

Environmental and Social Framework (ESF)

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Tamil Nadu Urban Infrastructure Financial Services (TNUIFSL)

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ACRONYMS

AMC	Asset Management Company
BP	Bank Procedures
MD &CEO	Managing Director & Chief Executive Officer
CPR	Common Property Resource
CRZ	Coastal Regulation Zone
DPR	Detailed Project Report
EAR	Environmental Assessment Report
ECOP	Environmental Code of Practices
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESAR	Environmental and Social Assessment Report
ESR	Environmental and Social Report
ESF	Environmental and Social Framework
E & S	Environmental and Social
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
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
MoEF	Ministry of Environment and Forest
MRTS	Mass Rapid Transport System
MUDF	Municipal Urban Development Fund
NGO	Non Governmental Organization
OD	Operational Directives
OP	Operational Policies
PAP	Project Affected Person
PAF	Project Affected Family
PIA	Project implementation Agency
PMC	Project Management Consultant
PMG	Project Management Group
PMU	Project Management Unit
RMP	Risk Management Plan
R&R	Resettlement and Rehabilitation
SAR	Social Assessment Report
SEC	Sensitive Environmental Components
TC	Trustee Company
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
TOR	Terms of Reference

TRAMP	Traffic and Transport Program
ULB	Urban Local Body
WB	World Bank
BP	Bank Procedures
RP	Resettlement Plan

EXECUTIVE SUMMARY

BACKGROUND

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. 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.
2. 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 (Industrial Credit and Investment Corporation of India), HDFC (Housing Development and Financial Corporation) and IL&FS (Infrastructure Leasing and Financial Services Limited). To fund project development activities, a new Grant Fund (GF) has been established.
3. TNUDF will channel increased financial resources, including private financing, into high priority infrastructure investments. Specifically the fund would:
 - fund 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
4. The projects financed would:
 - ensure that 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 and social impacts take place or that the borrower will be taking measures to avoid or minimise such impacts in consonance with the Environment and Social Framework (ESF - Originally named as Environmental and Social Report - ESR).

5. 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.
6. Recognising the environmental and social issues that can arise in urban infrastructure projects, TNUIFSL has evolved an Environmental and Social Framework (ESF). The ESF provides an overall framework to TNUIFSL in identification, assessment and management of environmental and social concerns at the sub project level. The ESF outlines the policies, assessments and procedures that will enable TNUIFSL to ensure that a subproject that it funds is developed in accordance with ESF and is adequately protected from associated risks. The ESF also aims to sensitise borrowers to assessment and management of environmental and social issues arising in urban infrastructure projects.
7. The ESF has been revised and updated by TNUIFSL. The process of preparing this report has 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. There have also been a series of discussions within and outside TNUIFSL for the preparation of the Report. The project team acknowledges the Project Management Group (PMG) of the Government of Tamil Nadu, the Directorate of Municipal Administration, the World Bank Task Force and several other institutions and individuals for their contribution in evolving this ESF.
8. The Environmental and Social Framework (ESF) for TNUIFSL is in two volumes:
 - Volume I: consists of an Executive Summary; and a Environmental and Social Assessment Framework
 - Volume II: consists of the Environmental and Social Information package for borrowers of TNUIFSL loans

While the ESF includes both volumes, appropriate parts of Volume II will form part of the Information Package to be given to the borrower along with the Loan Application Form.

9. The Board of Directors, TNUIFSL, will be formally approving the ESF.

TNUIFSL POLICY STATEMENT

10. TNUIFSL has adopted the Environmental and Social Policy of the TC to promote environmentally sound, socially acceptable and commercially viable urban infrastructure projects. TNUIFSL, like the TC of TNUDF, 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 all projects to
 - ❑ Environmental soundness by conserving natural resources, preserving biodiversity and ecological equilibrium; minimising release of polluting wastes and Integrating mechanisms within projects to maintain and enhance environmental quality of project locations.
 - ❑ 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. TNUIFSL expects that most of the projects that it funds will be small and medium urban infrastructure projects.
13. While adopting the environmental and social policy of the TNUDF-TC, TNUIFSL has reflected its commitment through detailed operational procedures illustrated in its ESF.

ENVIRONMENTAL AND SOCIAL ISSUES

14. To evolve its environmental 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 1.3).
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, 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 applicable to TNUIFSL financed projects are both pollution and natural resource related. Key Mandatory environmental laws are:
 - 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, 1990
 - Chennai Metropolitan Area Ground water (Regulation) Amendment Act, 2002
22. Key environmental rules and regulations applicable for TNUIFSL projects are:
 - Legislations**
 - 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
 - Policies**
 - National Conservation Strategy and Policy Statement on environment and Development, 1992
 - Policy Statement for Abatement of Pollution 1992
23. 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 OPs of The World Bank that could be triggered in TNUIFSL's projects are Operational Policy Note 11.03 on cultural properties and OP 4.04 on Natural Habitats. Projects that are expected to cultural

properties or natural habitats will be categorised as E 1 and management plans will be prepared as per OP 11.03 or OP 4.04 as applicable.

24. Compliance with environmental requirements laid down by the policy, legal and regulatory framework will not pose a problem in a majority of projects that are envisaged to be financed by TNUIFSL. However, in most cases the regulatory agency is the municipal authority. Hence it will be essential for the municipal body requesting the finances to clearly separate the project execution function and regulatory function. It will be the responsibility of the Municipal Commissioner to furnish the necessary undertaking of compliance along with the project proposal. Categorisation of projects will be done so that assessments can be done speedily and remedial measures can be adopted.

Regulatory Framework - Social

25. Mandatory Social Laws are:
- Land Acquisition Act, 1894 as amended in 1984
 - 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
26. 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. TNUIFSL as a borrower of credit would ensure that Bank policies are followed.

TNUIFSL's SOCIAL ENTITLEMENT FRAMEWORK

27. 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 ESF.
28. TNUIFSL will ensure that the Policies and procedures described in the ESF will be applicable to all World Bank supported projects. This ESF provides a list of entitlements for project affected persons and families. Detailed exposition of the social entitlement framework for World Bank 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 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.

29. TNUIFSL, as a financial intermediary, will ensure 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 assessment and management of environmental and social issues that could arise within projects financed by TNUIFSL.

TNUIFSL Project Cycle

30. 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 closely monitor construction, operation and maintenance phases.
31. During project screening, TNUIFSL will assess the eligibility of a project based on TNUIFSL's lending policies. The assessment will form a 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) as per guidelines provided to him in the Information Package. The E&S Manager/specialists, will advise the borrower on the requirements of ESF and will also review the adequacy of environmental 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.
32. During Project Appraisal, TNUIFSL along with the borrower will vet the DPR. Environmental and social aspects will be cross checked against standards set in the ESF. The loan officer on the advice of the E&S managers/specialists will submit the appraisal report for approval with a recommendation to accept the project as submitted; accept with modifications; or reject it.
33. After requisite approvals for projects that fall under the E1 and S1, the DPRs along with the environmental and social assessment reports will be sent to the World Bank for clearance. After obtaining their concurrence the loan officer will discuss basic terms of agreement such as rate of interest; repayment schedule; security/guarantee; and environmental and social commitments with the borrower. TNUIFSL then prepares and signs the loan agreement with the borrower. The first loan installment is then disbursed.
34. TNUIFSL shall undertake annual audits, through ESF auditor, of its portfolio to review the status of ESF compliance. While all projects of E-1 and 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.

- 35 In addition to this, TNUIFSL will ensure that the borrowers appoint independent consultants to monitor EMP/SMP implementation for E1/S1 category projects and submit quarterly compliance reports to TNUIFSL. In case of E2/S2 projects the monitoring can be done by the borrowers themselves.

ORGANISATIONAL SUPPORT STRUCTURE

- 36 In order to ensure that the policy obligations and associated procedures in the ESFA are operationalised, TNUIFSL has outlined an organisational support structure. Besides fixing responsibility on key actors in the process, the organizational support structure also outlines the capacity building that is essential for TNUIFSL staff and borrowers.

Organisational Structure

37. TNUIFSL will deploy professionals headed by a Managing Director & Chief Executive Officer (MD&CEO). The other professionals include Senior vice Presidents for projects finance, Managers and Assistant Managers, Procurement specialists etc. TNUIFSL will also recruit E&S specialists/managers to ensure implementation of the ESF.

Responsibility Allocation Framework

38. TNUIFSL will ensure sensitivity to environmental and social aspects of various projects among its project appraisal and management staff. To ensure this, TNUIFSL will appoint a dedicated E&S managers/specialists to address all the environmental and social concerns related to urban infrastructure projects. The E&S manager will take the help of external environmental or social advisors in addressing E&S issues relating to the projects, if complexities are encountered in environmental or social aspects.
39. The E&S managers/specialists will be responsible to approve the categorization of the project after the reviewing the report and will check the inclusion and adequacy of the environmental management plan, assigning of responsibility and whether its cost is included in the project cost. He will also assess the capability of the borrower in implementing the plan and identify institutional strengthening measures if required.
40. One of the Sr. Vice presidents at TNUIFSL will oversee appraisal, investments and resources of the projects and will interface with Multilateral Agencies. The other Vice President (projects) will appraise projects, in addition to specific environmental and social assessment and management issues assisted by the E&S managers/specialists. Sr. Vice President and Company Secretary will look after Management Information Systems and auditing. Assistant Managers will help their higher officials in the departments concerned. Procurement specialist will look after the procurement of consultants and works.

Advisors (Environmental and Social Issues)

41. The Advisors will mean external advisors who will be engaged if complexities are encountered in environmental or social aspects of the project. The advisors will essentially provide services to TNUIFSL as required, for the following
- Advising the E&S managers/specialists on complex environmental and social issues
 - Reviewing EAR, SAR and other documents submitted by borrowers for specific environmental and social projects/ components
 - Monitoring and evaluating such projects
42. An external Agency will be appointed as ESF auditor who will undertake the annual review of the ESF performance through environmental and social audit of sample projects and suggest improvements to the ESF.

Capacity Building

43. TNUIFSL envisages capacity building of its own personnel and its borrowers who will include Urban Local Bodies, Statutory Boards, Public Undertakings and Potential Private Operators in order to ensure that the ESF is effectively operationalised. To address this issue, the project management unit (PMU), which has been set up by GoTN, will organise training programs. The training program for various role players will include an orientation on the ESF, Municipal Finance, Urban Planning, Project Management and Engineering and Public Health under TNUIDP III.

Part I

TNUIFSL'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 and socially acceptable urban infrastructure projects by integrating environmental and social considerations in to their lending operations. The institutions commit all projects to:

Environment

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.

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 provide 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

TNUIFSL will use the Environmental and Social Framework (ESF), the Grant Fund and other funding mechanisms to operationalise the environmental and social policy.

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

Part II

SECTION 1

ENVIRONMENTAL AND SOCIAL ISSUES

- 1.1 TNUIFSL manages funds for the TNUDF, one of India's largest urban development projects with a multi-city, multi-sectoral focus. TNUIFSL will extend 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 During the implementation of TNUDF projects, TNUIFSL has encountered number of environmental and social problems 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. TNUIFSL recognizes these environmental and social issues related to urban infrastructure projects and prepares it self to address their mitigation through a set of management procedures elaborated in its ESF.
- 1.3 TNUIFSL will ensure that the Policies and procedures described in the ESF will be applicable to all World Bank supported projects. This ESF provides a list of entitlements for project affected persons and families. Detailed exposition of the social entitlement framework for World Bank financed 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 over 500 sub-projects including roads, bridges, street lights, solid waste plants, storm water drains, bus stations, and markets in various municipalities in Tamil Nadu (refer Appendix 1 for list of municipalities).

TYPICAL MUNICIPAL INFRASTRUCTURE PROJECTS

- 1.5 TNUIFSL is expected to finance the following categories of urban infrastructure projects:
 - Water Supply and Sewerage
 - Solid Waste Management
 - Transportation including urban roads and traffic management
 - Commercial Complexes
 - Non commercial/Community Amenities
 - Integrated area development
- 1.6 Physical scales and typical costs of urban infrastructure projects are shown in Table 1.1.

Table 1.1: Profile of Typical TNUIFSL Projects*

Project	Physical	Financial (Rs. in lakhs)
I) Water Supply & Sewage		
A. Water Supply		
1. Water supply lines & taps	1 - 10 kms	2 - 20
2. Water tankers	10,000 liters	6 - 7
3. Overhead tanks	10 lakh liters	20
4. Water treatment plants	1 unit (10,000 liters)	20
5. Head works		
B. Stormwater Drainage		
1. Open drains	0.5 - 5 kms	5 - 50
2. Closed / Underground drains	0.5 - 7 kms	10.
C. Sewerage / Sanitation		
1. Public conveniences	1 - 5 units(8 seat)	2 - 10
2. Pay & use latrines	10 - 12 (1 seater)	2.5 - 3
3. Sewage treatment	1 unit (10000 liters)	20
4. Septic tanks		
5. Sewage forms	5-20 ha	10-25
II) Solid Waste Management		
A. Compost Yard	4 - 5 acres	20
B. Vehicles	10 ton capacity	8
III) Transportation		
A. Roads		
1. Widening of roads	4 - 20 km (1m width)	12 - 60
2. Improvement of surface	5 - 30 kms (1m width)	15 - 90
3. New roads	2 - 5 km (2 lane)	20 - 50
4. Traffic islands	1 - 5 units	1 - 5
5. Road dividers	1 - 2 km	4 - 10
6. Footpaths		
B. Street Furniture		
1. Traffic signals	1 - 5 junctions	5 - 20
2. Street lights	60 - 600 poles	10 - 100
3. Sign boards	100 - 500 units	2 - 10
C. Road Structures		
1. Subways		
- Pedestrian	1 unit (30 m)	60
- Cycle	1 unit (40 m)	100
- Fast moving	1 unit (2 lanes, 400m)	500 - 600
2. ROBs	1 unit (2 lanes, 500m)	600 - 1500
3. Culverts	1 - 5 units	4 - 20
4. Small Bridges	1 unit (6 - 10 m)	6 - 10
D. Terminals / Shelter		
1. Bus Shelters	1 - 5 units	0.20 - 1.0
2. Bus Terminals/ Stands	1 unit (13 busways)	100
3. Truck Terminals	1 unit (30 lorries)	45
4. Workshops		
5. Carparking complexes	1 unit (200 cars)	1000
E. Fleet Expansion		
F. Construction & Maintenance equipment		5-20
G. Inland Water ways		
IV. Commercial Complexes		
A. Shopping /Office complexes	30 - 50 shops	30 - 50
B. Vegetable/Fish markets	50 - 75 shops	20 - 30
C. Slaughter houses	one unit (6 -10 bays)	5 - 6
D. Marriage halls	1 unit (500 seats)	10
E. Lodge / Dormitory	1 unit (30 people)	10
F. Municipal community complexes	1 unit	10

Project	Physical	Financial (Rs. in lakhs)
V. Non Commercial/Community Amenities		
A. Parks	1 acre unit	20
B. Playgrounds	1 acre unit	2 – 3
C. Maternity & Child Center	1 unit (Building & equipment)	14
D. Hospitals	10 beds	20 lakhs
E. Educational Institutions/Reading rooms	1 unit (2 class rooms)	1 - 1.5
F. Burial Grounds	1 acre unit	10 – 12
G. Electric crematorium	1 unit	30
VI. Integrated Area Development		
A. Housing (Sites & Services)		
B. Guided Urban Development		
C. TRAMP		

Based on analysis of TNUIFSL sub projects

ENVIRONMENTAL AND SOCIAL ISSUES

1.7 While TNUIFSL financed projects are expected to improve general living standards within urban localities, they can also have associated impacts on the local environment and people. Based on the experience of past projects carried out by urban local bodies in Tamil Nadu, this document identifies environmental and social issues that can arise in urban infrastructure projects. Issues that could arise in various urban infrastructure projects are listed below.

I. WATER SUPPLY AND SEWERAGE PROJECTS:

(a) Water Supply:

1.8 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
- Disposal of excavated soil
- Pollution from construction equipments
- 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)

1.9 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 :

1.10 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

1.11 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/Sanitation :

1.12 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
- 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
- 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

1.13 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:

1.14 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
- 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

1.15 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 :

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

a) Roads :

1.17 Road projects include construction of new roads, widening of existing roads, improvement of road surfaces, laying of internal roads construction of traffic islands and road dividers. The environmental issues that may arise in these projects are:

- change in hydrology and drainage patterns
- Need for road side drains for densely populated and market areas
- increase in air pollution and noise levels due to traffic
- disturbance to other utilities/services during construction
- Impact on sensitive receptors
- destruction of roadside microhabitat/vegetation due to widening and construction
- Community and cultural severance
- Impact on natural habitats
- Coastal zone impacts
- Impact on cultural properties
- 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
- Traffic management concerns in densely developed areas

1.18 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 :

1.19 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
- effect on urban aesthetics

c) Road Structures :

1.20 Road structure projects to be funded by TNUIFSL will include construction of subways (for pedestrians, cycles and fast moving vehicles of one unit of two lanes of 30 to 40 meters width), road overbridges/ road under bridges (**ROBs/RUBs**), culverts (one to five units) and small bridges (one unit with a width of six to ten meters). 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
- Traffic management concerns in densely developed areas

1.21 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:

1.22 TNUIFSL 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 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

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

e) Improvement / Rehabilitation of Lakes / waterways

1.24 TNUIFSL 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

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

IV. COMMERCIAL COMPLEXES:

1.26 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 quite residential/sensitive areas,)
- Disturbance to other services/lines due to construction
- Disposal of solid and liquid waste generated
- Increase in urban congestion and associated traffic and transportation issues
- Sanitation
- Fire hazards
- Construction related impacts
- Parking

- 1.27 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 :

- 1.28 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
 - Fire safety
- 1.29 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:

- 1.30 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 quite residential/sensitive areas,)
 - Solid & liquid waste disposal
 - Destruction of microhabitat/vegetation
 - Issues associated with uncontrolled proliferation of informal sector
 - Construction related impacts
 - Traffic and transportation related issues (including access/connectivity)
- 1.31 Social issues may arise in these projects if there is need for private land (or) government land that has been occupied or encroached upon.

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

1.32 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), as per the terms of reference indicated in **Appendix 3** of this document. A proposed project is classified as E1 if it is likely to affect sensitive environmental components (SEC) such as those mentioned in Table 1.2. Those projects/activities, which require environmental clearance as per the EIA notification published by Ministry of Environmental and Forest (as presented in **Appendix 14** of this report) will also be categorized as E1.

Table 1.2 List of Sensitive Environmental Components

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

- b. E-2 projects are expected to have only moderate environmental issues. TNUIFSL has laid down Sample Environmental Management Plan in **Appendix 4**, to mitigate these 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 impacts 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.

1.33 Based on the experience gained from the projects executed, an indicative categorization of various types of urban infrastructure projects is provided in **Table1.3** 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,

1.34 Projects other than the once listed in table 1.3 will be categorised as discussed in section 1.32. The E&S managers/specialists of TNUIFSL will verify and approve the categorization based on its environmental sensitivity and consult Environmental and Social Advisors if required. While the E&S managers/specialists can decide upward scaling of categories such as from E2 to E1, scaling down of categories should be carried out only on the approval of the World Bank after submitting relevant justifications for it.

Table 1.3: GUIDELINES FOR ENVIRONMENTAL CATEGORISATION OF PROJECTS

Project	Environmental Category
I) Water Supply & Sewage	
A. Water Supply	
1. Water supply augmentation	E-2 ¹
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 ²
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

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

² 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 Category
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
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-3
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 / Shelter ³	
1. Bus Shelters	E-2
2. Bus Terminals/Stand	E-2
3. Truck Terminals	E-2
4. Workshops	E-2
5. Parking Complexes	E-2
E. Fleet Expansion >100 buses	E-2
<100 buses	E-3
F. Construction & Maintenance equipment	E-3
G. Inland Water Ways / Lakes / Water Bodies	E-1
IV. Commercial Complexes	
A. Shopping /Office complexes (for < 1000 persons or with a sewage discharge < 50,000 litres per day)	E-2
B. Shopping /Office complexes (for > 1000 persons or with a sewage discharge > 50,000 litres per day)	E-1
C. Vegetable/Fish markets	E-2
D. Slaughter houses	E-1
E. Marriage halls	E-2
F. Lodge / Dormitory	E-3
G. Municipal Community complexes complexes (for < 1000 persons or with a sewage discharge < 50,000 litres per day)	E-2
H. Municipal Community complexes complexes (for > 1000 persons or with a sewage discharge .> 50,000 litres per day)	E-1

³ In case of construction of new bus/truck terminals, the project will be categorized as E1

Project	Environmental Category
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-3
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

1.35 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 1.4 below. TNUIFSL encourages its borrowers to identify such opportunities and including the same as part of the project components..

Table 1.4 Potential Environment Enhancement 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
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
3.Storage Reservoirs	<ul style="list-style-type: none"> ▪ Development of Parks / Play Grounds / Green Spaces at Storage Reservoir Complexes
4. Water Transmission Lines	<ul style="list-style-type: none"> ▪ Develop suitable vegetative cover along the transmission lines
5.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
B.Storm water Drainage	
1.Closed underground Drains	Development of foot paths over the drains to protect the drain and offer add on facilities
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
D. Solid Waste Management	
1.Compost and Landfill Facilities	<ul style="list-style-type: none"> ▪ Development of Parks and Green Spaces for Tourist Attraction and Environmental Improvement
E.Transportation	
1.Widening & Laying of New Roads	<ul style="list-style-type: none"> ▪ Plantation and development of vegetative belt along the alignment ▪ Rehabilitation plan for quarries/borrow areas
2.Traffic Islands & Dividers	<ul style="list-style-type: none"> ▪ Landscaping and Aesthetic Improvements at the

	proposed locations
F. Bus Shelters & Terminals	▪ Development and implementation of Rainwater Harvesting measures
G. Inland Waterways / Lakes, etc.	▪ Development of Parks and Recreational Facilities for Tourist Attraction and Environmental Improvement
H. Commercial Complexes	▪ Development and implementation of Rainwater Harvesting measures

II.SOCIAL CATEGORISATION OF PROJECTS

1.36 Based on the number of Project Affected Persons (PAPs) who may be affected by the project (refer paragraph 2.40 for definition of PAPs) 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)

1.37 Table 1.5 provides TNUIFSL's categorisation of urban infrastructure projects based on their social sensitivity.

Table 1.5 : 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 ESF 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

1.38 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, TNUIFSL 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 TNUIFSL 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, 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 3 for Articles inserted in Constitution). 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.
- 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 4 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. TNUIFSL projects will not cause any air pollution hence these laws will not be directly applicable. If air pollution is caused, immediate remedial action will be taken.

d) Environment (Protection) Act, 1986

2.18 This law essentially links pollution and natural resource issues. It seeks to supplement existing laws on pollution control and also lays down standards for air quality and noise. The Central Government in pursuance of its rule-making powers under the Act, has passed notifications regulating siting of industry and operations. Environmental Impact Assessment (EIA) would be applicable to those projects that fall under schedule I of EIA notification. The law includes provision for projects that are costed above Rs. 60 crores or projects relating to commercial complexes, office complexes for over 1000 persons or with sewage discharges over 50,000 liters / day, will have to undergo an EIA.

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, 1990

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. Further GoTN has also issued orders regulating development within 500 m from the high water mark.

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. Some of the water projects funded by TNUIFSL could handle Chlorine above 10 tons per year and those projects will attract the provision of these rules.

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

2.24 This law addresses handling of hazardous substances that fall under specified schedules. Projects envisaged by TNUIFSL will not require handling of specified substances.

c) **Municipal Solid waste (Management & Handling) Rules 2000**

2.25 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.

d) **Bio-Medical Waste (Management & Handling) Rules 1998**

2.26 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.

e) **Tamil Nadu Timber Transit Rules, 1968**

2.27 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.

Note: Any new legislation and amendments will need to be updated in the ESF .on a regular basis.

IV. OPERATIONAL POLICIES AND DIRECTIVES OF THE WORLD BANK

A) Environmental Assessment - OP/BP 4.01 Requirements

- 2.28 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.
- 2.29 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) Cultural Property - OPN 11.03 Requirements

- 2.30 The World Bank's Operational Policy Note 11.03 aims at preserving and avoiding the elimination of structures having archaeological (prehistoric), paleontological, historical, religious and unique natural values. Projects that could significantly damage non-replicable cultural properties are declined for funding and the Bank will in turn assist protection and enhancement of cultural properties encountered in the project rather than leaving that protection to chance. Where ever, projects to be funded by TNUIFSL encounter cultural properties, suitable cultural properties management plan will be prepared and implemented as part of the project. The ESF has taken due consideration of this requirement.

c) Natural Habitats – OP/BP 4.04

- 2.31 Operational Policy 4.04 sets out the World Bank's policy on supporting and emphasising the precautionary approach to natural resource management and ensuring 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 TNUIFSL 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 and EMP to mitigate the impacts of the project.

d) Forests – OP/BP 4.36

2.32 OP/BP 4.36 sets out specific policy on 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. The policy requires consultation with local people, the private sector and other stakeholders in forest area. In the context of TNUP operations, these issues are relevant for the projects that pass through or require diversion of forest land.

V. COMPETENT REGULATORY AGENCIES

a) Municipal Bodies

2.33 For most laws applicable to TNUIFSL 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) Tamilnadu Pollution Control Board

2.34 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

2.35 As per the provisions under EIA Notification, 1994 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.

2.36 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.

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

Project	Applicable Legislations	Obligations ¹	Responsibility ¹
I) Water Supply & Sewage			
A. Water Supply			
1. Water Supply Augmentation	None		
2. Water Supply Distribution Lines	None		
3. Water Tankers	None		
4. Overhead Tanks	None		
5. Water Treatment Plants	Water Act, 1974 Hazardous Chemicals Rules, 1989 Hazardous Waste Mgt. Rules 1999	Secure the following from TNPCB • Consent to Establish • 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	Secure the following from TNPCB Consent to Establish Consent to Operate	ULB / Project Implementing Agency ULB / Operating Agency
8. River Intake Works	None		
B. Stormwater Drainage			
1. Open drains	None		
2. Closed / Underground drains	None		
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

Project	Applicable Legislations	Obligations¹	Responsibility¹
3.Sewerage Network, Pumping Station and Treatment Plant	Water Act, 1974 Hazardous waste Management Rules 1999	Secure the following from TNPCB for treatment plant 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 Act, Water Act and EPA	Secure the following from TNPCB Consent to Establish Consent to Operate,	ULB / Project Implementing Agency ULB / Operating Agency
B. Compost Yard	MSW Rules, 2000 Air Act, Water Act and EPA	Secure the following from TNPCB Consent to Establish Consent to Operate,	ULB / Project Implementing Agency ULB / Operating Agency
C. Vehicles (more than 5 nos.)	None		
III) Transportation			
A. Roads			
1. Widening of roads	EIA Notification, 1994	Cleannaces, consents and Reporting	ULB / Project Implementing Agency
2. Improvement of surface	Tamil Nadu Timber Transit Rules,		

Project	Applicable Legislations	Obligations¹	Responsibility¹
3. New roads	1968	Obtain Permit wherever cutting of trees is involved to transport timber under Rule, 4	
4. Traffic islands	Air Act, Forest Act, CRZ		
5. Road divider	Notification and EPA		
6. Foot paths			
B. Street Furniture	None		
1. Traffic signals	None		
2. Street lights	None		
3. Sign boards	None		
C. Road Structures			
1. Subways			
- Pedestrian	None		
- Cycle	None		
- Fast moving	None		
2. ROBs	Air Act, Noise Rules		
3. Culverts	None		
4. Small Bridges	None		
D. Terminals / Shelter			
1. Bus Shelters	None		
2. Bus Terminals/Stands	Water 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
3. Truck Terminals	Water 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
4. Workshops	Water 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 Act, 1981& Noise Rules as per	Ensure air and Noise quality	Contractor during

Project	Applicable Legislations	Obligations¹	Responsibility¹
	EP Act,1986	is within the stipulated limits of TNPCB	construction and ULB / operating agency during operation
E. Fleet Expansion >100 buses	Water 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
<100 buses	Water 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
F. Construction & Maintenance equipment	None		
G. Inland Water Ways / Lakes / Water Bodies	Water 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
IV. Commercial Complexes			
A. Shopping /Office complexes (for < 1000 persons or with a sewage discharge < 50,000 litres per day)	None		
B. Shopping /Office complexes (for > 1000 persons or with a sewage discharge > 50,000 litres per day)	Water Act, 1974	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
C. Vegetable/Fish markets	Water Act, 1974	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
D. Slaughter houses	Water Act, 1974	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
E. Marriage halls	Water Act, 1974	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
F. Lodge / Dormitory	Water Act., 1974	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
G. Municipal Community complexes (for < 1000 persons or with a sewage discharge < 50,000 liters per day)	None	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency

Project	Applicable Legislations	Obligations¹	Responsibility¹
H. Municipal Community complexes (for > 1000 persons or with a sewage discharge .-> 50,000 liters per day)	Water Act, 1974	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
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	Air Act, 1981		
VI.Integrated Area Development			
A. Housing (Sites & Services)	Water Act,1974&EP Act 1986	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
B. Guided Urban Development	Water Act,1974&EP Act1986	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
C. TRAMP	EP Act,1986	Secure No Objection Certificate from TNPCB	ULB or Project Implementing Agency
VII. General :			
A. Computer Facilities	None		
B. Weigh Bridge	None		
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			

I. MANDATORY

a) Land Acquisition Act, 1894 as amended in 1984

2.37 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.

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

2.39 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.

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

2.40 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.

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

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

2.42 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 at least 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

2.43 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.

E) National Policy on Resettlement & Rehabilitation for Project Affected Families–2003

2.44 The National Policy on R & R for PAFs provides for rehabilitation grants and other benefits to all PAFs. The policy recognises person of any tenure while defining displaced persons. The R & R benefits are the minimum required and states have been given the option to propose higher benefits.

F) Tamil Nadu Highways Act - 2001

2.45 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.

2.46 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.

- 2.47 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.
- 2.48 This Act also provides negotiation settlements for the land acquisition. The GoTN has designated district collectors as the authority for negotiated settlements.
- 2.49 In the Highway 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

- 2.50 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. TNUIFSL as a borrower of credit would ensure that Bank policies are followed.

III. TNUIFSL's SOCIAL SAFEGAURD AND ENTITLEMENT FRAMEWORK

- 2.51 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 ESF. In order to provide a framework for the R&R process in projects where World Bank financing is involved, this ESF provides a list of entitlements for project affected persons and families. Detailed exposition of the social safeguard and entitlement framework for World Bank 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.

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

- 2.53 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.

- 2.54 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
- 2.55 Vulnerable PAPs: Vulnerable PAPs are those living below poverty line, SC / ST families and women headed households.
- 2.56 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 ESF:

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.

- **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 ESF 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 ESF. Registration cost (currently at 9% or prevailing rate) will be paid in addition to compensation.
- **Income rehabilitation:** The ESF 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 TO TNUIFSL

I. MUNICIPAL BODIES AS BORROWERS AND REGULATORS

2.57 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. TNUIFSL's lending operations are presently focussed on these agencies.

II. CONSUMER PROTECTION

2.58 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. This will be kept in mind in TNUIFSL financed projects and it will be ensured that the services provided will subscribe to high standards of quality

III. ENVIRONMENT

2.59 Compliance with environmental requirements laid down by the policy, legal and regulatory framework need to be carefully looked in to in projects that are envisaged to be financed by TNUIFSL. However, in most cases the regulatory agency is the municipal authority. Hence it will be essential for the municipal body requesting the finances to clearly separate the project execution function and regulatory function. It will be the responsibility of the Municipal Commissioner to furnish the necessary undertaking of compliance along with the project proposal. Categorisation of

projects will be done so that assessments can be done speedily and remedial measures can be adopted.

IV. SOCIAL

- 2.60 Land acquisition is not expected in a majority of TNUIFSL 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 could necessitate a 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 AND SOCIAL ASSESSMENT FRAMEWORK

- 3.1 TNUIFSL, as a financial intermediary, will ensure 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 the TNUIFSL. 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 TNUIFSL is managing the Grant Fund of Government of Tamilnadu, which provides financial assistance for project development, including environmental and social assessment studies. Under this the ULBs can avail grant for preparation of DPRs and also for project monitoring consultancies where the ULBs have limited capacity. TNUIFSL is employing consultants for design and project management to help in preparation of DPRs and in project monitoring. In the design consultancy the TOR contains (as part of the task to be performed by the consultants) provisions for dealing with ESF issues and the consultants are required to prepare the EMP / SMP and EA/SA and report the findings as part of the final DPR wherever required. The DPR is also required to evaluate the possible alternatives to avoid environmental or social issues. Based on the above study the ULBs can also avail the Grant Fund to

implement the R&R measures as suggested in the SMP report and approved by TNUIFSLs internal review committee.

- 3.3 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 closely monitor the construction, operation and maintenance phases.
- 3.4 The project cycle of TNUIFSL and the interface with the ESF requirements are discussed in detail in the following sections. The same is summarized in **Table 3.1**.

I. PROJECT SCREENING

- 3.5 Upon receipt of request for funding, TNUIFSL will assess the eligibility of the project based on TNUIFSL'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 and an appropriate Information Package will be issued to the Borrower for specific project details. The Loan Application Form will include environmental and social screening formats. The environmental and social information package 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.
- 3.6 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 a 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 upon the adequacy and 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 ESF⁴

- 3.7 Based on guidelines issued in the Information Package, 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 information package. The package also includes list of indicative issues that may arise for different urban projects. In case of E-2 and S-2 projects, the EMP/SMP required as part of the DPR shall be prepared as per the specific format included in the information package. Sample EMPs for few urban projects are included in the information package for reference purpose. 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.
- 3.8 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 the E&S managers/specialists of TNUIFSL. The E&S 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 a part of the DPR.
- 3.9 If the DPR is prepared with TNUIFSL's assistance, the E&S managers/specialists will categorize project as per ESF 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 and a specific ToR EA of Road project are included in **Appendix 3a and 3b**).
- 3.10 On receipt of the proposals, the E&S managers/specialists will evaluate the completeness of the methodology for ESA and its suitability for the project requirements. The E&S managers/specialists will also review the project activities at every stage of the design, so that the environmental and social considerations as per the ESF are adequately reflected in the DPR.
- 3.11 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 loan officer will then clear the DPR for detailed appraisal.

⁴ In case of deficiencies in EA, TNUIFSL will provide the borrower a copy of the Environmental and Social Information Package to help improve compliance with ESF

- 3.12 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 ESF. 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

- 3.13 During Project Appraisal, TNUIFSL (with the help of advisors and the E&S Manager in the case of E-1/ S-1 projects) along with the borrower will vet the DPR. Technical aspects that will be looked into are 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 include cost estimates; financial operating plan; economic and financial viability; and adequacy of proposed financing. Organisational aspects considered will be the 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 ESF 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 when necessary by TNUIFSL.
- 3.14 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 loan officer will submit the appraisal report for approval with a recommendation to accept the project as submitted; or accept with modifications; or reject it.
- 3.15 During the appraisal stage, the environmental appraisal shall focus on the following aspects:
- Adequacy of the EA as per the ESF including analysis of alternatives if relevant
 - Compliance with regulatory requirements and clearances
 - Comprehensiveness of the EMP in light of the project specific environmental issues
 - Integration of environmental measures in to the design where ever 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”
 - Need for any legal covenant to address any specific environmental risks including regulatory risks (this could be an input to the sanction letter)
 - Need for World Bank’s clearance of EA/EMPs for E1 category projects
- 3.16 TNUIFSL will follow the Procurement Guidelines of the World Bank for procurement of works. While developing the bid documents in addition to the references to various acts relating to environment and labour, the Environment Management 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

- 3.17 Prior to Loan sanction and disbursement, the environmental and social components of the DPR have to be approved by the appropriate authority. For projects costing below Rs.15 crores, the loan has to be approved by the TNUIFSL board. Projects above Rs.15 crores will obtain approval for loans from the Trustee Company (TC) Board. All E1 / S1 sub-projects will be forwarded to the World Bank for clearance after the EMP and SMP has been cleared by the internal review committee of the TNUIFSL. TNUIFSL will ensure that the comments/suggestions of the World Bank for such projects (E1/S1) are addressed adequately while finalizing the DPR. Prior to Board decisions, TNUIFSL shall meet World Bank’s policy on public disclosure.
- 3.18 After requisite approvals and concurrence are obtained, the loan officer will discuss basic terms of agreement such as rate of interest; repayment schedule; security/guarantee; and environmental and social commitments with the borrower. TNUIFSL will discuss implementation of environmental 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 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 first loan installment 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.

3.19 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 firstly 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.

3.20 Grievance Redress Committee (GRC):

Initially any aggrieved PAP will be directed to approach GRC, controlled by the appropriate Commissioner of ULB / DE Highways, 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).

3.21 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.

3.22 **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

- 3.23 TNUIFSL will monitor all projects that it finances to ensure conformity to standards during construction, operation and maintenance. Monitoring of Environmental and Social components will be carried out through environmental and social compliance reports that form a part of Quarterly Progress Reports for E-1 and S –1 projects. TNUIFSL shall ensure that the borrower appoints an environmental and social monitoring consultant for E-1 and S –1 projects, who will visit the project sites at all stages of the project and submit the EMP and R&R compliance reports to TNUIFSL. 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.
- 3.24 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.
- 3.25 TNUIFSL shall undertake annual audits, through ESF auditor, of its portfolio to review the status of ESF compliance. While all projects of E-1 and S-1category 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 ESF audit is attached as **Appendix 11**.
- 3.26 The E&S 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 internal review committee and determine the need for appropriate interventions. These interventions could include appropriate revision of ESF 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	<p>a. Discussions with borrower to</p> <ul style="list-style-type: none"> - assess eligibility of project based on TNUIFSL lending policies - categorise project from environmental and social perspective - identify scope of project report <p>b. Issue Loan Application form for ISR</p> <p>c. Issue Information Package for Detail Project Report, along with Environment and social screening format</p> <p>d. Appraise the borrower of ESF requirements</p>	<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 Package for DPR issued
	<ul style="list-style-type: none"> • Prepare Initial Screening report 	<p>a. Receive Loan Application form along with Environmental and social screening forms</p> <p>b. Assess</p> <ul style="list-style-type: none"> - creditworthiness of borrower - financial/economic rate of return - loan : grant proportion - environmental 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

MILE STONES	Objectives	PROCESS	RESPONSIBILITY	DECISION/PRODUCT
	<ul style="list-style-type: none"> Receive DPR⁵ from borrower 	a. Desk review <ul style="list-style-type: none"> designation of loan officer 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. <ul style="list-style-type: none"> Site investigation if necessary, to assess <ul style="list-style-type: none"> suitability of site availability of inputs technical and engineering designs construction, operation and maintenance arrangements environmental 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 	<ul style="list-style-type: none"> TNUIFSL Borrower 	<ul style="list-style-type: none"> Project Appraisal Report with 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 Detail Project Report for approval <ul style="list-style-type: none"> CEO (project costs < Rs.5 crores) TNUIFSL board (project costs Rs. 5-15 crores) TC Board (project costs > Rs.15 crores) EAR and SAR to Multilateral agency for E1/S1 Projects 	<ul style="list-style-type: none"> TNUIFSL 	<ul style="list-style-type: none"> Approval of the project

⁵ In case the DPR is prepared with TNUIFSL's assistance, the E&S manager will ensure that all environmental and social aspects of the projects are adequately covered in the DPR as per the requirements of ESF.

MILE STONES	Objectives	PROCESS	RESPONSIBILITY	DECISION/PRODUCT
	Concurrence from Multilateral Agencies (MA)	a. Obtain concurrence from MA for accepted project report (for all E1 or S1 projects and all projects where costs >Rs.15 crores)	<ul style="list-style-type: none"> • MA • TNUIFSL 	<ul style="list-style-type: none"> • MA's concurrence on accepted 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
4. Project Monitoring Audit and Recovery	<ul style="list-style-type: none"> • Ensure conformity to standards during construction, operation & maintenance 	a. Prepare quarterly progress reports b. Field visits if required	<ul style="list-style-type: none"> • Borrower • TNUIFSL 	<ul style="list-style-type: none"> • Quarterly Progress reports
	<ul style="list-style-type: none"> • 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 report⁶ • Project completion report
	<ul style="list-style-type: none"> • Ensure Implementation of agreed EMP / RAP 	a. Prepare quarterly progress reports b. Field visits if required	<ul style="list-style-type: none"> • Borrower • TNUIFSL 	<ul style="list-style-type: none"> • Quarterly Progress reports

⁶ Refer Document 17 of Environmental & Social Information Package for the format of Compliance Report

MILE STONES	Objectives	PROCESS	RESPONSIBILITY	DECISION/PRODUCT
	<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 • ESF 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 and Social Framework (ESF) are operationalised, TNUIFSL has outlined an organisational support structure. Besides fixing responsibility, the organisational support structure also outlines capacity building essential for TNUIFSL staff and 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 One of the two Vice presidents at TNUIFSL will oversee appraisal, investments and resources of the projects and will interface with Multilateral Agencies. The other Vice President (projects) will appraise projects, handle specific environmental and social and management issues related to various projects. He will be assisted by E&S Managers/Specialists. The E&S managers/specialists will perform the duties as detailed out in **Appendix 8**. Sr. Vice President and Company Secretary will look after Management Information Systems and auditing. Assistant Managers will help their higher officials in the departments concerned. Procurement specialist will look after the procurement of consultants and works.

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 Both Vice presidents at TNUIFSL will do appraisals of projects. The E&S Manager will help the CEO and Vice Presidents in project specific environmental and social assessment and management issues. The two Managers (Accounts) will maintain loan accounts of borrowers.

- 4.7 The E&S manager 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, assigning of responsibility and whether its cost is included in the project cost. He will also assess the capability of the borrower in implementing the plan and identify institutional strengthening measures if required.
- 4.8 Both the Vice Presidents, E& S manager and the advisors (environment & social) will act as 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 ESF.
- 4.9 As the portfolio of projects increase in numbers and complexity of environmental and social issues, help of more specialized expertise will be inducted into the TNUIFSL as advisors.

Advisors for Environmental and Social Issues

- 4.10 TNUIFSL will appoint two external Advisors who have the full range of expertise to advise and assist the E&S Manager on complex environmental and social concerns related to urban infrastructure projects. They will advise the E&S Manager in developing, appraising and monitoring E-1 and S-1 category projects. They will also address other project specific environmental and social issues as and when necessary. The Terms of Reference for environmental and Social advisors is presented in **Appendix-10**.
- 4.11 The advisors will essentially provide services to TNUIFSL as required, for the following
- Advising the E&S manager on complex environmental and social issues
 - Reviewing EAR, SAR and other documents submitted by borrowers for specific environmental and social projects/ components
 - Monitoring and evaluating such projects
- 4.12 The ESF auditors and the E&S manager will undertake the annual environmental and social audit of all TNUIFSL financed projects. The Terms of Reference for environmental auditing consultants is furnished in **Appendix-11**.

Capacity Building

- 4.13 TNUIFSL envisages capacity building of its own personnel including members of the internal review committee and its borrowers who will include Urban Local Bodies, Statutory Boards, Public Undertakings and Potential Private Operators in order to ensure that the ESF is effectively operationalised. This will be accomplished by organising training programs under the training component of the TNUIDP III coordinated by the E&S Manager.

- 4.14 The TNUIFSL personnel have not been exposed to formal training in the management of environmental and social issues. Thus the training program for various role players will include an orientation program on the ESF, 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**.
- 4.15 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.
- 4.16 Based on the experiences gained, TNUIFSL will modify its training efforts and will make it more practical. The expanded training program will be supported through the institutional development component of TNUDP-III. The training will focus on the environmental and social issues. The contents will basically focus on the ESF profile, concept, regulatory requirements, Environment and Social priority issues, project cycle of TNUIFSL, outline of EA / SA and report formats in respect of the Environmental aspects. In respect of social aspects the course content will focus on the R & R policies and procedures, National and MA 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**
- 4.17 In addition to the above, TNUIFSL will make a conscious effort to mainstream the environmental and social topics with the main training program of TNUDP III. The E&S manager and the capacity building consultant will explore such options of mainstreaming Environmental 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 and social issues.
- 4.18 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 E & S 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 will be trained during the course of TNUDP III, 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 Program (2005- - 2010

Programs	Contents			Duration / Schedule	Participants
<p>Program 1 Orientation Program / Workshop for Project Development agency</p>	<p>Module 1 - ESF Profile</p> <ul style="list-style-type: none"> • TNUIFSL Concept • ESF 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 • EIA process • Identification of Environmental Impacts • Impact Identification Methods • Identification Mitigation Measures • Formulation of Environmental Management Plan • 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"> • TNUIFSL Professionals including members of the internal review committee • Heads of Statutory Boards, Public Undertakings and other monitoring agencies such as CMA, CMDA, TNPCB etc.

<p>Program - 2 Orientation Program / Workshop for Project Implementing agency</p>	<p>Module 1 - ESF Profile</p> <ul style="list-style-type: none"> • TNUIFSL Concept • ESF 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 • EIA process • Identification of Environmental Impacts • Impact Identification Methods • Identification Mitigation Measures • Formulation of Environmental Management Plan • 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"> • 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.
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Programs	Contents				Duration / Schedule	Participants
<p align="center">Program -3 Workshop on Sectoral Environmental and Social Assessment</p>	<p>Module 1– Water supply, sewerage and sanitation</p> <ul style="list-style-type: none"> • ESF Concept • Regulatory Requirements- E&S Priority Issues • EA/SA Process Outline • Identification of Environmental Impacts • Identification Mitigation Measures • Formulation of Environmental Management Plan • Implementation and Monitoring • Social Entitlement Frameworks • Social Assessment • RAP Techniques • Case Studies 	<p>Module 2– Solid waste management</p> <ul style="list-style-type: none"> • ESF Concept • Regulatory Requirements- E&S Priority Issues • EA/SA Process Outline • Identification of Environmental Impacts • Identification Mitigation Measures • Formulation of Environmental Management Plan • Implementation and Monitoring • Social Entitlement Frameworks • Social Assessment • RAP Techniques 	<p>Module 3– Roads, Traffic and Transportation</p> <ul style="list-style-type: none"> • ESF Concept • Regulatory Requirements- E&S Priority Issues • EA/SA Process Outline • Identification of Environmental Impacts • Identification Mitigation Measures • Formulation of Environmental Management Plan • Implementation and Monitoring • Social Entitlement Frameworks • Social Assessment • RAP Techniques • Case Studies 	<p>Module 4 – Open Forum</p> <ul style="list-style-type: none"> • Feed back and comments from the Participants. 	<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.

Programs	Contents			Duration / Schedule	Participants
		<ul style="list-style-type: none"> • Case Studies 			
<p>Program - 4 Experience Sharing</p>	<p>Module – Experiences and Best Practices</p> <ul style="list-style-type: none"> • Experiences on implementation of E&S in implemented projects. • Best Practices followed in E&S • 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.

Appendices

LIST OF MUNICIPALITIES IN TAMIL NADU: DISTRICTWISE

List of Municipalities in Tamil Nadu		
Sl. No	District & Municipalities	Grade
1	Coimbatore District	
1	Pollachi	Special Grade
2	Tiruppur	Special Grade
3	Mettupalayam	Selection Grade
4	Udumalaipet	Selection Grade
5	Goundampalayam	Grade III
6	Kuniamuthur	Grade III
7	Kuruchi	Grade III
8	Nallur	Grade III
9	Palladam	Grade III
10	Valparai	Grade III
11	Velampalayam	Grade III
2	Cuddalore District	
12	Chidambaram	Selection Grade
13	Cuddalore	Selection Grade
14	Panruti	Grade I
15	Virudhachalam	Grade I
16	Nellikuppam	Grade II
3	Dharmapuri District	
17	Dharmapuri	Grade I
4	Dindigul District	
18	Palani	Selection Grade
19	Dindigul	Special Grade
20	Kodaikanal	Special Grade
5	Erode District	
21	Dharapuram	Grade I
22	Gobichettipalayam	Grade I
23	Sathyamangalam	Grade I
24	Bhavani	Grade II
25	Kasipalayam (E)	Grade III
26	Periyasemur	Grade III
27	Punjaipuliampatti	Grade III
28	Surampatti	Grade III
29	Veerappanchatram	Grade III
30	Vellakoil	Grade III
31	Erode	Special Grade
6	Kancheepuram District	
32	Chengalpattu	Grade I
33	Madurantagam	Grade II
34	Anakaputhur	Grade III
35	Maraimalainagar	Grade III
36	Pammal	Grade III
37	Puzhuthivakkam	Grade III
38	Alandur	Selection Grade
39	Kancheepuram	Selection Grade
40	Pallavapuram	Selection Grade
41	Tambaram	Selection Grade
7	Kanyakumari District	
42	Colachel	Grade II

43	Kuzhithurai	Grade II
44	Padmanabhapuram	Grade II
45	Nagercoil	Special Grade
8	Karur District	
46	Kulithalai	Grade II
47	Inamkarur	Grade III
48	Thanthoni	Grade III
49	Karur	Special Grade
9	Krishnagiri District	
50	Krishnagiri	Grade I
51	Hosur	Selection Grade
10	Madurai District	
52	Melur	Grade II
53	Tirumangalam	Grade II
54	Usilampatti	Grade II
55	Anaiyur	Grade III
56	Avaniyapuram	Grade III
57	Thirupparankundram	Grade III
11	Nagapattinam District	
58	Sirkazhi	Grade II
59	Vedaranyam	Grade III
60	Mayiladuthurai	Selection Grade
61	Nagapattinam	Selection Grade
12	Namakkal District	
62	Komarapalayam	Grade I
63	Rasipuram	Grade I
64	Pallipalayam	Grade III
65	Namakkal	Selection Grade
66	Tiruchengode	Selection Grade
13	Nilgiris District	
67	Gudalur	Grade III
68	Nelliyalam	Grade III
69	Coonoor	Selection Grade
70	Udhagamandalam	Special Grade
14	Perambalur District	
71	Ariyalur	Grade III
72	Jayankondam	Grade III
73	Perambalur	Grade III
15	Pudukottai District	
74	Pudukkottai	Grade I
75	Aranthangi	Grade II
16	Ramanathapuram District	
76	Paramakudi	Grade I
77	Ramanathapuram	Grade I
78	Keelakarai	Grade III
79	Rameswaram	Grade III
17	Salem District	
80	Attur	Grade I
81	Idappadi	Grade I
82	Narasingapuram	Grade III
83	Mettur	Selection Grade
18	Sivagangai District	
84	Devakkottai	Grade I
85	Sivagangai	Grade I
86	Karaikudi	Selection Grade

19	Thanjavur District	
87	Pattukkottai	Selection Grade
88	Kumbakonam	Special Grade
89	Thanjavur	Special Grade
20	Theni District	
90	Bodinayakanur	Grade I
91	Cumbum	Grade I
92	Theni-allinagaram	Grade I
93	Chinnamanur	Grade II
94	Periyakulam	Grade II
95	Gudalur	Grade III
21	Thiruvallur District	
96	Madhavaram	Grade I
97	Tiruvallur	Grade II
98	Maduravoyal	Grade III
99	Manali	Grade III
100	Poonamallee	Grade III
101	Thiruthani	Grade III
102	Thiruverkadu	Grade III
103	Valasaravakkam	Grade III
104	Avadi	Selection Grade
105	Kathivakkam	Selection Grade
106	Tiruvottiyur	Selection Grade
107	Ambattur	Special Grade
22	Thiruvannamalai District	
108	Arani	Grade I
109	Thiruvathipuram	Grade II
110	Thiruvannamalai	Selection Grade
23	Thiruvarur District	
111	Mannargudi	Grade I
112	Tiruvarur	Grade I
113	Koothanallur	Grade II
114	Thiruthuraiipoondi	Grade II
24	Thirunelveli District	
115	Sankarankoil	Grade I
116	Tenkasi	Grade I
117	Kadayanallur	Grade II
118	Puliyangudi	Grade II
119	Sengottai	Grade II
120	Ambasamudram	Grade III
121	Vikramasingapuram	Grade III
25	Trichi District	
122	Manapparai	Grade I
123	Thuraiyur	Grade II
124	Thuvakudi	Grade III
26	Tuticorin District	
125	Kayalpattinam	Grade III
126	Kovilpatti	Selection Grade
127	Thoothukudi	Special Grade
27	Vellore District	
128	Ambur	Grade I
129	Arakkonam	Grade I
130	Arcot	Grade I
131	Gudiyatham	Grade I
132	Ranipet	Grade I

133	Thirupathur	Grade I
134	Vaniyambadi	Grade I
135	Walajapettai	Grade II
136	Dharapadavedu	Grade III
137	Jolarpet	Grade III
138	Melvisharam	Grade III
139	Pernampattu	Grade III
140	Sathuvachari	Grade III
141	Vellore	Special Grade
28	Villupuram District	
142	Tindivanam	Grade I
143	Vandavasi	Grade II
144	Kallakurichi	Grade III
145	Villupuram	Selection Grade
29	Virudhunagar District	
146	Aruppukkottai	Grade I
147	Srivilliputhur	Grade I
148	Virudhunagar	Grade I
149	Sattur	Grade II
150	Thiruthangal	Grade III
151	Rajapalayam	Selection Grade
152	Sivakasi	Selection Grade

Appendix 2
LOCATION MAP OF ROAD PROJECTS UNDER TNUDP III

Appendix 3 a

**Terms of Reference to Carry out Environmental Assessment Studies for E I
Projects**

1.0 *Brief Introduction*

A brief introduction to the project shall be provided in this section.⁷

2.0 *The Project Area and Setting*

A brief description of the project area / city and salient features of the city shall be presented in this section.

3.0 *The Project Objectives and Need*

A brief profile of the existing water supply system in the project city, 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.

4.0 *Scope of Work*

The scope of work shall clearly specify various activities to be performed by the environmental consultant, surveys to be carried out, and other requirements of the study. The following sections list out various tasks to be performed by the environmental consultants in conducting Environmental Impact Assessment for the project.

Task 1 Description of Project

A full description of the proposed project shall be provided in this task. This shall include an analysis of the existing water supply situation in the project city and a description of each of the proposed components such as intake structures, treatment plant, transmission main, pumping station, storage reservoirs, distribution network, etc. 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 environmental 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. A review of the studies carried out on the environmental aspects of the project area shall also be carried out. 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, etc., the consultants shall review applicable operational policies / directives of The World Bank.

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

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.

A detailed activities to be carried out under environmental assessment is given under section 5.0.

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 TNUDF 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 is required, 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 6.0 below

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

5.1 Environment Screening

1. Environmental screening shall be undertaken to identify the environmental hot spots along the project corridors and determine the level of environmental analysis required for the EA. The consultant consultants shall carry 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 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.

5.2 **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:
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
 - (b) Impacts on topography and surface drainage in the project area,

- (c) Community and cultural severance, identified through consultations
- (d) Expected changes in the land use patterns along the proposed alignment and the associated impacts
- (e) Impact on ecologically sensitive features including nesting and area of interest for avifauna in and around water bodies, etc.
- (f) Impact on Socio-economic aspects of the projects area
- (g) The environmental aspects, which are not relevant and do not require further attention in the project cycle of the project should be specified. For this purpose, consultant shall link the findings of screening/scoping exercise
- (h) The air pollution predictions where ever necessary using relevant mathematical models and recent meteorological trends
- (i) The noise impacts on sensitive receptors shall be assessed using relevant models
- (j) Any impacts that are irreversible and/or cannot be avoided or mitigated should be identified

6.0 Environmental Management Plan

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. EMP shall cover the following details:

- (a) Mitigatory measures: For each of the significant negative impact the consultant should recommend measures to eliminate and 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. 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.
- (b) Environmental Codes of Practices (ECOPs): As part of mitigating impacts during construction phase of the project, the consultants shall provide ECOPs, which shall be followed as part of standard practice during construction period.
- (c) Landscape plan: Wherever necessary, the Landscaping plan should be prepared considering the project area as a whole and shall meet project specific requirements. The landscaping elements shall comprise of signages, green-belt development, special contouring and dense green area needs for attenuation of noise and air pollution, integration of aesthetics, etc. 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
- (d) Budget Estimates: The EMP budget estimates shall be prepared for each of the project component and the shall be integrated with the overall project cost estimates
- (e) 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. 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

- (f) 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.

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 World Bank'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 |
| ▪ Interim Report | within *** months of date of award of contract |
| ▪ Draft Report | within *** months of date of award of contract |
| ▪ Final report | within *** months of date of award of contract |

Terms of reference for carrying out Environment Assessment of Road Projects

Background

A brief background relating to the project and EA work shall be provided in this section

The Project Area

1. The project area shall cover the location of individual Traffic and Transportation Schemes (such as roads, RoBs/RuBs, etc.) under consideration and its impact corridor, which might extend beyond the RoW.

EA Objectives & Process

2. The proposed EA shall achieve the following objectives:
 - (a) Establish the environmental baseline in the study area
 - (b) identify and assess the adverse environmental impacts; and provide requisite measures to address these impacts
 - (c) identify the opportunities for environmental enhancements in the project area and provide requisite guidance/plans in this regard
 - (d) Wherever relevant integrate the measures (mitigation and enhancement related) in the project planning and design;
 - (e) Develop appropriate management plans and codes of practices for implementing, monitoring and reporting of the environmental mitigation and enhancement measures suggested.
3. The EA shall be carried out in line with the Government of India (GoI)'s regulations (EIA Notification), the World Bank's EA guidelines and TNUDF's E&S Framework.
- 4.. The EA comprises : environmental screening, project EA and the Environmental Management Plans (EMPs). 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.

Scope of work

Project Understanding

5. The consultants shall familiarize with the project details covering: geographical location, project configuration and components with relevant maps and description of works to be carried out.
6. The consultants shall interact with the engineering and social consultants to determine how the EA work fits into the overall project preparation/ project cycle; how overlapping areas are to be jointly addressed; and to appropriately plan the timing of the deliverables of the EA process. The project understanding, EA context shall be succinctly documented in the form of **Inception Report**.

Environment Screening

7. Environmental screening shall be undertaken to identify the environmental hot spots along the project corridors and determine the level of environmental

analysis required for the EA. The consultant consultants shall carry 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**.

8. The screening exercise shall be supported through secondary and primary information collection and, stakeholder consultations on existing environment scenario. As part of the screening the consultants shall:
 - (e) Identify sensitive locations in the project area including regionally or nationally recognized environmental resources and sensitive manmade land uses like hospitals, schools, etc
 - (f) Establish baseline environmental quality with regard to air, water and noise at sensitive receptors.
 - (g) List and map common property resources such as roadside trees; forests, large water bodies; and major physical cultural properties, etc.
 - (h) Identify Human settlement, physical infrastructure and project activities that would result in severance.
 - (i) Determine the need for a stand alone EMP or ECOPs or combination their of.

Project EA

9. 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 a detailed maps showing candidate sites for environmental improvements. The specific tasks under this include:
10. 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):
11. 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.
12. 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.
13. Biological and Ecological assessment covering water bodies, fauna & flora, ecologically sensitive areas (perceived as well as officially listed).

14. 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.
- (a) Critical areas of environmental importance: shall be identified as an output of the current environmental status of the project sites
11. **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:
- (k) Impacts on the water bodies
- (l) Impacts on topography and surface drainage in the project area,
- (m) Community and cultural severance, identified through consultations
- (n) Expected changes in the land use patterns along the proposed alignment and the associated impacts
- (o) Impact on ecologically sensitive features including nesting and area of interest for avifauna in and around water bodies, etc.
- (p) Impact on Socio-economic aspects of the projects area
- (q) The environmental aspects, which are not relevant and do not require further attention in the project cycle of the project should be specified. For this purpose, consultant shall link the findings of screening/scoping exercise
- (r) The air pollution predictions where ever necessary using relevant mathematical models and recent meteorological trends
- (s) The noise impacts on sensitive receptors shall be assessed using relevant models
- (t) Any impacts that are irreversible and/or cannot be avoided or mitigated should be identified

Environmental Management Plan

12. 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. EMP shall cover the following details:
- (g) **Mitigatory measures:** For each of the significant negative impact the consultant should recommend measures to eliminate and 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. 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.
- (h) **Environmental Codes of Practices (ECOPs):** As part of mitigating impacts during construction phase of the project, the consultants shall provide ECOPs, which shall be followed as part of standard practice during construction period.
- (i) **Landscape plan:** Wherever necessary, the Landscaping plan should be prepared considering the project area as a whole and shall meet project specific requirements. The landscaping elements shall comprise of signages, green-belt development, special contouring and dense green

area needs for attenuation of noise and air pollution, integration of aesthetics, etc. 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

- (j) Budget Estimates: The EMP budget estimates shall be prepared for each of the project component and the shall be integrated with the overall project cost estimates
- (k) 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 (with clear delineation of responsibilities between the Special Purpose Vehicle (SPV), Operator and State Agency). 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
- (l) 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.

Public Disclosure

- 13 The consultants are to provide support and assistance to the Client in meeting the disclosure requirements, which at the minimum shall meet the World Bank'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.
- 14. The consultants shall prepare a non-technical EA Summary Report for public disclosure.

Sample Environmental Management Plan⁸ for E 2 Category Projects

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"> o Obtain clearance for construction of barrage from Department of Ecology, Environment and Forests, GoTN o Obtain permission from Central Water Commission (CWC) for inter-state rivers. o 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"> o Site selection to be based on proper design considerations and study of the geology, hydrology and topography of the area to minimize the impacts. o 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"> o 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 Development and Design **	Failure of the barrage/ reservoir structures, and flooding of nearby areas.	<ul style="list-style-type: none"> o Proper design of the structure taking into consideration terrain and soil characteristics, hydrology and geology. 	Design Consultant/ Project Implementing Agency	Project Implementing Agency in co-ordination with Dept. of Mines and Geology
B. Construction Phase				
Excavation, cutting and filling operations ***	Flooding and water contamination due to improper disposal of	<ul style="list-style-type: none"> o Immediately transport accumulated construction waste to a site identified by the ULB/Project Implementing Agency 	Contractor / Project Implementing Agency	Project Management Consultant /

⁸ 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
	construction and demolition of waste.			ULB
	Damage to standing crops due to construction activities.	<ul style="list-style-type: none"> o Construction activities shall be planned so as not to damage any crops. In case if it is inevitable provide monetary compensation to the owners o Immediately transport accumulated construction waste to a site identified by the ULB and PPMS. 	Contractor and Project Implementing Agency	PMC / ULB
	Induced erosion and flooding of nearby areas	<ul style="list-style-type: none"> o Creation of soil barriers or mounds and adequate temporary drainage arrangements should be provided. 	Contractor and Project Implementing Agency	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. during construction; and avoiding construction activities during nights. o Sprinkling of water and removal of excess matter/construction debris from the site as soon as possible. 	Contractor and Project Implementing Agency	PMC / ULB
	Safety hazards to labourers and nearby resident population.	<ul style="list-style-type: none"> o Adequate safety precautions such helmets, 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 	Contractor and Project Implementing Agency	PMC / ULB
Laying of water distribution 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 and Project Implementing Agency	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 and Project Implementing Agency	PMC / ULB
	Dust generation	<ul style="list-style-type: none"> o Water sprinkling, removal of excess materials, cleaning of sites upon completion of activities. 	Contractor and Project Implementing Agency	PMC / ULB
	Reduced pedestrian and vehicle access to	<ul style="list-style-type: none"> o Establish work sequence and methods to minimize access disruption; provide alternative 	Contractor and Project Implementing Agency	PMC / ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	residences and businesses	safe access as possible; temporary bridges and crossings, detours and walkways.		
	Temporary water supply interruptions	o Establish coordination procedures for cut-off; minimize time for replacement operations; and appropriate scheduling as necessary.	Contractor and Project Implementing Agency	PMC / ULB
	Increased traffic inconvenience (emissions, congestions, longer travel times)	o Use alternate traffic routing; ensure coordination with local authorities; routine control and maintenance of equipment.	Contractor and Project Implementing Agency	PMC / ULB and Traffic Police
Construction camps*	Health impacts due to absence of housing and sanitation facilities in labour camps.	o The Private Contractor should ensure provision of appropriate housing, water supply, and sanitation facilities to construction labour.	Contractor and Project Implementing Agency	PMC / ULB
	Health impacts to nearby resident population due to labor camps.	o The Private Contractor should ensure provision of appropriate housing, water supply, and sanitation facilities to construction labour. The PC should also provide for adequate access to medical facilities.	Contractor and Project Implementing Agency	PMC / ULB
C. Operation Phase				
Storage of water***	Flooding of the downstream areas; soil erosion; water logging of low-lying areas etc.	o Ensure proper technical design of the storage reservoir to minimize seepage and chances of possible failure of the structure.	Contractor and Project Implementing Agency / ULB	Project Implementing Agency/ ULB/TNPCB
	Increase moisture content in soil, which affects the structures/foundation of buildings in nearby areas.	o Ensure proper site selection. Ensure proper design, construction and operation of the structure and system to minimize seepage and appropriate implementation techniques. o In case of failure of nearby building structures / foundations, monetary compensation shall be provided	Design Consultant, Contractor and Project Implementing Agency	ULB
	Increase in groundwater levels; change in crop pattern shifting to more water intensive crops/horticulture crops;	o Empowering local cultivators and labourers for sustainable practices	Irrigation Department and Department of Agriculture	Agriculture Department in co-ordination with Local

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	change in farm ownership and cropping pattern.			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"> o Provide sewerage system with sufficient treatment capacity to suffice to increased water supply levels o Plan and cost for adequate centralized/decentralized sewage disposal and treatment, and sanitation facilities. 	Contractor and Project Implementing Agency	ULB
Operation of water treatment facilities **	Safety hazards from chlorination process, accidents in handling chlorine cylinders and operation of plants	<ul style="list-style-type: none"> o Install chlorine leak detectors; require protection and emergency response equipment for operators. o Provide safety equipments to operating staff and training in handling the plant and chlorine cylinder 	Contractor and Project Implementing Agency	ULB
Operation of water treatment facilities **	Soil and water contamination sludge disposal	<ul style="list-style-type: none"> o Use only approved, appropriate disposal sites 	ULB/ Project Operating Agency	TNPCB

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

Sample Environmental Management Plan⁹ 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	<ul style="list-style-type: none"> o undertake afforestation in nearby areas 	ULB / Project Implementing Agency	TNUIFSL / TNPCB
Treated Water Disposal into nearby stream ***	Pollution of stream water and other water bodies receiving STP discharges due to reduction in efficiency or non working of STP	<ul style="list-style-type: none"> 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 	ULB / Project Implementing Agency	TNUIFSL / TNPCB

⁹ 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
		standards laid down by the state pollution 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.	o Providing adequate and safe sludge disposal facilities	Design Consultant, ULB / Project Implementing Agency	TNUIFSL and TNPCB
Provision for Accidental leakages / bursts **	Flooding of the nearby areas with untreated sewage in event of accidental leakages or bursts	o The Design Consultants should design for bypass arrangements, to discharge untreated sewage.	Design Consultants and ULB	ULB
	Low lying areas in the site, which can get flooded during monsoons	o Provide proper drainage arrangements so that the water does not stagnate on the site	Contractor and ULB	ULB
Location of STP*	Nuisance hazards to neighboring areas.	o Careful planning and design of STP with adequate buffer zones. Future growth of the surrounding areas shall be considered.	Design Consultant and ULB	ULB
Developing sewage pumping station*	Noise and odour nuisance to surrounding areas.	o Select appropriate location away from sensitive locations such as schools and hospitals. o Provide sufficient buffer areas o 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.	o Ensure immediate transportation of accumulated waste to an identified site.	Contractor/ Project Implementing Agency	PMC / TNUIFSL
	Damage to standing crops due to construction activities.	o Construction activities shall be planned so as not to damage any crops. In case if it is inevitable provide monetary compensation to the owners o Immediately transport accumulated construction waste to a site identified for the purpose.	Contractor and ULB	PMC / TNUIFSL
	Temporary flooding due to excavation during monsoons.	o Provide suitable arrangements for drainage control.	Contractor and ULB	PMC / TNUIFSL

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	Noise, vibration and dust from construction activities.	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 and ULB	PMC / TNUIFSL
	Safety hazards to labor.	o Provide adequate safety precautions such as helmets, safety shoes, gloves, etc.	Contractor and ULB	PMC / TNUIFSL
Laying of sewer network *	Spillage of fuel and oil	o Store tanks and drums for excess capacity; forbid pouring into soils or drains; enforce adequate equipment maintenance procedures	Contractor and ULB	PMC / TNUIFSL
	Noise and vibration disturbances to residents and businesses	o Establish schedule and other specific restrictions; limit work to daylight hours as possible; use of less noise generating equipment, proper maintenance	Contractor and ULB	PMC / TNUIFSL
Laying of sewer network *	Dust generation	o Water sprinkling, removal of excess materials, cleaning of sites upon completion of activities.	Contractor and ULB	PMC / TNUIFSL
	Reduced pedestrian and vehicle access to residences and businesses	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 and ULB	PMC / TNUIFSL
	Temporary water supply interruptions	o Establish coordination procedures for cut-off; minimize time for replacement operations; and appropriate scheduling as necessary.	Contractor and ULB	PMC / TNUIFSL
	Increased traffic inconvenience (emissions, congestions, longer travel times)	o Use alternate traffic routing; ensure coordination with local authorities; routine control and maintenance of equipment.	Contractor and ULB	PMC / TNUIFSL and Traffic Police
Construction Camps*	Health impacts due to absence of housing and sanitation facilities in labour camps.	o Provision of appropriate housing, water supply, and sanitation facilities.	Contractor and ULB	PMC / TNUIFSL
	Impacts on surrounding	o Provide proper temporary drainage and solid	Contractor and ULB	PMC /

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	environment due to improper drainage and solid waste management facilities in construction camps.	waste collection and disposal facilities at the construction site.		TNUIFSL
C. Operation Phase				
Treatment and Disposal ***	Impairment of receiving water quality in surface/sub-surface source due to inadequate /inefficient treatment. Contamination groundwater supplies due to leaching and impact on soil and agriculture	<ul style="list-style-type: none"> o 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. o 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/ ULB	TNPCB
Treatment and Disposal ***	Problems arising due to bad odour, insects, polluted air, noise pollution, etc.	o Provide buffer zones in the form of green belt around the STP; to be ensured during the design and development phase itself.	Operator/ ULB	TNPCB
	Indiscriminate disposal of sludge leading to contamination of land and soil.	o Prepares a sludge disposal plan and adheres to the same.	Operator/ ULB	TNPCB
	Health and safety of workers due to the release of toxic gases and hazardous material.	o Ensure safe operation and maintenance practices are followed, and plans for emergencies are in place.	Operator/ ULB	ULB
	Reduced land values in nearby areas and aesthetics affected.	o 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.

Sample Environmental Management Plan¹⁰ for E 2 Category Projects

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.	o Undertake afforestation programs to compensate to loss of tree cover	ULB	TNUIFSL
	Encroachment into sensitive areas such as forests, wildlife habitations etc especially in case of laying transmission mains	o 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. Contamination of groundwater due to leaching.	o Ensure proper design and adequate buffer zones to comply with MSW Rules, 2000. o Ensure appropriate design provisions are made for liners, leachate collection and treatment facilities to prevent percolation of leachate.	Design Consultant/ULB Design Consultant/ ULB	TNUIFSL TNUIFSL
	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
B. Construction Phase				
Excavation activities*	Noise and dust due to vehicle movement and other activities.	o 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.	Contractor and ULB	ULB
		o Approach road shall be constructed before starting the work, to reduce the dust and vehicular pollution		
	Safety hazards to labour.	o Adequate safety precautions such helmets, safety shoes, gloves, etc. should be provided to the labour.	Contractor and ULB	ULB
C Operation Phase				
Disposal of solid	Nuisance due to odour and	o Provide adequate buffer zone around the landfill	Operator/ULB	ULB and

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
waste*	<p>influx of insects, rodents, flying birds.</p> <p>Emission of toxic gases from landfill site.</p> <p>Health and safety of workers due to the release of toxic gases and hazardous materials during the operation of the facility.</p> <p>Contamination of groundwater</p>	<p>site with thick vegetative cover.</p> <ul style="list-style-type: none"> o Waste shall be dumped at the designated place and shall not allow the waste to accumulate near the waste reception area. o Provision of landfill gas management system. o Proper and timely compaction of waste and provision of protective material to landfill employees. o Proper maintenance of leachate collection facilities shall be done. Leachate shall be treated to the standards of TNPCB before disposal. 	<p>Operator/ULB</p> <p>Operator/ULB</p> <p>Operator/ULB</p>	<p>TNPCB</p> <p>ULB and TNPCB ULB and TNPCB</p> <p>ULB and TNPCB</p>
	Public health and safety hazards to workers from odor, smoke from fire and diseases transmitted by flies, rodents, etc.	<ul style="list-style-type: none"> o Ensure proper compaction and regular covering of waste, and provide adequate buffer from the nearby areas by means of green cover. 	Operator/ULB	ULB
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 and ULB	PMC / TNPCB
	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 and ULB	PMC
	Noise, vibration and dust from	<ul style="list-style-type: none"> o Use of less noise generating equipment for all 	Contractor and	PMC

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	construction activities.	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.	ULB	
	Health hazards due to hazardous nature of silt Safety of labour.	o Provide adequate safety precautions such helmets, safety shoes, gloves, etc.	Contractor and ULB	PMC
	Impairment of receiving water quality due to construction activity	o Ensure proper cleaning of construction material and completion of the work before opening to operation	Contractor and ULB	PMC
Construction Camps*	Health impacts due to absence of housing and sanitation facilities in labour camps.	o Provision of appropriate housing, water supply, and sanitation facilities.	Contractor and ULB	PMC
	Impacts on surrounding environment due to improper drainage and solid waste management facilities in construction camps.	o Provide proper temporary drainage and solid waste collection and disposal facilities at the construction site.	Contractor and ULB	PMC
Operation Phase				
Disposal of storm water ***	Impairment of receiving water quality due to mixing of wastewater.	o 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	o Ensure timely desilting of drains o 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	o Permission from the local/district authorities for tree cutting, o Minimize tree cutting as far as possible and adequate care should be taken while cutting,	ULB	ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
		<ul style="list-style-type: none"> o Top earth should be refilled and compacted wherever tree cutting is done. 		
Severances**	Severances to utilities	<ul style="list-style-type: none"> o Permission from respective departments to shift utilities o Prior information to affected people o Provisions such as foot over bridge with hand rails in the residential areas 	Respective Departments/ ULB	ULB
B. Construction Phase				
Excavation, cutting and filling operations***	Silt runoff from construction operations and chemicals used in construction activities.	<ul style="list-style-type: none"> o Careful construction activity planning, monitoring and proper resurfacing. Provide adequate runoff and drainage control. 	Contractor and ULB	PMC / TNUIFSL
	Soil and water contamination by improper disposal of construction waste.	<ul style="list-style-type: none"> o Provide proper arrangements for collection and disposal of construction waste. 	Contractor and ULB	PMC / TNUIFSL
	Increased dust levels due to excavation activities and accumulation of excavated earth..	<ul style="list-style-type: none"> o 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 and ULB	PMC / TNUIFSL
	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; avoiding construction activities during nights; sprinkling of water and removal of excess matter from the site as soon as possible. 	Contractor and ULB	PMC / TNUIFSL
	Road blocking and temporary flooding due to excavation during monsoons.	<ul style="list-style-type: none"> o Provide alternate arrangements for traffic diversion and suitable provision for drainage control. 	Contractor and ULB	PMC / TNUIFSL
	Safety of workers .	<ul style="list-style-type: none"> o Adequate safety precautions such as helmets, safety shoes, gloves, etc. should be provided to the labour. 	Contractor and ULB	PMC / TNUIFSL
Construction camps*	Health impacts due to absence of housing and sanitation facilities in labor camps.	<ul style="list-style-type: none"> o Provision of appropriate housing, water supply, and sanitation facilities. 	Contractor and ULB	PMC / TNUIFSL

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
C. Operation Phase				
Road use*	Increased noise and air pollution from increased traffic volume.	o 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.	o 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.

**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

TAMIL NADU URBAN INFRASTRUCTURE AND FINANCIAL SERVICES LIMITED

SOCIAL SAFEGUARD AND ENTITLEMENT FRAMEWORK

- 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 (Industrial Credit and Investment Corporation of India), HDFC (Housing Development and Financial Corporation) and IL&FS (Infrastructure Leasing and Financial Services Limited). A new Grant Fund (GF) has been established to operationalise the environmental and social measures.
- 1.2 TNUIFSL has evolved an Environmental and Social Framework (ESF) recognizing the environmental and social issues that can arise in urban infrastructure projects. The ESF provides TNUIFSL an overall framework to guide it in identification, assessment and management of environmental and social concerns at the project level. The ESF outlines the policies, assessments and procedures that will enable TNUIFSL to ensure that a project that it funds is developed in accordance with ESF and is adequately protected from environmental and social risks. The ESF 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: TNUIFSL 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 TNUIFSL funding: TNUIFSL 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 in the form of overhead tanks, underground sumps etc.,
 - Under ground sewage projects: These projects involve developing the contour maps, 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 busses, 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.

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 ESF 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 provide 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 ESF 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 Component.
- 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 ESF.
- 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 state government 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 ESF 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 ESF 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 by TNUIFSL as per the prescribed document provided in the information package 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 by TNUIFSL as per the prescribed document provided in the information package 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. Normally the Consultants prepare these. 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.
- Identify components, if any to be funded by Bank
- 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 World Bank 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 World Bank and TNUIFS prior to the issuance of bid documents for the civil works.

- 6.4 The GoTN has created the Grant Fund-I, 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 in TNUDF with the Vice President Projects, Manager-ESF and the CEO, 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 and supervised by the Vice President (projects). 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)
			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
		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)	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 by the TNUDP) 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

		<p>2.2 Fully affected or where part structure affected but remaining structure rendered unviable</p>	<p>Legal owner with valid title</p>	<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.</p> <p>(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>
			<p>Tenant/ Lease holder</p>	<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/businesses	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 by TNUDP 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 by TNUDP 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 ESF document shall apply.
 2. Land for land of equivalent extent as per guidelines in the ESF 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.

TERMS OF REFERENCE FOR THE ENVIRONMENT & SOCIAL (E&S) MANAGER

The following terms of reference is suggested for the E&S Manager.

1. To verify periodically that all sub-projects are in line with the prevailing national, state and local legislation on the one hand, and the World Bank policies on the other.
2. To ensure that TNUDP-III's ESF is being fully integrated with the sub-project appraisal cycle within TNUIFSL, by identifying the project category before issuing the Terms of Reference to the design consultants and evaluating the proposals with respect to their completeness and compliance to ESF.
3. To carry out quarterly visits to sub-project implementation sites to monitor as well as provide onsite training as required.
4. To co-ordinate closely with the external capacity-building consultants for the conduct of training of ULBs, and orientation programmes for the design consultants, project management consultants and contractors.
5. To co-ordinate on an annual basis with the external auditors and to ensure that the scope of the audit covers both (i) TNUIFSL's internal procedures and (ii) sub-project design, implementation and operation issues.
6. To arrange to conduct analytical studies based on sub-project experience in order to influence policy changes that will lead to better management of environmental and social / R&R issues in the urban sector as a whole.
7. To retain documents, reports and other records pertaining to TNUDP-III's ESF.
8. To prepare and submit quarterly progress reports to the GoTN, the World Bank and other agencies as required.
9. To function as a single-point contact on TNUDP-III's ESF matters for other TNUIFSL staff and external agencies.
10. To update and maintain TNUDP-III's ESF on an ongoing basis.
11. To report to Vice President (Projects) on all matters pertaining to TNUDP-III's ESF

TERMS OF REFERENCE FOR ENVIRONMENT & SOCIAL / R&R CAPACITY-BUILDING CONSULTANTS

The following terms of reference is suggested for the Environmental and Social capacity building consultants.

1. To develop and maintain the following guidelines:
 - Construction-related guidelines for all urban sub-projects
 - Generic environmental guidelines for each sub-project type.
 - Site selection guidelines
 - Health & safety guidelines
2. To provide support to TNUIFSL in all queries posed to the E&S manager by external agencies such as the project design consultants, PMCs and ULBs.
3. To identify training needs in the TN urban sector on environmental and social / R&R issues.
4. To prepare and maintain a training agenda on environmental and social / R&R issues for the TN urban sector.
5. To develop and deliver training programs for the different stakeholders in the TN urban sector on an ongoing basis.
6. To document good practices in the urban sector that has a replication potential and to use this good practice information for the training.
7. To ensure that the monitoring feedback from the E&S manager and the external auditors are suitably incorporated in the training modules.
8. To record training feedback and evaluate the same to improve subsequent training.
9. To provide support to TNUIFSL in analytical studies and notes prepared for bringing about policy changes.
10. To provide half-yearly reports of the capacity-building initiatives undertaken.

[Note: The external capacity-building consultants should be available to TNUIFSL on an ongoing basis throughout TNUIDP-III. They should be contracted for an initial 2-year period extendable based on their performance.]

TERMS OF REFERENCE FOR ENVIRONMENT AND SOCIAL ADVISORS

I Background:

The Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) has been set up to finance various urban infrastructure projects including water supply, roads, bridges, street lights, solid waste plants, storm water drains, bus stations, and markets in the municipalities of Tamil Nadu. The scope of operations for TNUIFSL includes urban infrastructure projects sponsored by Urban Local Bodies (ULBs), Statutory Boards and Potential Private Investors. TNUIFSL believes that each of its projects will improve living standards and the environment of urban populations in and around its project locations.

II Environmental and Social Aspects of projects.

TNUIFSL will promote environmentally sound, socially acceptable and commercially viable urban infrastructure projects. TNUIFSL has reflected its environmental and social commitment through detailed operational procedures detailed in the Environmental and Social Framework (ESF). In this connection, the role of external advisors on Environmental and Social Aspects will be as under

- Advising E&S Manager of TNUIFSL on project specific environmental and social screening. The advisors will be required to advise while screening complex projects for the environmental and social components.
- Appraising Environmental Assessment Reports (EAR), Social Assessment Report (SAR) and other documents for such projects submitted by the Borrowers. The advisors will appraise the EAR and SAR of environmentally and socially sensitive projects. They will review the identified environmental issues and assess the management measures and assess compliance of the measures suggested in the ESF.

TERMS OF REFERENCE FOR ENVIRONMENTAL AND SOCIAL AUDIT

1. Background:

The Tamilnadu Urban Infrastructure Financial Service Limited (TNUIFSL) has been set up to finance various urban infrastructure projects in Tamilnadu. The eligible borrowers of TNUIFSL include Urban Local Bodies (ULBs), Statutory Boards and Private Corporate Entities.

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

To facilitate the process laid down within its ESF, TNUIFSL intends to select consultants to audit projects sanctioned by TNUIFSL.

2. Objectives:

- To audit the conformity of environmental and social categorisation of projects approved by the TNUIFSL during the Financial Year _____, with respect to the categorisation prescribed in the ESR of TNUIFSL.
- To audit the compliance of the environmental and social aspects of approved projects, which are under implementation.

3. Outline of the tasks to be carried out:

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

(a) To Audit the Environmental and Social Categorisation of Approved Projects:

The consultants will audit the conformity of environmental and social categorisation of projects approved by the TNUIFSL with respect to environmental and social categorisation in the ESF of TNUIFSL (i.e.) whether the Environmental and Social categorisation specified for the approved projects are in conformity with environmental and social categorisation specified in the ESF.

(b) Auditing the compliance of the Approved Projects:

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 clearly spelt out in the consultants proposal and shall be approved by TNUIFSL's internal review committee before the commencement of the Audit. The audit will be carried out in the presence of the representatives of ULB and the PMC.

(c) Adequacy of the EMP/SMP

The consultant will also 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.

(d) Reporting

To review the status report submitted by the project Management consultant 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.

(e) Audit Report

The findings of the review and audit should be summarized in a tabular form and will include compliance, non compliance, best practices and enhancement measures along with the name of the agency responsible for each of the above. In case of non-compliances, 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.

4. Schedule for completion of tasks:

The entire tasks shall be completed in a time frame of about six weeks period.

The Conformity of Approved projects related to the financial year _____, with ESF guidelines shall be completed in 2 weeks time.

The compliance to agreed standards during construction, operation and maintenance of the projects approved shall be completed in Four Weeks time. This audit will cover all projects above Rs.15 crores value and 25% of the other projects, which are approved till _____.

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

A copy of the Environmental Social Information Package for Borrowers of the TNUIFSL and Management information system (MIS) report, indicating details of the projects sanctioned will be given by client.

6. Final outputs (i.e., Reports, drawings etc.). That will be required of the Consultant;

- Environmental and Social Audit Reports indicating confirmity of projects approved by TNUIFSL, relating to the financial year _____, with ESF guidelines.
- Environmental and Social Audit report indicating the conformity to agreed standards during construction, operation and maintenance of the approved projects. This will cover all the projects above Rs.15 crores value and 25% of the other projects which are sanctioned till _____.

7. Composition of review committee and review procedure to monitor consultants work;

- The Chief Executive Officer, TNUIFSL
- Vice President Projects
- E&S Manager, TNUIFSL
- Advisors, TNUIFSL (if engaged for this project)

(f) Procedure for review of progress reports, Final Draft and Final reports:

The review committee will review the progress of work. The decision / suggestion of the review committee will be communicated in the form of minutes, for taking action.

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

Sl.No.	Key Professional	No. of persons	Experience
1.	Project Co-ordinator	1	Post Graduate in Environmental Engineering / Planning
2.	Project Co-ordinator	1	Post Graduate in Sociology / Social work

Contractual Text to be included for PMC Consultancies

1. The following text shall be included in the PMC contracts for monitoring the compliance of EAR and SAR for various sub-projects.

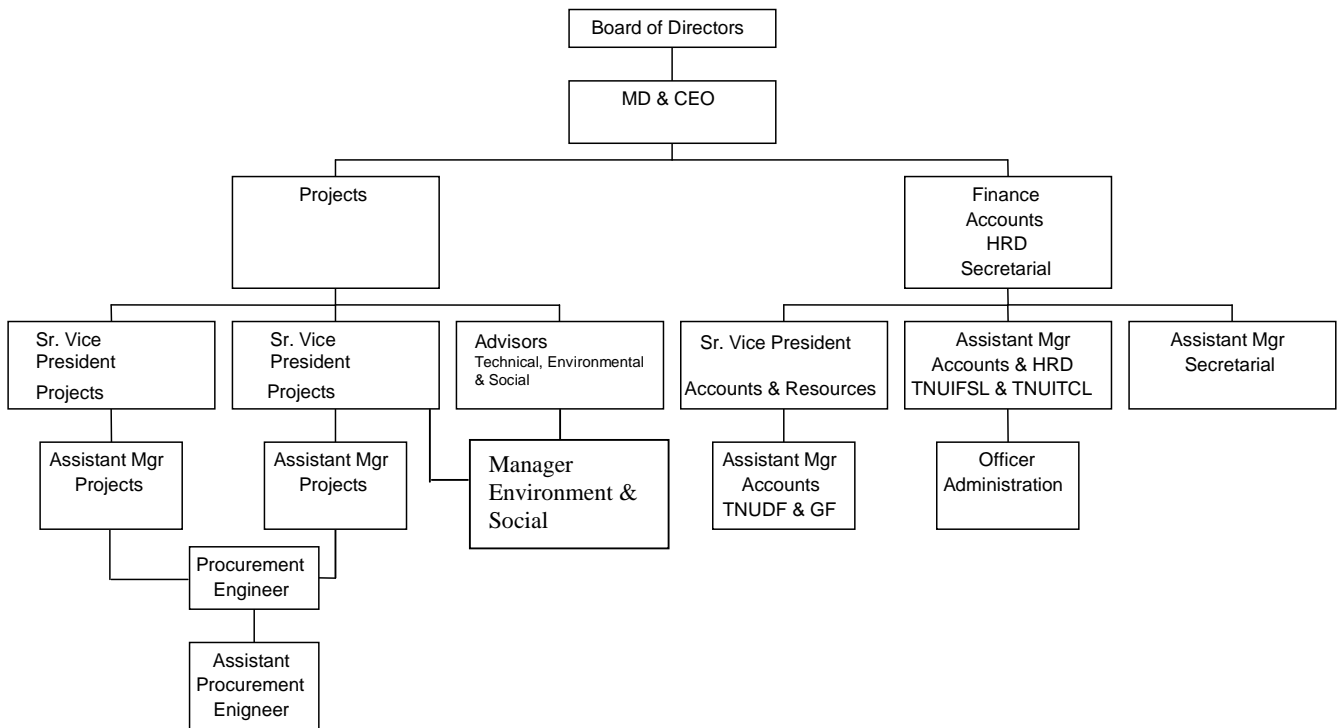
For E-1 or S1 Projects:

“The Consultant should ensure that the mitigative measures recommended in the EA or SA Report of the project and EMP and RAP are implemented by the contractor. The implementation status of the EMP and RAP shall be reported to the V.P Projects through Manager (E&S) of TNUIFSL”.

For E-2 or S-2 Projects

“The Consultant shall meet the specific guide lines provided in the ESF of TNUIFSL and should ensure that the environmental and social issues are adequately addressed in the project. The implementation status of the same shall be reported to the V.P Projects through Manager (E&S) of TNUIFSL”.

ORGANISATION CHART : TNUIFSL



**MINISTRY OF ENVIRONMENT AND FORESTS
NOTIFICATION**

New Delhi, the 27th January, 1994

(As amended on 04/05/1994, 10/04/1997, 27/1/2000 and 13/12/2000, 01/08/2001 & 21/11/2001)

1. S.O. 60 (E) Whereas a notification under clause (a) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 inviting objections from the public within sixty days from the date of publication of the said notification, against the intention of the Central Government to impose restrictions and prohibitions on the expansion and modernization of any activity or new projects being undertaken in any part of India unless environmental clearance has been accorded by the Central Government or the State Government in accordance with the procedure specified in that notification was published as SO No. 80(E) dated 28th January, 1993;

And whereas all objections received have been duly considered;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby directs that on and from the date of publication of this notification in the Official Gazette, expansion or modernization of any activity (if pollution load is to exceed the existing one, or new project listed in Schedule I to this notification, shall not be undertaken in any part of India unless it has been accorded environmental clearance by the Central Government in accordance with the procedure hereinafter specified in this notification;

2. Requirements and procedure for seeking environmental clearance of projects:

1(a) Any person who desires to undertake any new project in any part of India or the expansion or modernization of any existing industry or project listed in the Schedule-I shall submit an application to the Secretary, Ministry of Environment and Forests, New Delhi.

The application shall be made in the proforma specified in Schedule-II of this notification and shall be accompanied by a project report which shall, inter alia, include an Environmental Impact Assessment Report, an ** Environment Management Plan and details of public hearing as specified in Schedule-IV** prepared in accordance with the guidelines issued by the Central Government in the Ministry of Environment and Forests from time to time. However, public hearing is not required in respect of (i) Small scale industrial undertakings located in (a) Notified / Designated Industrial areas / Industrial Estates or (b) Areas earmarked for industries under the jurisdiction of Industrials development Authorities:

(ii) Widening and Strengthening of Highways;

(iii) Mining Projects (Major Minerals) with lease area upto 25 hecatares

(iv) Units located in Export Processing Zone, Special Economic Zones and

(v) Modernisation of Existing Irrigation Projects.

(b) Cases rejected due to submission of insufficient or inadequate data and *Plans may be reviewed as and when submitted with complete data and *Plans. Submission of incomplete data or plans for the second time would itself be a sufficient reason for the Impact assessment Agency to reject the case summarily.

II In case of the following site specific projects:

(a) mining; (b) pit-head thermal power stations; (c) hydro-power, major irrigation projects and/or their combination including flood control; (d) ports and harbours (excluding minor ports); (e) *prospecting and exploration of major minerals in areas above 500 hectares; *

The project authorities will intimate the location of the project site to the Central Government in the Ministry of Environment and Forests while initiating any investigation and surveys. The Central Government in the Ministry of Environment and Forests will convey a decision regarding suitability or otherwise of the proposed site within a maximum period of thirty days. *The said site clearance shall be granted for a sanctioned capacity and shall be valid for a period of five years for commencing the construction, operation or mining. *

III a) The reports submitted with the application shall be evaluated and assessed by the Impact Assessment Agency, *and if deemed necessary it may consult* a committee of Experts, having a composition as specified in Schedule-III of this Notification. The Impact Assessment Agency (IAA) would be the Union Ministry of Environment and Forests. The Committee of Experts mentioned above shall be constituted by the Impact Assessment Agency or such other body under the Central Government authorised by the Impact Assessment Agency in this regard.

(b) The said Committee of Experts shall have full right of entry and inspection of the site or, as the case may be, factory premises at any time prior to, during or after the commencement of the operations relating to the project.

** (c) The Impact Assessment Agency shall prepare a set of recommendations based on technical assessment of documents and data, furnished by the project authorities, supplemented by data collected during visits to sites or factories if undertaken, and details of public hearing.

The assessment shall be completed within a period of ninety days from receipt of the requisite documents and data from the project authorities and completion of public hearing and decision conveyed within thirty days thereafter.

The clearance granted shall be valid for a period of five years for commencement of the construction or operation of the project. **

No construction work, preliminary or otherwise, relating to the setting up of the project may be undertaken till the environmental and site clearance is obtained.

IV. In order to enable the Impact Assessment Agency to monitor effectively the implementation of the recommendations and conditions subject to which the environmental clearance has been given, the project authorities concerned shall submit a half yearly report to the *Impact Assessment Agency. Subject to the public interest, * the Impact Assessment Agency shall make compliance reports publicly available.

V. If no comments from the Impact Assessment Agency are received within the time limit, the project would be deemed to have been approved as proposed by project authorities.

3. Nothing contained in this Notification shall apply to:

(a) any item falling under entry Nos. 3, 18 and 20 of the Schedule-I to be located or proposed to be located in the areas covered by the Notifications S.O. No.102 (E) dated 1st February, 1989, S.O. 114 (E) dated 20th February, 1991; *S.O. No. 416 (E) dated 20th June, 1991* and S.O. No.319 (E) dated 7th May, 1992.

(b) any item falling under entry Nos.1,2,3,4,5,9,10,13, 16,17,19,*21*,25 and 27 of Schedule-I if the investment is less than Rs.50 crores.

(c) any item reserved for Small Scale Industrial Sector with investment less than Rs. 1 crore.

(d) defence related road construction projects in border areas.

(e) any item falling under entry No. * of Schedule I covered by the notification G.S.R. 1037(E) dated 5th December 1989.

4. Concealing factual data or submission of false, misleading data/reports, decisions or recommendations would lead to the project being rejected. Approval, if granted earlier on

the basis of false data, would also be revoked. Misleading and wrong information will cover the following:

- False information
- False data
- Engineered reports
- Concealing of factual data
- False recommendations or decisions

[No.Z-12013/4/89-IA-I]

SCHEDULE-I

(See paras 1 and 2)

LIST OF PROJECTS REQUIRING ENVIRONMENTAL CLEARANCE FROM THE CENTRAL GOVERNMENT

1. Nuclear Power and related projects such as Heavy Water Plants, nuclear fuel complex, Rare Earths.
2. River Valley projects including hydel power, major Irrigation and their combination including flood control.
3. Ports, Harbours, Airports (except minor ports and harbours).
4. Petroleum Refineries including crude and product pipelines.
5. Chemical Fertilizers (Nitrogenous and Phosphatic other than single superphosphate).
6. Pesticides (Technical).
7. Petrochemical complexes (Both Olefinic and Aromatic) and Petro-chemical intermediates such as DMT, Caprolactam, LAB etc. and production of basic plastics such as LLDPE, HDPE, PP, PVC.
8. Bulk drugs and pharmaceuticals.
9. Exploration for oil and gas and their production, transportation and storage.
10. Synthetic Rubber.
11. Asbestos and Asbestos products.
12. Hydrocyanic acid and its derivatives.
- 13 (a) Primary metallurgical industries (such as production of Iron and Steel, Aluminium, Copper, Zinc, Lead and Ferro Alloys).
- (b) Electric arc furnaces (Mini Steel Plants).
14. Chlor alkali industry.
15. Integrated paint complex including manufacture of resins and basic raw materials required in the manufacture of paints.
16. Viscose Staple fibre and filament yarn.
17. Storage batteries integrated with manufacture of oxides of lead and lead antimony alloys.
18. All tourism projects between 200m—500 metres of High Water Line and at locations with an elevation of more than 1000 metres with investment of more than Rs.5 crores.
19. Thermal Power Plants.
20. Mining projects *(major minerals)* with leases more than 5 hectares.
21. Highway Projects **except projects relating to improvement work including widening and strengthening of roads with marginal land acquisition along the existing alignments provided it does not pass through ecologically sensitive areas such as National Parks, Sanctuaries, Tiger Reserves, Reserve Forests**
22. Tarred Roads in the Himalayas and or Forest areas.
23. Distilleries.
24. Raw Skins and Hides
25. Pulp, paper and newsprint.
26. Dyes.
27. Cement.
28. Foundries (individual)
29. Electroplating
30. Meta amino phenol

SCHEDULE-II

[See Sub-para I (a) of para 2]

APPLICATION FORM

1. (a) Name and Address of the project proposed:

(b) Location of the project:

Name of the Place:

District, Tehsil:

Latitude/Longitude:

Nearest Airport/Railway Station:

(c) Alternate sites examined and the reasons for selecting the proposed site:

(d) Does the site conform to stipulated land use as per local land use plan:

2. Objectives of the project:

3. (a) Land Requirement:

Agriculture Land:

Forest land and Density of vegetation.

Other (specify):

(b) (i) Land use in the Catchment within 10 kms radius of the proposed site:

(ii) Topography of the area indicating gradient, aspects and altitude:

(iii) Erodibility classification of the proposed land:

(c) Pollution sources existing in 10 km radius and their impact on quality of air, water and land:

(d) Distance of the nearest National Park/Sanctuary/Biosphere Reserve/Monuments/heritage site/Reserve Forest:

(e) Rehabilitation plan for quarries/borrow areas:

(f) Green belt plan:

(g) Compensatory afforestation plan:

4. Climate and Air Quality:

(a) Windrose at site:

(b) Max/Min/Mean annual temperature:

(c) Frequency of inversion:

(d) Frequency of cyclones/tornadoes/cloud burst:

(e) Ambient air quality data:

(f) Nature & concentration of emission of SPM, Gas (CO, CO₂, NO_x, CH_n etc.) from the project:

5. Water balance:

(a) Water balance at site:

(b) Lean season water availability;

Water Requirement:

(c) Source to be tapped with competing users (River, Lake, Ground, Public supply):

- (d) Water quality:
- (e) Changes observed in quality and quantity of groundwater in the last years and present charging and extraction details:
- (f) (i) Quantum of waste water to be released with treatment details:
 - (ii) Quantum of quality of water in the receiving body before and after disposal of solid wastes:
 - (iii) Quantum of waste water to be released on land and type of land:
- (g) (i) Details of reservoir water quality with necessary Catchment Treatment Plan:
 - (ii) Command Area Development Plan:

6. Solid wastes:

- (a) Nature and quantity of solid wastes generated
- (b) Solid waste disposal method:

7. Noise and Vibrations:

- (a) Sources of Noise and Vibrations:
- (b) Ambient noise level:
- (c) Noise and Vibration control measures proposed:
- (d) Subsidence problem, if any, with control measures:

8. Power requirement indicating source of supply: Complete environmental details to be furnished separately, if captive power unit proposed:

9. Peak labour force to be deployed giving details of:

- Endemic health problems in the area due to waste water/air/soil borne diseases:
- Health care system existing and proposed:

10. (a) Number of villages and population to be displaced:

- (c) Rehabilitation Master Plan:

11. Risk Assessment Report and Disaster Management Plan:

Report prepared as per guidelines issued by the Central Government in the MOEF from time to time:

12 (a) Environmental Impact Assessment

- (b) Environment Management Plan:
- (c) Detailed Feasibility Report:
- (d) Duly filled in questionnaire

13. Details of Environmental Management Cell:

I hereby give an undertaking that the data and information given above are due to the best of my knowledge and belief and I am aware that if any part of the data/information submitted is found to be false or misleading at any stage, the project be rejected and the clearance given, if any, to the project is likely to be revoked at our risk and cost.

Signature of the applicant
With name and full address

Given under the seal of Organisation on behalf of Whom the applicant is signing

Date:

Place:

In respect to item for which data are not required or is not available as per the declaration of project proponent, the project would be considered on that basis.

SCHEDULE-III

[See sub-para III (a) of Para 2]

COMPOSITION OF THE EXPERT COMMITTEES FOR ENVIRONMENTAL IMPACT ASSESSMENT

1. *The Committees will consist of experts in the following disciplines:*
 - (i) Eco-system Management
 - (ii) Air/Water Pollution Control
 - (iii) Water Resource Management
 - (iv) Flora/Fauna conservation and management
 - (v) Land Use Planning
 - (vi) Social Sciences/Rehabilitation
 - (vii) Project Appraisal
 - (viii) Ecology
 - (ix) Environmental Health
 - (x) Subject Area Specialists
 - (xi) Representatives of NGOs/persons concerned with environmental issues.
2. The Chairman will be an outstanding and experienced ecologist or environmentalist or technical professional with wide managerial experience in the relevant development sector.
 3. The representative of Impact Assessment Agency will act as a Member-Secretary.
 4. Chairman and Members will serve in their individual capacities except those specifically nominated as representatives.
 5. The Membership of a Committee shall not exceed 15.

SCHEDULE-IV

(See Sub-para 1 of para 2)

Procedure for Public Hearing

- (1) Process of Public Hearing: - Whoever apply for environmental clearance of projects, shall submit to the concerned State Pollution Control Board twenty sets of the following documents namely: -
 - (i) An executive summary containing the salient features of the project both in English as well as local language.
 - (ii) Form XIII prescribed under Water (Prevention and Control of Pollution) Rules, 1975 where discharge of sewage, trade effluents, treatment of water in any form, is required.

(iii) Form I prescribed under Air (Prevention and Control of Pollution) Under Territory Rules, 1983 where discharge of emissions are involved in any process, operation or industry.

(iv) Any other information or document, which is necessary in the opinion of the Board for their final disposal of the application.

(2) Notice of Public Hearing: -

(i) The State Pollution Control Board shall cause a notice for environmental public hearing which shall be published in at least two newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned. State Pollution Control Board shall mention the date, time and place of public hearing. Suggestions, views, comments and objections of the public shall be invited within thirty days from the date of publication of the notification.

(ii) All persons including bona fide residents, environmental groups and others located at the project site/sites of displacement/sites likely to be affected can participate in the public hearing. They can also make oral/written suggestions to the State Pollution Control Board.

Explanation: - For the purpose of the paragraph person means: -

(a) any person who is likely to be affected by the grant of environmental clearance;

(b) any person who owns or has control over the project with respect to which an application has been submitted for environmental clearance;

(c) any association of persons whether incorporated or not like to be affected by the project and/or functioning in the filed of environment;

(d) any local authority within any part of whose local limits is within the neighbourhood, wherein the project is proposed to be located.

(3) Composition of public hearing panel: - The composition of Public Hearing Panel may consist of the following, namely: -

(i) Representative of State Pollution Control Board;

(ii) District Collector or his nominee;

(iii) Representative of State Government dealing with the subject;

(iv) Representative of Department of the State Government dealing with Environment;

(v) Not more than three representatives of the local bodies such as Municipalities or panchayats;

(vi) Not more than three senior citizens of the area nominated by the District Collector.

(4) Access to the Executive Summary:- The concerned persons shall be provided access to the Executive Summary of the project at the following places, namely:-

(i) District Collector Office;

(ii) District Industry Centre;

(iii) In the Office of the Chief Executive Officers of Zila Praishad or Commissioner of the Municipal Corporation/Local body as the case may be;

(iv) In the head office of the concerned State Pollution Control Board and its concerned Regional Office.

(v) In the concerned Department of the State Government dealing with the subject of environment.

[No.Z-12013/4/89-IA]

Foot note: *The Principal Notification was published vide number S.O. 60 (E) dated 27th January 1994 and subsequently amended vide numbers S.O. 356(E) dated 4th may, 1994, S.O. 318 (E) dated 10th April, 1997, S.O. 73 (E) dated 27th January, 2000 and S. O. 1119 (E) dated 13th December, 2000.*

NOTE: * and** indicate amendments