessary maps to scale

Task 2 Review of Earlier Studies

The consultants shall review various earlier studies such as feasibility and detailed project reports, etc., of the project and understand the project and various aspects associated with the same. This shall provide a base to formulate the environmental surveys necessary for the project and assessing impacts of the same.

Task 3 Legislative and Regulatory Considerations

A review of the legal and regulatory provisions applicable for the project shall be carried out in this task. The objective of the review is to bring out the legal and policy issues to be addressed in the project at various stages of project development such as planning, design, execution and operation. In addition to the environmental laws such as EP Act, Water Act, Air Act, EIA notifications etc., the consultants shall review applicable operational policies / directives of the EFA.

The review shall thus provide a complete list of regulatory formalities required for the project and various clearances required from different regulatory agencies including State Pollution Control Board.

Task 4 Preparation of Environmental Profile

An environmental profile of the project influence area shall be prepared, based on appropriate primary & secondary surveys and field investigations. The objective of this profile is to establish existing environmental conditions of the project area, in terms of air, water, noise, soil and other environmental parameters, which should form the basis for prediction of impacts due to proposed project activities. As part of this, the environmentally sensitive land uses (protected natural areas, areas of ecological value, sensitive receptors like schools, hospitals etc) would also be identified and plotted on a map to scale.

The extent and duration (atleast one season for rapid assessment and the three seasons for full detailed assessment) of surveys shall be judiciously decided by the consultant as per requirements of the environmental regulations applicable in India and guidelines of international funding agencies. The profile prepared shall be adequate enough to predict impacts of the project and shall cater to the requirements of obtaining necessary environmental clearances from the authorities.

The profile shall essentially include all physical, ecological and socio-economic components of the project environment and bring out the salient and sensitive features of the same. Important aspects such as reserve forests, national parks, major water bodies, structures of archaeological / historic importance, and other environmental resources (if any) shall be identified and salient features of the same shall be presented.

In addition to the basic environmental profile, quality of water supplied by the present water supply system, potential points of cross contamination and health profile of the project area population shall also be brought out in detail through appropriate sampling surveys and field investigations.

Detailed activities to be carried out under environmental assessment is given under section 4.0.

Task 5 Determination of Potential Impacts

Based on the environmental profile of the project area prepared above and the proposed project activities discussed under Activity 1, the consultants shall carry out environmental screening to determine the nature of impacts and level of Environmental Assessment to be carried out (Section 5.0 provide the details to be carried out).

- In case of low or insignificant level of impacts, where an EMP will suffice, the consultant shall review the recent versions of generic EMPs available with TNUIFSL and carry out necessary changes to suit the project requirements.
- As part of screening, if medium to high impacts, requiring a detailed EA and stand alone EMP, the consultant shall carry out detailed impact analysis. The consultant shall predict environmental impacts of the project components, activities and sub-activities on various environmental attributes (bio, geo and physical) through appropriate analytical tools and techniques such as modelling techniques, over lays, etc. Significant or insignificant, permanent or temporary, reversible or irreversible, negative or positive impacts shall be categorised separately and presented for each phase of project development.

All identified impacts shall be summarised in an easily understandable format and the magnitude and significance of each impact shall be explained in detail.

An analysis of various project alternatives, including the 'Project' and 'No Project' scenario shall be brought out and impacts shall be analysed for each scenario. Based on the above analysis the best alternative that causes minimum or no impact shall be recommended for implementation.

Task 6 Stakeholder Consultations

The consultants shall carry out consultations with Experts, NGOs, Forest Department (if applicable) and other selected Government Agencies and other stakeholders to (a) collect baseline information, (b) obtain a better understanding of the potential impacts (c) appreciate the perspectives/concerns of the stakeholders, and (d) secure their active involvement during subsequent stages of the project as appropriate .

Consultations shall be preceded by a systematic stakeholder analysis, which would (a) identify the individual or stakeholder groups relevant to the project and to environmental issues, (b) include expert opinion and inputs, (c) determine the nature and scope of

consultation with each type of stakeholders, and (d) determine the tools to be used in contacting and consulting each type of stakeholders. A systematic consultation plan with attendant schedules will be prepared for subsequent stages of project preparation as well as implementation and operation, as required. Where community consensus is required in respect of proposed mitigation measures for impacts on community assets including water bodies, places of worships etc., specific plan for modification/relocation etc have to be disclosed and consensus obtained.

Task 7 Development of an Environmental Management Plan / Determination of Mitigation measures

The consultants using outputs of the above tasks shall develop an implementable Environmental Management Plan (EMP) for the project. Development of an Environmental Management Plan is detailed under Section 5.0 below

Task 8 Identification of adaptation / mitigation measures for Climate Change

Based on the outcome of the screening, if subsequent relevance to climate change is envisaged in the project implementation or during operation, then the consultants shall collect relevant information and appraise the climate change impact. The consultants shall identify adaptation needs of the project, review for greenhouse gas reduction potential and identify necessary measures for implementation.

4.0 Environmental Screening and EA activities to be carried out in detailed

4.1 Environment Screening

1. Environmental screening shall be undertaken to identify the environmental hot spots along the project corridors, project relevance to climate change and determine the level of environmental analysis required for the EA. The consultant shall carry out a preliminary analysis to assess the nature, scale and magnitude of the impacts that the project is likely to cause on environment . In case of significant environmental impacts encountered (may be applicable to the entire project/specific project interventions/specific locations), The consultants shall explore possible alternatives to the project and/or project components in a consultative manner. The deliverable at this stage will be **Environmental Screening Report**.
2. The screening exercise shall be supported through secondary and primary information collection and, stakeholder consultations on existing environment scenario. As part of the screening exercise the consultants shall:
 - (a) Identify sensitive locations in the project area including regionally or nationally recognized environmental resources and sensitive manmade land uses like hospitals, schools, etc
 - (b) Establish baseline environmental quality with regard to air, water and noise at sensitive receptors.
 - (c) List and map common property resources such as roadside trees; forests, large water bodies; and major physical cultural properties, etc.

- (d) Identify Human settlement, physical infrastructure and project activities that would result in severance.
3. The consultants shall also appraise the project in terms of substantial greenhouse gas reduction potential and substantial need of adaptation to possible climate change.

4.2 **Project EA**

1. Existing Environment and Baseline Conditions: Baseline assessment shall be carried out based on the outcome of Environmental Screening carried out for the project. The baseline conditions shall be established through detailed primary level field surveys. At this stage the consultants shall prepare detailed maps showing candidate sites for environmental improvements. The specific tasks under this include the following:
2. Data Collection: Data shall be collected on relevant physical, biological and socio-economic conditions to establish the current environmental status of the project area. The data collection should be undertaken to arrive at meaningful information that will facilitate assessment of impacts and preparing management plan. Broadly, the following form of the data categories shall be covered (the consultant is also encouraged to use professional judgement and local knowledge in defining other data requirements):

The current land uses at the proposed project site and the study area using maps plotted to appropriate scale, covering lakes/ponds and their uses, forests and its classification, ecologically sensitive areas (sanctuaries, national parks, wildlife corridors, identified areas of nesting, mangroves and / or of interest of migratory birds, etc.), prominent land marks, sensitive receptors, community severance, village settlements, agricultural lands, pasture and barren lands, various categories of CRZ areas if any, etc.

Physical - Geology, topography, soils, climate and meteorology (with emphasis on critical season considering water bodies and air quality), ambient air quality, surface and groundwater hydrology, existing sources of air emissions, existing water quality status of water bodies of importance.

3. Biological and Ecological assessment covering water bodies, fauna & flora, ecologically sensitive areas (perceived as well as officially listed).
4. Based on the outcome of screening report, the consultants shall carry out additional air and noise quality monitoring, which in future may depict the base line conditions for EMP monitoring.

Critical areas of environmental importance shall be identified as an output of the current environmental status of the project sites

5. *Impact Prediction:* The Consultant shall identify positive and negative impacts likely to result from the proposed project, interpreting “environmental” throughout the EA to include socio-economic impacts as well as impacts on the natural environment. All the project activities during pre-construction, construction and operation phases shall be considered to assess the impacts. The impact assessment shall necessarily cover “no action” alternative in the analysis. The consultants shall regularly interact with technical and social team of the project to share the findings of the impact assessment. The assessment of environmental impacts shall necessarily cover (but not limited to) the following:
 - (a) Impacts on the water bodies (including, but not limited to the impacts on water source proposed to be developed for the project in case of a water supply scheme)

- (b) Impacts on topography and surface drainage due the proposed project activities in the project area,
- (c) Community and cultural severance, identified through consultations
- (d) Expected impacts on the land use patterns at and around the proposed project facilities/components
- (e) Impact on ecologically sensitive features including spawning areas in creeks/estuarine areas, etc.
- (f) Detailed assessment of impacts on receiving water bodies (including source of water bodies and down stream impacts on riparian rights)
- (g) Assess the change of stream course due to diversion channels to construction intake structures and its impact on downstream users
- (h) Impact on Socio-economic aspects of the projects area
- (i) The noise and air quality related impacts during construction period on sensitive receptors shall be assessed
- (j) Impact on Trees, public utilities and other community structures, cross overs, etc to be assessed.
- (k) Any impacts that are irreversible and/or cannot be avoided or mitigated should be identified

5.0 Environmental Management Plan

The EMP should suggest ways / options for mitigating negative impacts of the project, the preventive measures necessary. Where required, EMP shall include community consensus for the mitigation measures proposed. The EMP shall identify the means / agency responsible for implementation of the same and recommend suitable monitoring mechanism for the EMP. The EMP shall be in the form of contract covenants and shall provide detailed cost estimates converted into BOQ items wherever necessary and applicable for implementation of the same. The consultant shall also recommend an appropriate institutional mechanism as per the requirements of EMP.

The above referred activity shall be applicable for Generic EMPs as well as specific EMPs developed as an outcome of detailed EAs

The consultant shall prepare a detailed EMP covering the measures to mitigate and/or minimize the negative impacts, including the implementation arrangement and a monitoring plan for the same with site specific requirements. EMP shall cover the following details:

- **Mitigatory measures:** For each of the significant negative impact, the consultant should recommend measures to eliminate or mitigate the impact. In case any impact is non-mitigable, the cost of damage shall be estimated. The cost (capital and recurring) of all the mitigation measures and the responsible parties for implementation should be clearly identified and shall be translated in to BOQ items. Wherever possible the measures should be drafted as contract clauses, which can be incorporated in construction/operational phase agreements. The mitigatory measures should necessarily contain conceptual designs wherever necessary. The consultants should also specify neighbourhood committees to supervise effective implementation of the proposed mitigatory measures.
- **Landscape plan:** Wherever necessary, the Landscaping plan should be prepared considering the project area as a whole and shall meet project specific requirements. Considering the nature of the project area, the EA should provide a conceptual

landscape plan for all the project components while considering the special environmental and social needs.

- **Budget Estimates**: The EMP budget estimates shall be prepared for each of the project component and shall be integrated with the overall project cost estimates and the relevant costs shall be included in the BOQ provisions
- **Monitoring Plan**: The Consultant should specify the types of monitoring needed for potential environmental impacts during construction and operation. As in the case of the mitigation plan, requirements should be specific as to what is to be monitored, how and by whom along with reporting formats and recommendations if any Cost estimates are necessary and where monitoring reports are to be prepared, the recipient responsible for review and any corrective action should be identified. The monitoring plan should be supplemented with a detailed schedule of implementation of EMP measures.
- **Institutional Arrangement to Manage Environment Impacts Effectively**: The consultants shall identify institutional/organizational needs to implement the recommendations of the project EA and to propose steps to strengthen or expand, if required. This may extend to new agency functions, inter-sectoral arrangements, management procedures and training, staffing, operation and maintenance, training and budgeting.

6.0 Identification of Adaptation and mitigation for Climate change:

If from the screening process substantial climate change relevance is identified for the project, then a detailed assessment shall be carried out as follows.

- The 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 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 water sources) and indirect effects of climate change. 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 project to adapt.
- The assessment and consideration of the potential for **greenhouse gas reduction** (Emission Saving) to avoid substantial greenhouse gas emissions. First, the expected development of greenhouse gases in the project area/sector will be assessed, followed by review of the planned strategy or measures for their contribution to greenhouse gas emissions and if there are potentials for reducing greenhouse gas emissions. On this basis, options to contribute to greenhouse gas reduction shall be developed, and if applicable taking into consideration the developmental impacts.
- The costs of the measures identified strategy or measure shall be integrated into the project estimates with necessary provisions for implementation.

7.0 Public Disclosure

The consultants are to provide support and assistance to the Client in meeting the disclosure requirements, which at the minimum shall meet the EFA's policy on public disclosure. The consultants will prepare a plan for in-country disclosure, specifying the timing and locations; translate the key documents, such as the EA Summary in local language; draft the newspaper announcements for disclosure; and help the client to place all the EA reports in the client's website.

The consultants shall prepare a non-technical EA Summary Report for public disclosure.

8.0 *Inputs to be provided by the Client*

The client shall make available all relevant documents, reports in connection to the project area/study area and facilitate procurement of data to the consultants.

9.0 *Outputs and Estimated Time Schedule*

The study shall be completed within a period of **** months from date of contract and the schedule of deliverables shall be as specified below.

- Inception Report within ** month of date of award of contract. Includes Initial Site Assessment
- Interim Report within *** months of date of award of contract. Includes baseline parameters, environmental profile and analysis of level of impacts, stakeholders' consultation.
- Draft Report within *** months of date of award of contract Includes detailed EA and/or site specific EMP Climate Assessment and Adaptation&Mitigation measures and Social Assessment.
- Final report within *** months of date of award of contract

10.0. Procedure for review of reports.

The review committee will review the reports and offer its comments, decisions/ suggestions. The comments or views on the various reports shall be given to the consultants within 7 days of review of the respective reports/documents/designs. Commensurate to this, a revised report shall be prepared, which will be reviewed in the next review meeting.

11.0. List of key professional positions whose CV and experience would be evaluated:

<i>S. No.</i>	<i>Key Professional</i>	<i>No. of Persons</i>	<i>Experience</i>
1.	Project Manager	1	A post graduate in Environmental Engineering / Environmental Planning / Public Health Engineering with about 5 years experience in preparation of Detailed Environmental, Climate and Social Impact Assessment Reports for infrastructure projects.
2.	Project Engineer	1	A graduate in Civil Engineering with about 5 years experience in the field mentioned above

Sample Environmental Management Plan⁹ for E 2 Category Projects*

* 1. These EMPs are for reference purpose and is expected to be used as guidance documents. Project specific issues need to be adequately addressed while developing project specific EMPs. 2. The enhancement opportunities in Table 1.3 are also to be considered in finalising the project specific EMP.

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	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 Department of Ecology, Environment and Forests, GoTN ○ 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 / 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, GoTN, 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 Department of Ecology, Environment and Forests, GoTN 	Project Implementing Agency / ULB	Project Implementing agency / ULB
Project	Failure of the barrage/	<ul style="list-style-type: none"> ○ Proper design of the structure taking into 	Design Consultant/	Project

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These EMPs are for reference purpose and is expected to be used as guidance documents. Project specific issues need to be adequately addressed while developing project specific EMPs.

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
Development and Design **	reservoir structures, and flooding of nearby areas.	consideration terrain and soil characteristics, hydrology and geology.	Project Implementing Agency	Implementing Agency in co-ordination with Dept. of Mines and Geology
<i>B. Construction Phase</i>				
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 monitory 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 as possible. 	Contractor / PIA	PMC / ULB
	Safety hazards to labourers	<ul style="list-style-type: none"> ○ Adequate safety precautions such helmets, 	Contractor / PIA	PMC / ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency	
	and nearby resident population.	safety shoes, gloves, etc. should be provided to the labour and provide appropriate signage near the construction activities to sensitize the community and minimize accidents			
Laying of water distribution network*	Spillage of fuel and oil	○ 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	○ 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	○ 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	○ 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	○ 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)	○ 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.	○ The Private Contractor should ensure provision of appropriate housing, water supply, and sanitation facilities to construction labour.	Contractor / PIA	PMC / ULB	
	Health impacts to nearby resident population due to	○ The Private Contractor should ensure provision of appropriate housing, water supply, and	Contractor / PIA	PMC / ULB	

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	labor camps.	sanitation facilities to construction labour. The PC should also provide for adequate access to medical facilities.		
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/TNPCB
	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 of water supply***	Generation of additional quantity of wastewater leading to contamination of surface/sub-surface sources, if not adequately treated.	<ul style="list-style-type: none"> ○ Provide sewerage system with sufficient treatment capacity to suffice to increased water supply levels ○ Plan and cost for adequate centralized/decentralized sewage disposal and treatment, and sanitation facilities. 	Contractor and PIA	ULB
Operation of water treatment facilities	Safety hazards from chlorination process,	<ul style="list-style-type: none"> ○ Install chlorine leak detectors; require protection and emergency response equipment 	Contractor and PIA	ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
**	accidents in handling chlorine cylinders and operation of plants	for operators. o Provide safety equipments to operating staff and training in handling the plant and chlorine cylinder		
Operation of water treatment facilities **	Soil and water contamination and sludge disposal	o Use only approved, appropriate disposal sites	ULB/ PIA	TNPCB
Collection and Pumping	High energy demand for pumping operation.	o	Design Consultant/ PIA	

Note: *** denotes – Significant Impact; ** Denotes-Moderate Impacts and *- Minor Impact.

Sample Environmental Management Plan¹⁰ for E 2 Category Projects

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
II. Sewerage and Sanitation Projects				
A. Design and Development Phase				
Land Acquisition **	Loss of tree cover	o undertake afforestation in nearby areas	PIA	ULB
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	o Ensure efficient working condition. – Choice of treatment process, construction technique, equipment and skilled operation and supervision critical to maintain effluent quality compliance. o The treated water quality shall comply with the standards laid down by the state pollution	ULB / PIA	TNPCB

¹⁰ These EMPs are for reference purpose and is expected to be used as guidance documents. Project specific issues need to be adequately addressed while developing project specific EMPs.

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
		control board for disposal onto the land, water body or for irrigation use.		
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	TNPCB
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/ TNPCB
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. Provide sufficient buffer areas Follow standard codes for selection pumps and other apparatus. Use less noise making and easy to operate equipment. 	Design Consultant/ ULB	ULB
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 	Contractor / PIA	PMC / ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
		<p>the owners</p> <ul style="list-style-type: none"> o Immediately transport accumulated construction waste to a site identified for the purpose. 		
	Temporary flooding due to excavation during monsoons.	<ul style="list-style-type: none"> o Provide suitable arrangements for drainage control. 	Contractor / PIA	PMC & ULB
	Noise, vibration and dust from construction activities.	<ul style="list-style-type: none"> o 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"> o Provide adequate safety precautions such as helmets, safety shoes, gloves, etc. 	Contractor / PIA	PMC & ULB
Laying of sewer network *	Spillage of fuel and oil	<ul style="list-style-type: none"> o 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"> o 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"> o 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"> o Establish work sequence and methods to minimize access disruption; provide alternative safe access as possible; temporary bridges and crossings, detours and walkways. o 	Contractor / PIA	PMC & ULB
	Temporary water supply	<ul style="list-style-type: none"> o Establish coordination procedures for cut-off; 	Contractor / PIA	PMC & ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	interruptions	minimize time for replacement operations; and appropriate scheduling as necessary.		
	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 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
<i>C. Operation Phase</i>				
Collection and Pumping	High energy demand for pumping operationa.	<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	TNPCB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
Treatment and Disposal ***	Problems arising due to bad odour, insects, polluted air, noise pollution, etc.	○ 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	TNPCB
	Indiscriminate disposal of sludge leading to contamination of land and soil.	○ Prepares a sludge disposal plan and adheres to the same.	Operator/ PIA/ ULB	TNPCB
	Health and safety of workers due to the release of toxic gases and hazardous material.	○ 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.	○ Adequate buffer zones during development and construction phase should mitigate the affect considerably.	ULB	ULB

Note: *** denotes – Significant Impact; ** Denotes-Moderate Impacts and *- Minor Impact.

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
III. Solid Waste Management & Disposal				
A. Development and Design Phase				
Land acquisition*	Loss of tree cover.	○ 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	○ 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	TNPCB
Design and Development***	Nuisance hazards to neighbouring areas.	○ Ensure proper design and adequate buffer zones to comply with MSW Rules, 2000.	Design Consultant/ PIA/ ULB	ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	Contamination of groundwater due to leaching.	o Ensure appropriate design provisions are made for liners, leachate collection and treatment facilities to prevent percolation of leachate.	Design Consultant/PIA	ULB
	Reduced land values in nearby areas and impacts aesthetics affected.	o Adequate buffer zones during development shall be provided to mitigate the affect considerably.	Design Consultant/ ULB	ULB

Sample Environmental Management Plan¹¹ for E 2 Category Projects

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 TNPCB
	Emission of toxic gases from landfill site.	<ul style="list-style-type: none"> ○ Provision of landfill gas management system. 	Operator/ PIA	ULB and TNPCB
	Health and safety of workers due to the release of toxic gases and hazardous materials during the operation of the facility.	<ul style="list-style-type: none"> ○ Proper and timely compaction of waste and provision of protective material to landfill employees. 	Operator/ PIA	ULB and TNPCB
	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 TNPCB
	Public health and safety hazards to workers from odor,	<ul style="list-style-type: none"> ○ Ensure proper compaction and regular covering of waste, and provide adequate buffer from the 	Operator/ PIA	ULB

¹¹ These EMPs are for reference purpose and is expected to be used as guidance documents. Project specific issues need to be adequately addressed while developing project specific EMPs.

B. Construction Phase				
	smoke from fire and diseases transmitted by flies, rodents, etc.	nearby areas by means of green cover.		
IV. Stormwater 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"> o Proper disposal site shall be selected so as not to disrupt drainage lines and water bodies. o In case of the nalas carrying sewage, the silt shall be disposed carefully at an identified site. The site shall be identified in co-ordination with TNPCB o Ensure immediate disposal of accumulated waste. 	Contractor / PIA	PMC / ULB
	Temporary flooding during construction activity.	<ul style="list-style-type: none"> o Desilting activity shall be scheduled during non-flooding season. o Provide suitable arrangements for drainage control. 	Contractor / PIA	PMC / ULB
	Noise, vibration and dust from construction activities.	<ul style="list-style-type: none"> o 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
	Health hazards due to hazardous nature of silt Safety of labour.	<ul style="list-style-type: none"> o Provide adequate safety precautions such helmets, safety shoes, gloves, etc. 	Contractor / PIA	PMC / ULB
	Impairment of receiving water quality due to construction activity	<ul style="list-style-type: none"> o Ensure proper cleaning of construction material and completion of the work before opening to operation 	Contractor / PIA	PMC / ULB

B. Construction Phase				
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	TNPCB
	Nuisance due to clogging of drains, formation of mosquito breeding grounds etc	<ul style="list-style-type: none"> Ensure timely desilting of drains Create awareness among people not to throw garbage and other waste into the drains 	ULB	ULB in co-ordination with local NGOs
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

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
	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

B. Construction Phase				
C. Operation Phase				
Road use*	Increased noise and air pollution from increased traffic volume.	○ Planting of trees as noise barriers at sensitive receptors	ULB / Traffic Police / RTO	ULB in co-ordination with TNPCB
	Safety of residents and pedestrian road users.	○ Provide pedestrian crossing wherever necessary.	ULB / Traffic Police / RTO	Police Department in co-ordination with RTO and ULB

Note: *** denotes – Significant Impact; ** Denotes-Moderate Impacts and *- Minor Impact.

Construction Projects – Commercial complexes/ large buildings

High energy consumption – Energy Efficient Lighting/ Alternative power generation/supply - in-situ

Water Consumption – Grey water reuse/ rainwater harvesting

TAMIL NADU URBAN INFRASTRUCTURE AND FINANCIAL SERVICES LIMITED

SOCIAL SAFEGUARD AND ENTITLEMENT FRAMEWORK

1.0 Introduction

- 1.1 The Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) has been set up to manage a Trust fund Tamil Nadu Urban Development Fund (TNUDF). The trust has been established to manage urban infrastructure projects in Tamil Nadu. The deployment of funds will be on the basis of a management contract and will be managed by TNUIFSL. Eligible borrowers include Urban Local Bodies (ULBs), Statutory Boards, Public Undertakings and potential Private Investors. The fund has a corporate Trustee Company (TC) with shareholdings from Government of Tamil Nadu (GoTN) and three leading Financial Institutions - ICICI, HDFC and IL&FS.
- 1.2 TNUIFSL has evolved an Environmental, Climate Change and Social Framework (ECSMF) recognizing the environmental and social issues that can arise in urban infrastructure projects. The ECSMF provides TNUIFSL an overall framework to guide it in identification, assessment and management of environmental and social concerns at the project level. The ECSMF outlines the policies, assessments and procedures that will enable TNUIFSL to ensure that a project that it funds is developed in accordance with ECSMF and is adequately protected from environmental and social risks. The ECSMF also aims to sensitize borrowers to assessment and management of environmental and social issues arising in urban infrastructure projects.

2. Brief Description of the project and sub-project / Components

- 2.1 Type of Projects: TNUDF expects that most of the projects that it funds will be small and medium urban infrastructure projects. TNUIFSL will use the Grant Fund-I and other funding mechanisms to operationalise the environmental and social policy.
- 2.2 Projects eligible for TNUDF funding: TNUDF would finance the following categories of urban infrastructure projects:
- Water Supply projects: These projects involve source creation or improvement to the existing sources, laying of conveying mains, construction of water treatment plants, laying of internal distribution line, construction of pumping stations, construction of storage facilities in the form of overhead tanks, underground sumps etc.,
 - Underground sewerage projects: These projects involve laying of branch and main sewer lines, conveying mains, pumping stations, treatment plant etc,
 - Solid Waste Management: These projects may involve developing the compost yards with washing facilities, compound walls, purchase of vehicles for transporting the garbage, etc.,
 - Transportation: purchase of buses, construction of bus stands, bridges, laying of internal roads etc.,
 - Commercial Complexes: basically creating office and shopping space.

- Non commercial/Community Amenities: Development of the common facilities such as roads, parks, construction of storm water drains etc.,
- Integrated area development: These projects may involve the combination of the above listed projects.
- Improvement/Rehabilitation of Lakes/Water Ways: 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.

3. Need for resettlement and rehabilitation:

- 3.1 The type of projects that TNUDF is expected to fund will require land which may include the following but not limited to:
- private patta land including homestead land
 - poramboke land
 - government land under different tenure systems
 - forest land
- 3.2 The need for resettlement and rehabilitation arises when the land which is acquired or alienated or transferred results in involuntary displacement and/or loss of livelihood, sources of income and access to common properties/resources on which people depend for economic, social and cultural needs irrespective of their legal status. Though the squatters and encroachers are not entitled to legal compensation for land that they have occupied, this policy will provide for resettlement and rehabilitation of such persons with the aim of improving their standard of living. This policy will also be applicable to those landowners from whom land would be acquired.
- 3.3 Plans for minimizing land acquisition / alienation / transfer and R&R: TNUIFSL will try to avoid or minimize displacement by exploring alternate designs and/or technology (in case of projects developed by borrowers, project appraisal will address the availability of alternate design, site, its suitability etc.) and choose the alternative that requires the least land and that involves the least resettlement and rehabilitation.
- 3.4 R&R implementation and project activities: The R&R action plan will precede project activities and the process of resettlement and rehabilitation will be completed before commencing the project activities.

4. R&R Process:

- 4.1 Principles and objectives governing resettlement: TNUIFSL's ECSMF policies will be based on the following principles and objectives
- Addressing legitimate concerns of relevant stakeholders, especially project affected persons
 - Avoiding or minimizing resettlement and rehabilitation due to land acquisition and transfer of government land under different tenure system through appropriate technical and management measures
 - Ensuring appropriate resettlement and rehabilitation of project affected persons 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
- 4.2 Eligibility criteria: In order to provide a framework for the R&R process in projects, this ECSMF provides the eligibility criteria and the entitlements for different categories of project affected persons.
- 4.3 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.
- 4.4 Project Affected Persons (PAPs): Any person affected either directly or indirectly by the project and/or project related activity, irrespective of the legal status and would include the following along with their family members.
- 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)
 - g) Persons losing access to community amenities and resources and
 - h) Shopkeepers, hawkers etc.
- 4.5 Vulnerable PAPs: Vulnerable PAPs are those living below poverty line, SC / ST families and women headed households and any other person who is at disadvantage position compared to the majority of the affected persons.
- 4.6 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 in favor of the project.
- 4.7 Type of Impacts to be addressed: The three broad categories of economic and social impacts, resulting due to projects funded by TNUDF that would be mitigated are
- a) Loss of assets, homesteads and land,
 - b) Loss of income or means of livelihood
 - c) Indirect group oriented impacts due to loss of access to common properties and resources

4.8 Procedure for land acquisition:

- i. Where possible and permitted by regulations, the required land will be acquired by implementing agencies through direct purchase based on 'willing buyer willing seller' principle, as the first option. Negotiations for direct purchase would be carried in a public place and in transparent manner. All proceedings will be documented and final agreement would be signed by the negotiating parties.

- ii. Where direct purchase by implementing agencies is not materialized, negotiated settlement can be reached through the provisions of the TN Highway Act 2001, Clause 19(2), i.e. through the GoTN designated authorities (District Collectors or specific authority to be authorized for the sub project) for that purpose, in respect of sub projects for transportation projects involving Highways Department.
- iii. Where negotiated settlement under the procedures specified under (ii) above is not possible, and for other urban projects, required land for the sub-projects would be acquired following the provisions of the LA Act (Emergency clause will not be applied) and the ECSMF.
- iv. The negotiated amount will be paid within three months from the date of final agreement of the negotiated settlement by the negotiating parties. Interest @12% p.a. will be added for any delay exceeding three months in payment of compensation.
- v. In case of payment of compensation under the TN Highway Act or Land Acquisition Act, all other additional assistance described in the entitlement matrix will be available.

4.9 Compensation for Land: Compensation to land will be paid by the borrower at replacement cost to all titleholders from whom land will be acquired for the project as per the below procedures.

4.10 Quantum of compensation:

Chennai Metropolitan Area (CMA)

- (a) Under private negotiations the quantum of compensation will be “higher of 142% Guideline value or registered sale price of similar data land in the vicinity as minimum and 150% as maximum compensation amount for negotiations”. In addition, 9% or any amount that is prevailing at the time of negotiations will be paid towards likely costs of stamp duty and registration charges of the acquired propriety;
- (b) If the guidelines values are not updated upto the current financial year in which the negotiations are taking place with the land owners, then they will be updated @7% p.a. on compounding basis upto the current financial year. Similarly, if the sale deeds registered are not available for the one year prior to the date of negotiations, they will be updated @ 7% p.a. compounding basis;
- (c) For the purpose of negotiations, if the registered sale values are above 30% of the guideline values, then 130% of guideline value will be considered as the base registered sale price for the purpose of negotiations; and,
- (d) The compensation amount will be made available to the land owners both under private negotiations and TN Highway Act prior to taking over of the affected properties;

Outside Chennai Metropolitan Area

- (e) Under private negotiations the negotiated price should not be less than 150% of the guideline values. If the guideline values are more than one year old at the time of negotiations, 5% per

annum will be added to bring the guideline values to current levels. In addition, 9% or any amount that is prevailing at the time of negotiations will be paid towards likely costs of stamp duty and registration charges of the acquired propriety; and

- (f) The compensation amount will be made available to the land owners both under private negotiations and Land Acquisition Act prior to taking over of the affected properties.

5. Entitlements for PAPs:

5.1 The entitlement for different category of impacts is explained in the entitlement matrix. The principles of the entitlement matrix are in accordance with the National Policy on R&R, 2003.

5.2 Estimate of Affected Persons: A full census survey will be undertaken to register and document the socio-economic status of the affected population in the project area. The start date of the census survey will be the cut-off date for entitlements under the project, to determine who all will be entitled for resettlement and rehabilitation.

6. Implementation of R & R

6.1 As per the ECSMF of TNUIFSL, the projects which are likely to displace people are categorized as follows:

Category	Description		
	Level of issues	Management measures	
S-1	Serious social issues expected	Project specific SAR along with a RAP essential	200 and more PAPs are affected
S-2	Moderate social issues expected	Adopt generic design guidelines and norms in ECSMF along with a project specific abbreviated plan essential	< 200 PAPs are affected
S-3	No social issues expected, hence socially benign	No social mitigation measures required, need to submit SSR	No PAPs

6.2 In case of S-3 project, the Social Status Report will provide necessary inputs for further course of action, for S-2 project the Social Management Plan will indicate the measures to be taken and they will be monitored buy TNUIFSL as per the prescribed format provided to the borrower. In case of S-1 projects the Social Assessment Report will be prepared based on the census and socio-economic survey and will also be monitored buy TNUIFSL as per the prescribed document provided in the appendix to the borrower. In case of projects categorized as S-1 or S-2 (based on the social screening form), the project specific Social Assessment Report or Social Management Plan as the case may be will be prepared. The Resettlement Action Plan/Social Management Plan will include the following but not limited to:

- Brief description of sub-project

- Baseline socioeconomic characteristics
- Extent of land requirement and need for land acquisition
- Need for relocation and resettlement sites
- Institutional arrangements
- Income restoration measures
- Implementation schedules
- Cost and budgets
- Participation and consultation
- Grievance redress mechanism
- Monitoring and evaluation.

6.3 Financial Arrangements for R & R: The project specific Social Assessment Report in case of S-1 projects, the Social Management Plan in case S-2 projects and Social Status Report in case of S-3 projects will indicate the cost and budgets and also the source of funding. All projects will complete the detailed Social Screening Process prior to their categorization and preparation of Social Impact Assessment Report. The following areas will be clearly defined

- Clear statement of financial responsibility and authority
- Ensure that the cost of land acquisition and resettlement is included in the overall project costs.
- Resettlement costs should be a part of annual investment plan
- Prepare a cost-wise, item-wise budget estimate for the entire duration of resettlement implementation, including administrative expense, monitoring and evaluation and contingencies.
- List the sources of funds
- Describe the specific mechanisms for adjustments to cost estimates by inflation factor.
- Describe provisions to account for physical and price contingencies.

SAR and RAP for S1 projects, and SMP for S2 projects should be submitted to the EFAs as required for review and approval following which they should be disclosed at local level for information of project affected people. Civil works contracts should not be awarded unless and until land acquisition and payment of compensation and other allowances is completed for a section/phase of the project. The RAP/SMP should have been approved by the EFAs and TNUIFSL prior to the issuance of bid documents for the civil works.

6.4 The GoTN has created the Grant Fund-I, under the programs with external financial assistance which has provisions for meeting out the rehabilitation and resettlement costs of projects funded by TNUDF. Any ULB that plans for the implementation of R&R measures can seek funding from the Grant Fund-I to finance the cost of R&R implementation.

6.5 Consultative process for developing a Rehabilitation Action Plan (RAP): TNUIFSL will adopt a consultative process for developing a Rehabilitation Action Plan and monitor the implementation. The people will be informed and consulted about the project, its impacts, their entitlements and the options.

6.6 Redress Mechanism for Grievances: Initially any aggrieved PAP will be directed to approach the appropriate Commissioner of ULB and subsequently if not satisfied to District Collector during the Collectors weekly grievance redress day. The third level for grievance redress will be the high level committee that would be constituted comprising of members from the borrower,

Implementing Agency, CMA, DTP, CMDA etc as applicable, which would respond within 30 days from the date of receiving the petition. The action taken on the grievance will be communicated to the aggrieved PAP through registered letter within 45 days from the date of receipt of the petition. The project affected person can go through these three grievance redress forum and if not satisfied can appeal in the court of law.

6.7 Step-by-step process for registering and redressing of grievances, response time, communication modes, mechanism for appeal and the provisions to approach civil courts in case of other provision fail will be disseminated. These will be prepared in the local language and distributed to all the PAPs.

6.8 Institutional Arrangements for Monitoring and Evaluation: At TNUIFSL the Social Assessment report will be reviewed and the Resettlement Action Plan will be prepared. Based on the outcome of the RAP, the R & R will be monitored at TNUIFSL by an social safeguard manager who would be totally responsible for social safeguards related issues. In case of complicated R & R, the TNUIFSL will monitor the R & R activities with the help of the external consultants.

Social Safeguard & Entitlement Framework

Sl. No	Type of Loss	Application	Definition of Entitled person	Entitlement Framework
	1.1 Land (agriculture Land)	Less than 20% of land holding* lost and residual land remains economically viable (marginal impact on livelihood)	Legal user with valid title or customary or usufruct rights.	-Cash compensation at the Replacement Cost for the extent of land lost (Ref Note 1)
		More than 20% of land holding lost, or where less than 20% lost but remaining land becomes economically unviable (severe impact on household income and living standards)	Tenant/ Lease holder / Share Cropper	-No compensation against land. -For loss of income a lump sum subsistence allowance of Rs.12,000.
			Squatters/ Encroachers	-Squatters and encroachers will not be entitled to compensation for the loss of land
		Legal user with valid title or customary or usufruct rights	-Land for land of on the basis of replacement land (1 ha of dry land or ½ ha of wetland for 1 ha of dry land lost), up to a maximum of 3.00 ha of dry land and 1.5 ha of wetland. The purchase price will be negotiated between the willing seller and willing PAP (Ref Note 2). The project will bear registration charges in addition to compensation for land. Or Cash compensation at the Replacement cost for the entire land holding (Ref Note 1&2) -For loss of income PAFs will receive a rehabilitation grant (adjusted for inflation every year) of Rs. 24,661/- per ha of dry land lost or Rs. 41,420/- per ha of wetland lost, up to a maximum of 3.00 ha of dry land and 1.5 ha of wetland. -Maintenance allowance for 12 months at Rs. 1000/month per PAF -One time shifting allowance of Rs.1,000/- -Compensation for any affected fixed structure on the land at replacement cost and right to salvage building material	

*Land holding refers to the land plot directly impacted by the project and does not include any other land holdings that a PAP may own at other locations.

		Tenant/ Lease holder / Share Cropper	-No compensation for affected land -Maintenance allowance for 12 months at Rs. 1000/month per PAF -One time shifting allowance of Rs.1,000/-
		Squatters	-No compensation for loss of land -For loss of incomes, a subsistence allowance for 3 months equivalent to monthly minimum wages as per prevailing rates of GoTN. -One time shifting allowance of Rs. 1000/-
1.2 Residential / Commercial Land	Loss of part of land holding with remaining land more than the minimum required under the zoning regulations	PAPs with valid title or customary and usufruct right	-Cash compensation for affected portion of land at replacement cost. (Ref Note 1)
		Tenants and leaseholders	-Reimbursement to leaseholders for un-expired lease period limited to 12 months -Transition allowance equivalent to two months income.
		Squatters/ Encroachers	-No compensation for loss of land -Transition allowance equivalent to two month's income
	Entire loss of land holding or where partial loss but the remaining land becomes unviable or too small (PAP is required to relocate)	PAPs with valid title or customary and usufruct right	-An equivalent area of land with access to services and facilities at least of same level as affected land and at location acceptable to PAP. The project will identify the land and the purchase price will be negotiated between the willing seller and the willing PAP. The project will bear registration charges. (See Note 2) Or Cash compensation for entire land holding at replacement cost (Ref Note 1) -One time shifting allowance of Rs. 1,000/-

			Tenants and Leaseholders	<p>Leaseholders will be entitled to:</p> <ul style="list-style-type: none"> -An equivalent area of land with access to services and facilities at least of same level as affected land and at location acceptable to PAP <p>Or</p> <ul style="list-style-type: none"> Cash compensation as reimbursement for un-expired lease period limited to 12 months -One time shifting allowance of Rs. 1,000/- <p>Tenants will be entitled to:</p> <ul style="list-style-type: none"> -Allowance equivalent to six months rental value -One time shifting allowance of Rs. 1,000/-
			Squatters/ Encroachers	<ul style="list-style-type: none"> -No compensation for loss of land -One time shifting allowance of Rs. 1,000/-
2.	Structures/ Buildings (Residential, Commercial, Industrial or Institutional)	2.1 Partially affected and remaining structures viable for continued use	Legal user with valid title	<ul style="list-style-type: none"> -Cash compensation at replacement cost for affected area of structure calculated based on PWD scheduled rates without depreciation -Repair cost for restoration of remaining structure -Right to salvage material
Owner of structure without legal title (squatters)			<ul style="list-style-type: none"> -Cash compensation at replacement cost for affected area of structure calculated based on PWD scheduled rates without depreciation -Repair cost for restoration of remaining structure -Right to salvage material 	
Encroacher			Right to salvage material	

		2.2 Fully affected or where part structure affected but remaining structure rendered unviable	Legal owner with valid title	<p>-Cash compensation at replacement cost for the affected unit, calculated based on the PWD scheduled rates, without depreciation plus house/shop building allowance equivalent to 25% of compensation.</p> <p>or</p> <p>For PAFs losing upto 20 sq.m of house will get a built house of 20 sq.m. and PAFs losing house of more than 20 sq.m will get a built house of 40 sq.m, where possible.</p> <p>In case of Shops and business, an alternate built shop, where possible, in the resettlement site (resettlement site will be developed provided not less than 20 units opt to move into a particular resettlement site) of plinth area of 9 Sq.m. (The cost of unit to be charged to the PAF is limited to two-thirds to non-vulnerable and one-third to vulnerable subject to maximum of compensation amount received)</p> <p>-Subsistence Allowance for 6 months equivalent to monthly minimum wages for unskilled casual laborers</p> <p>-One time shifting allowance of Rs.1,000/-</p> <p>-Right to salvage material.</p>
			Tenant/ Lease holder	<p>-Subsistence allowance for 6 months at equivalent rental value</p> <p>-One time shifting allowance of Rs.1,000/-</p> <p>-Right to salvage material if any additions done by the tenant</p>

			Squatter	<p>-Cash compensation at replacement cost for the affected unit, calculated based on the scheduled rates of the PWD without depreciation, plus house/shop building allowance equivalent to 25% of compensation.</p> <p>or</p> <p>PAFs losing upto 20 sq.m of house will get a built house of 20 sq.m. and PAFs losing a house of more than 20 sq.m will get a built house of 40 sq.m. where possible.</p> <p>In case of Shops and business an alternate built shop, in a resettlement site (resettlement site will be developed provided not less than 20 units opt to move into a particular resettlement site) of plinth area of 9 Sq.m.</p> <p>(The cost of unit to be charged is limited to two-thirds to non-vulnerable and one third to vulnerable subject to maximum of compensation amount received)</p> <p>-Subsistence Allowance for 6 months equivalent to monthly minimum wages</p> <p>-One time shifting allowance of Rs.1,000/-</p> <p>-Right to salvage material.</p>
			Encroacher	<p>-Compensation at replacement cost for affected portion of structures</p> <p>-Right to salvage material</p>
3	Loss of income / Livelihood	3.1 Loss of employment of agricultural laborer	PAPs	-Subsistence Allowance for 3 months equivalent of monthly minimum wages for unskilled casual laborer as per prevailing rates of GoTN
		3.2 Loss of rental income from building	Owner of affected building	<p>-If rental income derived from building is declared and records of Income Tax returns are available, then a cash grant equivalent to one year income calculated as an average of past three years income</p> <p>or</p> <p>-Subsistence allowance for 12 months at equivalent rental value</p>

		3.3 Loss of income from trade/business	Owner of Business	-If business income is declared and records of Income Tax returns are available, then a cash grant equivalent to one year income calculated as an average of past three years income or If business income details are not available, then a cash grant equivalent to 365 days of minimum wages (minimum wages are fixed by the respective District Collector in accordance with Minimum wages fixed by Ministry of Labor under Minimum Wages Act, 1948. Rates will be revised every year)
			Employees (Identified during Baseline Survey on cut off date)	-One time maintenance allowance / cash grant equivalent to 90 days of minimum wages (minimum wages are fixed by the respective District Collector in accordance with Minimum wages fixed by Ministry of Labor under Minimum Wages Act, 1948. Rates will be revised every year)
			Hawker (Identified during Baseline Survey on cut off date)	-Compensation for temporary Loss by way of one time shifting allowance of Rs. 1000/- Lump Sum maximum. Shifting allowance to commensurate the need. -Subsistence allowance for the number of days equivalent to the actual loss of business income calculated as per applicable minimum wages
4	Loss of Standing Crops		Cultivator (Title holder / Tenant / Lease holder / Share Cropper / Squatter	-Advance Notice of 3 months to harvest crop or -Cash compensation equivalent to market value of standing crop lost.

5	Loss of access to a) Common resources b) Social and Cultural property			The affected common resources will be provided / created afresh 1) Wherever possible, the property will be relocated in consultation with the community 2) When relocation of the property is not feasible, will be provided afresh
6	Loss of Amenities / Services to host communities		Amenities and Services	-Affected host communities will be entitled to restoration of losses as a result of additional consumption due to resettlement -Will be provided amenities/services equivalent to those provided to PAPs.
7.	Unidentified Impacts			Unforeseen impacts will be documented and mitigated based on the provisions of the policy

- Notes:
1. Procedure for acquisition / negotiation and quantum of compensation as per guidelines in the ECSMF document shall apply.
 2. Land for land of equivalent extent as per guidelines in the ECSMF document shall apply. Where land-for-land of equivalent production capacity or other attributes is not available at locations acceptable to the PAPs, cash compensation may be provided at the informed request of the PAPs.
 3. The compensation for homestead land including the built-up area will be governed as per provision under Sr.no:1 : 'land'
 4. Based on Consumer Price Index for agricultural laborers for Tamil Nadu – Sep 2003, Index 362
 5. The repair cost of affected structures should be as estimated to be required for a particular structure subject to minimum of 25% of the compensation amount for partial structure loss.

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 mitigation 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 persons (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 duration 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 persons (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.

**SOCIAL MANAGEMENT PLAN
FOR S-2 CATEGORY PROJECTS**

Social Assessment	YES	NO	If Yes, Specify Details	Social Management Measure	Cost
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 livelihood	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 = 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. Is there loss of access to common resources and or facilities?			i. Specify type of CPR being lost ii. No. of HHs losing their access to CPRs	i. No. of HHs to be provided CPRs ii. No. of HHs to be provided amenities	
5. 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	
6. Is there any impact on indigenous people?			i. No. of HHs		
7. Is there any induced development?					
1. Was the land acquired /			i. When was this done ?	i. No.of HHs (with valid title) to be given land for land =	

Social Assessment	YES	NO	If Yes, Specify Details	Social Management Measure	Cost
bought / transferred prior to the present ownership of ULBs ?			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	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 =	

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 guide lines 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 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. 	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 landuse 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	Not Applicable	
B. Sewerage / Sanitation		

Project/ Sub-Project	Site Selection Criteria	Remarks
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 encroachments) 	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 encroachments) • 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
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

Project/ Sub-Project	Site Selection Criteria	Remarks
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 involves cutting / felling of trees • 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>
D.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 involves cutting / felling of trees • Avoid a site that requires relocation of population (pucca or kutcha houses or slums / squatters or encroaches) • Ensure that the soil is not permeable 	<p>ollow Municipapl Solid Waste (Management & Handling) Rules, 2000 of Ministry of Environment and Forests</p>

**TERMS OF REFERENCE FOR ENVIRONMENTAL, CLIMATE CHANGE
AND SOCIAL AUDIT**

1 Background:

The Tamil Nadu Urban Development Fund (TNUDF) has been set up to finance various urban infrastructure projects in Tamil Nadu. The eligible borrowers of TNUDF include Urban Local Bodies (ULBs), Statutory Boards and Private Corporate Entities.

TNUDF believes that each of its projects will improve living standards and the environment of urban population in and around project locations. TNUDF is committed to promoting environmentally sound, socially acceptable and commercially viable urban infrastructure projects. TNUDF has reflected its environmental and social commitments through detailed operational procedures stipulated in its Environmental Climate Change and Social Framework (ECSMF). All projects financed by TNUDF should be in consonance with its ECSMF.

To facilitate the process laid down within its ECSMF, Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) intends to appoint consultants to audit projects taken up with External Financial Assistance.

2 Objectives:

- To audit the conformity of environmental and social categorisation of projects with respect to the categorisation prescribed in the ECSMF of TNUIFSL.
- To audit the compliance of the environmental, climate and social aspects of approved projects, which are under implementation; and,
- Review and comment on how the recommendations of the previous audit have followed so far.

3. Scope of Work

1. To carryout environmental and social audit with respect to the projects taken up under External Fund by Urban Local Bodies (ULBs) such as UGSS, WSIS, Bus Stations, River Improvement and Road Projects.
2. The various departments involved in the implementation are Commissionerate of Municipal Administration (CMA), Chennai Metropolitan Development Authority (CMDA), Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB), Tamil Nadu Water Supply and Drainage Board (TWADB), Directorate of Town Panchayats). The list of sub-projects to be audited is provided in the Annexure.

4. Outline of the tasks to be carried out:

The selected Consultant will essentially provide services to TNUIFSL as required, for the following tasks.

1. To Audit the Environmental and Social Categorisation of Projects:

The consultants will audit the conformity of environmental and social categorisation of projects approved by the TNUDF with respect to environmental and social categorisation in the ECSMF of TNUIFSL . The consultants will also review the adequacy of screening procedures to identify the possible issues; considerations of incorporating the social and environmental issues identified during the screening process into the engineering designs and action plans.

This audit will cover all the E1 category projects and 25% of the E2 projects, and all those projects involving land acquisition and resettlement & rehabilitation.

2. Auditing the compliance of the Projects:

The consultants will

- Cover the compliance aspects with reference to the agreed ECSM process at different stages of project development as well as the technical content of the EAs/EMPs and RAPs/SMPs. Such an exercise shall include the effectiveness in translating the EMPs into contract conditions and technical specifications.
- Critically review and report the compliance on Bank's recommendations during various supervision missions;
- Undertake field visits to ascertain actual level of compliance in implementing the EMPs and RAPs;
- Audit and confirm that the payment of compensation and assistance has been paid in accordance with ECSMF procedures wherever payment of compensation and assistance is involved for the projects affected people,
- Undertake field visits to interact with the beneficiaries on sample basis to assess their levels of satisfaction with the process followed in delivering the entitlements;
- Review the process followed for redressing the grievances filed by the affected people with regard to compensation, R&R assistance or any other related complaints.
- Review and confirm that the disclosure of documents has been carried out in accordance with the established procedures; and,
- Review the internal monitoring followed by TNUIFSL in managing the social and environmental impacts during the implementation of the sub-projects and suggest suitable measures for improving the process as needed.

The consultant will audit the compliance of environmental and social aspects during construction, operation and maintenance of projects approved by TNUIFSL, across all categories and different sub-project locations. The selection of sub-project shall be approved by TNUIFSL

before the commencement of the Audit. The audit will be carried out in the presence of the representatives of ULBs / Implementing Agencies.

3. Adequacy of the EMP/SMP

The consultant will audit the adequacy of the EMP/SMP and recommend practicable measures to include/improve the management measures and the agency responsible for carrying out the measures, wherever found inadequate. The consultant will also document the best practices and possible environmental and social enhancement measures with respect to the audited projects. Apart from documenting the good practices, shall discuss the deviations in following the ECSMF and corrective measures (project level and in overall process).

4. Reporting

The consultant shall review the status report submitted by the ULBs / Implementing Agencies on the implementation of EMP / SMP and the process adopted by design consultants in identification and mitigation measures while preparing the DPRs. To report on the adequacy and timely submission of the Quarterly Progress Reports including the process involved in addressing the risk management.

5. Documentation:

The consultant shall document the good practices and lessons learnt with respect to Environmental and Social Safeguards implementation and management in the sub-projects.

6. Audit Report

The findings of the review and audit should be summarized in a tabular form to include compliance, non compliance, best practices and enhancement measures along with the name of the agency responsible for each of the above. This matrix should be provided as an attachment to the main report. In case of non-compliance, the consultants need to undertake a follow up visit after giving sufficient time (depending on the type of corrective measures) for the agency responsible to take corrective actions.

6. Data, services and facilities to be provided by the Client:

A copy of the Environmental Climate Change and Social Framework (ECSMF) of the TNUIFSL and Management Information System (MIS), indicating details of the projects sanctioned will be given by client.

The available reports/documents/data will be provided to the consultants.

7. Composition of review committee to monitor consultants' work;

- 1.
- 2.
- 3.

- 4.
- 5.

The consultant would be required to submit __copies of each of the reports besides providing a soft copy of all reports,etc. All the pages in reports shall be printed in duplex mode except for A3 pages.

8. Procedure for review of reports:

The review committee will review the progress of work during each stage of the assignment and as and when required. The decision / suggestion of the review committee will be communicated in the form of minutes, for taking action.

9. Outputs, Payments and Time Schedule

Reports	Duration	Payment
On submission and acceptance of Initial Report on Compliance	Within 3 weeks from the date of award of contract.	15 % of the contract value
On submission and acceptance of Draft Audit Report –	Within 10 weeks from the date of award of contract	55 % of the contract value
On submission and acceptance of Submission of Final Report	Within 12 weeks from the date of award of contract	30 % of the contract value

10.List of key positions, whose CV and experience would be evaluated.

Sl.No	Key Professional	No. of persons	Experience
1.	Environmental Specialist	1	Post Graduate in Environmental or Public Health Engineering Environmental Planning/ Environmental Science with about 5 years of experience in preparation of EIA Reports, carrying out Environmental Audit, experience on Climate Change Adaptation and Mitigation etc.
2.	Social Development Specialist	1	Post Graduate in any of Social Sciences work with 5 years of experience preferably in social auditing, experience in land acquisition and resettlement issues in development projects

Necessary support staff as required shall be engaged by the consultant in order to achieve the objective of the assignment.

Annexure: List of Sub-projects to be audited.

Guideline of KfW Entwicklungsbank

for conducting business in an environmentally, socially and climate friendly manner
("Sustainability Guideline")

January 2011

Preamble

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Abbreviations

EHS	- Environmental Health and Safety Guidelines (World Bank Group)
ILO	- International Labour Organisation
FI	- Financial Intermediary
FC	- Financial Cooperation
IFC	- International Finance Corporation
PJF	- Programme-based joint financing
SEA	- Strategic Environmental Assessment Study
ESMP	- Environmental and Social Management Plan
ESIA	- Environmental and Social Impact Assessment

Preamble

For more than two decades, KfW Entwicklungsbank has been promoting projects to protect the environment, social development and the climate in numerous areas. Central to its promotional activities are the principles of environmental compatibility and sustainability. Therefore, all promoted projects have long been subject to a comprehensive and systematic assessment by KfW Entwicklungsbank to ensure they are compatible with environmental and other crucial development standards. Based on its Statement on Environmental Protection and Sustainable Development, which it submitted to the German parliament, KfW Bankengruppe has introduced a set of guiding environmental and social principles. They set forth the environmental and social policies that govern KfW's operations with a view to contributing to sustainable development within the meaning of the German Federal Government's sustainability strategy. Starting from these principles, this Guideline provides more specific guiding principles which apply to KfW Entwicklungsbank, while also incorporating some important social aspects. Technically speaking, this Guideline expands on the previous Environmental Protection Guidelines of KfW Entwicklungsbank, building on many years of experience KfW Entwicklungsbank has acquired in assessing the environmental and social impact of German Financial Cooperation (FC) projects.

1. Mission of KfW Entwicklungsbank

1.1 KfW Entwicklungsbank funds investments and related advisory services in developing and emerging countries on behalf of the German Federal Government. The projects are implemented by local partners on their own responsibility. More specifically, KfW Entwicklungsbank uses funds from the federal budget, which are topped up by the bank's own funds, in order to support the construction of economic and social infrastructure, the development of efficient financial sectors, and the implementation of environmental and climate protection measures and programmes to preserve natural resources. The most important objective of KfW Entwicklungsbank's promotional activities is to help the Federal Government of Germany and its partner countries achieve their overarching development goals (i.e. to reduce poverty, secure peace, promote democracy, shape globalisation in an equitable manner and engage in environmental and climate protection). Moreover, KfW's Carbon Fund promotes climate protection by purchasing certified emission reductions from eligible projects.

1.2 The priority areas of KfW's promotional activities in developing countries include social development, environmental and climate protection and the conservation of natural resources. Its work also encompasses projects which make a crucial contribution to implementing international agreements on environmental and climate protection and on the conservation of natural resources such as the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (UNCBD) and the Convention to Combat Desertification (UNCCD). Whenever the main goal of projects is not geared to environmental, climate or resource protection, KfW Entwicklungsbank seeks to incorporate climate and/or environmental objectives into the project scope.

2. Objectives and scope of this Guideline

2.1 This Guideline describes principles and procedures to assess the environmental, social and climate impacts during the preparation and implementation of measures financed by KfW Entwicklungsbank. In this context, the Guideline pursues the following objectives, in particular:

to define a common binding framework to incorporate environmental, social and climate standards into the planning, appraisal, implementation and monitoring of measures financed by KfW Entwicklungsbank;

to promote transparency, predictability and accountability in the decision-making processes of environmental and social impact assessments (ESIA) and climate change assessments;

to improve the assessment of economic risks associated with projects by taking account of the environmental, climate and social aspects.

2.2 All funding activities of KfW Entwicklungsbank must be subject to an ESIA and a climate change assessment as defined in this Guideline. This applies both to the funding of programmes and projects and to funding activities that are not project-related, such as programme-based joint financings, financial sector programmes, corporate finance operations and certified emission reductions. This Guideline

covers all forms of financing provided by KfW Entwicklungsbank.

3. Environmental and social impact assessment and climate change assessment of projects

3.1 Objective and core elements

3.1.1 The objective of environmental and social impact assessments (ESIA) and climate change assessments is to anticipate and appraise any foreseeable impact a project may have on the environment, the climate and/or on social factors, and to identify and prevent any negative impact, or limit it to a tolerable level and (provided that the negative impact is inevitable but still tolerable) introduce compensation measures. In addition, the assessments should identify, monitor and manage any residual risks. The objective of the climate change assessment is also to recognise climate change impacts that may impair the achievement of objectives in due time so that, if applicable, required adaptation measures can be taken into consideration in the project conception. Apart from assessing individual projects, ESIA and climate change assessments are designed to demonstrate to partner countries the need to appraise projects and explore opportunities to make them environmentally, climate and socially compatible; they are also intended to raise awareness of development approaches that are ecologically and socially sustainable. By aligning ESIA with internationally recognised environmental and social standards (e.g. World Bank Safeguard Policies, IFC Performance Standards, Environmental, Health and Safety Guidelines of the World Bank Group, ILO Core Labour Standards, EU Environmental Legislation), KfW Entwicklungsbank aims to improve donor harmonisation in accordance with the Paris Declaration.

3.1.2 ESIA and climate change assessments are a core element of the assessment procedure of KfW Entwicklungsbank. They are, first and foremost, intended as a management tool to steer and shape projects over their entire life cycle (i.e. from planning to completion). The essential steps of an ESIA and climate change assessment include:

A preliminary appraisal, called **screening**, to determine the environmental, climate and social relevance of a project, and, if the project has been found to be of such relevance:

the definition of the assessment scope (**scoping**), in close cooperation with the executing agency, in order to identify and assess the project's environmental, climate and social consequences and risks more accurately; and the design and implementation of an environmental and social impact study (**ESIS**), climate change adaptation assessment and/or climate change mitigation assessment in order to examine all or individual aspects of the project, including participatory approaches to involve affected local groups and keep the public in the partner country informed.

3.1.3 The steps mentioned above must cover the entire programme or project; they must not be limited only to those parts of the project which are financed by KfW Entwicklungsbank. This also applies to the rehabilitation and/or expansion of existing facilities. Moreover, it is important to consider relevant alternatives to reach the project objective. One possible outcome of an ESIA or climate change assessment may be that the original project design or the location has to be modified.

3.2. Screening and classification of projects

3.2.1 As part of the screening process, the planned project will be appraised at an early stage in order to determine its relevance in terms of environmental and social aspects and risks, as well as in terms of substantial greenhouse gas reduction potential and substantial need of adaptation to possible climate change. The screening process is designed to identify and appraise the type and scale of any negative consequences or risks that may arise from the planned project (environmental/social impacts), potentials for reducing greenhouse gas emissions and possible climate change impacts on the project that may impair the achievement of objectives. The next step, once the relevance of such consequences or risks has been established, is to define the type and scope of additional studies which need to be conducted as part of project preparations. Appendix 2 includes a checklist to assess the environmental and climate change relevance.

3.2.2 All projects will be classified into one of the following three **categories A, B or C**, according to the relevance of their potentially negative environmental and social impact.

Category A – Projects will be classified as category A, if they may have a severe negative impact on the environment and/or the social conditions of those concerned. A potentially severe negative impact means that the consequences are manifold, irreversible or unprecedented. Such consequences may affect a larger area beyond the site of the facility under construction, the site of the facility itself or the project area in a narrower sense. As a

matter of principle, any projects that are considered sensitive must be classified as category A; this applies to projects which may, for example,

affect important protected habitats or sites (tropical forests, coral reefs, nature reserves, wetlands, historic cultural sites etc.);

violate international treaties (such as conventions on international waste management regulations or on marine conservation);

lead to a high consumption of resources, and of large areas of land or large quantities of water in particular;

constitute a major hazard to human health (e.g. facilities located in residential areas or handling hazardous substances; noise pollution or harmful emissions); or

require the resettlement of a large number of people.

An illustrative list of projects that may be classified as category A is attached as appendix 1.

3.2.4 For **category A** projects, it is mandatory to analyse and appraise any negative ecological and social consequences as part of an independent environmental and social impact study (ESIS) and to draw up an environmental and social management plan (ESMP). The ESMP should describe all measures that need to be taken to avert, mitigate, offset and monitor any negative consequences that have been identified by the ESIS; it should also assign responsibilities for implementing such measures and list the costs involved. For category A projects, KfW Entwicklungsbank requires the executing agency to operate an appropriate monitoring system; if the projects are run by private operators, they are required to have their own environmental and social management system. Any such management system must comprise the following elements: (a) adequate organisational capabilities, (b) environmental and social assessment procedures, (c) management programmes, (d) specific environmental and social training measures, (e) well-structured relations with the target group, (f)

monitoring and (g) reporting procedures.

Category B – Projects will be classified as category B if they may have a potentially negative impact on the environment and on the social conditions of those concerned, which, however, is less severe than that of category A projects and can usually be mitigated through state-of-the-art countermeasures or standard solutions (cf. appendix 1). Typically, the potential consequences of category B projects are limited to the local area, are in most cases reversible and are easier to mitigate through appropriate measures. For category B projects, the need for and the scope, priorities and depth of an ESIS have to be determined on a case-by-case basis.

3.2.6 Category C – Projects will be classified as category C if they are expected to have no or only minor negative environmental and social consequences and if the implementation and operation of the project does not require any particular protection, compensation or monitoring measures. Category C projects usually do not require any additional analysis within the meaning of this Guideline or any further ESIA procedures. However, category C projects should be monitored for any relevant changes over their life cycle.

3.2.7 For the elements of the climate change assessment (adaptation assessment and mitigation assessment), the checklist in appendix 2 is used to determine if the measure may have a substantial climate change relevance or not (also see the definition of the relevance criteria in appendix 2). If relevance is expected, then a detailed climate change assessment is carried out as follows.

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 partner country'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.

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.

The climate change assessment only examines the relevance, which if applicable then entails a more in-depth assessment; the result is described in the programme proposal or in internal KfW proposal documents.

3.3 In-depth study and appraisal of negative effects and risks

3.3.1 The outcome of the screening will determine to what extent an in-depth study of potentially negative environmental, climate and social consequences is required. For category A projects, an in-depth environmental and social impact study (ESIS) is mandatory. If according to appendix 2 it is determined that substantial climate change relevance is expected, then an in-depth assessment of the greenhouse gas reduction potential or of the adaptation needs is also obligatory. As a matter of principle, the responsibility for collecting the relevant information to appraise the environmental, climate and social impact rests with the executing agency or the recipient of the funds. If necessary, KfW Entwicklungsbank will ask the executing agency to provide the information required to conduct an ESIA and/or climate change assessment, and will manage all additional studies. All ESIS recommendations have to be set forth in an action list as part of an ESMP, which should also specify environmental and social monitoring measures that need to be taken by the executing agency.

3.3.2 An in-depth study of the potentially negative environmental, climate and social consequences of a project may be conducted either as part of the feasibility

study, or as part of an independent study if the negative consequences are severe and of a more complex nature. For planned projects with a potentially severe environmental and social impact (category A), it is mandatory to conduct an independent ESIS, which must involve the communities or groups concerned (public participation, see section 3.6 below). In addition, the ESIS must

forecast and appraise the negative environmental and social consequences and risks of the planned project;

identify possible alternatives, including possible amendments to the project and/or protection or compensation measures, and assess the project's residual impact once such measures have been implemented;

discuss any opportunities afforded by the project to enhance its positive environmental and social effects;

discuss the management of environmental and social measures;

discuss the monitoring of environmental and social aspects (development and effectiveness of protection measures) during the implementation and operation of the project.

The analyses in the framework of the climate change assessment are to be implemented with the respective relevant aspects.

3.3.3 The executing agency, in consultation with KfW Entwicklungsbank, is responsible for the design and implementation of such studies, which are part of the project preparations. The study should also involve other relevant bodies and agencies of the partner countries which are responsible for environmental, climate and social issues. If there is a potential need for major protection and/or compensation measures, the costs of such measures have to be taken into account in the economic feasibility study and included in the funding scheme.

3.3.4 If the ESIS or the climate change assessment provides evidence that the project may have a negative environmental, climate and/or social impacts, which cannot be limited to a tolerable level or offset by modifications or technical

devices, the project will not be eligible for funding. Funding will also be denied if the project does not comply with the legal regulations of the partner country or with international agreements.

3.3.5 A conclusive appraisal of the project's environmental, climate and social impacts will be made in the project appraisal report. Whether an ESIA has been or must be conducted in accordance with generally accepted standards, including disclosure and public hearing, is also relevant for the appraisal. This is mandatory for all category A projects. In addition, it has to be verified whether the ESIS has been duly accepted by the competent public institutions of the project country or if this is part of the national approval procedure. The results of the in-depth climate change assessment are also fed into the final evaluation.

3.3.6 The conclusive appraisal must be based on the following basic principles:

The main purpose is to make constructive proposals for improvement which provide solutions to unresolved questions or suggest additional measures to limit negative consequences.

The project should seek to propose solutions for appropriate protection measures which are commercially viable and socially acceptable.

Local operators must have adequate technical skills to handle the proposed pollution control measures while ensuring proper operation of their facilities.

It has to be ensured that funds will be made available to implement the protection measures that have been identified to mitigate or offset adverse social consequences. In that respect, it is necessary to determine the share of expenditure to be borne in the framework of the KfW financing and the contributions of the executing agencies.

3.3.7 If the project is funded jointly with other donors, (e.g. under PJF schemes, sector programmes, project-related co-funding schemes etc.) that have already conducted an ESIS or an in-depth climate change assessment, a plausibility check will usually suffice. However, this does not rule out that certain aspects may

have to be examined in more depth.

3.4 Appraisal standards

3.4.1 In appraising the environmental, social and climate compatibility of its projects, KfW Entwicklungsbank takes into account the guiding environmental and social principles of KfW Bankengruppe, the specific development policy concepts and guidelines for development cooperation issued by the German Federal Government, and other international safeguards and standards for the environmental, climate and social sustainability of development projects. With a view to achieving sustainability and preventing negative environmental, climate and social consequences, KfW Entwicklungsbank will ensure that all projects funded by the bank comply with the principles of

preventing, reducing or limiting environmental pollution or degradation, including greenhouse gas emissions and other burdens;

protecting and preserving biodiversity and tropical forests and managing natural resources in a sustainable manner;

consideration of probable and foreseeable consequences of climate change;

avoiding any adverse impact on community life, particularly of indigenous people and other vulnerable communities, and safeguarding the rights, living conditions and values of indigenous communities;

avoiding or minimising involuntary resettlement of communities and mitigating the negative social and economic consequences arising from changes in the use of land and soil by restoring the original living conditions of the communities concerned;

promoting health and safety at work and industrial safety for all project staff;

outlawing forced labour and the worst forms of child labour, banning

discrimination in professional life and at the workplace and promoting the freedom of association and the right to collective bargaining;

protecting and preserving cultural heritage;

assisting the executing agency in managing and monitoring potentially negative environmental, climate and social consequences arising from the implemented project.

3.4.2 In any event, the fundamental benchmark for appraising the environmental, climate and social compatibility of projects is their compliance with the environmental and social standards of the partner country and the national licensing or certification requirements. KfW Entwicklungsbank evaluates the appropriateness of national environmental and social standards on the basis of internationally recognised appraisal standards, including those of the World Bank Group (Environmental, Health and Safety Guidelines EHS, IBRD/IDA Safeguard Policies and IFC Performance Standards) and other equivalent standards issued by regional development banks or by the EU. KfW Entwicklungsbank will disclose the standards it has used for appraisal. When funding major dam and reservoir projects, KfW Entwicklungsbank also takes into account the recommendations of the World Commission on Dams (WCD).

3.4.3 Any permanent or temporary deviation from the applicable appraisal standards must be notified in advance and include an explanation of the reasons for the planned deviation. Whenever temporary deviations occur, the executing agency has to provide substantial evidence that the target standard will be met by the agreed deadline. In doing so, the executing agency is assisted by KfW Entwicklungsbank, whose approval of the project will be contingent on whether the reasons for deviations are deemed acceptable.

3.5 Protection and compensation measures

3.5.1 When selecting protection, compensation and monitoring measures, it is important to make sure that they can be enforced and executed in the implementation and operation phase. Whenever protection and compensation measures are set forth in the framework of an ESMP or a climate change

assessment and – in the case of involuntary resettlement – in a resettlement management plan, the executing agency will, at the same time, have to agree to monitor the effects of such measures in an appropriate manner and submit a report to KfW Entwicklungsbank.

3.5.2 In some cases, it may not be possible to determine appropriate protection measures with reasonable certainty during the project planning phase. Whenever it is uncertain whether the identified environmental or social risks or risks resulting from climate change will materialise and which countermeasures will be required, such risks have to be tracked on an ongoing basis by an adaptive project monitoring process.

3.6 Public participation

3.6.1 An important element of the ESIA planning and decision-making process is to involve the communities concerned and keep the public in the partner country informed. When the ESIA scope is determined and the ESIS draft is presented, hearings need to be scheduled to consult with the people concerned and/or their community representatives, cooperatives or NGOs. Moreover, it is crucial to use appropriate media channels to provide the affected communities and, as the case may be, the general public of the partner country with comprehensive information in all phases of the project; such information needs to be provided in a timely and culturally suitable manner. Interested parties in a climate change assessment (e.g. those affected, the public) should also be involved in relevant cases.

3.7 Monitoring

3.7.1 In order to guarantee an effective monitoring of any negative environmental, climate and social impacts, the executing agency and/or the recipient of the funds have/has to agree to certain reporting and notification duties and employ appropriate monitoring tools. To track the environmental, climate and social consequences and risks of a project, it is particularly important to supervise the application of the agreed protection measures and monitoring procedures. If an ESMP has been drawn up, it will be used as a basis for monitoring.

4. Environmental and social impact assessment and climate change assessment of general or sector budget support (PBA)

4.1 Unlike other financing tools, general and sector budget support schemes do not earmark funds for individual measures or projects. Instead, the donors pay their funds directly into the budget of the partner country. The purpose of budget support is to provide assistance for economic, regulatory or institutional reforms across sectors (general support) or to promote sector-specific political and institutional reforms. In that context, the objective of environmental and social impact assessments as well as climate change assessments is to review the environmental regulations and policies of the partner country, to identify and appraise potentially negative environmental, climate and social consequences arising from reform programmes, and to determine at an early stage of the decision-making process (through strategic environmental assessment studies or SEAs) whether they are in line with national development goals for environmental and climate protection. Strategic environmental assessment studies are of particular importance for budget support in environmentally, climate and/or socially sensitive sectors, if there is a foreseeable risk of negative environmental, climate and/or social consequences.

4.2 Whenever a lead donor (e.g. World Bank, IDB, ADB, AfDB, EU) has already conducted a SEA for a certain budget support programme, the study and its results and recommendations may, subject to this Guideline, be used for assessing the programme's sections that are to be financed by KfW Entwicklungsbank, after a plausibility check has been performed and the necessary technical amendments have been made.

4.3 SEAs are conducted to implement Millennium Development Goal 7, which is 'to integrate the principles of sustainable development into country policies and programmes'.

This corresponds to the commitment made in the Paris Declaration on Aid Effectiveness 'to develop and apply common approaches for "strategic environmental assessment" at the sector and national levels'.

5. Environmental and social impact assessment and climate change

assessment of cooperation with financial intermediaries

5.1 The objective of ESIA and climate change assessments for projects involving financial intermediaries (FI) is to anticipate and prevent any negative environmental, climate and social consequences that may arise from loans extended to clients of FIs refinanced by KfW Entwicklungsbank. In assessing FIs, ESIA and climate change assessments should focus – subject to significance and relevance – on environmental, climate and social risks associated with the planned promotional activities on the one hand, and on the FI's procedures and capacity to assess environmental, climate and social concerns and monitor the loans on the other. This includes an assessment of the FI's environmental and social management system in particular. As a rule, no assessment will be made of the environmental and social impact of the individual loans that have been extended by the FI. If FIs do not have an appropriate environmental and social management system, they have to agree to introduce a system that complies with the IFC Performance Standards. In addition, partner institutes are required to adhere to the basic principles of 'responsible finance' in dealing with their clients (see position paper attached as appendix 4).

5.2 FIs have to agree to give adequate consideration to environmental, climate and social aspects in their loan extension process. This includes compliance with national environmental and social legislation and related regulations. As a matter of principle, funds provided by KfW Entwicklungsbank must not be used for projects or measures that are registered in the "IFC Exclusion List" (appendix 3); the specifications set forth in the list (e.g. microfinance) apply by analogy.

5.3 Whenever there is evidence that an FI supports projects in sectors or subsectors that are associated with grave environmental, social and/or climate risks and KfW Entwicklungsbank funds are applied for, the assessment of the FI has to determine whether the FI is willing and able to assess the environmental, climate and social relevance of such projects and will deny funds to all projects that may have intolerable environmental, climate and social consequences. To satisfy this requirement, the FI must have, or establish, its own

ESIA procedure, or commission external assessments (e.g. from local environmental or regulatory bodies or agencies) and enforce appropriate

protection measures whenever projects may have a significant negative environmental, climate and social impact. This notwithstanding, KfW Entwicklungsbank reserves the right to approve or reject any finalised project in critical areas, e.g. category A projects.

5.4 Microfinance institutions are supported mainly by refinancing loan portfolios rather than loans to individual borrowers. In such cases, the assessment needs to determine whether the introduction of an environmental management system is commensurate with the number of loans and the scale of the negative environmental, social and climate consequences and risks that are to be expected. In any event, it is crucial to examine the microfinance provider's portfolio and its track record in dealing with environmental, climate and social concerns.

6. Environmental and social impact assessment and climate change assessment of KfW Carbon Fund projects

6.1 The KfW Carbon Fund promotes climate protection by developing an international market for greenhouse gas emissions and supporting the EU's Emissions Trading System (ETS). To that end, the Fund purchases certified emission reductions from eligible projects worldwide and sells them to German and European companies that are required to comply with reduction targets set forth by law (compliance purchasers), or to governments of other member states; the Fund may also cancel certified emission reductions on a voluntary basis to neutralise KfW's own carbon footprint. By selling certified emission reductions, the projects are able to generate additional revenues. This helps to initiate climate protection projects, promote the transfer of modern technologies and support sustainable development in developing countries. As a matter of principle, the KfW Carbon Fund operates within the framework of the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the requirements of the EU Emissions Trading System (ETS) and of relevant German legislation. According to the relevant international agreements, CDM projects should not only create certified emission reductions and involve the developing countries in the worldwide struggle against global warming, but they should also pursue the objective of contributing to sustainable development in the host countries. This is certified by the host country governments.

6.2 The fundamental criterion for appraising projects from which the fund plans to purchase certified emission reductions is their compliance with international legal requirements for CDM and JI projects, which are set forth in the EU Emissions Trading Directive, the Kyoto Protocol and the UN Framework Convention on Climate Change and will be verified by the Executive Board (EB) and the JI Supervisory Committee (JISC). In addition, the appraisal takes account of relevant – and sometimes stricter – European and national legal provisions. Finally all projects must certify that they are in compliance with the environmental and social regulations of their host country.

6.3 The environmental, climate and social relevance of a project is analysed using the information on the project's environmental, climate and social impact that is available in the mandatory UNFCCC documentation (particularly in the Project Design Document (PDD) and the validation report). If necessary, additional information may be requested. If a qualified assessment of the environmental, climate and social impact of a project has already been carried out by other institutions (e.g. the European Investment Bank or the World Bank), a plausibility check will suffice. However, this does not rule out that certain aspects may have to be examined in more depth.

6.4 If the analysis provides evidence that the project may have a severe negative impact on the environment and/or the social conditions of those concerned or that climate change consequences pose a threat to the project, an additional analysis of the project, beyond the scope of the national approval procedure of the host country, is required. The scope, focus and depth of that analysis will be determined on an individual basis, according to the characteristics of the project.

6.5 If the analysis provides evidence that a project that is intended to generate certified emission reductions does not satisfy internationally recognised environmental, climate and social standards (see chapter 3.4.2 above) or is at variance with relevant international law or is associated with intolerable environmental and/or climate risks or social disadvantages, the KfW Carbon Fund will not purchase any certified emission reductions from that project. Any permanent or temporary deviation from the applicable appraisal standards must

be limited and notified in advance, explaining the reasons for the planned deviation. Whenever temporary deviations occur, the executing agency has to provide substantial evidence that the target standard will be met by the agreed deadline.

7. Fast-track procedure in the event of natural disasters, crises and conflicts

7.1 Fast-track measures which are intended to rapidly repair damage caused by natural disasters, crises and conflicts are subject to a special procedure. The Federal Government will decide on any support provided under a fast-track procedure and may waive individual assessment criteria if such waiver is necessary to speed up the procedure. The criteria that may be waived may relate to the socio-economic, socio-cultural, gender-specific and ecological impact (environmental and social impact assessment and climate change assessment) of the measures (see also the Work Instructions for Fast-Track Procedures).

8. Validity and review of this Guideline

This Guideline is effective for all new projects that will be initiated after 1 January 2011. This Guideline will be reviewed for necessary modifications or adjustments in 2012.

Appendix 1

Illustrative list of projects which may have severe negative environmental, social, and climate change impacts

The following is an illustrative list of project types and measures that have the potential to cause severe negative environmental and/or social impacts and can therefore be assigned to category A or B (where negative impacts are less severe and reversible).

1. Extensive and significant changes to the use of natural resources (e.g. changes in the use of land - as farmland, as forest or pasture land, for rural development, commercial timber production, etc) as well as extensive land reclamation.
2. Extensive and significant changes to management methods in agriculture and fishery (e.g. introduction of new plant species, large-scale mechanisation, introduction of new fish species) and extensive logging.
3. Intensive poultry (more than 40,000 birds) or pig farming operations (more than 2,000 porkers).
4. Use of water resources (e.g. large dams and other impoundments, irrigation and drainage projects, deep wells, water management and management of catchment areas, water supply).
5. Infrastructures (e.g. roads, bridges, airports, seaports, transmission lines, pipelines, railroad networks, tourism).
6. Industrial activities (e.g. metallurgic works, timber processing plants, chemical factories, power plants, cement factories, refineries and petrochemical plants, agro-industries).
7. Use of geological resources, mining etc. (e.g. mines, quarries, peat exploitation, oil and natural gas production).
8. Municipal wastewater treatment plants with a capacity of more than 150,000 population equivalents.
9. Waste management and removal (e.g. sewerage systems, landfills, treatment plants for domestic and hazardous waste).
10. Projects in which a significant number of affected persons have to be resettled involuntarily.

Appendix 2: Questionnaire for implementation of the preliminary appraisal

The preliminary appraisal (Screening) is performed on the basis of both the checklist below and consideration of existing and additional, easily accessible information.

	No	Yes
Environmental assessment:		
Does the measure potentially have a substantial negative impact on one or more of the following subjects of protection? Humans, including human health Animals, plants and biological diversity Soil, water, air and landscape Cultural goods and other assets Interdependencies between the above-mentioned protected resources	<input type="checkbox"/>	<input type="checkbox"/>
Does the measure have considerable potential to improve environmental quality, resource protection or strengthen ecological sustainability?	<input type="checkbox"/>	<input type="checkbox"/>
Is an environmental assessment required by the national law of the partner country?	<input type="checkbox"/>	<input type="checkbox"/>
Climate adaptation assessment (Climate Proofing):	No	Yes
Are the intended developmental impacts of the measure substantially dependent on climatic parameters such as temperature, rainfall, wind, etc?	<input type="checkbox"/>	<input type="checkbox"/>
Does the measure present the possibility of substantially increasing the adaptation capacity of the target groups or ecosystems?	<input type="checkbox"/>	<input type="checkbox"/>
Climate change reduction assessment (Emission Saving):	No	Yes
Is the measure expected to make a substantial contribution to greenhouse gas emissions?	<input type="checkbox"/>	<input type="checkbox"/>
Can it be assumed that the measure will have the potential to considerably reduce emissions of greenhouse gases or increase CO ₂ sequestration in soil?	<input type="checkbox"/>	<input type="checkbox"/>

If one or more of the questions are answered with "Yes", then an in-depth environmental and/or climate change impact assessment should certainly be carried out. The in -depth assessment can be limited to the sub-areas or protected resources for which an impact is affirmed.

The following criteria should be used to judge **relevance**:

- extent of the expected impacts (e.g. number of affected persons),
- frequency, duration and expected time of the expected impacts,
- sensitivity of the affected natural spaces, population groups and economic activities as well as their adaptation capacity,
- irreversibility of changes,
- requirements in legal regulations (e.g. threshold values for pollutants).

Considerable negative risks and positive potentials can also result from other aspects than those mentioned in the checklist. Therefore the checklist should not exclude a more extensive analysis.

In accordance with the precautionary principle, an in -depth environmental and/or climate change assessment should also be performed if, due to uncertainties, **no clear decision can be taken in terms of the relevance of the environmental and climate risks or potentials.**

Appendix 3

IFC Exclusion List

The IFC Exclusion List defines the type of projects that IFC **does not** finance.

IFC does not finance the following projects:

- Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB's, wildlife or products regulated under CITES.
- Production or trade in weapons and munitions¹.
- Production or trade in alcoholic beverages (excluding beer and wine)¹.
- Production or trade in tobacco¹.
- Gambling, casinos and equivalent enterprises¹.
- Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where IFC considers the radioactive source to be trivial and/or adequately shielded.
- Production or trade in unbonded asbestos fibers. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.
- Drift net fishing in the marine environment using nets in excess of 2.5 km. in length.

A reasonableness test will be applied when the activities of the project company would have a significant development impact but circumstances of the country require adjustment to the Exclusion list.

All financial intermediaries (FIs), except those engaged in activities specified below*, must apply the following exclusions, in addition to IFCs Exclusion List:

- Production of activities involving harmful or exploitative forms of forced labour² /harmful child labor³.
- Commercial logging operations for use in primary tropical moist forest.
- Production or trade in wood or other forestry products other than from sustainably managed forests.

When investing in **microfinance** activities, FIs will apply the following items in addition to the IFC Exclusion List:

- Production of activities involving harmful or exploitative forms of forced labour² /harmful child labor³.
- Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals. Hazardous chemicals include gasoline, kerosene, and other petroleum products.
- Production or activities that impinge on the lands owned, or claimed under adjudications, by Indigenous Peoples, without full documented consent of such people.

Trade finance projects, given the nature of the transactions, FIs will apply the following items in addition to the IFC exclusion List.

- Production of activities involving harmful or exploitative forms of forced labour² /harmful child labor³.

Footnotes

1. This does not apply to project sponsors who are not substantially involved in these activities. "Not substantially involved" means that the activity concerned is ancillary to a project sponsor's primary operations.

2. Forced labour means all work or service not voluntarily performed, that is extracted from an individual under threat of force or penalty.

3. Harmful child labour means the employment of children that is economically exploitative, or is likely to be hazardous to or to interfere with, the Child's education, or to be harmful to the Child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral, or social development.

Appendix 4

"Responsible Finance" - a guiding theme in KfW Entwicklungsbank's financial sector promotion

In a globalised world where transparency is high and information flows in abundance, socially and morally appropriate behaviour is becoming increasingly important for all market participants in the financial sector. *Responsible Finance* has become a catchword in development finance and, in particular, in financial system development. For many financial institutions and investors, the social component is a factor of growing importance which, along with their commercial goals, is shaping their decisions (double bottom line).

Over the past years the financial and micro-finance sectors in developing and transition countries have experienced enormous growth. Enterprises and the population in almost all countries now have significantly better access to financial services, and this has contributed to economic growth and greater prosperity, even among poorer groups of the population. Yet despite these positive impacts, the upward trend has also shown its downside - untransparent and, ultimately, prohibitive lending terms have put many customers at risk of incurring more debt than they can sustain, particularly through the uncontrolled and sometimes aggressive marketing of consumer credit.

Even if there are no internationally acknowledged definitions or standards of *Responsible Finance*, it can be taken to mean all practices that are designed to create a fair balance of interests between a financial institution and its customers, employees and business partners on the one hand and their shareholders and refinanciers on the other hand. *Responsible Finance* is ultimately a precondition for sustainably increasing the prosperity of all stakeholders.

What does Responsible Finance mean for the actors participating in the financial sector?

Responsible Finance is a topic that affects all market players and cannot be reduced merely to the relationship between a financial institution and its customers. We therefore outline four dimensions of *Responsible Finance* below:

Customers. Customers are in a weaker position particularly when their level of education is insufficient for them to be adequately aware of the consequences of borrowing. Customers therefore should be capable of understanding the fundamental aspects of financial services, and most importantly those of a debt relationship. Giving them certain basic knowledge ("financial education") is therefore indispensable. What appears to be just as crucial is strengthening the customers' trust in the financial system as a whole, for instance by promoting deposit insurance schemes.

Financial institutions. Amid growing competition, financial institutions today face the challenge of matching necessary growth with a sound lending policy and, most of all, avoiding untransparent lending practices. Transparency in a customer relationship includes providing comprehensible information about the products and conditions, particularly the disclosure of all costs associated with the lending operation ("truth-in-lending"), restructuring repayment instalments and periods in line

with the customer's repayment capacities and cash flow, credible management of complaints, clearly defined and communicated corporate philosophy, setting and monitoring of developmentally relevant objectives such as promoting the creation of employment, and compliance with appropriate environmental and social standards ("social performance").

Regulatory authorities. The protection of consumer interests should include not only responsible banking practices (through voluntary undertakings) but should be based on a legal and regulatory framework that creates proper incentives for these. Ultimately, regulatory requirements (proscribing certain collection practices, requiring disclosure of effective annual interest rates, and others) have proven to be more efficient than the interest ceilings still being applied in some countries - often purportedly in the interest of consumer protection - which often impact negatively on the poor sectors of the population (credit rationing).

Donors and investors. Donors and investors can conduct themselves responsibly, for example, by engaging in long-term commitments, by supporting the development of new products and good corporate governance, and by deploying their instruments (funding, guarantees, participations, subordinate debt capital) in line with the needs of the financial institutions they support, with the aim of achieving as great an impact as possible to strengthen local financial markets so as to respond to the needs of broad sectors of the population. In the area of micro-finance this also means, for example, refraining from undermining the potential to mobilise savings.

What does *Responsible Finance* mean for KfW Entwicklungsbank and what role does the bank play in this regard?

Responsible Finance is not a new topic for KfW but was already consistent with its self-image before it became a topic of international debate. With its financial sector operations German Financial Cooperation (FC) contributes to disseminating responsible practices in all of the four dimensions described above; and this is definitely not confined to its microcredit operations. German FC contributes to the basic principles established by the Federal Ministry for Economic Cooperation and Development (BMZ) for a social and ecological market economy, and it contributes above all to poverty reduction by achieving broad-based growth, promoting gender equity, strengthening the private sector, improving the conditions for a market economy, strengthening social partnerships, making the economy ecologically sustainable and creating equal opportunities for disadvantaged groups of the population.

The role of KfW in the area of *Responsible Finance* shows various facets:

Systemic approach. KfW's activities focus on different levels of intervention (micro, meso and macro level) and pursue a comprehensive and systemic approach to financial system development in transition in developing countries ("building inclusive financial systems"). In this approach we make use of long-standing, close contacts with ministries, central banks, commercial banks and microfinance institutions in our partner countries which are characterised by a partnership based on mutual trust. The development and application of best practice minimum standards in individual projects helps to develop the financial sector framework. KfW regards itself as a partner who contributes to development at the various levels of intervention with a long-term perspective.

Selecting the "right" partners. We provide funding and equity to financial institutions which for their part regard *Responsible Finance* as an element of their business model and have appropriate strategies to achieve this. Banks that make their lending terms transparent and customer-friendly are among the preferred partners for FC.

Focusing on suitable products. Financial sector projects in FC centre on successful intermediaries whose business activity is not primarily geared to short-term commercial goals (for example by focusing on consumer credit), but to responding to the needs of developmentally relevant target groups, such as by focusing on MSME loans in the area of

micro-finance, housing finance and savings products for small and micro-savers.

Long-term commitment as an investor in microfinance funds and microfinance institutions (MFIs). KfW plays an important role in setting up and promoting funds which it accompanies over many years as an investor with a seat and vote in the supervisory board, thus contributing to disseminating standards applicable to *Responsible Finance*.

"Additionality" for ethically motivated investors. Ethically motivated investors (such as private foundations) are developing an increasing interest in investing their own funds, for instance in the area of micro-finance, and they rely on KfW's country, sector and target-group expertise as well as its financing know-how to ensure that their funds are employed in responsibly operating institutions and that their investment is consistent with their risk preferences. Examples include structured finance operations in the micro-finance sector.

Contributing to international expert discussions. KfW is acknowledged as one of the leading development banks in the area of financial sector development, particularly micro-finance. By hosting and participating in international conferences and in an intensive and continuous dialogue with relevant market actors KfW influences advances and trends in financial sector development. Its main focus is on the promotional and developmental aspect. Overall, *Responsible Finance* is one of the most important overarching themes for financial sector promotion at KfW Entwicklungsbank. The bank has vast experience in connection with *Responsible Finance* from many years of cooperation with financial intermediaries in developing and transition countries. It contributes this experience to the international debate and its operations contribute to disseminating good practice.