

# Resettlement Plan

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## IND: Proposed Tamil Nadu Urban Flagship Investment Program (Tranche 2) – Water Supply System in Madurai City PART A

Prepared by Madurai City Municipal Corporation, Government of Tamil Nadu for the Asian Development Bank.

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## CURRENCY EQUIVALENTS

(as of 20 June 2019)

Currency Unit	–	Indian rupee (₹)
₹1.00	=	\$0.0144
\$1.00	=	₹69.6025

## ABBREVIATIONS

ADB	–	Asian Development Bank
ASO	–	assistant safeguards officer
BPL	–	below poverty line
CMSC	–	construction, management and supervision consultant
EUP	–	enter upon permission
FGD	–	focus group discussion
GIAC	–	governance improvement and awareness consultant
GOTN	–	Government of Tamil Nadu
GRC	–	grievance redress committee
GRM	–	grievance redress mechanism
IPP	–	indigenous peoples plan
MAWS	–	Municipal Administration and Water Supply Department
NOC	–	no objection certificate
PIU	–	program implementation unit
PMU	–	program management unit
PWD	–	Public Works Department
RCC	–	reinforced cement concrete
RFCTLARR	–	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement
R&R	–	resettlement and rehabilitation
ROW	–	right-of-way
SIA	–	social impact assessment
SPO	–	social project officer
SPS	–	Safeguard Policy Statement
SRSE	–	social and resettlement safeguard expert
WTP	–	water treatment plant
TNUFIP	–	Tamil Nadu Urban Flagship Investment Program
TNUIFSL	–	Tamil Nadu Urban Infrastructure Financial Services Ltd.
TWADB	–	Tamil Nadu Water Supply and Drainage Board
WSS	–	Water supply system
ULB	–	urban local body

## WEIGHTS AND MEASURES

km	–	kilometer
m	–	meter
MLD	–	million liters per day
mm	–	millimeter
km <sup>2</sup>	–	square kilometers

## **NOTES**

In this report, "\$" refers to United States dollars.

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## CONTENTS

	<b>Page</b>
I. SUBPROJECT DESCRIPTION	1
II. SCOPE OF LAND ACQUISITION AND RESETTLEMENT	2
III. SOCIOECONOMIC INFORMATION AND PROFILE	8
A. Package 1: Abstraction and Transmission of Raw Water	8
B. Package 2: Construction of New Water Treatment Plant	11
C. Package 3: Laying of Clear Water Main, Feeder Main, Feeder Network, and Construction of Overhead Tanks	12
D. Package 4: Laying of Distribution Network	21
IV. INFORMATION DISCLOSURE, CONSULTATION, AND PARTICIPATION	22
V. GRIEVANCE REDRESS MECHANISM	25
VI. LEGAL FRAMEWORK	28
VII. ENTITLEMENTS, ASSISTANCES, AND BENEFITS	29
A. Permanent Impacts	29
B. Temporary Impacts	30
VIII. RESETTLEMENT BUDGET AND FINANCING PLAN	32
IX. INSTITUTIONAL ARRANGEMENTS AND IMPLEMENTATION SCHEDULE	34
X. MONITORING AND REPORTING	39

### APPENDIXES:

1. Details of Potential Temporary Impacts
2. Safety Measures for Pipelaying-Sample Template
3. Site Visits and Consultations
4. Estimation of Temporary Impacts
5. Land Records and Certifications
6. Proposed Structure of Subproject Information Disclosure Leaflet
7. Sample Grievance Registration Form
8. Terms of Reference for Independent Third Party for Negotiated Purchase or Voluntary Land Donation
9. Land Acquisition and Involuntary Resettlement Due Diligence Report for Proposed Water Treatment Plant at Madurai City

## EXECUTIVE SUMMARY

**Introduction.** The Tamil Nadu Urban Flagship Investment Program (TNUFIP) is designed under the multitranche financing facility (MFF) modality of Asian Development Bank (ADB) financing and will primarily focus on improvement of water supply and sewerage services in selected cities of the state. The TNUFIP is envisaged to be structured under three main components: (i) investment in municipal infrastructure namely water supply and sewerage, (ii) municipal reform-based activities, and (iii) technical assistance for design, supervision, program management, reforms, and climate change.

**Subproject Scope.** Drinking water supply for Madurai city is currently abstracted from three sources: Vaigai dam (115 million liters per day [MLD]), Cauvery river (30 MLD), and Vaigai riverbed (47 MLD). The city has existing water treatment plant (WTP) of capacity 118.6 MLD commissioned in 1995. The current water supply from various sources is assessed at 192 MLD while the total water supply demand including the transmission losses for the intermediate (2034, population-1.92 million) and ultimate (2049, population-2.28 million) year is estimated at 317 MLD and 374 MLD respectively. To meet the demand gap of 125 MLD for the intermediate year 2034, under ADB funded TNUFIP, following subproject components are proposed:

- (i) **Package 1:** (i) Construction of check dam, intake well and head works at Mullai Periyar River at Lower Camp to draw 130 MLD of raw water; and (ii) Laying of 95.74 kilometers (km) of raw water main of 1,100 mm dia. from head works to proposed WTP at Pannaipatty.
- (ii) **Package 2:** Construction of 130 MLD WTP within the premises of existing WTP at Pannaipatty.
- (iii) **Package 3:** (i) Laying of 54.35 km of clear water main of 1,400 mm dia. from proposed WTP at Pannaipatty to Madurai city; (ii) Laying of 10.49 km of main feeder; (iii) Laying of 95 km of feeder main network to various overhead tanks (OHTs); and (iv) Construction of 37 new OHTs; and
- (iv) **Package 4:** Laying of 200 km of new Distribution Network.

**Key Findings.** Private land of around 1.93 acres (one landowner) is proposed to be obtained for the construction of intake well and head works through negotiated settlement by the Confederation of Indian Industries, which will then donate the site to the corporation. Negotiations are completed with the landowner and land price is finalized in discussion with the landowner while the remaining procedures of payment and land transfer are underway. The remaining proposed facilities such as water treatment plant, overhead tanks etc. will be either accommodated within the existing premises or on government lands owned by Madurai Corporation. At overhead tank sites 32 and 35, permanent impacts are envisaged to 4 structure owners (15 affected persons) due to demolition of one commercial and one residential structure respectively. Raw and clear water mains will be laid along various types of roads belonging to national highways, state highways, district authorities, corporation etc. No permanent or semi-permanent structures will be demolished for laying of raw and clear water mains. To avoid impacts to structures, black top portion of the road will be cut to lay the pipeline. Potential temporary impacts are assessed due to laying of new pipe networks for raw water main, clear water main, feeder main, feeder network and distribution network. These are identified based on surveys of the entire raw water main, clear water main and feeder main alignments, and transect walks and sample surveys for the feeder network and distribution network. A total of 2,510 roadside businesses are anticipated to be temporarily affected due to laying of pipelines.

**Recommended Actions.** A draft resettlement plan has been prepared for Madurai water supply subproject components. This resettlement plan is in line with the ADB Safeguard Policy Statement

(SPS), 2009 and resettlement framework prepared for TNUFIP. The resettlement budget is estimated at ₹16.99 million which includes land cost, land transfer and registration cost, third party certification cost, structure cost and associated benefits, and temporary income loss for 6–15 days based on the pipe diameter. All the costs related to land acquisition, land transfer, and registration etc. will be borne by the urban local body (ULB). A detailed measurement survey will be conducted in sections ready for implementation, based on detailed design, and the draft resettlement plan updated, based on survey results. The final resettlement plan will also include outcomes of third party certification for the head works site. The independent third party for negotiated settlement and land donation will be appointed by program implementation unit (PIU)/ULB. The final resettlement plan will address gaps in negotiated settlement of land, if any, and provide additional compensation measures, if required. The updated resettlement plan will be reviewed by program management unit (PMU) and submitted to ADB for approval prior to start of construction. In line with the resettlement framework, the resettlement plan has also laid down the structured outline for required institutional and implementation arrangements with schedule, grievance redress mechanism, consultation and disclosure activities, and monitoring and evaluation. A summary of resettlement framework and resettlement plan in local language will be disclosed to representatives of all key stakeholders through a city level stakeholder workshop, and to affected persons during site-specific/local level consultations. A hard copy of summaries will also be made available at ULB offices and full documents will be uploaded at their and ADB websites. Program implementation unit's assistant safeguard officer (PIU ASO) will be responsible for updating and implementation of resettlement plan. Program management unit's social project officer (PMU SPO) is responsible for approval and implementation monitoring of resettlement plans. Governance improvement and awareness consultant (GIAC) will assist in monitoring resettlement plan implementation.

## I. SUBPROJECT DESCRIPTION

1. The proposed Tamil Nadu Urban Flagship Investment Program (TNUFIP) is aligned to support in the following: (i) urban infrastructure across the state improved and world class cities focusing on universal access to 24x7 water supply services and sanitation facilities including tertiary treatment of sewage to become engines for economic growth developed;<sup>1</sup>(ii) five industrial corridors developed (footnote 1); (iii) quality of life for all, especially the poor and the disadvantaged improved;<sup>2</sup> (iv) a clean and sustainable environment provided.<sup>3</sup> TNUFIP will focus on cities in five priority economic corridors: (i) Chennai–Hosur, (ii) Chennai–Tiruchirapalli, (iii) Coimbatore–Madurai, (iv) Coimbatore–Salem, and (v) Madurai–Thoothukudi. The reform-based component of the program will seek to provide results-based performance incentives to select cities and towns. The program shall also focus on transformative investments in 24x7 water supply, full sanitation coverage smart water management, and urban climate change resilience drawing from the support of various Asian Development Bank (ADB) grant technical assistance. The TNUFIP is envisaged to be structured under three main components: (i) investment in municipal infrastructure namely water supply and sewerage, (ii) municipal reform-based activities, and (iii) technical assistance for design, supervision, program management, reforms, and climate change. TNUFIP will be implemented over an 8-year period beginning in 2018 and will be funded by ADB via its multitranche financing facility (MFF). The impact of the TNUFIP will be improved liveability and resilience in urban areas of economic importance in Tamil Nadu. Tranche 1 of TNUFIP covered underground sewerage system (UGSS) improvements in cities of Tirunelveli, Coimbatore, Trichy, Vellore, Rajapalayam, and Chennai, and water supply system (WSS) improvements in selected areas of Chennai Metropolitan Region. Tranche 2 of TNUFIP will cover underground sewerage system improvements in remaining areas of Vellore and Trichy and additionally cover cities of Ambur and Tiruppur. Tranche 2 will also cover WSS improvements in cities of Coimbatore, Madurai and Tiruppur.

2. As per Census 2011, Madurai Corporation area spreads over 150 square kilometer (km<sup>2</sup>). comprising around 1.5 million population in 100 municipal wards. Drinking water supply for Madurai City is currently abstracted from three sources: Vaigai Dam (115 MLD), Cauvery River (30 MLD), and Vaigai Riverbed (47 MLD). The main source of water supply to the core city comprising 72 wards is from Vaigai Dam which is filled up from Mullai Periyar Dam. The existing piped water supply network covers around 59% of the households. The remaining peripheral added areas that comprise 3 municipalities, 3 town panchayats, and 11 rural panchayats are served from various other surface and ground water sources. The city also has existing water treatment plant (WTP) of capacity 118.6 MLD commissioned in 1995. The current water supply from various sources is assessed at 192 MLD while the total water supply demand including the transmission losses for the intermediate (2034, population-1.92 million) and ultimate (2049, population-2.28 million) year is estimated at 317 MLD and 374 MLD respectively. To meet the demand gap of 125 MLD for the intermediate year 2034, under ADB funded TNUFIP, the following components are proposed under Madurai Water Supply System Subproject:

- (i) **Package 1:** (i) Construction of check dam, intake well, and head works at Mullai Periyar River at Lower Camp to draw 130 MLD of raw water; and (ii) Laying of 95.74 km of raw water main of 1,100 mm dia. from head works to proposed WTP at Pannaipatty.

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<sup>1</sup> Government of Tamil Nadu. 2012 [Vision 2023](#). Chennai.

<sup>2</sup> Government of India. 2015. [Mission Statement and Guidelines, Atal Mission for Rejuvenation and Urban Transformation \(AMRUT\)](#). New Delhi.

<sup>3</sup> Government of India. 2015. [Smart Cities - Mission Statement and Guidelines](#). New Delhi.

- (ii) **Package 2:** Construction of 130 MLD new WTP within the premises of existing WTP at Pannaipatty.
- (iii) **Package 3:** (i) Laying of 54.35 km of clear water main of 1,400 mm dia. from proposed WTP at Pannaipatty to Madurai city; (ii) Laying of 10.49 km of main feeder; (iii) Laying of 95 km of feeder main network to various OHTs; and (iv) Construction of 37 new OHTs; and
- (iv) **Package 4:** Laying of 200 km of new distribution network.

3. This draft resettlement plan is prepared for proposed water supply subproject in Madurai under Tranche 2 of ADB financed TNUFIP and is in line with the resettlement framework prepared for the implementation of social safeguards under TNUFIP.

## II. SCOPE OF LAND ACQUISITION AND RESETTLEMENT

4. The subproject will not have significant involuntary resettlement impacts as it will not significantly affect 200 or more people either by physical displacement or loss of 10% or more of their productive assets. Consistent with the subproject selection criteria, the proposed subproject avoids/minimizes involuntary resettlement impacts. Construction of proposed head works, overhead tanks (OHTs), WTP will be either accommodated within the existing facilities' premises or on vacant government lands. Private land identified for the construction of head works and intake well at Mullai Periyar River, Lower Camp, is proposed to be obtained through negotiated settlement with third party certification. Permanent impacts (structure loss) are also envisaged for construction of OHT-32 and OHT-35. Temporary income loss<sup>4</sup> is envisaged for roadside mobile vendors during pipelaying. Package-wise land acquisition and resettlement impacts are presented as under and briefed in Table 1 and Table 2.

5. To minimize construction impacts, wherever possible, work will be executed during early hours of the day in order to avoid inconveniences to the public as well as traders and vendors. All safety norms would strictly be adhered to depending on the magnitude of work and the sensitivity of the location. Appendix 2 provides sample impact minimization measures template to be followed for pipe laying.<sup>5</sup> The program implementation unit (PIU) will also ensure that all the necessary rules related to safety and security of the public and residents are followed by the contractor. The actual dates of construction schedule with respect to peak business hours, festival time, and special business days will be discussed with vendors, squatters, market committee members, and residents, and accordingly construction activities will be planned. After laying pipes the lane/road will be restored to its original condition (including bitumen, cement concrete and cement concrete interlocking tiles as applicable).

6. In line with ADB Safeguard Policy Statement (SPS) 2009, and based on the identified impacts, the Madurai subproject can be classified as involuntary resettlement category B. resettlement plan preparation is required for Madurai subproject components in line with the ADB SPS, 2009 and resettlement framework prepared for TNUFIP. This document is the draft resettlement plan for Madurai Water Supply System (WSS).

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<sup>4</sup> Temporary disruptions in continuing economic activity for 6-15 days each, are anticipated during laying of pipelines. The duration of impact is expected to vary, depending on the diameter of the pipe. All the temporarily affected persons can continue their businesses at same location once the construction work is completed.

<sup>5</sup> This will be updated based on the final / revised project scope and detailed drawings before project implementation.

7. The draft resettlement plan will be updated based on detailed measurement surveys that will include full census of affected peoples and an inventory of all lost assets. Finalization, review and concurrence of resettlement plan by ADB is required prior of award of civil contracts.<sup>6</sup> A 100% census and socioeconomic surveys will be undertaken to register and document the status of affected people within subproject impact area. Any temporary or permanent impacts or costs incurred by affected persons will be identified through the detailed measurement survey (DMS) and compensated at replacement cost, in line with the principles of the resettlement framework.

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<sup>6</sup> Detailed measurement survey will be jointly conducted by safeguards personnel of program implementation unit, consultants and contractors prior to implementation at each site/stretch of alignment. resettlement plan for different sites/stretches will be prepared and submitted to ADB for approval; prior payment of compensation to permanent and/or temporarily impacted persons is mandatory before start of civil work at each site/alignment stretch. PIU, CMSC and contractor will be responsible for conduct of DMS and CMSC based on final detailed design and will update resettlement plan prior to implementation.

Table 1: Summary of Land Acquisition and Resettlement Impacts, Madurai Water Supply System

	Proposed Subprojects	Land Requirement (Acres)			Private Land (Nos.)		Structure Loss-Residential (Nos.)			Structure Loss-Commercial (Nos.)			Temporary Income Loss (Nos.)	
		Govt.	Private	Total	Affected Persons	Vul Affected Persons	Stru.	Affected Persons	Vul Affected Persons	Stru.	Affected Persons	Vul Affected Persons	Affected Persons	Vul Affected Persons
<b>1</b>	<b>Package 1</b>													
i	Head works	-	1.93	1.93	1	1	-	-	-	-	-	-	-	-
ii	Raw water main <sup>a/</sup>	-	-	-	-	-	-	-	-	-	-	-	42	22
	<b>Sub Total P-1</b>	<b>-</b>	<b>1.93</b>	<b>1.93</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>42</b>	<b>22</b>
<b>2</b>	<b>Package 2</b>													
i	Water treatment plant	5.00	-	5.00	-	-	-	-	-	-	-	-	-	-
	<b>Sub Total P-2</b>	<b>5.00</b>	<b>-</b>	<b>5.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>3</b>	<b>Package 3</b>													
i	Clear water main <sup>b/</sup>	-	-	-	-	-	-	-	-	-	-	-	23	7
ii	Main feeder <sup>c/</sup>	-	-	-	-	-	-	-	-	-	-	-	35	19
ii	Feeder network <sup>d/</sup>	-	-	-	-	-	-	-	-	-	-	-	930	517
i	37 overhead tanks	5.16	-	5.16	-	-	1	3	3	3	12	12	-	-
v	<b>Sub Total P-3</b>	<b>5.16</b>	<b>-</b>	<b>5.16</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>12</b>	<b>12</b>	<b>988</b>	<b>543</b>
<b>4</b>	<b>Package 4</b>													
i	Distribution network <sup>e/</sup>	-	-	-	-	-	-	-	-	-	-	-	1,480	789
	<b>Sub Total P-4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,480</b>	<b>789</b>
	<b>Grand Total</b>	<b>10.16</b>	<b>1.93</b>	<b>12.09</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>12</b>	<b>12</b>	<b>2,510</b>	<b>1,354</b>
	Permanent Impacts	-	1.93	-	1	1	1	3	3	3	12	12	-	-
	Temporary Impacts	-	-	-	-	-	-	-	-	-	-	-	2,510	1,354

a/, b/, c/ - Impacts are based on the resettlement survey carried out along the entire alignment

d/, e/ - Impacts are based on sample resettlement survey carried out for three stretches of 500m each in high density, medium density and low density areas.

Source: Resettlement Surveys and Madurai Corporation.

**Table 2: Proposed Subproject Components and Land Acquisition and Resettlement Impacts in Madurai Water Supply System**

Sl. No.	Proposed Subproject Components	Scope of Land Acquisition and Rehabilitation and Resettlement	Summary
<b>A</b>	<b>Package-1: Abstraction of Water, Transmission of Raw Water</b>		
1	Construction of check dam, intake well and head works	Raw water will be abstracted from Mullai Periyar River at Lower Camp and will require approximately 1.93 acres of private land for the construction of check dam, intake well and head works. The identified land belongs to Mrs. C. Saroja (survey numbers 2400/2a and 2301/1-Patta No. 1544) and is located in Melagudalur South Lower Camp, Uthamapalayam Taluk in Theni district. The land is not under cultivation from many years or have any structures as it frequently gets submerged under water. Private land (1.93 acres) to be obtained through negotiated settlement and donation.	Private land (1.93 acres) to be obtained through negotiated settlement and donation.
2	Laying of 1,100 millimeters (mm) dia of raw water pumping main of 89 kilometers (km) from head works at Mullai Periyar River to proposed water treatment plant (WTP) at Pannaipatty	Raw water main will be laid along various roads (national/state highways, district, corporation roads etc.) within the available right-of-way (ROW). Temporary impacts on movable businesses within ROW are envisaged on 42 affected persons. Permanent impacts on roadside structure/properties will be avoided by cutting the black top portion of the road, if adequate ROW is not available.	Temporary economic impacts to 42 vendors
<b>B</b>	<b>Package-2: Construction of New Water Treatment Plant (WTP)</b>		
1	New WTP of 130 million liters per day (MLD)	Proposed WTP of 130 MLD will be accommodated within the existing WTP premises and there are no land acquisition and involuntary resettlement impacts envisaged. The land identified within the existing municipal premises is free of any encumbrances, legal cases etc. and has been in possession of Madurai Corporation from 1988. (Survey numbers 406/2B1, 407/1, 407/2A1, 408/1A, 408/1B, 409, 410/1A, 410/1B, 411/1A, 411/1B, 412/1, 412/2, 413, 415/1A2, 415/1B, and 415/2A). New WTP will require a total of 5 acres and adequate land is available within the existing premises. A due diligence report (DDR) was prepared for WTP and is attached as Appendix 9.	No involuntary resettlement/ indigenous people impacts anticipated
<b>C</b>	<b>Package-3: Laying of Clear Water Main, Feeder Main, Feeder Network and Construction of OHTs</b>		
1	Laying of 1,1400 mm dia clear water pumping main of 54.44 km. from WTP at Pannaipatty to Madurai city	Clear water main will be laid along various roads under ownership of national/state highways, district, corporation etc. within the available ROW. Temporary impacts on movable businesses within ROW are envisaged on 23 affected persons. Permanent impacts on roadside structure/properties will be avoided by cutting the black top portion of the road, if adequate ROW is not available.	Temporary economic impacts to 23 vendors
2	Laying of Feeder Main of 10.49 km.	Feeder main will be laid along two major roads; bypass road and Kulamangalam road; within the available right-of-way (ROW). Both the roads are under ownership of Madurai Corporation. Temporary impacts on movable businesses within ROW are envisaged on 35 affected persons.	Temporary economic impacts to 35 vendors

Sl. No.	Proposed Subproject Components	Scope of Land Acquisition and Rehabilitation and Resettlement	Summary
3	Laying of Feeder Network of 95 kms. to various overhead tanks (OHTs)	Feeder network will be laid along city roads belonging to Madurai Corporation and within the available ROW. Sample resettlement surveys were conducted in three representative areas (high, medium and low density). Based on the sample survey, temporary impacts on movable businesses within ROW are projected on 930 affected persons.	Temporary economic impacts to 930 vendors
4	Construction of 37 OHTs	<p>A total of 37 new OHTs are proposed at various locations. All the identified sites are under ownership of Madurai Corporation and falls under categories such as old compost yards, lorry stands/parking lots, common lands within residential areas, within premises of existing OHTs/water utilities, parks and playgrounds. Sites for all OHTs (Except OHT 32 and 35) are free of any encumbrances and there are no involuntary resettlement impacts.</p> <p>Construction of OHT-32 and OHT-35 envisages permanent impacts. At OHT-32 site, bus stand cum commercial building needs to be demolished. The bus stand is currently not in use and two shops at this building are given on rent. In the remaining space of bus stand, one person has encroached and running his ironing business. At OHT-35 a small residential structure (semi-pucca) was demolished in anticipation of ADB project. Details of all OHT sites are provided in Appendix 3.</p> <p>In addition to the above, following were reported as OHT site related concerns during consultations. These will be addressed as the part of the EMP, from actual project budget by contractor, or by corporation through their available funds:</p> <ol style="list-style-type: none"> <li>1. OHT 14 and 15 at TNV Nagar Park: siting of two OHTs as discussed during consultations without disturbing public toilet and already developed park facilities. Proper fencing of OHT area.</li> <li>2. OHT 19 at Valai Thoppu: Cleaning of the entire site properly as it was used for dumping solid waste (and not just the area required for OHT). Development of park within the remaining area.</li> <li>3. OHT 25 at Semparuthi Nagar: Development of park within the balance land..</li> <li>4. OHT 35: Island Nagar: Leaving 2 m access road from the main road till temple to ensure access.</li> <li>5. OHT 37 at Poriyalar Nagar: Planning of tall trees as a part of buffer zone to ensure park side house have better view of OHT site.</li> <li>6. OHT 42 at Gurunathar Koil: Locating new OHT adjacent to old OHT and fencing the entire area with proper compound wall to avoid tresspassing.</li> <li>7. OHT 48 at Harveepatii: Proper fencing of OHT premises with pucca compound wall to avoid kids climbing the OHT staircases.</li> </ol>	<p>Permanent impacts on 3 affected persons due to demolition of residential structure within identified OHT-35 land.</p> <p>Permanent impacts on 12 Affected persons due to proposed demolition of bus stop cum commercial complex at identified site of OHT-32.</p>

Sl. No.	Proposed Subproject Components	Scope of Land Acquisition and Rehabilitation and Resettlement	Summary
		Balaji Nagar: Proper fencing of OHT premises and providing common water tap for park. Buffer zones, plantation of trees etc. are covered under EMP budget while construction of compound walls is accommodated in the actual project budget. Development of parks and removal of solid waste to be undertaken by the Corporation.	
<b>D</b>	<b>Package-4: Laying of Distribution Network</b>		
1	Laying of Distribution Network of 200 kms.	Distribution network will be laid along city roads belonging to Madurai Corporation and within the available ROW. Sample resettlement surveys were conducted in three representative areas (high, medium and low density). Based on the sample survey, temporary impacts on movable businesses within ROW are projected on 1,480 affected persons.	Temporary economic impacts to 1,480 vendors

Source: Madurai City Corporation, WSS DPR and site visits.

### III. SOCIOECONOMIC INFORMATION AND PROFILE

#### A. Package 1: Abstraction and Transmission of Raw Water

##### 1. Construction of Check Dam, Intake Well, and Head Works

8. A check dam to head up the river water level up to 2.5 meter (m) is proposed to draw around 130 MLD of raw water from Mullai Periyar River at Lower Camp. This will be constructed in the immediate downstream of 18<sup>th</sup> Canal Scheme and permission to draw water is obtained from Water Resources Department (WRD) (Appendix 5). Other components proposed at head works include four intake wells, one collection well, protection wall around the site, and a pucca approach road to the head works site. All the proposed sub-components will be constructed within the land that belongs to irrigation department, government of Tamil Nadu. Only around 1.93 acres of land area belongs to private landowner and is proposed to be acquired through negotiated land purchase and land donation.




9. Initially it was proposed to obtain the private land by Madurai Corporation directly from the landowner through negotiated land purchase and various consultations were held with the landowner to fix the land rate and understand concerns. A detailed socio-economic survey was also conducted with the landowner C. Saroja on 15 October 2018. Survey revealed that the proposed land for acquisition falls under survey numbers 2400/2a and 2301/1-Patta No. 1544 and is located in Melagudalur South Lower Camp, Uthamapalayam Taluk in Theni district. The landowner indicated that she has around three acres of land of which only 1.93 acres is proposed for acquisition. The land is in possession of the landowner from more than 35 years and is not under cultivation as gets submerged frequently due to change in river flow. C. Saroja is an elderly (65 years old), widow belonging to other backward class category having a pension (₹13,000 per month) as the only source of income. She has her own individual house within 1 km from the intake site at Lower Camp. C. She has two daughters who are married; one stays at Chennai and another at Tiruppur. Since the land has remained unused and unproductive, its sale is expected to provide greater financial security to the landowner.

10. During various consultations with the Madurai Corporation and project preparatory technical assistance team members, C. Saroja indicated willingness to sell the land for the proposed project. She also agreed to the per acre rate at ₹850,000 totaling to ₹1,640,500 for 1.93 acres and expressed during consultations that she was offered an adequate and fair market price for the land and/or other assets. Later, however it was decided that Confederation of Indian Industries (CII) will acquire the land and hand it over to Madurai Corporation as a donation as the money required was not readily available with the corporation. The landowner willingly agreed to this proposal and CII has already paid ₹100,000 to her on 27 February 2019 as an advance. It was indicated that the remaining amount will be paid within 15 days and the process is underway.<sup>7</sup> The details of this agreement are provided in Appendix 5. Registration in the name of CII and further land donation from CII to Madurai Corporation is in process<sup>8</sup>. Third Party certification for the negotiated sale and land donation is also in the process.

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<sup>7</sup> Refer Appendix 8 for TOR of independent third party for negotiated purchase or voluntary land donation. The third party shall be a representative of the community (for example, a senior government officer, a leader of the community, a representative of a local NGO/CBO, principal of a local college/university professor), without any direct interest in the negotiation process, who is acceptable to each of the concerned parties (ULB and concerned land owner/donor).

<sup>8</sup> Negotiation process will follow the basic principles stated in SPS, 2009 that underlines that in case of failure of negotiation, expropriation by use of eminent domain would not occur. In case of failure of negotiation, a different

C. Saroja's son-in-law	C. Saroja-Landowner	C. Saroja's son-in-law
		
Mrs. Saroja's son-in law is helping her to coordinate various activities related to sale of land		

## 2. Laying of Raw Water Main

11. It is proposed to lay 89 km of raw water main of 1,100 mm dia. from head works to proposed WTP at Pannaipatty. Raw water main will be laid along various types of roads including national highway, state highway, district roads and will cross river, drain/canal crossings at few places in its entire alignment. Details of chainage wise land ownership of raw water main alignment, bypass sections etc. are given in Appendix 5.

12. Potential temporary resettlement impacts are identified due to laying of raw water main (Table 1). A detailed survey was conducted along the entire length in October 2018 followed by joint inspection visit in December 2018 involving officials from corporation, Tamil Nadu Urban Flagship Investment Program (TNUFIP), etc., to confirm the impacts. Surveys/visits indicated the possibility of permanent and temporary impacts on roadside structures and common property resources due to laying of raw water main. However, follow up meetings with the commissioner, Madurai Corporation confirmed that no permanent/semi-permanent structures (full/part, owned/rented/encroached) will be demolished for laying of raw water main. In alignment stretches where such structures are present, the pipe will be laid by cutting the black top portion of the road (Appendix 5), to avoid impact. If such realignment is not possible, detailed socio-economic survey will be conducted to assess the inventory of losses and associated impacts. This will be carried out before the start of the civil works. The updated draft resettlement plan will be submitted to ADB for approval prior to start of construction work.

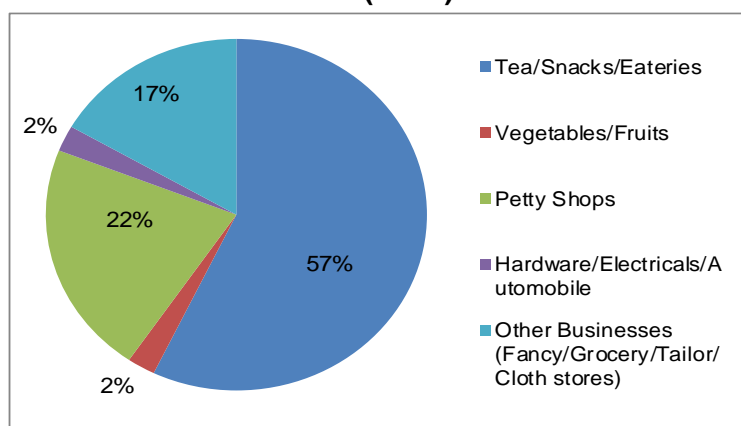
13. The business survey carried out in October 2018 identified a total of 42 affected persons whose business will be temporarily affected during raw water pipe laying, as they carry their activities within/very close to right-of-way. These businesses are mainly (57%) tea/snacks/eateries. Of the remaining, close to 22% have petty businesses, 17% have other businesses like grocery shops, tailoring, saloon etc., 2% sell vegetables and fruits, and around 2% have hardware businesses. Since these businesses are mainly along the highways, majority of them do not have mobile structures. Only a small percentage of affected persons (5%) use mobile carts and an additional 5% operate from kiosks that are not on wheels but can be moved. A majority of the businesses (62%) have extended their activities within ROW with temporary

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design or a different site can be selected for the project based on technical feasibility, where land is available for sale, where negotiated settlement will be tried again. The socioeconomic status of the land seller will be monitored over the project period to ensure that the same or better income or livelihood status is maintained, in line with Principle 6 of SR II. Consultations with the landowner indicate that he was well informed about the market price of land and satisfied with the final agreed/negotiated price. Third party verification and certification of the overall negotiated settlement process shall be undertaken and included in the updated resettlement plan. Further, meaningful consultations shall be conducted and minuted by the third party, to ensure that all the requirements of ADB SPS SR II pertaining to negotiated settlement are met.

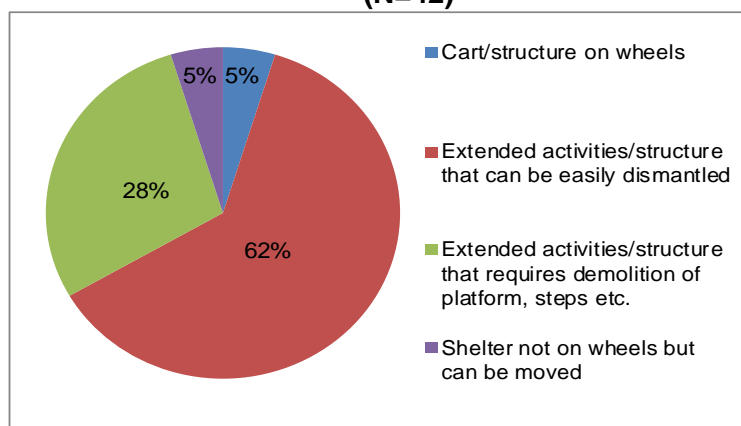
arrangements that can be easily dismantled and reconstructed again. Around 28% have extended their structures that will require demolition (such as steps, small platforms etc.) during construction. Demolition of these minor extensions will not affect the main structure, and access to the main structure will be ensured by the contractor. An indicative budget is provided in the resettlement plan for restoration of the affected minor structures. The updated resettlement plan will include the estimated amount required for restoration of each minor structure that will be paid to affected persons as a part of their total compensation package and will be based on the actual estimated cost of affected extension. Affected people can continue their businesses at their original place once the construction work is completed and loss of income for the period of disruption will be compensated in line with the resettlement framework.

**Figure 1: Type of Business  
(N=42)**



Source: Business survey; Raw water main survey, October 2018.

**Figure 2: Type of Structure  
(N=42)**

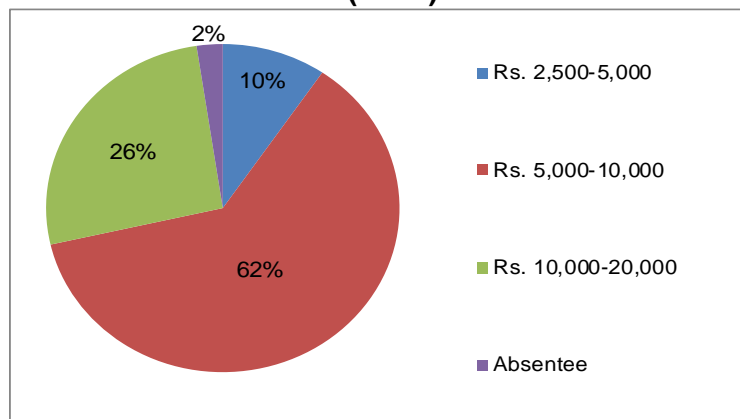


Source: Business survey; Raw water main survey, October 2018.

14. A majority of the affected structures (90%) are non-titleholders. Close to 83% structures are operated by owners while others are given on rent. About 40% of the affected persons indicated that they have been conducting their business at the present location for more than 10 years. An additional 24% indicated that they have been present at the same location for more than five years while the remaining 33% said they had moved to their respective places in the last 1-5 years.

15. In terms of the socioeconomic profile, around 10% of the potentially affected persons earn monthly income between ₹2,500–₹5,000. An additional 62% earn between ₹5,000–₹10,000 while around 26% earn income between ₹10,000–₹20,000. Average monthly income works out to ₹9,683 with minimum ₹4,000 and maximum ₹20,000.<sup>9</sup> Considering work week of 6 days (26 days per month), average daily income is estimated at ₹173 for the four below poverty line (BPL) affected persons and ₹372 for all affected persons. The overall average is lower than the notified minimum wage rate for unskilled category, at ₹643 for all corporations in the state. A total of 93% of the affected persons are the single breadwinners in their respective families.

**Figure 3: Monthly Household Income  
(N=42)**



Source: Business survey; Raw water main survey, October 2018.

16. Among all business owners, 33% were found to be elderly while the remaining were between 27–60 years of age. Only 2% are educated up to graduation level while among the remaining, 45% were illiterate, 5% had basic reading knowledge, 12% had completed primary level (4<sup>th</sup> grade), 31% had studied up to 10<sup>th</sup> grade, while 3% had completed higher secondary schooling. Of the temporarily affected persons, around 19% affected persons belong to scheduled caste category while the remaining belong to other backward classes (OBC). No scheduled tribes were identified among the temporarily affected persons during resettlement surveys. Around 14% of the affected person households have a woman as sole earner or chief breadwinner. Total vulnerable affected persons comprise 52% of the total surveyed affected persons and comprise below the poverty line, elderly (age above 60), scheduled castes and women headed households. Appendix 1 provides summary of survey.

## **B. Package 2: Construction of New Water Treatment Plant**

17. In February 2019, a due diligence report (DDR) was separately prepared for the proposed WTP based on the detail design report prepared by the Madurai Corporation. The DDR was approved by ADB and this section comprise key sections from the approved DDR, presented as Appendix 9 to this resettlement plan.

<sup>9</sup> As per data published by the Planning Commission, Government of India, in 2011-2012, poverty line in urban Tamil Nadu was ₹993 per capita per month. On adjusting for inflation, this works out to ₹1,406 per capita per month in 2017-2018 or a monthly household income of ₹5,540 for BPL households, considering the average urban household size in the state per Census 2011. Hence, a majority of the identified potentially temporarily impacted persons are estimated below poverty line, based on limited data available.

18. The proposed WTP will be constructed within existing WTP premises at Pannaipatti village located approximately 60 km from the city. The total land extent of 21.5 acres was acquired by the Madurai Corporation in 1988 from private landowners and existing WTP of 118.6 MLD was commissioned in 1995. As per the land records (Appendix 6), the land is under survey numbers 406/2B1, 407/1, 407/2A1, 408/1A, 408/1B, 409, 410/1A, 410/1B, 411/1A, 411/1B, 412/1, 412/2, 413, 415/1A2, 415/1B, and 415/2A. From 1988, the land is under possession of Madurai Corporation (refer encumbrance certificate) and there are no pending litigation cases for the land. Along with the encumbrance certificate, Madurai Corporation has also issued a certificate which indicates that the proposed land is under possession of Madura Corporation and there are no legal issues. The existing WTP occupies around 9.50 acres of land which includes WTP facilities in addition to laboratory, office complex and staff quarters. An additional 5 acres will be required for construction of proposed WTP while balance 7 acres will still be available for further expansion. The required land for proposed WTP is available within the premises and is currently covered with plantations/fruit trees like mango which are planted by municipal corporation itself. The site is not used as a grazing ground for household cattle or a place to collect firewood or fodder, hence no livelihood impacts are assessed. The existing premises are well protected from all sides with permanent compound wall. The site is surrounded by agricultural lands on all sides while the Periyar main irrigation canal runs along the south-east side. There are no habitations in the immediate surroundings of the WTP site.



19. Proposed WTP of 130 MLD will be accommodated within the existing WTP premises and no land acquisition and involuntary resettlement impacts are envisaged. The land identified within the existing municipal premises is free of any encumbrances, legal cases etc. and has been in possession of Madurai Corporation from 1988. The site has proper road access and there is adequate buffer space in the surrounding area to accommodate construction related activities. No impacts are envisaged on the surrounding lands/canal due to construction and operation and maintenance activities.

### **C. Package 3: Laying of Clear Water Main, Feeder Main, Feeder Network, and Construction of Overhead Tanks**

#### **1. Laying of Clear Water Main**

20. It is proposed to lay 54.44 km of clear water main of 1,400 mm dia. from proposed WTP at Pannaipatty to Madurai City. Clear water main will be laid along various types of roads including national highway, state highway, district roads and will cross river, drain/canal, railway crossings at few places in its entire alignment. Details of chainage wise land ownership of clear water main is given in Appendix 5.

21. Potential temporary resettlement impacts are identified due to laying of clear water main (Table 1). A detailed survey was conducted along the entire length in October 2018 followed by

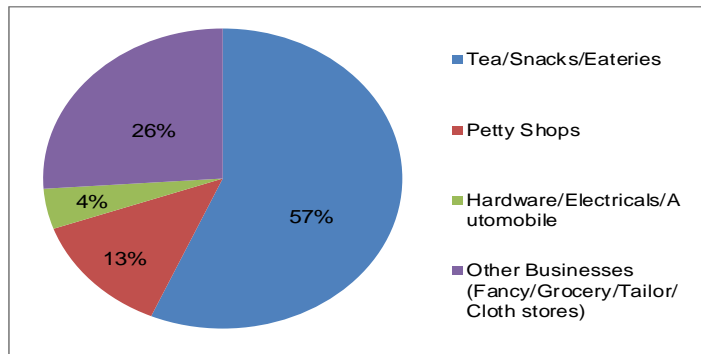
joint inspection visit in December 2018 involving officials from corporation, TNUIFSL etc. to confirm the impacts. Field visits indicated the possibility of permanent and temporary impacts on roadside structures and common property resources due to laying of clear water main. However, follow up meetings with the commissioner, Madurai Corporation confirmed that no permanent/semi-permanent structures (full/part, owned/rented/encroached) will be demolished for laying of clear water main. Where such impacts are likely, the pipe will be laid by cutting the black top portion of the road (Appendix 5). If such realignment is not possible, detailed socio-economic survey will be conducted to assess the inventory of losses and associated impacts. This will be carried out before the start of the civil works and the draft resettlement plan will be updated accordingly.

22. Survey conducted in October 2018 identified a total of 23 affected persons whose business will be temporarily affected during clear water pipe laying, as they carry out their activities within/very close to ROW. These businesses are mainly (57%) tea/snacks/eateries. Of the remaining, close to 13% have petty businesses, 26% have other businesses like grocery shops, tailoring, saloon etc., and around 4% have hardware businesses. None of the affected structures are mobile structures. A majority of the businesses (61%) have extended their activities within ROW with temporary arrangements that can be easily dismantled and reconstructed again while the remaining 39% have extended their structures that will require demolition (such as steps, small platforms etc.). Demolition of these smaller extensions will not affect the main structure, and access to the primary/main structure will be ensured by the contractor. An indicative budget is provided in this draft resettlement plan for restoration, which will be paid to affected persons facing loss of minor extensions. The compensation package in the updated resettlement plan for each such affected person will be based on estimation of on the actual estimated cost of the affected extension, based on the detailed measurement survey. Affected people can continue their businesses at their original place once the construction work is completed and loss of income for the period of disruption will be compensated in line with the resettlement framework.

23. A majority of the affected structures (74%) are non-titleholders. A close to 83% structures are operated by owners while others are given on rent. A close to 52% of the affected persons indicated that they have been conducting their business at the present location for more than 10 years. An additional 13% indicated that they have been present at a fixed location for more than five years while the remaining 35% said they had moved to their respective places in the last 1-5 years.

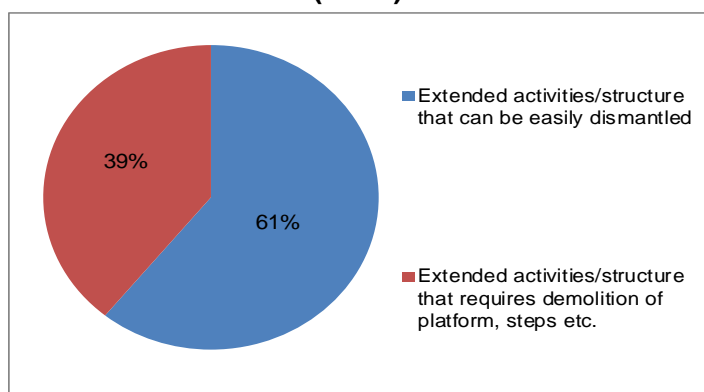
24. In terms of the socioeconomic profile, around 13% of the potentially affected persons earn monthly income less than ₹5,000. An additional 26% earn between ₹5,000–₹10,000 while around 61% earn income between ₹10,000–₹20,000. Average monthly income works out to ₹9,683 with minimum ₹4,000 and maximum ₹20,000. Considering work week of six days (26 days per month), average daily income is estimated at ₹115 for the BPL affected persons and ₹487 for all affected persons. The overall average is lower than the notified minimum wage rate for unskilled category, at ₹643 for all corporations in the state. A total of 83% of the affected persons are the single breadwinners in their respective families.

**Figure 4: Type of Business  
(N=23)**



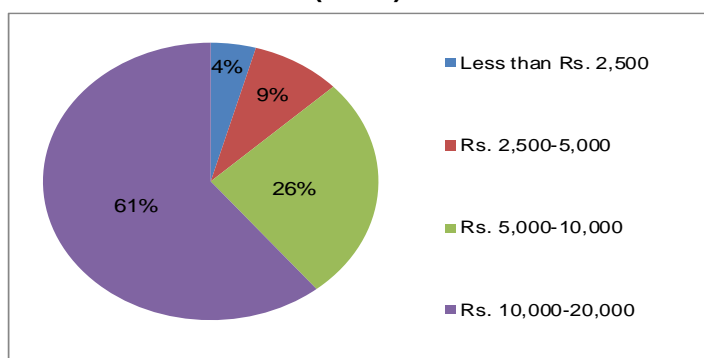
Source: Business survey; Clear water main survey, October 2018.

**Figure 5: Types of Structures  
(N=23)**



Source: Business survey; Clear water main survey, October 2018.

**Figure 6: Monthly Household Income  
(N=23)**



Source: Business survey; Clear water main survey, October 2018.

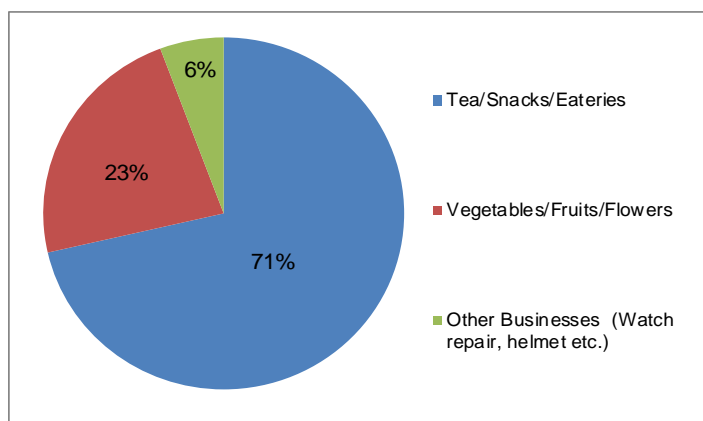
25. Among all business owners, 9% were found to be elderly while the remaining were between 27–60 years of age. Only 4% are educated up to graduation level while among the remaining, 5% were illiterate, 4% had basic reading knowledge, 18% had completed primary level (4<sup>th</sup> grade), 65% had studied up to 10<sup>th</sup> grade, while 4% had completed higher secondary schooling. Of the temporarily affected persons, around 4% affected persons belong to scheduled caste category while the remaining belong to OBC. No scheduled tribes were identified among the temporarily affected persons during resettlement surveys. Around 4% of the affected person

households have a woman as sole earner or chief breadwinner. Total vulnerable affected persons comprise 35% of the total surveyed affected persons and comprise below poverty line, elderly (age above 60), scheduled castes and women headed households. Appendix 1 provides a summary of the survey.

## 2. Laying of Feeder Main

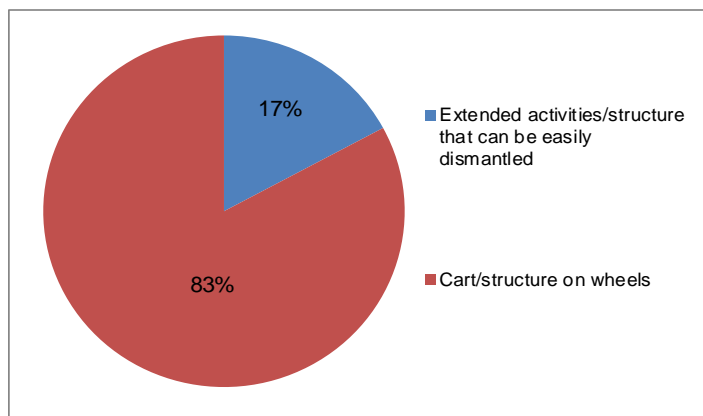
26. A total of 10.49 km of main feeder pipeline will be laid along two major roads; bypass and Kulamangalam main roads. A detailed survey was conducted along the entire length in February 2019 to identify potential temporary resettlement impacts due to laying of feeder main. Survey identified a total of 35 affected persons whose business will be temporarily affected during clear water pipe laying, as they carry their activities within/very close to ROW. These businesses are mainly (71%) tea/snacks/eateries. Of the remaining, close to 23% sell vegetables, fruits, flowers etc. and the others (6%) have petty businesses. A majority of the businesses (83%) are movable (cart on wheels) while the remaining 17% have extended their activities within ROW with temporary arrangements that can be easily dismantled and reconstructed again. Affected people can continue their businesses at their original place once the construction work is completed and loss of income for the period of disruption will be compensated in line with the resettlement framework.

**Figure 7: Type of Business  
(N=35)**



Source: Business survey; Feeder Main survey, February 2019.

**Figure 8: Type of Structure  
(N=35)**

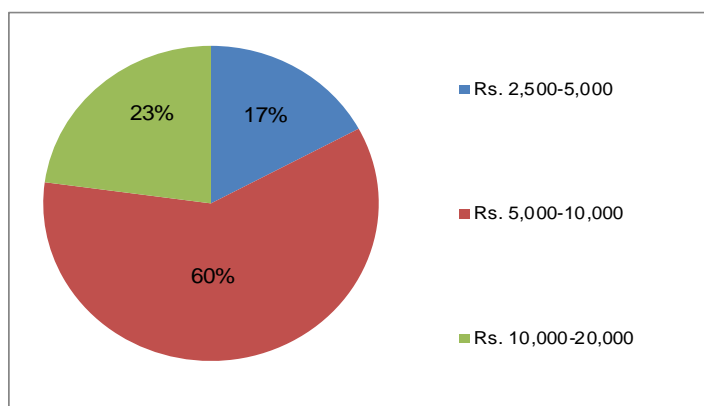


Source: Business survey; Feeder Main survey, February 2019.

27. All the affected businesses are non-titleholders and are operated by owners. Close to 31% of the affected persons indicated that they have been conducting their business at the present location for more than 10 years. An additional 20% indicated that they have been present at a fixed location for more than five years while the remaining 49% said they had moved to their respective places in the last 1–5 years.

28. In terms of the socioeconomic profile, around 17% of the potentially affected persons earn monthly income less than ₹5,000. An additional 60% earn between ₹5,000–₹10,000 while around 23% earn income between ₹10,000–₹20,000. Average monthly income works out to ₹8,171 with minimum ₹4,000 and maximum ₹15,000.<sup>10</sup> Considering work week of six days (26 days per month), average daily income is estimated at ₹115 for the four BPL affected persons and ₹314 for all affected persons. The overall average is lower than the notified minimum wage rate for unskilled category, at ₹643 for all corporations in the state. A total of 46% of the affected persons are the single breadwinners in their respective families.

**Figure 9: Monthly Household Income  
(N=35)**



Source: Business survey; Feeder Main survey, February 2019.

29. Among all business owners, 14% were found to be elderly while the remaining were between 22–60 years of age. Only 6% are educated up to graduation level while among the remaining, 37% were illiterate, 9% had basic reading knowledge, 14% had completed primary level (4<sup>th</sup> grade), 29% had studied up to 10<sup>th</sup> grade, while 6% had completed higher secondary schooling. Of the temporarily affected persons, around 34% affected persons belong to scheduled caste category while the remaining belong to OBC. No scheduled tribes were identified among the temporarily affected persons during resettlement surveys. Around 11% of the affected person households have a woman as sole earner or chief breadwinner. Total vulnerable affected persons comprise 54% of the total surveyed affected persons and comprise below the poverty line, elderly (age above 60), scheduled castes and women headed households. Appendix 1 provides summary of survey.

<sup>10</sup> As per data published by the Planning Commission, Government of India, in 2011-2012, poverty line in urban Tamil Nadu was ₹993 per capita per month. On adjusting for inflation, this works out to ₹1,406 per capita per month in 2017-18 or a monthly household income of ₹5,540 for BPL households, considering the average urban household size in the state per Census 2011. Hence, a majority of the identified potentially temporarily impacted persons are estimated below poverty line, based on limited data available.

### 3. Laying of Feeder Network to Various Overhead Tanks

30. A total of 95 km of feeder network is proposed to carry clear water to proposed 37 OHTs. To identify potentially affected persons, a sample survey was carried out in May 2019 at three representative stretches of 500 m each in high density, medium density, and low-density areas. The survey identified a total of 18 affected persons in representative areas whose business will be temporarily affected during pipe laying, as they carry their activities within/very close to ROW. Based on the total proposed feeder network of 95 km, total number of affected persons are projected at 930. Refer Appendix 4 for the methodology for estimation of temporary impacts.

**Table 3: Feeder Network Resettlement Survey**

Area/Street	Sample Survey	Affected Persons Identified	Total Proposed	Projected Affected Persons
	Km	Nos.	Km	Nos.
High Density <sup>a</sup>	0.50	11	19	418
Medium Density <sup>b</sup>	0.50	3	48	288
Low Density <sup>c</sup>	0.50	4	28	224
<b>Total</b>	<b>1.50</b>	<b>18</b>	<b>95</b>	<b>930</b>

Note: The estimated temporary impacts based on sample surveys and projections in the draft resettlement plan would be replaced by actual figures based on detailed measurement survey and detailed design, and the resettlement budget adjusted accordingly, in the updated resettlement plan. Based on discussions with project preparation engineers, routing of pipelines through high density areas will be avoided as far as possible during detailed design.

<sup>a</sup> Jaihindpuram Main Road

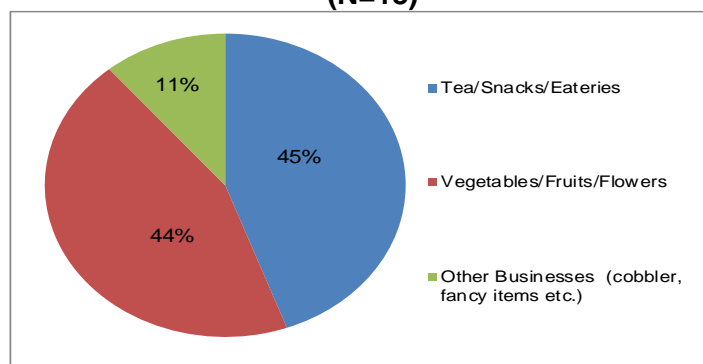
<sup>b</sup> Anna Nagar 2nd Main Road, SMP Colony

<sup>c</sup> Balaji Nagar Main Road.

Source: Transect walk and Sample Surveys of Feeder Network, May 2019.

31. The businesses of potentially affected persons are mainly (45%) tea/snacks/eateries. Of the remaining, close to 44% sell vegetables, fruits, flowers etc. and the others (11%) have petty businesses. Around 50% of the businesses are movable (cart on wheels) while the remaining 50% have extended their activities within ROW with temporary arrangements that can be easily dismantled and reconstructed again. Affected people can continue their businesses at their original place once the construction work is completed and loss of income for the period of disruption will be compensated in line with the resettlement framework.

**Figure 10: Type of Business (N=18)**

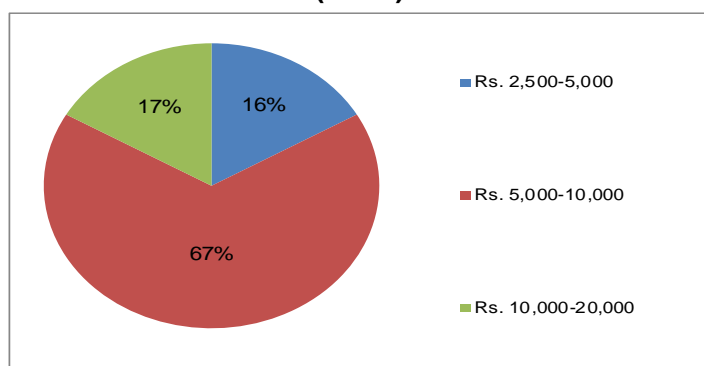


Source: Business survey, transect walk, and Sample Surveys of Feeder Network, May 2019.

32. All the affected businesses are non-titleholders and are operated by owners. A close to 44% of the affected persons indicated that they have been conducting their business at the present location for more than 10 years. An additional 28% indicated that they have been present at a fixed location for more than five years while the remaining 28% said they had moved to their respective places in the last 1–5 years.

33. In terms of the socioeconomic profile, around 17% of the potentially affected persons earn monthly income less than ₹5,000. An additional 67% earn between ₹5,000–₹10,000 while around 16% earn income between ₹10,000–₹20,000. Average monthly income works out to ₹8,111 with minimum ₹3,000 and maximum ₹18,000.<sup>11</sup> Considering work week of 6 days (26 days per month), average daily income is estimated at ₹115 for the four BPL affected persons and ₹312 for all affected persons. The overall average is lower than the notified minimum wage rate for unskilled category, at ₹643 for all corporations in the state. A total of 44% of the affected persons are the single breadwinners in their respective families.

**Figure 11: Monthly Household Income  
(N=18)**



Source: Business survey, transect walk, and Sample Surveys of Feeder Network, May 2019.

34. Among all business owners, 39% were found to be elderly while the remaining were between 29–60 years of age. Among all affected persons, 50% were illiterate, 22% had completed primary level (4<sup>th</sup> grade) while 28% had studied up to 10<sup>th</sup> grade. Of the temporarily affected persons, around 22% affected persons belong to scheduled caste category while the remaining belong to OBC. No scheduled tribes were identified among the temporarily affected persons during resettlement surveys. Around 11% of the affected person households have a woman as sole earner or chief breadwinner. Total vulnerable affected persons comprise 62% of the total surveyed affected persons and comprise below the poverty line, elderly (age above 60), scheduled castes and women headed households. Appendix 1 provides summary of survey.

#### **4. Construction of 37 New Overhead Tanks**

35. A total of 37 OHTs are proposed at various locations (Appendix 3). All the identified sites are under ownership of Madurai Corporation and fall under categories such as old compost yards, lorry stands/parking lots, common lands within residential areas, within premises of existing OHTs/water utilities, parks and playgrounds. Sites for all OHTs (Except OHT 32 and 35) are free

<sup>11</sup> As per data published by the Planning Commission, Government of India, in 2011-2012, poverty line in urban Tamil Nadu was ₹993 per capita per month. On adjusting for inflation, this works out to ₹1,406 per capita per month in 2017-2018 or a monthly household income of ₹5,540 for BPL households, considering the average urban household size in the state per Census 2011. Hence, a majority of the identified potentially temporarily impacted persons are estimated below poverty line, based on limited data available.

of any encumbrances and there are no involuntary resettlement impacts. Consultations were conducted on 13, 14, and 15 February 2019 at critical sites where public opposition was possible. Details of consultations are included in Appendix 3 which focused on resolving site related issues and proper siting of facility within the identified site so as not to disturb the adjoining activities. Construction of OHT-32 and OHT-35 envisages permanent impacts. At OHT-32 site, municipal bus stand cum commercial building needs to be demolished. The bus stand is currently not in use and two shops in this building are given on rent. In the remaining space of the bus stand, one person has encroached and is running his ironing business. At OHT-35, a small residential structure (semi-pucca) was found to have been demolished in anticipation of ADB project.

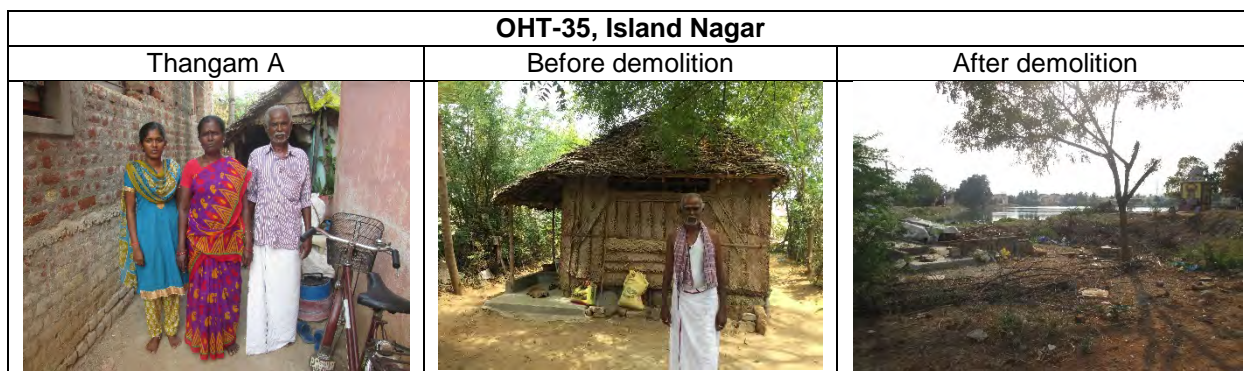
36. **Affected Persons at OHT-32.** A total of three business owners (12 affected persons) are envisaged to suffer permanent impacts due to demolition of bus stop at EB Colony.

- (i) **Arivazhagan P.** He is running his saloon from last six years at identified place, the place was chosen as soon as he shifted to Madurai city. His saloon is well designed, and he has spent close to ₹85,000 for interiors and construction of cement shed in front of the shop. He spends approximately ₹1,000 per month towards electricity bills and other maintenance against earnings of around ₹15,000 per month. Arivazhagan P. is the only earning member in his family of five people. The family belongs to scheduled caste category and the affected business is its only source of income. Though the shop is reportedly on rent, there is no written contract available and no rent is paid to Madurai Corporation.
- (ii) **Palanichamy.** He is running his grocery shop for the past ten years at the identified place, which he chose as soon as he shifted to Madurai city. He has incurred an expense close to ₹100,000 towards various infrastructure, shed etc. till date and spends approximately ₹2,500 per month towards electricity bills and other maintenance. He indicated that his turnover per month is around ₹150,000 of which profit is around ₹15,000–₹20,000. Palanichamy and his wife Premalatha jointly handle this business and it is the only source of income for their family of five people. The family belongs to other backward class category. Though the shop is on rent, there is no written contract available and no rent is paid to Madurai Corporation.
- (iii) **Madasamy P.** From past one year, he has encroached on the open space available on one side of the bus stop with a temporary shed and has placed his moving cart inside. As indicated by him, no expenses are incurred for this arrangement and for maintenance. His wife works intermittently as daily wage labourer, but ironing work is the main source of income for the family. He earns around ₹5,500 per month. The family has only two members and belongs to scheduled caste.

OHT-32, EB Colony Shopping Complex		
Arivazhagan P-Saloon	Palanichamy-Grocery Shop	Madasamy P-Ironing Shop
		



37. **Affected Persons at OHT-35.** One non-titleholder (3 affected persons) is likely to suffer permanent impacts due to demolition of residential structure at Island Nagar. The non-titleholder, Thangam A. was given fishing rights (through renewable contract with public works department) at adjacent lake of site identified for OHT-35, Island nagar. Due to pollution of lake and blocking of incoming channels there is no adequate water in the lake and fishing has been stopped for many years. However, Thangam A. continued occupying the government/corporation site near the lake. As indicated by him he is been at this place from 1989 and over the period has constructed a small semi-pucca makeshift house. He had incurred around ₹20,000 for construction of the 200 ft<sup>2</sup> house. The structure had pucca cement plinth and semi pucca superstructure with thatched roof. The house had basic furniture for living, cooking etc. and affected person had been continuously staying there, even overnight. The residential structure constructed by Thangam A. was demolished 6 months before (December 2019) for clearing the site for construction of OHT-35. Thangam A. has no house of his own and was married twice (the second marriage was after the death of his first wife). He currently stays with his second wife who stays in her father's house. Both Thangam A. and his wife work as daily wage labourers and together earn approximately ₹8,000 per month. They have one dependent daughter and family belongs to scheduled caste category. Thangam A. is also an elderly person.



#### D. Package 4: Laying of Distribution Network

38. To identify potentially affected persons for proposed 200 km of distribution network, a sample survey was carried out in May 2019 at three representative stretches of 500m each in high density, medium density and low-density areas. The survey identified a total of 15 affected persons in representative areas whose business will be temporarily affected during pipe laying, as they carry their activities within/very close to ROW. Based on the total proposed distribution network of 200 km, the total number of affected persons is projected at 1,480. Refer Appendix 4 for the methodology for estimation of temporary impacts.

**Table 4: Distribution Network Resettlement Survey**

	Sample Survey	Affected Persons Identified	Total Proposed	Projected Affected Persons
Area/Street	Km	Nos.	Km	Nos.
High Density <sup>a</sup>	0.50	8	20	320
Medium Density <sup>b</sup>	0.50	6	80	960
Low Density <sup>c</sup>	0.50	1	100	200
<b>Total</b>	<b>1.50</b>	<b>15</b>	<b>200</b>	<b>1,480</b>

Note: The estimated temporary impacts based on sample surveys and projections in the draft resettlement plan would be replaced by actual figures based on detailed measurement survey and detailed design, and the resettlement budget adjusted accordingly, in the updated resettlement plan. Based on discussions with project preparation engineers, routing of pipelines through high density areas will be avoided as far as possible during detailed design.

<sup>a</sup> Munichalai Road.

<sup>b</sup> Jai Nagar Main Road, SMP Colony.

<sup>c</sup> Kenneth Cross Road.

Source: Transect walk and Sample Surveys of Distribution Network, May 2019., May 2019.

39. The businesses of potentially affected persons are mainly (60%) tea/snacks/eateries, while the remaining 40% sell vegetables, fruits etc. Around 47% of the businesses are movable (cart on wheels) while the remaining 53% have extended their activities within ROW with temporary arrangements that can be easily dismantled and reconstructed again. Affected people can continue their businesses at their original place once the construction work is completed and loss of income for the period of disruption will be compensated in line with the resettlement framework.

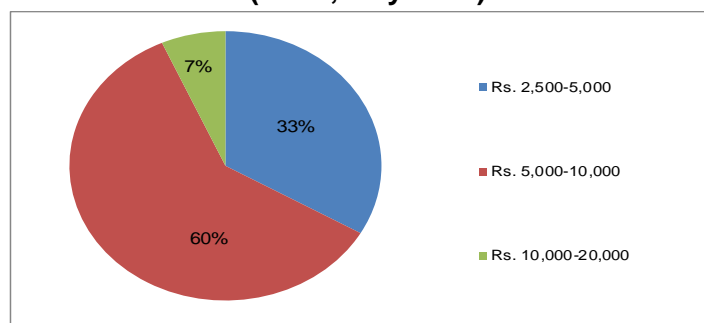
40. All the affected businesses are non-titleholders and are operated by owners. Close to 60% of the affected persons indicated that they have been conducting their business at the present location for more than 10 years. An additional 27% indicated that they have been present at a fixed location for more than five years while the remaining 13% said they had moved to their respective places in the last 1–5 years.

41. In terms of the socioeconomic profile, around 33% of the potentially affected persons earn monthly income less than ₹5,000. An additional 60% earn between ₹5,000–₹10,000 while around 7% earn income between ₹10,000–₹20,000. Average monthly income works out to ₹6,533 with minimum ₹3,000 and maximum ₹15,000.<sup>12</sup> Considering work week of six days (26 days per month), average daily income is estimated at ₹115 for the four BPL affected persons and ₹251

<sup>12</sup> As per data published by the Planning Commission, Government of India, in 2011-2012, poverty line in urban Tamil Nadu was ₹993 per capita per month. On adjusting for inflation, this works out to ₹1,406 per capita per month in 2017-2018 or a monthly household income of ₹5,540 for BPL households, considering the average urban household size in the state per Census 2011. Hence, a majority of the identified potentially temporarily impacted persons are estimated below poverty line, based on limited data available.

for all affected persons. The overall average is lower than the notified minimum wage rate for unskilled category, at ₹643 for all corporations in the state. A total of 73% of the affected persons are the single breadwinners in their respective families.

**Figure 12: Monthly Household Income  
(N=15, May 2019)**



Source: Business survey, transect walk, and sample surveys of distribution network, May 2019.

42. Among all business owners, 53% were found to be elderly while the remaining were between 27–60 years of age. Among all affected persons, 33% were illiterate, 40% had completed primary level (4<sup>th</sup> grade), 20% had studied up to 10<sup>th</sup> grade while 7% had studied up to 12<sup>th</sup> grade. Of the temporarily affected persons, around 33% affected persons belong to scheduled caste category while the remaining belong to OBC. No scheduled tribes were identified among the temporarily affected persons during resettlement surveys. Around 7% of the affected person households have a woman as sole earner or chief breadwinner. Total vulnerable affected persons comprise 59% of the total surveyed affected persons and comprise below the poverty line, elderly (age above 60), scheduled castes and women headed households. Appendix 1 provides summary of survey. Appendix 4 further discusses estimation of temporary impacts.

#### **IV. INFORMATION DISCLOSURE, CONSULTATION, AND PARTICIPATION**

43. Consultation with the primary and secondary stakeholders is an important tool for successful preparation and implementation of resettlement plan. The key stakeholders consulted during sub-project preparation, resettlement plan preparation and implementation, and program implementation include:

- (i) Heads and members of households likely to be affected;
- (ii) program beneficiaries, groups/ clusters of affected persons;
- (iii) Local voluntary organizations and community-based organizations (CBOs);
- (iv) Government agencies and departments; and
- (v) Major project stakeholders, such as women, trader's associations, CBOs, etc.

44. Types of consultations during PPTA stage are presented in Table 5.

- (i) Consultations with potentially affected persons were conducted during transect walks. The concerns expressed mainly included traffic disruptions and temporary impacts on livelihood, including duration of impact (Appendix 3). It was informed to surveyed potential affected persons that appropriate measures will be undertaken during construction to minimize impacts. (including scheduling of activities during the early morning and reducing construction activities during the rush hour). It was also informed that, if despite mitigation measures, there were any temporary impacts on livelihood; these would be compensated in accordance with the resettlement framework policy provisions.

- (ii) Meetings were conducted with owner of the private land (C. Saroja) proposed for acquisition for head works. The meetings mainly focused on arriving appropriate price for the land and inform landowner on procedures followed for negotiated land acquisition and land donation. The landowner through various meetings has agreed to the final negotiated rate and is willing to sell the land through negotiated land purchase to Confederation of Indian Industries (CII) who will later donate the land to Madurai Corporation.
- (iii) Additional consultations were conducted on 13, 14 and 15 February 2019 at critical sites<sup>13</sup> where public opposition was possible. Details of consultations are included in Appendix 3 which focused on resolving site related issues and proper siting of facility within the identified site so as not to disturb the adjoining activities. During consultations, it was informed to affected persons at OHT-32 and OHT-35 sites, where permanent impacts are envisaged, that the losses will be compensated in line with this resettlement plan and TNUFIP Resettlement framework.
- (iv) Consultations with potentially affected persons were conducted during transect walks. The concerns expressed mainly included temporary impacts on livelihood, including duration of impact. It was informed to surveyed potential affected persons that appropriate measures will be undertaken during construction to minimize impacts. (Including scheduling of activities during the early morning and reducing construction activities during the rush hour). It was also informed that, if despite mitigation measures, there were any temporary impacts on livelihood; these would be compensated in accordance with the resettlement plan's entitlement matrix.

45. Further consultations will also include focus group discussions (FGDs) and structured census surveys parallel to detailed measurement survey in sections ready for implementation before the project implementation. These will be carried out by the construction management and supervision consultant's (CMSC) social and resettlement safeguard expert (SRSE), who will work closely with PIU assistant safeguards officer (ASO) and PMU SPO. A city-wide stakeholder consultation involving representatives from all stakeholder groups to brief them about the technical details of project and project implementation cycle; project benefits as well as adverse impacts envisaged during construction; environmental and social safeguards, gender inclusion, community participation aspects built into the project etc. is proposed. Minutes of meeting will be added to the updated resettlement plan.

46. At this PPTA stage disclosure activities include dissemination/distribution of summary of resettlement framework and resettlement plan in local language to key stakeholders including affected persons. The approved resettlement framework/resettlement plan (full documents) will also be disclosed on ADB and local government's websites and will be available in key local/ state government offices. During the subproject implementation, construction schedules will be informed to all residents (including affected persons) prior to the commencement of pipe laying through signboards. The signboards will be in local language and will include at minimum: (i) section to be affected, (ii) start and end dates, (iii) information on traffic rerouting if any, and (iv) contact information for questions/grievances.

**Table 5: Consultation and Disclosure Activities during Project Preparatory and Technical Assistance Stage**

Activities	Details	Responsible Agency
Preliminary awareness about the project activities	City visits and series of meetings with key stakeholders (ULB, and other officials)	PMU/ PPTA team

<sup>13</sup> Consultations were conducted at: OHT 14, 15, 19, 21, 23, 25, 32, 34, 35, 37, 41, 42, 47, 48 and 50.

Activities	Details	Responsible Agency
Baseline surveys	Sample household socioeconomic surveys to understand baseline infrastructure situation, problems faced in service delivery, household's willingness to get connected to new systems and willingness to pay. Introduction to project provided to sample households.	PPTA Team
Transect walks and business surveys	Transect walks and screening of project impact area to identify potential affected persons and record their socioeconomic and business profile.	PPTA team
City wide stakeholder consultation	Dissemination of project related technical and other information to representatives of all key stakeholders (at one platform) and disclosure of summary of social safeguard documents in local languages	PMU/ PIU/ PPTA team

PIU = program implementation unit, PMU = program management unit, PPTA = project preparatory technical assistance, ULB = urban local body.

47. Permanently displaced affected persons will be consulted regularly throughout resettlement plan implementation to ensure smooth transition to the new relocation sites. The affected person of OHT-35 will be consulted further to identify compensation as per replacement cost/ market value for the structure without depreciation or alternative house with minimum area as per Government norms. Continued involvement of those affected by the subproject will be ensured. An intensive information dissemination and feedback campaign for affected persons will be conducted by the PIU from the time of resettlement plan preparation to implementation and monitoring. The proceedings of such campaigns shall be documented. All the comments made and concerns raised by the affected persons will be documented in the subproject records and summarized in sub-project monitoring reports.

48. During revised resettlement plan preparation, PIU/ PMU will be responsible for issuing various required public notices. For temporary impacts, the date of census survey will be considered as the cut-off date. Printed information/boards will be provided/erected in project affected area at a common place. Similarly, the list of affected persons will be published at common places with contact details of CMSC/ PIU officials. The list will be put up area-wise and at the same time for the entire city. This will help avoid affected persons moving into other areas and identify any duplication of affected persons. CMSC will facilitate affected persons to approach lists in their area and get confirmation on any duplication, missing/ absent affected persons. For permanently displaced affected persons PIU in coordination with PMU will issue various notices such as for final listing of affected persons, allotment of government housing, demolishing of existing houses/commercial building and shifting to relocation site, schedule of skill training programme etc.

49. Additionally, draft/final resettlement framework/resettlement plan will be made available in ULB/PIU and PMU offices. The resettlement framework and resettlement plan will be disclosed in ADB's website and the ULB/ PMU websites. Further, final resettlement plans will be disclosed in ADB's website, PMU websites, and PIU or ULB websites; and information dissemination, through subproject specific leaflets and public announcements, and consultation will continue throughout program implementation. The project leaflets will be distributed by governance improvement and awareness consultant (GIAC)/CMSC to the affected persons for their information. A sample project information dissemination leaflet is attached in Appendix 6.

## V. GRIEVANCE REDRESS MECHANISM

50. A common grievance redress mechanism (GRM) will be in place to redress social, environmental or any other project related grievances. The GRM described below has been developed in consultation with stakeholders. Public awareness campaign will be conducted to ensure that awareness on the project and its grievance redress procedures is generated. The campaign will ensure that the poor, vulnerable and others are made aware of grievance redress procedures and entitlements per project entitlement matrix, and PMU and concerned PIUs will ensure that their grievances are addressed.

51. Affected persons will have the flexibility of conveying grievances/suggestions by dropping grievance redress/suggestion forms in complaints/suggestion boxes or through telephone hotlines at accessible locations, by e-mail, by post, or by writing in complaints register in ULB or PIU or implementing agency offices. PIU safeguards officer will have the responsibility for timely grievance redress on safeguards and gender issues and for registration of grievances, related disclosure, and communication with the aggrieved party.

52. GRM provides an accessible, inclusive, gender-sensitive and culturally appropriate platform for receiving and facilitating resolution of affected persons' grievances related to the project. A two-tier grievance redress mechanism is conceived, one, at project level and another, beyond project level. For the project level GRM, a grievance redress committee (GRC) will be established in PIUs; Safeguards officer and Social and Gender Officer will be responsible for creating awareness among affected communities and help them through the process of grievance redress, recording and registering grievances of non-literate affected persons.

53. GRM aims to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. All grievances – major or minor, will be registered. Documentation of the name of the complainant, date of receipt of the complaint, address/contact details of the person, location of the problem area, and how the problem was resolved will be undertaken. PIU will also be responsible for follow-through for each grievance, periodic information dissemination to complainants on the status of their grievance and recording their feedback (satisfaction/ dissatisfaction and suggestions).

54. In case of grievances that are immediate and urgent in the perception of the complainant, the contractor, and supervision personnel of the CMSC and PIU will resolve the issue on site, and any issue that is not resolved at this level will be dealt at PIU head level for immediate resolution. Should the PIU fail to resolve any grievance within the stipulated time period, the unresolved grievances will be taken up at ULB level. In the event that certain grievances cannot be resolved even at ULB level, particularly in matters related to land purchase/acquisition, payment of compensation, environmental pollution etc., they will be referred to the district level GRC headed by the District Collector. Any issue which requires higher than district level inter-departmental coordination or grievance redress, will be referred to the state level steering committee.

55. GRC will meet every month (if there are pending, registered grievances), determine the merit of each grievance, and resolve grievances within specified time upon receiving the complaint-filing which the grievance will be addressed by the state-level steering committee. The Steering Committee will resolve escalated/unresolved grievances received.

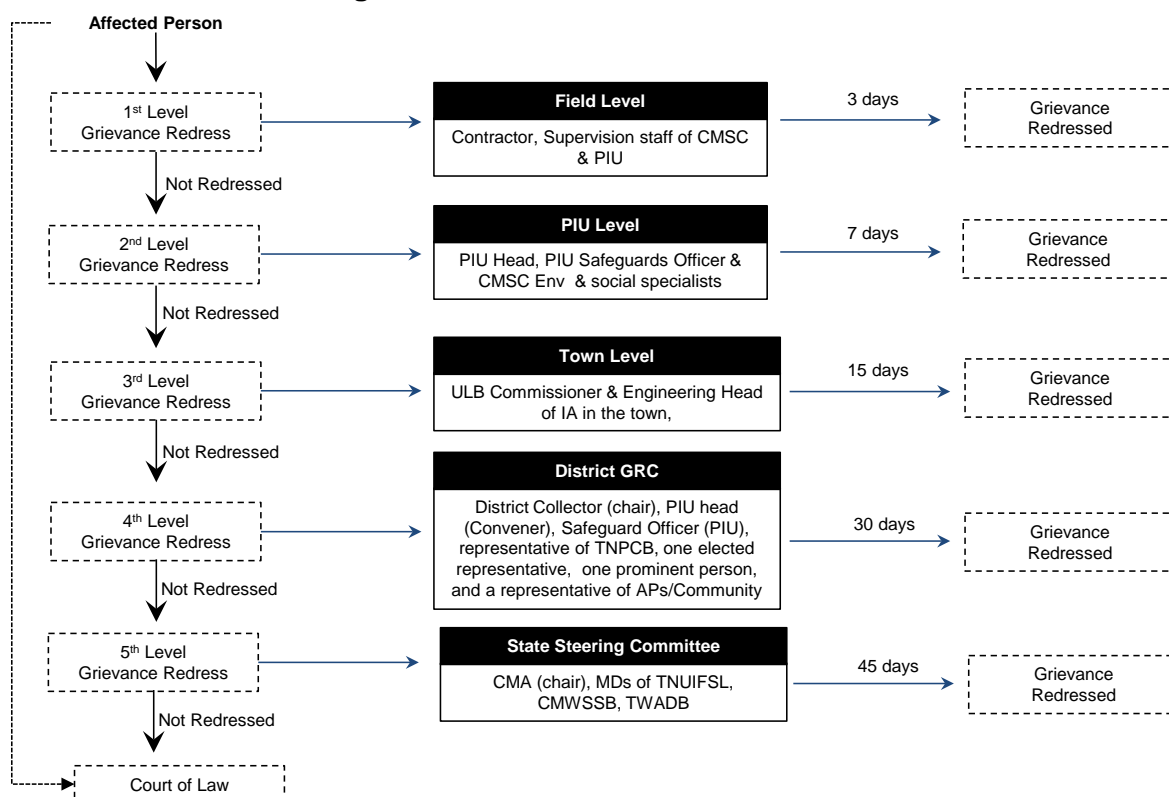
56. **Composition of Grievance Redress Committee.** GRC will be headed by the District Collector, and members include: ULB/ PIU head, Safeguards Officer of PIU, representative of TNPCB, one elected representative/ prominent citizen from the area, and a representative of affected community. GRC must have a women member.

57. **State Level Steering Committee** will include Commissioner of Municipal Administration as chair, member include managing directors of TNUIFSL, Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB), TWADB and others as applicable.

58. **Areas of Jurisdiction.** The areas of jurisdiction of the GRC, headed by the District Magistrate will be: (i) all locations or sites within the district where subproject facilities are proposed, or (ii) their areas of influence within the District. The Steering Committee will have jurisdictional authority across the state (i.e., areas of influence of subproject facilities beyond district boundaries, if any).

59. The multi-tier GRM for the project is outlined below (Figure 13), each tier having time-bound schedules and with responsible persons identified to address grievances and seek appropriate persons' advice at each stage, as required. The GRC will continue to function throughout the project duration. The implementing agencies/ ULBs shall issue notifications to establish the respective PIU level grievance redress cells, with details of composition, process of grievance redress to be followed, and time limit for grievance redress at each level.

- (i) **First Level Grievance.** The contractor and CMSC supervision personnel and PIU supervision personnel can immediately resolve issues on-site in consultation with each other and will be required to do so within 3 days of receipt of a complaint/grievance.
- (ii) **Second Level Grievance.** All grievances that cannot be redressed within 3 days at field/ ward level will be brought to the notice of social safeguards officer (SSO) of PIU. PIU will resolve the grievance within 7 days of receipt of compliance/grievance in discussion with the CMSC and the contractor. PIU SSO will be supported by the CMSC SSS at this stage.
- (iii) **Third Level Grievance.** All the grievances that are not addressed by PIU within 7 days of receipt will be brought to the notice of the town level committee (TLC), of which ULB commissioner will be the chairperson, and will be assisted by the concerned city level engineers. TLC will meet twice a month and determine the merit of each grievance brought to the committee. The PIU SSO will be responsible to see through the process of redressal of each grievance. The TLC will resolve the grievance within 15 days of receiving the complaint.
- (iv) **Fourth Level Grievance.** All grievances that are not addressed by the TLC within 15 days, and which require the district collector's intervention, will be escalated to the district level GRC, chaired by the district collector. The district level GRC will have the district collector as chair, PIU head as convenor, and safeguard officers of the PIU, representative of TNPCB, one elected representative, one prominent person/member of the community, and a representative of affected persons/community as members. At least one member of the GRC will be a woman. The GRC will resolve the grievance within 30 days of registration.
- (v) **Fifth Level Grievance.** Any grievance that remains unresolved by the GRC will be escalated to the state level steering committee.

**Figure 13: Grievance Redress Process**

APs= Affected Persons, CMA= Commisionerate of Municipal Administration, CMWSSB= Chennai Metro Water Supply and Sewerage Board, CMSC= construction management and supervision consultant, IA= implementing agency, MD= managing director, PIU= program implementation unit, PMU= program management unit, TNUIFSL= Tamil Nadu Urban Infrastructure Financial Services Ltd., TWADB= Tamil Nadu Water and Drainage Board.

60. The project GRM notwithstanding, an aggrieved person shall have access to the country's legal system at any stage and accessing the country's legal system can run parallel to accessing the GRM and is not dependent on the negative outcome of the GRM. In case of grievance related to land acquisition, resettlement and rehabilitation,<sup>14</sup> the affected persons will have to approach a legal body/court specially proposed under RFCTLARR, 2013; Land Acquisition, Rehabilitation and Resettlement Authority (LARRA).

61. In the event that the established GRM is not in a position to resolve the issue, the affected person also can use the ADB Accountability Mechanism through directly contacting (in writing) the complaint receiving officer at ADB headquarters or the ADB India Resident Mission. Before submitting a complaint to the Accountability Mechanism, it is necessary that affected persons make a good faith effort to solve the problem by working with the concerned ADB operations department and/or the resident mission. Only after doing that, and if they are still dissatisfied, will the Accountability Mechanism consider the complaint eligible for review. The complaint can be submitted in any of the official languages of ADB's developing member countries. The ADB Accountability Mechanism information will be included in the project-relevant information to be distributed to the affected communities, as part of the project GRM.

<sup>14</sup> The Authority admits grievance only with reference to the land acquisition and R&R issues under the RFCTLARR, 2013.

62. **Recordkeeping.** Records of all grievances received, including contact details of complainant, complaint received date, nature of grievance, agreed corrective actions and the date these were effected and final outcome will be kept by ULB/ PIU (with the support of CMSC) and submitted to PMU.

63. **Information Dissemination Methods of the Grievance Redress Mechanism.** The PIU, assisted by CMSC will be responsible for information dissemination to affected persons and general public in the project area on grievance redress mechanism. Public awareness campaign will be conducted to ensure that awareness on the project and its grievance redress procedures is generated. The campaign will ensure that the poor, vulnerable and others are made aware of grievance redress procedures and entitlements per this resettlement framework including contact details of officials/members of GRC, where/ how to register grievance, various stages of grievance redress process, time likely to be taken for redress of minor and major grievances, etc. Grievances received and responses provided will be documented and reported back to the affected persons. The number of grievances recorded and resolved and the outcomes will be displayed/disclosed in the PIU, offices, ULB notice boards and on the web, as well as reported in the semi-annual environmental and social monitoring reports to be submitted to ADB. A Sample Grievance Registration Form has been attached in Appendix 7.

64. **Periodic Review and Documentation of Lessons Learned.** The PMU will periodically review the functioning of the GRM and record information on the effectiveness of the mechanism, especially on the PIU's ability to prevent and address grievances.

65. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting/ information dissemination) will be borne by the respective PIU.

## VI. LEGAL FRAMEWORK

66. The policy framework and entitlements for the TNUFIP are based on:

- (i) The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (RFCTLARR), 2013 and RFCTLARR GOTN Notified Rules, 2017;
- (ii) Environmental and Social Management Framework (ESMF) of TNUIFSL;
- (iii) ADB's Safeguard Policy Statement (SPS), 2009; and
- (iv) The agreed entitlement matrix and resettlement framework.

67. The salient features of government and ADB policies are summarized below. The resettlement principles and procedures to be followed for social safeguards under TNUIFP are detailed out in the resettlement framework document. In case of discrepancy between the policies of ADB and the government, gap-filling measures will be adopted to bridge the discrepancies. Core involuntary resettlement principles for the TNUFIP to be followed for each subproject, including sample subprojects are:

- (i) Screening of the project to identify involuntary resettlement impacts and risks. Minimizing and avoiding land acquisition and resettlement impacts of each subproject by exploring all viable alternative designs;
- (ii) Where unavoidable, time-bound resettlement plans be prepared and affected persons will be assisted in improving or at least regaining their pre-program standard of living
- (iii) Full information and close consultations with affected persons including consultation with affected persons on compensation, disclosure of resettlement information to affected persons, and participation of affected persons in planning and implementing subprojects will be ensured; Disclose a draft resettlement plan,

including documentation of the consultation process in a timely manner to affected persons and other stakeholders. Disclose the final resettlement plan and other documents such as the monitoring reports to affected persons and other stakeholders;

- (iv) Where the resettlement impacts are unavoidable, the displaced persons should be assisted in improving or at least regaining their standard of living;
- (v) Vulnerable groups comprising below poverty line households, including female-headed households, disabled persons, elderly, children, landless, non-titled households with no tenure security, and schedule castes and scheduled tribe households will be given special assistance. Standard of living of vulnerable households will be improved, at least to the minimum national standard;
- (vi) Payment of compensation to affected persons including non-titled persons (e.g., informal dwellers/squatters, and encroachers) for acquired assets at replacement cost;
- (vii) Payment of compensation and resettlement assistance prior to the contractor taking physical acquisition of the land and prior to the commencement of any construction activities. All compensation needs to be paid prior to the physical and/or economic displacement of the affected peoples;
- (viii) Provision of income restoration and rehabilitation; and
- (ix) Establishment of appropriate grievance redress mechanisms.

68. A detailed description of each compensation measure and assistance is provided in the entitlement matrix attached in resettlement framework while a Madurai subproject specific/applicable entitlement matrix is given in Table 6. Affected persons will be entitled to a combination of compensation measures and resettlement assistance, depending on the nature of ownership rights of lost assets and scope of the impact, including social and economic vulnerability of the affected persons.

## **VII. ENTITLEMENTS, ASSISTANCES, AND BENEFITS**

69. All losses (assets, incomes and livelihoods) will be compensated based on the replacement cost principle, in accordance with ADB SPS. The entitlement matrix defines eligibility, compensation and entitlements due against each type of loss.

70. Income restoration schemes will be designed in consultation with affected persons, and skill training will be based on a training needs assessment. The objective of income restoration is to ensure that each affected person will have at least the pre-project level income or improved income after the subproject. As per GOTN's current practice, skill training institutes will be contractually bound for job placement as well. Elderly or physically challenged Affected persons who are unable to undergo training and/or access job placement, will be assisted to access government social welfare programs.

### **A. Permanent Impacts**

71. Permanently affected person at OHT-35, Island Nagar will receive new house in addition to the following benefits in accordance with the TNUFIP resettlement framework (Table 6). In summary, he will be provided with:

- (i) **Compensation Against Loss of House.** (i) Compensation as per replacement cost for the structure without depreciation; (ii) Alternative house with minimum area as per Government norms, to which titles will be granted to the affected persons, five years after relocation. The cost of alternative housing to be provided can be set off against all or part of the compensation payable for the structure lost;

- (iii) One-time Subsistence grant equivalent to 180 days of minimum wages which will be worked out as per the notified minimum wage rates; (iv) One-time financial assistance of ₹10,500/- as transportation cost for shifting of the family, building materials, belongings etc.; and (v) Right to salvage the affected materials.
- (ii) **Vulnerability Assistance.** One adult member of the affected household will be entitled for skill development. Appropriate skill training areas will be identified for any one adult member of affected vulnerable household, in consultation with the APs, to restore and enhance their income levels. Appropriate government programmes will be identified and linked for aged and disable Affected persons, if any. This assistance includes cost of training and financial assistance for travel/conveyance and food; and (ii) additional one-time assistance of ₹5,250. As per current practice of GOTN, the training institute will be responsible for placement of candidates in appropriate jobs. PIU will be responsible for payment to the training institute for the cost of training and for payment of travel/conveyance and food cost to affected persons. Appropriate government programmes will be identified and linked for aged and disabled Affected persons, if any household member is unable to access skill training.

72. Permanently affected persons (non-titleholders) at OHT-32, EB Colony will receive following benefits in accordance with the TNUFIP resettlement framework (Table 6). In summary, they will be provided with:

- (i) **Loss of Commercial Structure:** (i) Compensation as per replacement cost for the structure without depreciation; (ii) One-time subsistence grant equivalent to 180 days of minimum wages which will be worked out as per the notified minimum wage rates; (iii) One-time financial assistance of ₹10,500/- as transportation cost for shifting of the family, building materials, belongings etc.; (iv) One-time assistance of ₹15,750/- toward economic rehabilitation; and (v) Right to salvage the affected materials.
- (ii) **Vulnerability Assistance.** One adult member of the affected household will be entitled for skill development. This assistance includes cost of training and financial assistance for travel/conveyance and food. Appropriate government programmes will be identified and linked for aged and disabled Affected persons, if any.; and (ii) additional one-time assistance of ₹5,250. As per current practice of Government of Tamilnadu, the training institute will be responsible for placement of candidates in appropriate jobs. PIU will be responsible for payment to the training institute for the cost of training and for payment of travel/conveyance and food cost to affected persons. Vulnerability assistance is as per the entitlement matrix of the resettlement framework.

## B. Temporary Impacts

73. Potential temporary economic impacts identified for Madurai subproject range from 20–30 days of construction time for each road stretch of about 500 m. Impacts can be further avoided/minimized by taking construction on one side of the road at a time. In such cases temporarily affected persons will be assisted in moving to a nearby location where they can continue with their business activities and returning their temporary structures to the original location after construction is completed. Where moving is not required, access will be ensured by the contractor through measures prescribed in environmental management plan (EMP). During implementation, if a larger number of affected persons are identified at one place (e.g. vegetable market), then an alternate place in the vicinity will also be identified so that they can continue with their livelihood activities.

74. Majority of potentially affected persons have temporary structures that can be shifted to nearby locations if properly informed. Advance notice regarding construction activities, including duration and type of disruption provided to temporarily affected persons once contractor's work plans are finalized, with minimum 7 working days. If required, they will also be assisted to temporarily shift for continued economic activity. For example, they will be assisted to shift to the other side of the road or nearby areas where there is no construction. Ensuring there is no income or access loss during sub-project construction is the responsibility of contractors.

75. If construction activities result in unavoidable livelihood disruption, compensation for lost income based on the net income or as per notified minimum wage rates, whichever is higher will be provided. Vulnerable affected persons will be given priority in project construction employment. Compensation and assistance to temporarily affected persons will be made prior to their shifting from original place of business (if required) and before start of civil works. Since most affected households have moveable stalls, identification cards should be distributed 7 days before compensation. In summary, temporarily affected persons will be provided with:

- (i) Advance notice regarding construction activities, including duration and type of disruption provided to temporarily affected persons once contractor's work plans are finalized, with minimum 7 working days;
- (ii) Contractor's actions to ensure there is no income/ access loss consistent with the initial environmental examination. This includes: leaving spaces for access between mounds of soil, providing walkways and metal sheets to maintain access across trenches for people and vehicles where required, increased workforces to finish work in areas with impacts on access, timing of works to reduce disruption during business hours, phased construction schedule and working one segment at a time and one side of the road at a time;
- (iii) Assistance to mobile vendors/ hawkers to temporarily shift for continued economic activity. For example, assistance to shift to the other side of the road where there is no construction; and
- (iv) For construction activities involving unavoidable livelihood disruption (temporary income loss), compensation for lost income for the period of disruption.

**Table 6: Entitlement Matrix<sup>15</sup>**

No.	Impact Category	Entitlements	Explanations
<b>Impacts to Non-title holders (Squatters, encroachers, tenants, leaseholders)<sup>a</sup></b>			
A	Loss of House:	<ol style="list-style-type: none"> <li>1. Compensation as per replacement cost<sup>16</sup> for the structure without depreciation</li> <li>2. Alternative house with minimum area as per Government norms. The cost of alternative housing to be provided can be set off against all or part of the compensation payable for the structure lost.</li> <li>3. One-time Subsistence grant equivalent to 180 days of minimum wages which will be worked out as per the notified minimum wage rates<sup>17</sup>.</li> </ol>	Houses in urban areas may, if necessary, be provided in multi-storied building complexes. The Titles for alternatives houses shall be provided in the joint name of the wife and husband.

<sup>15</sup> Any changes required in the entitlement matrix pursuant to any Amendments in the LARR 2013 Act and Rules notified by the GOTN will be incorporated with the concurrence of the ADB. All cash allowance in the entitlement matrix will be revised at the rate of 5% per annum starting from financial year 2017-18.

<sup>16</sup> Replacement cost includes (i) fair market value; (ii) transaction costs; (iii) interest accrued, (iv) transitional and restoration costs; and (v) other applicable payments, if any (ADB SPS 2009, p 45 para 10). Applicable wherever replacement cost is mentioned in this EM.

<sup>17</sup> Government of Tamil Nadu, Labour and Employment Department. 2017. *Government Order (2D) No. 62 dated 11 October 2017. Minimum Wages Act, 1948 (Central Act XI of 1948): Revision of minimum rates of wages for employment under any local authority - Orders Issued.* Chennai

No.	Impact Category	Entitlements	Explanations
		4. One-time financial assistance of ₹10,000/- as transportation cost for shifting of the family, building materials, belongings and cattle. 5. Right to salvage the affected materials.	
B	Loss of shop/ productive asset	1. Compensation as per the replacement cost of the structure/productive asset without depreciation. 2. One-time subsistence grant equivalent to 180 days of minimum wages which will be worked out as per the notified minimum wage rates. 3. One-time financial assistance of ₹10,000/- as transportation cost for shifting. 4. One-time assistance of ₹15,000/- toward economic rehabilitation. 5. Right to salvage the affected materials.	
<b>Impact to Vulnerable Affected persons</b>			
A	Vulnerable <sup>b</sup> Affected persons	1. Training for skill development. This assistance includes cost of training and financial assistance for travel/conveyance and food. <sup>c</sup> 2. One adult member of the affected household, whose livelihood is affected, will be entitled for skill development. 3. Additional assistance to the vulnerable PAFs whose livelihood/ shelter is impacted by the project will be paid additional one-time assistance of Rs. 5000. 4. Wherever possible, the vulnerable people shall be assisted in enrolling in the applicable government programmes. 5. All Scheduled Castes and Scheduled Tribes relocated outside the district will be provided an additional 25% of the resettlement benefits to which they are entitled along with a onetime resettlement entitlement of Rs50, 000 per the provisions of the RFCTLARRA.	Training will be provided through relevant training institutions  Each vulnerable household - with single or multiple vulnerabilities, will receive one-time assistance.
<b>Unforeseen Impacts<sup>d</sup></b>			
A	Unforeseen Impacts	Unforeseen impacts encountered during implementation will be addressed in accordance with the principles of this resettlement framework.	-
<b>Temporary Economic Impacts during implementation</b>			
A	Temporary economic impacts	Compensation for loss of income for the duration of impact based on net income worked out as per information technology returns or based on notified minimum wage rates, whichever is higher.	Advance notice provided to temporarily affected persons once contractor's work plans are finalized, with minimum 7 working days.

PAF= RCFCTLARR= Right to Fair Compensation and Transparency in Land Acquisition.

<sup>a</sup> Affected non-titleholders on private or government land are included. Tenants and leaseholders in this category are those with informal/verbal arrangements

<sup>b</sup> This resettlement framework defines vulnerable households are defined as those below the poverty line, the landless, the elderly, women and children, disabled persons, scheduled castes and scheduled tribes, Indigenous Peoples, and those without legal title to land.

<sup>c</sup> Skill training institutes will be contractually bound for job placement as well, as per GOTN's current practice. Elderly or physically challenged APs who are unable to undergo training and/or access job placement, will be assisted to access government social welfare programs.

<sup>d</sup> If unanticipated involuntary resettlement impacts are found during implementation, a social impact assessment will be conducted and the resettlement plan updated or a new resettlement plan prepared, in accordance with ADB SPS 2009.

## VIII. RESETTLEMENT BUDGET AND FINANCING PLAN

76. The resettlement budget for Madurai subproject is estimated at ₹16.99 million. The costs are indicative estimates to be confirmed post detailed measurement survey based on detailed design and comprise GRM and consultation costs. Resettlement plan costs will be confirmed during detailed project preparation/ implementation.

**Table 7: Resettlement Cost<sup>a</sup>**

	Land Acquisition and Resettlement Impacts	Details	Unit	Unit Cost	Total Cost (₹)
1	<b>Loss of Residential Structure</b>				
	Demolition of existing structure	1	Nos.	LS	20,000
	New Government Housing (Beneficiary Contribution)	1	Nos.	80,000	80,000
	One-time Subsistence Grant for 180 days	180	Nos.	643 <sup>b, c</sup>	115,740
	One-time Transportation Allowance	1	Nos.	10,500	10,500
	Additional compensation for vulnerable households	1	Nos.	5,250	5,250
	Skill Training	1	Nos.	30,000	30,000
	<b>Total 1</b>				<b>261,490</b>
2	<b>Loss of Commercial Structure</b>				
	Demolition of existing structure (constructed by AP) AP-1	1	Nos.	LS	85,000
	Demolition of existing structure (constructed by AP) AP-2	1	Nos.	LS	100,000
	Demolition of existing structure (constructed by AP) AP-3	1	Nos.	LS	10,000
	One-time Subsistence Grant for 180 days for 3 business owners	540	Nos.	643	347,220
	One-time Transportation Allowance for 3 business owners	3	Nos.	10,500	31,500
	Economic rehabilitation	3	Nos.	15,750	47,250
	Additional compensation for vulnerable households	3	Nos.	5,250	15,750
	Skill Training	3	Nos.	30,000	90,000
	<b>Total 2</b>				<b>726,720</b>
3	<b>Temporary Income Loss</b>				
	Provisional sum for compensation of temporary income loss at notified minimum wage rate for Raw, Clear and feeder mains	100	15 days	643	964,500
	Provisional sum for compensation of temporary income loss at notified minimum wage rate for feeder network	930	10 days		5,979,900
	Provisional sum for compensation of temporary income loss at notified minimum wage rate for distribution network	1,480	6 days		5,709,840
	Reconstruction of extensions within ROW (platforms, steps etc.) for raw and clear water mains	21	Nos.	10,000	210,000
	<b>Total 3</b>				<b>12,864,240</b>
4	<b>Surveys, consultations, grievances and awareness</b>				
	Census and Socioeconomic surveys		LS		500,000
	DMS Survey for Resettlement Plan updating <sup>c</sup>		LS		500,000
	Consultation, grievance redress, disclosure <sup>d, f</sup>		LS		500,000
	<b>Total 4</b>				<b>1,500,000</b>
5	Provisional sum for third-party engagement		LS		100,000
	<b>Total 5</b>				<b>100,000</b>
	<b>Subtotal 1 to 5</b>				<b>15,452,450</b>
	<b>Contingency @ 10%</b>				<b>1,545,245</b>
	<b>Grand Total (₹)</b>				<b>16,997,695</b>

DMS= detailed measurement survey, LS= lump sum, Nos.= numbers, ROW= right-of-way.

<sup>a</sup> All resettlement costs will be met through counterpart funding.

<sup>b</sup> Government of Tamil Nadu, Labour and Employment Department. 2017. *Government Order (2D) No. 62 dated 11 October 2017. Minimum Wages Act, 1948 (Central Act XI of 1948): Revision of minimum rates of wages for employment under any local authority - Orders Issued.* Chennai

<sup>c</sup> For the purpose of budget preparation in the draft resettlement plan, notified minimum wage rate is used, as per the entitlement matrix. Costs in the updated resettlement plan will be based on a comparison of census and socio-economic survey data on income with the prevailing notified minimum wage rate at the time of compensation payment and the higher of the two will be used for the period of disruption.

<sup>d</sup> DMS will be conducted in sections ready for implementation, based on detailed design to confirm impacts.

<sup>e</sup> The allocation for disclosure includes cost of translation of the resettlement plan to Tamil.

<sup>f</sup> The estimated temporary impacts based on sample surveys and projections in the draft resettlement plan would be replaced by actual figures based on detailed measurement survey and detailed design, and the resettlement budget adjust accordingly, in the updated resettlement plan. Based on discussions with project preparation engineers, routing of pipelines through high density areas will be avoided as far as possible during detailed design.

77. All land acquisition and resettlement costs will be borne by the government/ULB/PIU. Under TNUFIP, it is suggested that payment will be directly made by PIU to affected persons. The CMSC SRSE/ GIAC will be involved in facilitating the disbursement process and will facilitate opening bank accounts for the affected persons (both permanent and temporary loses) who do not have bank accounts.

## IX. INSTITUTIONAL ARRANGEMENTS AND IMPLEMENTATION SCHEDULE

78. The Municipal Administration and Water Supply Department (MAWS) acting through the TNUIFSL will be the state-level executing agency. A program steering committee, headed by Principal Secretary, MAWS, GOTN, will provide overall guidance and strategic directions to the program. A PMU for TNUFIP, headed by the Managing Director, TNUIFSL acting as Program Director will be established within TNUIFSL for overall management, planning, implementing, monitoring, reporting, and coordinating TNUFIP. The Commissioner of Municipal Administration will act as the Deputy Program Director in the PMU. The project ULBs, represented by respective Municipal Commissioners, will be the implementing agencies for works in cities/towns and will establish PIUs headed by a municipal engineer as full-time Project Manager. For sewerage and water supply works in Chennai, CMWSSB, represented by its Managing Director, will be the IA and establish a PIU headed by a superintending engineer as full-time Project Manager. PIUs will be responsible for overseeing implementation of the various projects on a day-to-day basis. ULBs under the Program with less project implementation capacity, may utilize implementation support from the Tamil Nadu Water and Drainage Board (TWADB) to act as PIU. The Project Managers of the PIUs will be supported by technical, financial, safeguards and administrative staff from a CMSC recruited by TNUIFSL. For the capacity development and incentivized reforms components, CMA acting through its Commissioner, will be responsible for carrying out these activities and establish a PIU.

79. A Program Steering Committee, headed by Principal Secretary, MAWS, and Members comprises of: (i) Managing Director, TNUIFSL (Convener); (ii) Commissioner of Municipal Administration; (iii) Managing Director, CMWSSB; (iv) Managing Director, TWADB; and (v) Managing Director, TUFIDCO.

80. **Program Management Unit.** PMU will (i) monitor the project and have overall responsibility for ensuring adoption and compliance of resettlement framework and ADBs SPS. Additionally, PMU will monitor PIUs for: (i) identifying and preparing subprojects; (ii) reviewing resettlement plans prepared by PIU/ULB; (iii) ensure adoption and compliance of resettlement framework in land acquisition and other safeguards; (iv) guide in awareness campaigns and participation programs; (v) organize and operate the program performance monitoring system; (vi) prepare and submit timely reports to ADB; and (vii) design and organize capacity building programs. PMU will be assisted by CMSC in managing and guiding the overall implementation of the Program. PMU SPO will responsible for all land acquisition and resettlement matters from PMU side. PMU SPO will perform responsibilities like: (i) addressing social safeguards issues; (ii) implementing the resettlement framework; (iii) report to Projects Head with respect to land acquisition and resettlement plan implementation in the sub-projects; (iv) monitoring physical and financial progress on land acquisition activities and updating the PMU on the same; (v) monitoring

implementation of safeguards plans (resettlement plan); (vi) guiding the PIUs as and when necessary; and (vii) endorsing and submitting periodic monitoring reports.<sup>18</sup>

**81. Program Implementation Unit.**<sup>19</sup> PIUs will be established in each of the participating ULBs within their structure or at TWADB and in CMWSSB. For Madurai WSS subproject PIU will be established at ULB supported by CMSC. PIU ASO will assist PMU SPO in implementation of the social safeguards at the PIU level. The PIUs will be responsible for implementation of the resettlement plans. PIUs will undertake internal monitoring and supervision and record observations throughout the project period to ensure that the safeguards and mitigation measures are provided as intended. PIUs will be responsible for: (i) conduct briefing to contractors on safeguards requirements including GRM; (ii) implementing and monitoring safeguards compliance activities, public relations activities, gender mainstreaming activities, and community participation activities; (iii) coordinating with district administration and GIAC for land acquisition and resettlement and rehabilitation (R&R) aspects and addressing any problems and/or delays; (iv) monitoring physical and financial progress on land acquisition and R&R activities; (v) organizing monthly meetings with the PIU to review the progress on R&R; and (vi) share all reports relating to land acquisition, alienation, R&R activities etc. and status to PMU.

**82. Construction, Management and Supervision Consultant (CMSC).** The implementing agency will be assisted by a CMSC social and resettlement safeguards expert (SRSE). The SRSE will: (i) based on final designs, carry out census and socioeconomic surveys/verification surveys for the affected people and update resettlement plan in line with the TNUFIP resettlement framework; (ii) identify requirement for any enter upon permissions (EUPs)/No Objection Certificates (NOCs) for sub-project sites and assist PIUs in obtaining the same prior to start of civil works. Prepare any additional safeguard documentation, if required, such as due diligence reports; (iii) assist PIU in day-to-day implementation of resettlement plan activities and ensure contractors comply with conditions of resettlement framework/resettlement plan; (iv) take proactive action to anticipate and avoid delays in implementation, and ensure gender equality and social inclusion during implementation; (v) assist PIU in conducting public consultation and disclosure activities; (vi) Assist PIU in preparing periodic social safeguard monitoring reports as per project administration manual (PAM) requirements; (vii) under guidance of GIAC, assist PIU in establishing a system and indicators, focusing on gender and vulnerable households, to monitor social safeguards including GRM activities; (viii) support GIAC in conducting training focused on involuntary resettlement safeguards implementation capacity of the PIUs; and (ix) assistance to PIU/PMU in any other social safeguard related tasks.

**83. Governance Improvement and Awareness Consultants (GIAC).** The scope of service will include, but not be restricted to, implementation, monitoring and reporting of the consultation and participation plan (CPP); gender action plan (GAP), and monitor and guide resettlement plan implementation and lead involuntary resettlement trainings. Specific tasks related to social

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<sup>18</sup> The monitoring report will focus on the progress of implementation of the IEE/EIA and EARF, resettlement plan/resettlement framework and IPP/IPPF (if applicable), issues encountered and measures adopted, follow-up actions or corrective actions required, if any, as well as the status of compliance with subproject selection criteria and relevant loan covenants.

<sup>19</sup> If the subproject triggers new LARR, PIU will facilitate land acquisition through District Collector and will provide all details of land acquisition to CMSC SSE/PMU. CMSC SSE will incorporate the same in resettlement plan and check its compliance with resettlement framework/ADB SPS 2009 to make necessary additions (if any). PIU will bear the cost of any deviation or non-compliance or involuntary resettlement impact due to or in anticipation of ADB funded TNUFIP, to comply with the resettlement framework/ADB SPS 2009. Government procedures under RFCTLARR Act will run parallel to the required surveys and preparation/updating of resettlement plan for the subproject as per the agreed resettlement framework. The final compensation will be arrived at and disbursement of payments will take place in accordance with government procedures and as per the agreed resettlement framework for TNUFIP.

safeguards include: (i) monitor and guide PIUs on resettlement plan implementation, with particular reference to significant impacts; (ii) lead involuntary resettlement training and capacity building on involuntary resettlement/ indigenous people safeguards to project PIUs and CMA; (iii) guide PIUs to set up grievance redress mechanisms, record keeping and feedback mechanisms; and (iv) guide PIUs in keeping detailed records of progress and establishing monitoring and reporting systems for resettlement. GIAC will also provide guidance to PIUs on specific requirements for indigenous people plan (IPP) implementation, if Safeguard Requirements 3 triggered.

84. To build the institutional capacity for resettlement plan preparation and implementation, following key training activities will be undertaken. The cost of trainings for all project cities and staff will be borne by Project's capacity building program by PMU. The detailed cost and specific modules will be customized for the available skill set after assessing the capabilities of the target participants and the requirements of the project.

**Table 8: Indicative Training Needs Assessment**

<b>Description</b>	<b>Target Participants and Venue</b>
1. Introduction and Sensitization to Social/ Involuntary Resettlement/Indigenous Peoples Safeguards (1 day) <ul style="list-style-type: none"> <li>- ADB Safeguards Policy Statement</li> <li>- Government of India and Tamil Nadu applicable social safeguard acts</li> <li>- Incorporation of social/resettlement components under EMP into the project design and contracts</li> <li>- Monitoring, reporting and corrective action planning</li> </ul>	All staff and consultants involved in the project  At PMU, Chennai First year of the launch of TNUFIP.
2. Resettlement Plan implementation (2 days; 2 times during implementation with interval of 1 year in-between) <ul style="list-style-type: none"> <li>- Roles and responsibilities</li> <li>- Resettlement plan components and stages in implementation</li> <li>- Construction schedules and timelines</li> <li>- Public relations</li> <li>- Consultations</li> <li>- Grievance redress</li> <li>- Monitoring and corrective action planning</li> <li>- Reporting and disclosure</li> <li>- Timely documentation</li> </ul>	All staff and consultants involved in the subproject  All contractors prior to award of contract  At each PIU
3. Experiences and best practices sharing (1 day) <ul style="list-style-type: none"> <li>- Experiences on resettlement plan implementation</li> <li>- Issues and challenges</li> <li>- Best practices followed</li> </ul>	All staff and consultants involved in the project  All contractors All consultants At PMU Chennai

ADB= Asian Development Bank, EMP= environmental management plan, PIU= program implementation unit, PMU= program management unit, TNUFIP = Tamil Nadu Urban Flagship Investment Program.

**Table 9: Institutional Roles and Responsibilities**

<b>Activity</b>	<b>Responsible Agency</b>
<b>Subproject Initiation Stage</b>	
Finalization of sites for sub-projects	PIU
Disclosure of proposed land acquisition and sub-project details by issuing Public Notice	PIU
Meetings at community/household level with affected persons	PIU/CMSC
<b>Resettlement Plan Preparation and Updating Stage</b>	
Conducting Census of all affected persons	PIU/ULB
Conducting FGDs/meetings/workshops	PIU/ULB

<b>Activity</b>	<b>Responsible Agency</b>
Computation of replacement values of land/properties proposed for acquisition and for associated assets	PIU/ULB and as per RFCTLARR 2013 for Land Acquisition
Categorization of affected persons for finalizing entitlements	PIU/ULB
Formulating compensation and rehabilitation measures	PIU/ULB
Conducting discussions/meetings/workshops with affected persons and other stakeholders	PIU/ULB
Fixing compensation for land/property with titleholders	As per RFCTLARR 2013 for land acquisition
Finalizing entitlements and rehabilitation packages	PIU/ULB
Disclosure of resettlement plan	PIU
Approval of resettlement plan	PMU/ ADB
Sale deed execution and payment	PIU/ULB
Taking possession of land	PIU/ULB
<b>Resettlement Plan Implementation Stage</b>	
Implementation of proposed rehabilitation measures	PIU/CMSC
Consultations with affected persons during rehabilitation activities	PIU/ CMSC
Grievances redressal	CMSC/PIU/GRC/PMU
Internal monitoring	PMU/PIU/ULB

ADB= Asian Development Bank, CMSC= construction, management, and supervision consultant, FGD= focus group discussion, GRC= grievance redress committee, PIU= program implementation unit, PMU= program management unit, RFCTLARR= The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, ULB= urban local body

**85. Implementation of Resettlement Plan.** All proposed subproject utility sites will be secured prior to the contract award and start of civil works. Prior the contract award, for all Tiruppur City Corporation (TCC)/government lands, PIU will confirm that there are no legacy issues related to acquisition of the sites (i.e., year in which land was acquired/obtained, whether acquired in anticipation of ADB funding, whether all compensation has been paid and accepted, and whether there are any pending legal/other issues). This could be in the form of self-certification by the owner department/TCC. This will be submitted to ADB through PMU before contract award and start of civil works. resettlement plan will also be disclosed in English and its Executive Summary in Tamil prior to contract award.

**Table 10: Resettlement Plan Implementation Schedule**

	2019	2020		2021	2022	2023	2024
	H2	H1	H2				
Setting up of PIU							
Appointment of GIAC							
Setting up of project level GRM							
Awareness generation among affected persons on entitlements, impact avoidance and mitigation measures to be implemented by the contractor							
Conduct detailed measurement surveys, census surveys and issuance of ID cards in sections ready for construction							
Identify Vulnerable affected persons, if any*							
Update draft Resettlement Plan to reflect surveys, consultations, design changes, and due diligence results							
Consultations and disclosure							
Review and approval of updated Resettlement Plan (PMU and ADB)							
Training/capacity building of PMU and PIU safeguards officers, engineers and other staff, CMSC supervision staff and contractor's staff							
Payment of compensation							
Handover of sites and alignments to contractors							
Start of civil works							
Internal monitoring, including surveys of affected persons on entitlements, satisfaction surveys							
Repair/reconstruction of affected facilities, structures, utilities, if any				Immediately, in consultation with other departments, as required			

ADB = Asian Development Bank, CMSC = construction, management, and supervision consultant, GIAC = government improvement and awareness consultant, GRC = grievance redress committee, PIU = program implementation unit, PMU = program management unit.

Note: The cut-off date for non-titleholders, is the date of the start of the census survey. The date of Land Acquisition Notification under Section 11 of the RFCTLARR Act, 2013 is the cut-off-date for titleholders losing land and structures, if any. Endorsement and disclosure of finalized resettlement plans consistent with the resettlement framework to be undertaken.

## **X. MONITORING AND REPORTING**

86. Resettlement plan implementation will be closely monitored by the PMU. PIU will prepare monthly progress reports on implementation of resettlement plan and submit to PMU, documenting actual achievements against targets fixed and identifying reasons for shortfalls, if any. As a part of monitoring, the standard of living of vulnerable households will be assessed pre- and post-resettlement plan implementation. It will be ensured that the standard of living of vulnerable households is improved, at least to the minimum national standard. These reports will feed into the overall monitoring reports for the TNUFIP which will be generated every quarter for the first year of implementation and bi-annually thereafter. Details to be covered under internal monitoring are elaborated in resettlement framework.

87. After the completion of the Program, an end-term impact evaluation to assess the effectiveness of the implementation of the resettlement plan will be carried out. The evaluation will focus mainly on effectiveness of resettlement measures taken to address the identified impacts, including, (i) whether the affected persons facing permanent loss of business/livelihood have been able to enhance or restore their business/livelihood, (ii) how those facing temporary economic impacts have been able to adjust with the implementation plan to continue with their business and that compensation payment was for the actual period of disruption, and (iii) whether compensation and assistance provided to the displaced vulnerable household facing loss of house has led to improved standard of living.

## Details of Potential Temporary Impacts

**Table A1.1: Raw Water Main**

Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
1	Kavitha	Tea shop	2	1	8,000	-	27	OBC	5	Up to 10th grade
2	Pandian	Tea shop	2	3	8,000	-	32	OBC	4	Up to 10th grade
3	Jothi	Tea shop	2	10	8,000	-	42	OBC	3	Basic reading knowledge
4	Nallu	Petty shop	2	4	10,000	Elderly	66	OBC	2	Illiterate
5	Eswaran P	Tea shop	3	8	10,000	-	40	OBC	4	Up to 10th grade
6	(Absentee)	Mutton shop	1	-	-	-	-	-	-	-
7	Chellaiah	Petty shop	2	15	9,000	Elderly	70	OBC	1	Illiterate
8	Subramani	Petty shop	2	10	6,000	Elderly, SC	72	SC	2	Up to 4th grade
9	Jaganathan	Petty shop	2	6	10,000	Elderly, SC	62	SC	4	Up to 10th grade
10	Tamilselvi	Petty shop	3	7	15,000	SC	52	SC	3	Illiterate
11	Naina Mohammed	Soup stall	2	2	6,000	Elderly	63	OBC	2	Illiterate
12	Selvi	Tiffin stall	2	15	6,000	-	50	OBC	3	Illiterate
13	Muthulakshmi	Petty shop	3	4	4,000	WHH, BPL	38	OBC	2	Illiterate
14	Kamudurai	Hotel	3	1	15,000	-	52	OBC	3	Illiterate
15	Senthilkumaran	Studio	3	3	8,000	-	34	OBC	5	Up to 10th grade
16	Rajendran	Tea shop	3	3	16,000	-	58	OBC	5	Illiterate
17	Ravikumar	Grocery Store	2	28	20,000	-	40	OBC	4	Up to 10th grade
18	Ravichandran	Tea shop	3	20	18,000	-	52	OBC	4	Up to 10th grade
19	Selvam	Chicken Fry	2	10	6,000	-	45	OBC	3	Up to 10th grade
20	Sekar	Chicken Fry	3	30	20,000	-	53	OBC	3	Up to 4th grade
21	Sellakamu M	Grocery Store	2	20	20,000	-	31	OBC	8	Graduation
22	Mariammal	Tea shop	3	30	6,000	WHH, Elderly, SC	80	SC	4	Illiterate
23	Ramesh	Electronics & Service Center	2	10	8,000	SC	39	SC	4	Up to 10th grade
24	Bethaya	Petty shop	2	1	9,000	Elderly	72	OBC	5	Up to 4th grade
25	Pandi	Petty shop	3	1	15,000	-	48	OBC	4	Up to 10th grade
26	Nithya	Fancy Store	3	1	10,000	SC	28	SC	3	Up to 10th grade
27	Natarajan	Vegetable Shop	4	3	15,000	Elderly, SC	62	SC	2	Up to 4th grade
28	Pandiammal	Grocery Store	3	10	15,000	WHH	52	OBC	2	Up to 12th grade
29	Marimuthu	Tender Coconut	2	4	12,000	SC	55	SC	3	Illiterate
30	Subbuthai	Petty shop	2	10	10,000	Elderly	60	OBC	4	Illiterate

Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
31	Pinniammal	Ragi Porridge and Snacks	2	15	4,500	Elderly, BPL	60	OBC	5	Illiterate
32	Saraswathi	Ragi Porridge and Snacks	2	15	4,500	Elderly, BPL	65	OBC	5	Illiterate
33	Katchammal	Ragi Porridge	2	15	6,000	-	48	OBC	4	Illiterate
34	Jothi	Snacks Shop	2	15	5,000	BPL	39	OBC	5	Illiterate
35	Ochammal	Ragi Porridge	2	15	6,000	-	47	OBC	6	Illiterate
36	Ponnammal	Ragi Porridge	2	16	6,000	WHH, Elderly	70	OBC	3	Illiterate
37	Sumathi	Tiffin stall	2	13	6,000	-	40	OBC	3	Basic reading knowledge
38	Mani S	Snacks Shop	2	12	7,000	WHH	47	OBC	4	Up to 10th grade
39	Kamudurai M	Soup Stall and Snacks	1	2	6,000	-	43	OBC	4	Illiterate
40	Chellammal	Textiles	4	15	9,000	WHH, Elderly	70	OBC	5	Illiterate
41	Selvendran M	Tiffin stall	2	6	6,000	Elderly	70	OBC	2	Up to 10th grade
42	Kasi	Cloth Merchant	2	13	8,000	-	42	OBC	3	Up to 4th grade

Type of structure: 1-Cart/structure on wheels, 2-Extended activities/structure that can be easily dismantled and reconstructed again, 3-Extended activities/structure that requires demolition of platform, steps etc., 4-Shelter not on wheels but can be moved.

Table A2.2: Clear Water Main

Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
1	Rangaraj	Tea shop	2	20	8,000	Elderly	61	OBC	2	Up to 4th grade
2	Balan	Mutton shop	2	12	20,000	-	40	OBC	4	Illiterate
3	Ramakrishnan	Chicken Fry	2	15	20,000	-	42	OBC	4	Up to 10th grade
4	Ravi	Petty shop	3	30	4,000	BPL	45	OBC	2	Up to 10th grade
5	Amsath Begum	Tea shop	2	25	16,000	-	48	OBC	5	Up to 4th grade
6	Nagarani	Medical Stores	2	4	12,000	-	27	OBC	2	Graduation
7	Senthil	Tea shop	3	45	8,000	-	37	OBC	6	Up to 12th grade
8	Nagadevi	Tea shop	3	20	20,000	-	30	OBC	3	Up to 10th grade
9	Muthukumar	Tea shop	3	5	10,000	Phy Challenged	36	OBC	4	Up to 10th grade
10	Murugesan G	Amman Rice Store	2	3	3,000	BPL	46	OBC	4	Up to 10th grade
11	Murugan	Tea shop	3	45	10,000	Elderly	68	OBC	2	Basic reading knowledge
12	Madasamy	Mutton shop	3	10	20,000	-	45	OBC	5	Up to 10th grade
13	Raja	Grocery Store	2	40	6,000	-	47	OBC	5	Up to 10th grade
14	Annadurai	Tea shop	2	3	12,000	SC	50	SC	3	Up to 10th grade
15	Sudha	Petty shop	2	5	18,000	-	38	OBC	4	Up to 10th grade
16	Thayambu	Bike Workshop	2	9	12,000	-	43	OBC	4	Up to 10th grade

Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
17	Palpandi	Tea shop	2	3	13,000	-	54	OBC	4	Up to 4th grade
18	Boominathan	Tea and Cooldrinks	2	30	12,000	-	49	OBC	4	Up to 10th grade
19	Kalaiselvi	Tea and Cooldrinks	2	10	9,000	-	40	OBC	3	Up to 10th grade
20	Vaverkhan	Grocery Store	2	15	20,000	-	42	OBC	7	Up to 10th grade
21	Chitra	Grocery Store	3	1	16,000	-	35	OBC	4	Up to 10th grade
22	Karthikeyan	Saloon	3	14	20,000	-	35	OBC	5	Up to 10th grade
23	Valli	Tea and Petty shop	3	1	2,000	WHH, BPL	55	OBC	6	Up to 4th grade

Type of structure: 1-Cart/structure on wheels, 2-Extended activities/structure that can be easily dismantled and reconstructed again, 3-Extended activities/structure that requires demolition of platform, steps etc., 4-Shelter not on wheels but can be moved.

Table A3.3: Feeder Main

Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
1	Rajamma	Tender Coconut	3	3	5000	BPL, Elderly	60	SC	7	Illiterate
2	Jothi	Fruit Stall	3	35	4000	BPL	50	OBC	2	Illiterate
3	Sankar Ganesh	Fruit Stall	3	5	10000		34	OBC	4	Illiterate
4	Prema	Tender Coconut	3	15	4500	SC, WHH, BPL	45	SC	3	Illiterate
5	Durai	Flower shop	3	4	8000	Elderly	60	OBC	4	Illiterate
6	Krishnaveni	Watermelon	3	1	6000	SC	41	SC	5	Up to 10th grade
7	Rakku	Tender Coconut	3	30	6000	SC	45	SC	4	Up to 4th grade
8	Sundaram	Tender Coconut	3	30	6000	SC	58	SC	4	Illiterate
9	Dhathaniyan	Briyani Stall	3	2	9000	Elderly	64	OBC	2	Up to 10th grade
10	Sivakumar	Sugarcane Juice	3	5	5000	SC, BPL	24	SC	5	Up to 12th grade
11	Periyakaruppi	Tender Coconut	3	5	6000	SC, WHH	52	SC	1	Illiterate
12	Muthulakshmi	Porridge Shop	3	5	6000	WHH	50	OBC	4	Illiterate
13	Kannan	LMKS Cool drinks	3	3	15000		22	OBC	5	Graduation
14	Thamayanthi	Tender Coconut	3	15	4500	SC, BPL	37	SC	4	Illiterate
15	Valli	Flower shop	3	5	15000		48	OBC	3	Up to 4th grade
16	Karthi	Cooldrinks Stall	3	8	6000		25	OBC	3	Up to 10th grade
17	Muruganandam	Helmet Shop	1	10	9000	SC	40	SC	4	Up to 4th grade
18	Devekumar	Cooldrinks Stall	3	10	12000		45	OBC	4	Up to 12th grade
19	Maragatham	Tender Coconut	3	10	6000	SC, WHH, Elderly	66	SC	4	Illiterate
20	Petchiammal	Tender Coconut	3	20	6000	SC	48	SC	7	Illiterate
21	Meena	Flower shop	1	5	6000		55	OBC	3	Basic reading knowledge
22	Seethapathi	Tiffin Stall	1	5	6000		48	OBC	4	Graduation
23	Muthulakshmi	Flower shop	1	8	10000	WHH	48	OBC	6	Basic reading knowledge
24	Pandiammal	Tender Coconut	3	24	6000	SC	48	SC	3	Up to 10th grade
25	Abimannan	Watch Repair Shop	3	16	6000		45	OBC	5	Up to 10th grade
26	Sumathi	Cooldrinks Stall	3	5	6000		38	OBC	4	Up to 10th grade
27	Dhanalakshmi	Watermelon	3	1	8000		26	OBC	6	Up to 10th grade
28	Lakshmi	Tender Coconut	3	3	5000	BPL	37	OBC	4	Up to 4th grade
29	Alagumani	Fruit Stall	3	4	9000		39	OBC	5	Up to 10th grade
30	Devi Bala	Sugarcane Juice	3	7	9000		35	OBC	4	Up to 10th grade
31	Chandrika	Varathan Snacks	1	30	12000	WHH, Elderly	62	OBC	4	Up to 4th grade
32	Pitchai	Sugarcane, Tender Coconut	3	23	12000		40	OBC	8	Illiterate
33	Angusamy	Sugarcane Juice	3	10	12000		56	OBC	2	Up to 10th grade
34	Kannan	Tender Coconut	1	2	15000		45	OBC	4	Basic reading knowledge
35	Pandi	Fruit Stall	3	25	15000		50	OBC	5	Illiterate

Type of structure: 1-Cart/structure on wheels, 2-Extended activities/structure that can be easily dismantled and reconstructed again, 3-Extended activities/structure that requires demolition of platform, steps etc., 4-Shelter not on wheels but can be moved.

**Table A4.4: Feeder Network (Sample survey in high, medium and low density areas for 500 m stretch in each)**

Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
1	Baskar	Snacks Vendor	3	7	9000		51	OBC	4	Up to 10th grade
2	Veerayi	Fruits Vendor	1	3	6000	Elderly	60	OBC	5	Illiterate
3	Krishnan	Sugarcane Juice	3	15	9000		41	OBC	4	Up to 4th grade
4	Manoharan	Coconut Vendor	1	2	6000		57	OBC	5	Illiterate
5	Alagar	Tender Coconut Vendor	3	1	6000	SC, Elderly	65	SC	2	Up to 4th grade
6	Sakthivel	Watermelon Vendor	3	20	18000	SC	45	SC	4	Up to 4th grade
7	Palanisamy	Chappel Repair	1	25	6000	SC, Elderly	65	SC	5	Illiterate
8	Palanikumar	Sugarcane Juice	3	15	15000		29	OBC	4	Up to 10th grade
9	Chellammal	Vegetable & Fruits Vendor	1	20	6000	WHH, SC, Elderly	60	SC	1	Illiterate
10	Veerayi	Fruits Vendor	1	30	9000	WHH, Elderly	65	OBC	1	Illiterate
11	Rasammal	Fruits Vendor	1	10	9000	Elderly	60	OBC	2	Illiterate
12	Raman	Porridge Vendor	3	10	15000		55	OBC	5	Up to 4th grade
13	Mohamed	Fancy items Vendor	1	17	4000	Elderly, BPL	65	OBC	6	Up to 4th grade
14	Thiyagarajan	Banana Vendor	3	7	7000		42	OBC	3	Up to 10th grade
15	Karthikraja	Sugarcane Juice	3	30	9000		46	OBC	6	Up to 10th grade
16	Sundari	Flower Vendor	1	10	3000	BPL	50	OBC	6	Illiterate
17	Rajendran	Tender Coconut Vendor	3	3	3000	BPL	50	OBC	3	Illiterate
18	Shanthi	Flower Vendor	1	2	6000		40	OBC	4	Up to 10th grade

Type of structure: 1-Cart/structure on wheels, 2-Extended activities/structure that can be easily dismantled and reconstructed again, 3-Extended activities/structure that requires demolition of platform, steps etc., 4-Shelter not on wheels but can be moved.

**Table A5.5: Distribution Network (Sample survey in high, medium and low density areas for 500 m stretch in each)**











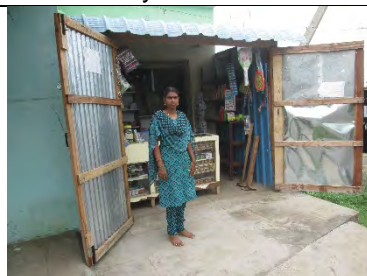
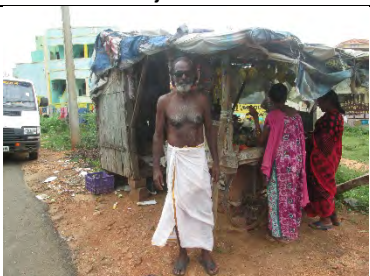



Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
1	Amsavalli	Sugarcane Juice	3	30	9000		36	OBC	4	Illiterate
2	Ramar	Sugarcane Juice	3	7	6000		40	OBC	3	Up to 4th grade
3	Rajendran	Sugarcane Juice	3	20	6000		61	OBC	3	Up to 4th grade
4	Irulayi	Vegetable Vendor	1	40	3000	SC, BPL, Elderly	65	SC	2	Illiterate
5	Pitchaikani	Vegetable Vendor	1	25	9000		63	OBC	3	Up to 10th grade
6	Abdulrahim	Banana Leaf Vendor	1	40	3000	BPL, Elderly	65	OBC	5	Up to 4th grade
7	Chinnathai	Greenleaf Vendor	1	50	3000	SC, BPL, Elderly	70	SC	5	Illiterate
8	Pitchaiammal	Vegetable Vendor	1	30	3000	SC, BPL, Elderly	65	SC	2	Illiterate

Sl. No.	Name of Business Owner	Type of Business	Type of Structure	Years of Business at present location	Average Monthly Profit	Vulnerability	Age of AP	Caste/Tribe/Community	Total members of the family	Educational status
9	Kuralarasan	Sugarcane Juice	3	3	6000	SC	27	SC	3	Up to 10th grade
10	Ravi	Tea Shop	3	10	6000		55	OBC	4	Up to 10th grade
11	Kumar	Snacks Vendor	3	10	6000		40	OBC	4	Up to 4th grade
12	Muthumani	Tiffin Centre	3	2	9000	WHH	60	OBC	4	Up to 4th grade
13	Vijayalakshmi	Tender Coconut Vendor	1	15	9000	SC	45	SC	5	Illiterate
14	Samuel Ganesh	Vegetable Vendor	1	20	5000	BPL, Elderly	65	OBC	2	Up to 4th grade
15	Bharathidasan	Tea Shop	1	10	15000		38	OBC	5	Up to 12th grade

Type of structure: 1-Cart/structure on wheels, 2-Extended activities/structure that can be easily dismantled and reconstructed again, 3-Extended activities/structure that requires demolition of platform, steps etc., 4-Shelter not on wheels but can be moved.

### Photographs of Affected Persons along the Raw Water Main









01 Kavitha - 97865 10679	02 Pandian	03 Jothi 89408 93054
		
04 Nallu 78679 29590	05 Eswaran P 81247 55227	06 Absentee
		
07 Chellaiah	08 Subramani 84288 77090	09 Jaganathan 63838 07480
		
10 Tamilselvi	11 Naina 80565 59088	12 Selvi 99526 18981
		
13 Muthulakshmi 99439 82649	14 Kamudurai 97877 65509	15 Senthilkumaran
		

Photographs of Affected Persons along the Raw Water Main		
16 Rajendran	17 Ravikumar 95005 45545	18 Ravichandran 87603 22809
		
19 Selvam 76675 30336	20 Sekar 97153 25779	21 Sellakamu M 99655 92997
		
22 Mariammal 90426 30504	23 Ramesh 76677 77420	24 Bethaya
		
25 Pandi 99768 02483	26 Nithya 97517 51053	27 Natarajan 78719 83946
		
28 Pandiammal 86828 10856	29 Marimuthu 91592 48191	30 Subbuthai 74487 14203
		

Photographs of Affected Persons along the Raw Water Main		
31 Pinniammal	32 Saraswathi	33 Katchammal 92290 85689
		
34 Jothi	35 Ochammal	36 Ponnammal
		
37 Sumathi	38 Mani S 99762 86008	39 Kamudurai M 96598 04177
		
40 Chellammal 97919 41597	41 Selvendran M 90920 57972	42 Kasi 80987 79570
		

### Photographs of Affected Persons along Clear Water Main

1 Rangaraj 97895 37535	2 Balan 96557 17232	3 Ramakrishnan 97878 49242
		
4 Ravi 95144 21240	5 Amsath Begum 997666 48554	6 Nagarani 81108 96577
		
7 Senthil 84895 47646	8 Nagadevi 80987 77843	9 Muthukumar 80980 02896
		
10 Murugesan G 99769 37841	11 Murugan 98656 24648	12 Madasamy 99422 66987
		
13 Raja 97151 41215	14 Annadurai 86753 66023	15 Sudha 99425 41552
		

Photographs of Affected Persons along Clear Water Main		
16 Thayambu 96263 82002	17 Palpandi 95006 67426	18 Boominathan 88700 37774
		
19 Kalaiselvi 76399 06246	20 Vaverkhan 90036 22820	21 Chitra 87542 85368
		
22 Karthikeyan 99447 93752	23 Valli 99523 81279	
		

### Photographs of Affected Persons along Feeder Main

1. Rajamma-81898 23462	2. Jothi-81898 23462	3. Sankar Ganesh-9047624960
		
4. Prema	5. Durai	6. Krishnaveni-81908 19059
		
7. Rakku-86810 47747	8. Sundaram-99940 20081	9. Dhathaniyan-88075 81688
		
10. Sivakumar-93843 59350	11. Periyakaruppi-7397540652	12. Muthulakshmi-9865495137
		
13. Kannan-93441 73207	14. Thamayanthi-99427 18013	15. Valli-89033 33464
		

Photographs of Affected Persons along Feeder Main		
16. Karthi-86676 44014	17. Muruganandam-8754772726	18. Devekumar-95972 81149
		
19. Maragatham-81898 92206	20. Petchiammal-63798 70367	21. Meena-96679 82836
		
22. Seethapathi-97864 86967	23. Muthulakshmi-6500582181	24. Pandiammal-99439 31191
		
25. Abimannan-98430 81827	26. Sumathi-77083 98027	27. Dhanalakshmi-8190014765
		
28. Lakshmi-97516 95270	29. Alagumani-96006 67016	30. Devi Bala-99948 85060
		

### Photographs of Affected Persons along Feeder Main

31. Chandrika-70948 06638	32. Pitchai-96262 92862	
		
33. Angusamy-84383 23942	34. Kannan-87542 80201	35. Pandi-96984 86472
		

### Photographs of Affected Persons along Feeder Network

#### Jaihindpuram Main Road, Madurai-High Density

1. Palanikumar-73688 55934	2. Chellammal-99439 51981	3. Veerayi-90958 35646
		
4. Rasammal-73688 55934	5. Raman-97905 79117	6. Mohamed-82220 05514
		
7. Thiyagarajan-99656 70917	8. Karthikraja-81443 28612	9. Sundari-85268 02275

**Photographs of Affected Persons along Feeder Network**



10. Rajendran-97863 26098



11. Shanthi-95972 61878



**Anna Nagar 2<sup>nd</sup> Main Road, SMP Colony, Madurai-High Density**

12. Alagar



13. Sakthivel-99762 22170



14. Palanisamy



**Balaji Nagar Main Road, Madurai-High Density**

15. Baskar-96595 23623



16. Veerayi



17. Krishnan-91597 14526



18. Manoharan-91597 15830

