UNDP / UN-HABITAT SPONSORED
SUSTAINABLE CITIES PROGRAMME

JAFFNA

URBAN GOVERNANCE SUPPORT PROJECT

CITY PROFILE

Ministry of
Urban Development & Water Supply

CITY PROFILE

Jaffna Municipal Council

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P R E F A C E

The Sustainable (Sri Lanka) Cities Programme which began in 1999 was extended to the Municipal Councils of Colombo, Sri Jayawardenapura Kotte, Dehiwela, Mount Lavinia, Negombo, Moratuwa, Matale, Kandy, Gampaha, Panandura, Wattala, Nuwara Eliya and Ratnapura. Later the Project had been extended to the Municipal Councils of Jaffna and Batticaloa. For the last two decades, due to the turbulent situation that prevailed in the North Sri Lanka, there was no proper plan prepared for the development of the Jaffna City. Therefore the City Profile of Jaffna Municipal Council has been prepared on the basis of information gathered through review of existing literature, interviews and consultations with the City's Stakeholder groups.

The City Profile is a basic document that contains the historical background and the existing conditions as regards to the infrastructure, and the basic amenities and services rendered by the Municipal Council. It would form the basis for initiating action for improvements and development of the Municipal Services, fostering better relationship with the stake holders, and reducing the level of poverty.

Most of the sectoral institutions and organizations which have rendered sectoral rehabilitation and development have implemented their programmes on a short term basis .The Profile will form the basis of a long term vision of the city's overall growth and development. This will be leading to the improvement in the rendition of services by the Municipal Council in the future.

With the signing of the ceasefire agreement the hostility and conflict situation has changed and there now exists a favorable and conducive environment for development. The City Profile would help the Municipal administration to mobilize all State and other Agencies to join hands in the development process.

I take this opportunity to express our gratitude to the Urban Governance Management Unit of the Ministry of Urban Development and Water Supply for all the guidance and assistance provided to us.

We should also thank Dr.Fahmy Ismail, National Technical Advisor, UNDP/UN HABITAT Sustainable Sri Lankan Cities Programme, and Urban Governance Support Project. The preparation of this City Profile would not have been a reality if not for the constant guidance and assistance provided by Dr.Fahmy Ismail and his team.

Dr.K.Kunarasa,
Municipal Commissioner,
Jaffna.

Chapter 1
Vision of the city

The vision of the city is to plan one which is functionally efficient, economically viable, environmentally sustainable and socially integrated to address the challenges, with the improvement of the quality of life.

1.1 **Objectives**

1. To develop the city as a modern city.
2. To improve the transportation system by increasing its efficiency and reduce congestion.
3. To increase the infrastructure facilities in the coming year.
4. To ensure environmentally sustainable development which will be in harmony with the natural net work.
5. To increase the quality and quantity of the housing stock and the associated social infrastructure.
6. To increase the amount of land available for commercial, residential and recreational purposes in order to prevent the speculative inflation of land prices and undesirable sub division of urban land.
7. To encourage stake holders to participate in the development project and programmes within the planning framework of the city.
8. To ensure that every man, woman and child has access to safe water, sanitation, a clean environment, health, education, nutrition, employment, public safety and mobility.
9. Through good urban governance citizens will be provided with the platform which will allow them to maximize their talents to improve their social and economic conditions.

1.2 Historical background

The administrative area of the **Jaffna City or Jaffna Town** is identical with the administrative area of the Jaffna Municipal Council.

Its origin could be traced to the mediaeval Tamil Kingdoms of Jaffna which had been strong during the 13th Century through to the 16th century.

Professor K.M.de Silva in his book “A History of Sri Lanka “ states as follows at page 84:

“**Jaffna under the Aryacakravatis was much the most powerful kingdom in the Island**.”

When the Portuguese succeeded in capturing the Jaffna Kingdom in 1619 Nallur was the capital. Due to the Tamil opposition the Portuguese could not continue to have Nallur as their capital .As a result Filipe DE Oliverira constructed the Fort and made it their capital because it was easier to defend and reinforce by sea. This area formed the nucleus of the present town later.

The Portuguese rule survived for a period of 39 years and the Dutch succeeded in ousting the Portuguese in 1658. It would appear that the small Portuguese town around the fort area was improved by the Dutch and was bounded on the north by Chapel street, west by the Esplanade, south by the Beach Road and east by 3rd Cross Street .It is interesting to note that prior to the construction of the Jaffna public library Chapel Street originated just

opposite the Muneeswaran Temple at Kankesanthurai Road and the whole stretch up to 3rd Cross Street was visible from the Jaffna Fort.

The Dutch had developed this town area both as an administrative and commercial centre. The commercial activities were conducted at the area called Parangitheru or pettah (pettai in Tamil).It was also the residential area of the Dutch, It is interesting to note that up to mid 1950s this area which was known as the main street area retained its importance with many commercial organizations functioning successfully. The facts that while Kankesanthurai Road, Manipay Road, Kayts Road, Point Pedro Road and Palaly Road have their point of origin at the Jaffna Fort area. Kandy Road has its origin at the Bastian or St.Johns college junction about 2 kilometers away from the fort area and that part is still known as Paranki Theru.

It has been noted that the Portuguese had destroyed all the Royal palace buildings of the Tamil kings at Nallur in order to construct the Fort. However it is gratifying to note that the British rulers have acquired the only remaining Gateway to the palace in 1907 and that is being preserved even now. The names Sangilithoppu, Pandaramalikai Rasavinthoddam are still in use in the city and stand as clear evidence of the Tamil kingdom of Nallur.

1.2.1 Emergence of Local Authority

1. The British who captured Jaffna by 1796 took steps to institutionalize the local authority functions of public health and sanitation, conservancy and scavenging, lighting, drainage, supervision and control of eating houses etc, by establishing a Sanitary Board under the Small Towns Sanitary Ordinance No 18 of 1892.The Board was administered by the Government Agent as Chairman and some senior officials in the District.
2. The Jaffna local Board was constituted in July 1906 under the provisions of Ordinance No13 of 1898 with the view of involving the people in the administration. The local Board consisted of three official members with Government Agent as Chairman and three unofficial members representing Central, Eastern and Western wards. It was the Local Board which established the Grant Bazaar market, Small Bazaar (gurunagar) market and the Rest House.
3. On the suggestion of the Local Board the Urban District Council (UDC) was promulgated under Ordinance No .11 of 1920 with effect from 1st January 1923.The area of the U.D.C consisted of 81/2 square miles and had a population of 42,346 people. It was divided in to eight wards and the council consisted of eight elected members and two nominated members .The Urban District Council had wider powers to deal with thoroughfares, public health, public utility etc .It had the power to impose and recover property rates license fees etc to meet the expenditure.

1.2.2 Office Buildings

The office of the Urban District Council was accommodated in a small room at the Kachcheri. The Council having felt the need for a spacious Office building initiated action to construct an office for it. The Ridgeway Hall premises was selected for this purpose and Mr.R.R.Nalliah, Chairman laid the

foundation for it. The building was constructed by demolishing the Ridgeway Hall and was declared open by the Governor Sir Reginald Edward Stubbs – G.C.M.G on 09th June 1936.Mr.Sam A.Sabapathy who succeeded Mr. Nalliah in 1937, carried out the construction of the Town Hall proper which was declared open by Sir Waithilingam Duraiswamy, the Speaker of the State Council.

Due to inadequacy of space to house the stores the premises on the eastern side of Front Street were acquired for Rs.70000 during 1955.This majestic building continued to house the Urban Council and the Municipal Council Offices until it was damaged beyond repairs on 10th April1985.

1.2.3 Urban Council

On the recommendation of the Donoughmore Commission the Urban District Council was elevated to the status of an Urban Council under the provisions of Ordinance No.61 of 1939, with effect from 1st January 1940.

The functions and powers of the Urban Council were identical with the Urban District Council. The significant changes were the extension of franchise to women and the increase of the number of members to 12 including two members nominated by the Governor.

1.2.4 Municipal Council

The local Government structure and system which got initiated with the introduction of the local Board from July 1906, the Urban District Council from 01st January 1923, the Urban Council from 01st January 1940 culminated in the promulgation of the Municipal Council with effect from 01st January 1949 under the provision of the Municipal Council Ordinance No 29 of 1947.

With the establishment of the Municipal Council, nomination of members ceased and the numbers of elected members were increased to fifteen representing the fifteen wards of the Council In 1968 the number of wards were increased to 23 and the numbers of elected members were also increased to twenty three.

The council at its meeting held on 12.8.1949 adopted the seal - the signet of the Council giving validity in the eyes of the law to corporate action with “YARL” (lute) as the main motif together with the same design of the crest.

With the attainment of Municipal status many central controls ceased to be and the Council had sizeable autonomy and authority to handle its own affairs.

1.2.5 Growth of the city

Under the British the Jaffna town began to grow as a provincial capital and reached the position of the second largest City in the Island.

While the opening of new schools, churches, streets, the General Hospital and the inauguration of the Railway services between 1902 to 1906 contributed very much, the establishment of almost all provincial and district head office for all Government Departments and the Kachcheri itself contributed a great deal to the growth of the city. It is estimated that as many as 188 Government Departments are functioning in the city. There was a time when not only students from other parts of the peninsula but also from far

away places like Anuradapura had their education in the leading schools of the city. The planned construction of Kayts, Karainagar, Manipay, Kankesanthurai, Palaly,Point Pedro and Kandy Roads having their axis at the fort junction resulted in the establishment of the central bus stand in the heart of the City. This too had a salutary effect on the growth of the City.

The Jaffna Railway station being the point of journey for not only the people of the city but also for those living up to Atchuvely on the north and for all from the Islands stimulated the growth. In the light of these developments wholesale and retail commercial organizations established themselves around the bus stand areas. With all these, the responsibility of the Municipal Council to provide Public Utility services not only extended to its citizenry but also to transit commuters, the strength of which may be equal to one another. Therefore the Jaffna City is still the Capital and the nerve centre of the Jaffna District.

The Jaffna Municipal Council which was ranked second in the Island in the early 1950s has dropped down beyond the tenth position due to the war situation that prevailed for over twenty years.

Jaffna City is the first, most and the worst affected City to suffer war damages. While its own buildings like the Municipal office and Town Hall, the Public Library the Rest-House, Open Air theatre, Grand Bazaar, Market etc have suffered irreparable damages, several of the City 's landmarks like the Weerasingam Hall , the General Post office the Railway Station, St.Peters Church, the Court Complex etc are some of the other buildings which suffered damages.

With the signing of the Ceasefire Agreement in February 2002 efforts are under way to rehabilitate the City. With the inherent and natural resilience character of the community there is every hope of the City being restored to its due glory of comprising the ancient Tamil Kingdom capital of Nallur and the fort area capital of the foreign rulers with in its administrative limits.

1.2.6 Pictorial Evidence of War Damage

Plate 1.1: K.K.S Road / Manipay Road Junction

Plate1.2: Modern Market collapsed after bombing

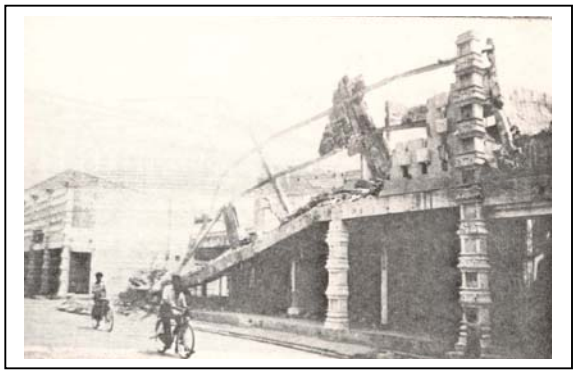


Plate 1.3: Shops in Grand Bazaar area

Plate 1.4: K.K.S Road

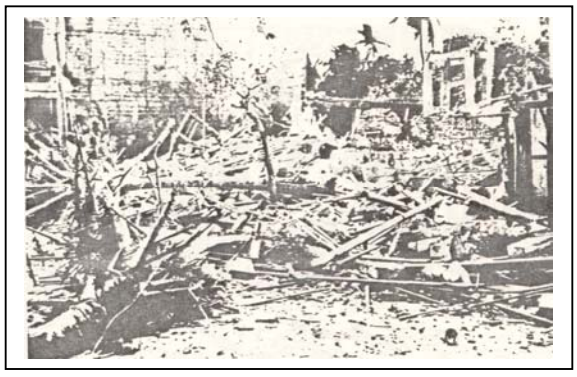


Plate 1.5: Rani Theatre at Grand Bazaar

Plate 1.6: Devastated Wellington Theatre

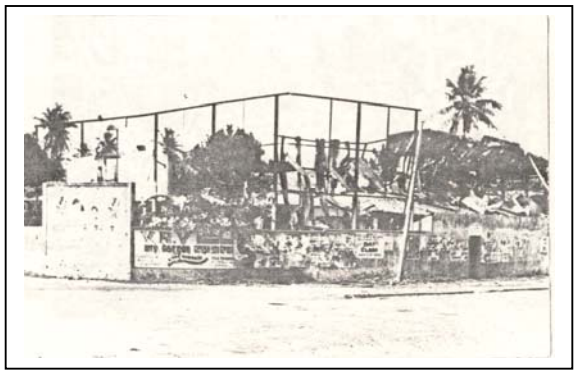


Plate 1.7: Houses in Pasaiyoor

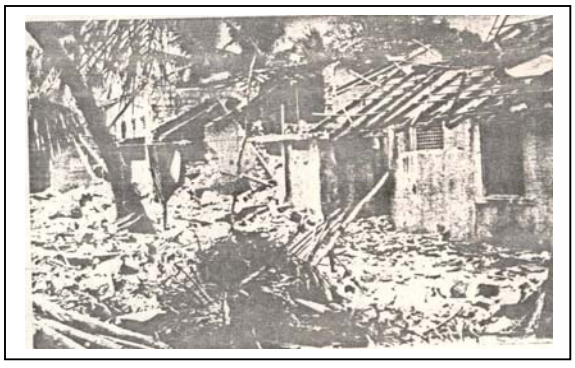


Plate 1.8: Damaged Main Bus Stand and Shops

Plate 1.9: Multi Storey Building at Main Street

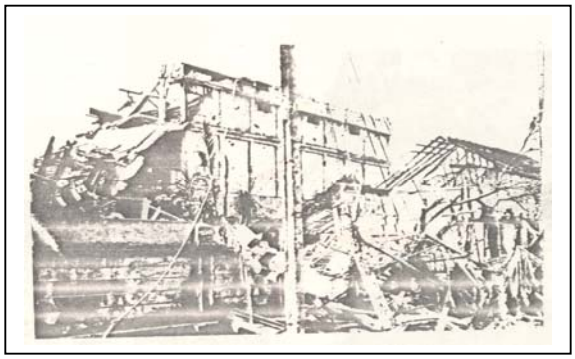


Plate 1.10: National Savings Bank and Peoples Bank at Main Street

Plate 1.11: Areal View of the Area Neighbouring the fort, Jaffna after the War Situation

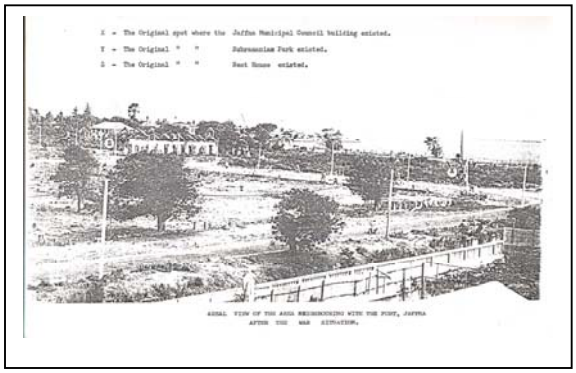


Plate 1.12: Main Street, Old Dutch Quarter

Plate 1.13: Commercial Building, K.K.S Road

Plate 1.14: Residential Building, Koddady.

Plate 1.15: Devastated Railway Station

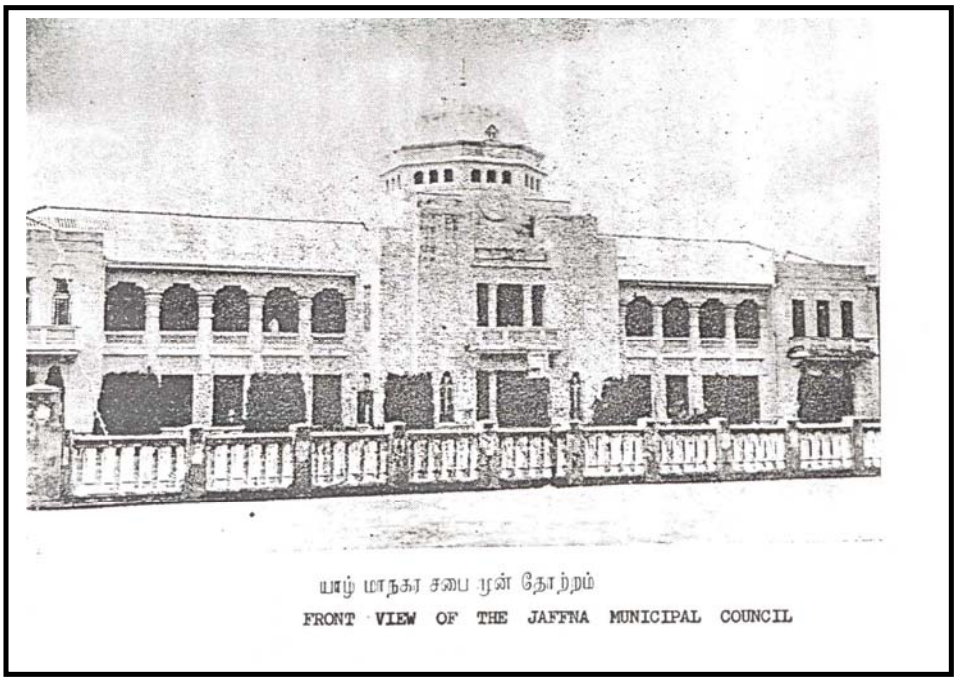
Source: Engineering Consultancy Bureau Repot 1991.

Chapter 2

2.0 Organizational Structure

The Jaffna Municipal Council was established on 01.01.1949 under the provisions of the Municipal Council Ordinance No.29 of 1947.It is the local authority within the administrative limits of the Municipality charged with the regulation, control and administration of all matters relating to the public health, public utility services and public thoroughfares and generally with the protection and promotion of the comfort, convenience and welfare of the people and the amenities of the Municipality. Jaffna Municipal Council had undergone heavy damages due to the war and could not function in its own premises. Office buildings were completely damaged during the period of war.

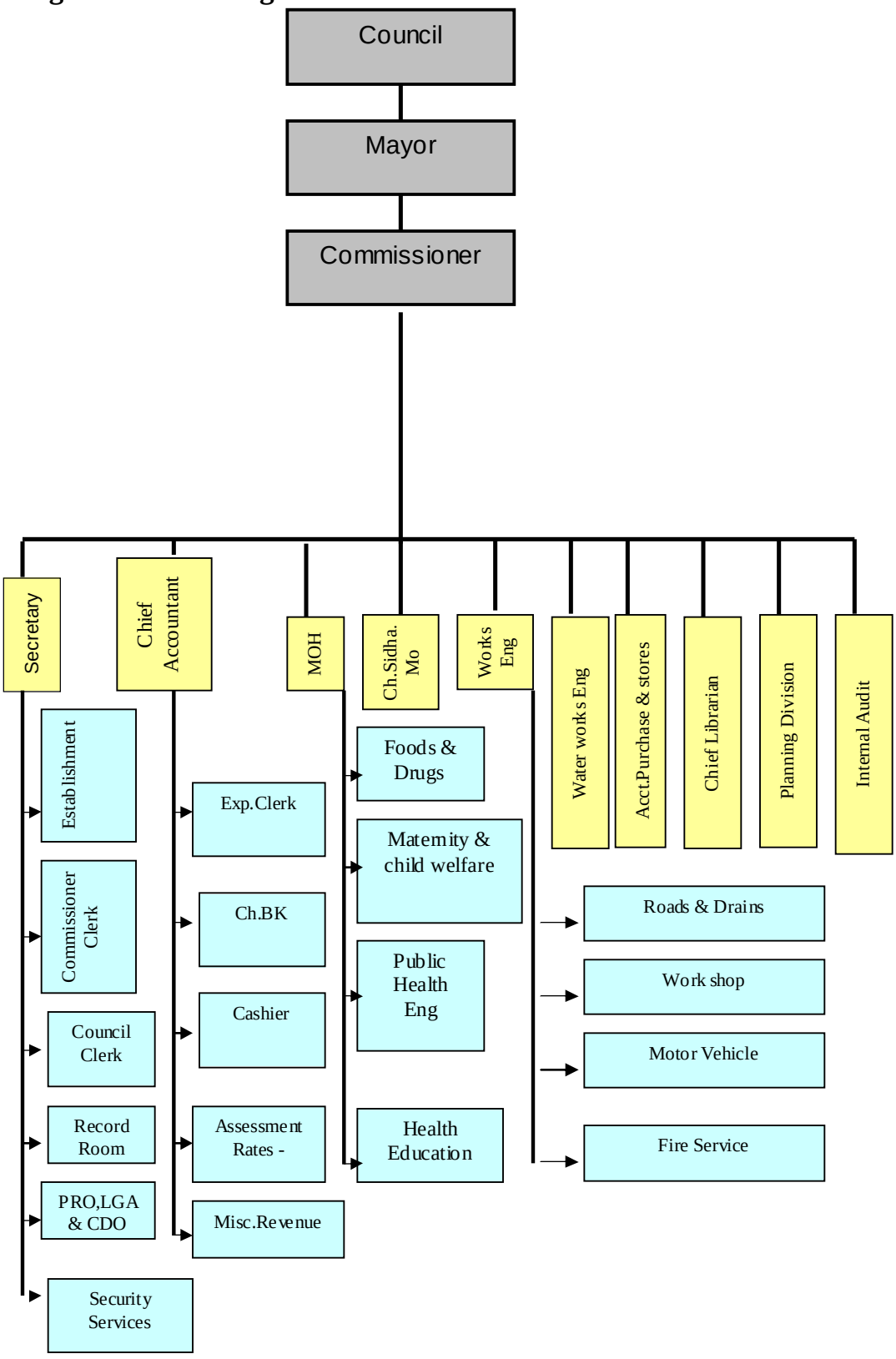
Plate 2.1: Devastated Town Hall Front View



யாழ் மாநகர சபை முன் தோற்றம்

FRONT VIEW OF THE JAFFNA MUNICIPAL COUNCIL

Figure 2.1: The Organization Chart



(Source: Municipal Budget, 2005)

2.1 Administrative Structure

2.1.1 Elected Council

i. The Council consists of 23 elected members. This number was determined from 1968 with a delimitation of the municipal area into 23 wards. The entire Jaffna Divisional secretariat area consisting of 15 wards and 08 wards from the Nallur Divisional secretariat area form the administrative area of the council. Even though the ward system has been replaced by the proportional representation system, yet the number of elected members remains at 23. A Mayor and a Deputy Mayor are elected from among the 23 members.

ii. The Mayor is the Chief Executive Officer of the Council and is responsible for the exercise, performance and discharge of the executive functions and responsibilities of the Council.

iii. The Deputy Mayor is not vested with any statutory powers except to exercise and perform any authority or responsibility delegated to him by the Mayor or Council; exercise the functions of the Mayor during any period of absence due to illness or other causes, and during the occurrence of the vacancy in the office of mayor.

2.1.2 Executive and Administrative Officers

i. The Municipal Commissioner is the Chief Executive Officer next to the Mayor, and all other Officers and servants are subordinate to him. He exercises, performs and discharges all the powers, duties, and functions conferred or imposed upon or vested in or delegated to him by or under the Municipal Council Ordinance or any other written law. By arrangement the Secretary acts for the Commissioner, whenever he is on leave or otherwise absent.

ii. In the event of the vacation of the office of both the Mayor and the Deputy Mayor by death or resignation or for any other cause, then during the period intervening between the vacation of office, of the Deputy Mayor and the election of a new Mayor, the Commissioner may exercise, perform and discharge all the rights, privileges, powers duties and functions vested in or conferred or imposed on the Mayor by the Municipal Councils ordinance or any other law.

iii. The Commissioner is responsible for the recovery of all rents, rates, taxes, license duties, fees, fines and other revenues due to the Council.

iv. The Jaffna Municipal Council has the unique record of being administered by Special Commissioners and Municipal Commissioners more than the elected representatives during the last 55 years. From 1975 to 2005 elected councils functioned only for a period of nine years, one council from 01.06.1979 to 01.06.83 and the other from 11.3.1998 to 17.2.2003.As at present also the council is being administered by the Municipal Commissioner as elections have not been held to elect a council after the expiration of the extended period of office of the last Council. Standing Committees envisaged by law are therefore non functional now. However Commissioner convenes and

presides over meetings of senior officers held to take important decisions.

v. The posts of Medical Officer, Works Engineer, and Accountant have been declared as executive departmental heads. Apart from these the Secretary, Waterworks Engineer, Librarian and the Internal Audit Branches function directly under the Commissioner. The Organization chart combines the line and functional authority and responsibility.

vi. The functions and duties performed by each Department or Branch and head of the Department /Branch responsible for the supervision of them are as follows;

2.1.2.1 General Administration

Secretary

a. Establishment or Personnel
b. Public Relations
c. Council Work
d. Commissioner's correspondences
e. Nursery Schools
f. Record Room

2.1.2.2 Finance Department

Chief Accountant

a. Expenditure
b. Bookkeeping and Accounting
c. Procurement and Supplies
d. Recovery of Assessment Rates
e. Recovery of Rents, license duties and other Revenues
f. Receipts and Payments of cash and cheques
g. Project Accounting

2.1.2.3 Health Department

Medical Officer of health

a. Maternity and child welfare
b. Preventive Service
c. Curative / Clinical Service Western
d. Food Sanitation
e. Health Education
f. Sidha Medicine and Clinics
g. Cleansing and environmental health
h. Markets
i. Cemeteries and burial grounds

2.1.2.4 Works Department

Works Engineer

a. Roads and lanes
b. Drains and Channels
c. Lands and Buildings
d. Motor-Vehicles & workshop

e. Fire Brigade
f. Stadium, Parks and Recreational centers
g. Security Services

2.1.2.5 Water works Section

Water Works Engineer

a. Maintenance of Head works and pumping station
b. Public distribution
c. Private service connections

2.1.2.6 Library Services

Chief Librarian

a. Public Library
b. Branch Library

2.1.2.7 Internal Audit

Chief Internal Audit

Internal Auditing of all Departments and Branches of the Council

2.2 Human Resource

2.2.1 Manpower Distribution - Cadre wise

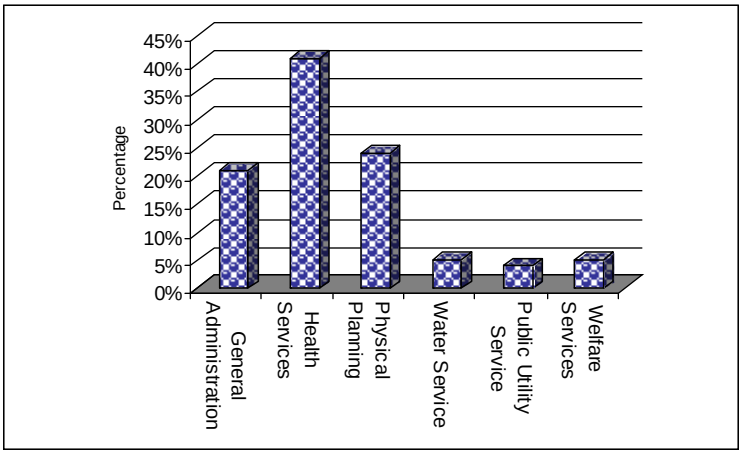
a. Health Department	=	508
b. Works Department	=	252
c. Finance Department	=	95
d. General Administration	=	62
e. Water Works Section	=	61
f. Library Service	=	66
g. Internal Audit	=	15
Total		**1059**

(Source: Budget 2004 & Cadre Library 2005)

2.3 The services provided by Jaffna Municipal Council

Municipal council is performing its day to day services to the public on a leased out land temporarily with limited resources. The Municipal council provides various services such as health, water, public utility and welfare for providing good health conditions, upgrading the living standards, providing better transport services, improving the social status, protecting the natural environment and providing better infrastructure to the tax payers. The figure illustrates the services which are provided by the Jaffna Municipal Council.

Figure 2.2: The services provided by Municipal Council



2.4 Financial Management

Municipal Council prepares the annual budget before the beginning of each year for proper financial management.

1. A perusal of the final Accounts of the Council for the year 2003 reveals the following Revenue and expenditure for that year.

1.1

a. Government Grants	92402703.96
b. Council Revenue	38773384.29
Total Revenue	131176088.25

1.2

Total Recurrent expenditure	128590724.20
Excess of Revenue over recurrent expenditure	2585364.05
Transferred to capital out lay	131176088.25

2.1 Employment Expenditure

a. Personal Emoluments	80294967.25
b. Traveling	403501.23
c. Pensions and Retirement Benefits	5824481.08
Total	86522949.56
3. Capital Grants	26737247.03
4. Property Rates Revenue	6806436.49

5. Expressing the above figures as percentages of one to the other or others to the nearest ten thousand would help understand the financial status of the council.

5.1 Percentage of Govt grants to total revenue $\frac{92400000}{131170000} \times 100 = 70.4\%$

5.2 Percentage of property rates to total revenue $\frac{6800000}{131170000} \times 100 = 5\%$

5.3 Percentage of revenue contribution to capital outlay to total revenue $\frac{2580000}{31170000} \times 100 = 5\%$

5.4 Percentage of employment expenditure $\frac{86520000}{131170000} \times 100 = 66\%$
Total revenue

5.5 Percentage of property rates to total council revenue

$$\frac{6800000}{38770000} \times 100 = 17.54\%$$

5.6 Percentage of Govt.grant to total recurrent expenditure

$$\frac{92400000}{128590000} \times 100 = 71.85\%$$

5.7 Percentage of employment expenditure to total recurrent expenditure

$$\frac{86520000}{128590000} \times 100 = 67.3\%$$

5.8 Percentage of Revenue contribution to capital outlay
to total council revenue $\frac{2580000}{38770000} \times 100 = 6.65\%$

6. From the above facts and figures it would appear that the Council is heavily dependent on the Central and Provincial Government grants to maintain itself.(5.1 & 5.6).
It is also clear that employment expenditure represents 66% of the total revenue and 67.3% of the total recurrent expenditure. When 2/3rd of the revenue is being spent on this score, only 1/3rdrd is available for maintenance and other capital improvements of the city. This is totally inadequate in relation to the services demanded of it by the citizenry.
7. It is understood that the percentage of reimbursement of personal emoluments which was around 80 percent up to end of the year 2004 has been reduced to about 65% from 01.01.2005. This would have an adverse impact as the increase in the salaries bill of the Council with effect from November 2004, from which monthly salaries of public servants have been increased by 40%.

2.4.1 Budget 2005

Having seen the financial position of the council for the year 2003, it would be relevant to look at the Budget of the council for the year 2005. The budget summaries of Revenue and Expenditure, recurrent Revenue, Capital Receipts, Recurrent Expenditure and Capital Expenditure are reproduced below.

Table 2.1: Revenue & Expenditure Budget Summary -2005

Recurrent Revenue		164726000
Capital Revenue		316500000
Less		481226000
Recurrent Expenditure	156878000	
Capiatl Expenditure	324344000	481222000
Surplus		4000

Table 2.2: Recurrent Revenue Summary - 2005

Recurrent Revenue	General Administration	Health services	Physical planning	Water services	Public utility services	Welfare services	Total
Rates & Taxes	6165000			1000000		3000000	101655000
Rents			25010000		14430000		16931000
Licenses	50000	3055000	300000				3405000
Fees for services	291000	1139000	1751000	301000	1000	310000	3793000
Penalties Warrant costs fines	3050000	18000	10000			27000	3105000
Other income	2065000	74000	6035000	1000	430000	2730000	11335000
Revenue						90000	115992000
Grants	100002000	900000	15000000				
Total	111623000	5186000	255997000	1302000	14861000	6157000	16472000

Table 2.3: Capital Receipts- Budget Summary -2005

Description of Capital Receipt	General Administration	Health services	Physical planning	Water services	Public utility services	Welfare services	Total
Capital Grant							
UNICEF	2000000					1000000	3000000
U.N.F.P.A			310000000				310000000
Rehabilitation(MRRR)			1000000				1000000
Criteria A			1000000				1000000
B							
C.L.G Grant			1000000				1000000
Decentralized Budget			500000				50000
P.U.P							
Necord (North East Community Restoration & Development)							
Total	2000000		313500000			1000000	316500000

Table 2.4: Recurrent Expenditure

Recurrent Expenditure	General Administration	Health services	Physical planning	Water services	Public utility services	Welfare services	Total
Personal Emoluments	22908000	47263000	21571000	6969000	3523000	8887000	111121000
Traveling Expenses	403000	239000	128000	57000	29000	15000	871000
Supplies & Requisites	679000	2695000	1017000	717000	137000	491000	5736000
Repairs Maintenance							
Capital Assets	395000	445000	22481000	242000	288000	778000	24629000
Transportation & Communication	2477000	909000	704000	971000	175000	1145000	6381000
Interest Payment	50000			14000	100000		164000

Grants, Contribution	299000	109000	107000	53000	18000	142000	728000
Pensions Retirement Benefits	2190000	3038000	2020000				7248000
Total	29401000	54398000	48028000	9023000	4270000	11458000	156878000

Table 2.5: Capital Expenditure

Description of Capital Expenditure	General Administration	Health services	Physical planning	Water services	Public utility services	Welfare services	Total
New Equipment outlay							
D.C.B Allocation	473000	2457000	1772000	507000	2127000	280000	7616000
Criteria Allocation A			1000000				1000000
B			1000000				1000000
P.U.P			1000000				1000000
Interim Library Necord, C.L.G Grant			500000				500000
Rehabilitation land Rehabilitation			310000000				310000000
UNICEF		2000000					
Loan Re payments				54000	174000	1000000	3000000 228000
Total	473000	4457000	315272000	561000	2301000	1280000	324344000

An analysis of the Recurrent Expenditure estimates indicates the following:

Table 2.6: Budget 2005 – Recurrent expenditure Analysis

Programme	Personal Emoluments Traveling and Pensions	Maintenance and Others	Total
General Administration	25501000	3900000	29401000
Health Services	50540000	4158000	54698000
Physical Planning Roads	23719000	24309000	48028000
Water service	7026000	1997000	9023000
Public Utilities	3552000	718000	4270000
Welfare services	8902000	2556000	11458000
Total	119240000	37638000	156878000

As far as the recurrent expenditure estimates are concerned it would appear.

a. That 76.08 % of the expenditure accounts for personal emoluments, travelling and pensions.
b. That 23.91 % is available for maintenance and other expenses.

As far as the revenue contribution to capital outlay are concerned it would appear

a. That only a sum of rs.7844000 has been sent apart or is available as revenue contribution to capital outlay.
b. That is only 4.76% of the total recurrent revenue estimates.
c. That is only 2.41 of the capital expenditure estimate.

Chapter – 3(1)

3.0 Physical and Cultural Environment Profile of the city

3.1 Physical Environment

3.1.1 Location

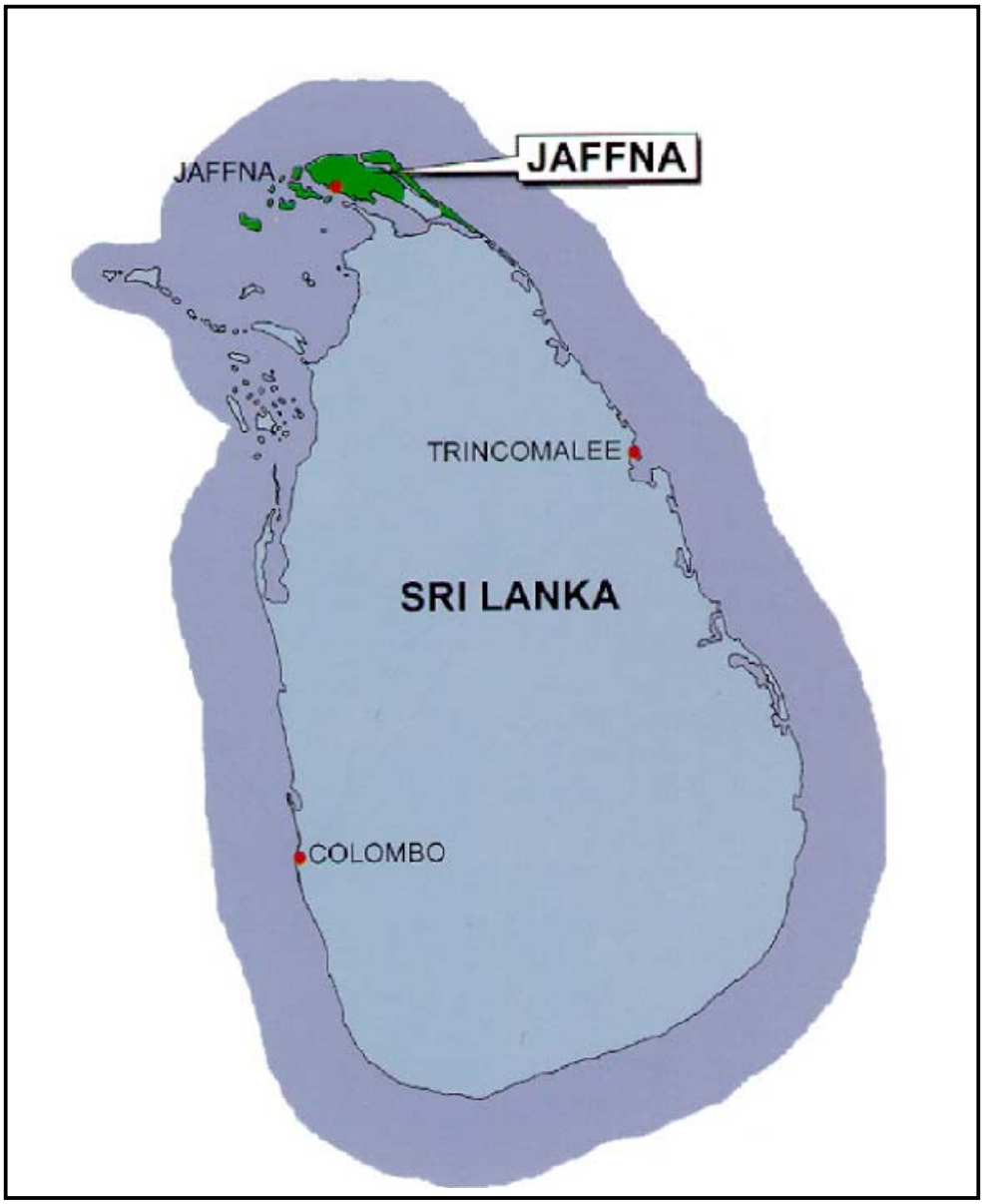
The Jaffna Town lies in the Southern part of Jaffna Peninsula between 9^0 38' North and 9^0 42' North and between 79^0 59' East and 80^0 3' East. It is the District Head Quarters for Jaffna district, which consist of most parts of Northern Sri Lanka.

The area of the Town is about 20.20 Square Km and the town is longer in the East – West direction measuring a maximum of 6 Km in length and its width varies from 8.5 to 4.0 Km. The Jaffna lagoon forms the Southern boundary of the town. The Municipal Council consists of Jaffna and part of Nallur Divisional Secretariat Division.

3.1.2 Topography

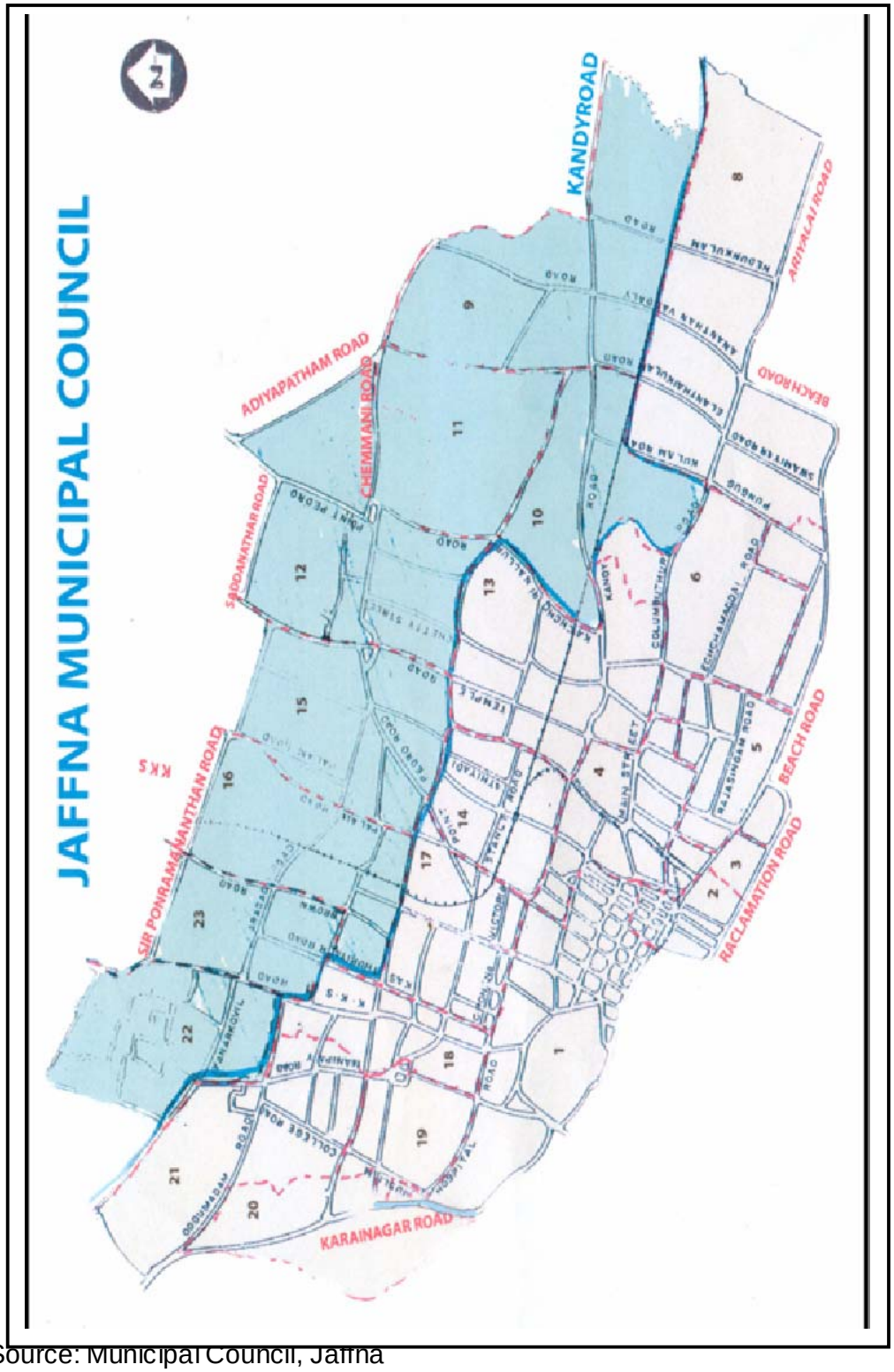
The present Jaffna town has in the course of its development engulfed some agricultural areas. But in general the topography is almost flat, the highest elevation is one 10 MSL and no sharp gradients are noticeable. With respect to topography there are no real constraints to physical development in the town. There is no natural stream.

Map 3.1.1: Physical Location of the City of Jaffna



Source: GTZ, RRAN - Rebuilding Lives, The Jaffna Rehabilitation Project, Sri Lanka.

Map 3.1.2: Municipal Wards in Jaffna



Source: Municipal Council, Jaffna

3.1.3 Climate

The climate of Jaffna is determined by the monsoon that forms a wet and dry season in the District. The major rainy season occurs during the North East monsoons from October to December and the minor rainy season occurs during the South West monsoon in April and May.

The period between the South West Monsoon and the North East Monsoon is the dry season extending from June to September. The average rainfall is 1300mm and during the period of 1988 to 2004 the minimum recorded was 847.8mm and the maximum at 1909.3 mm. In November 1944 the maximum monthly rain fall was recorded to be 1118mm and the minimum annual rainfall since 1971 was recorded at 635 mm in 1963 and 591mm in 1974, which reveals a considerable variation. (Market Town water supply Jaffna project, 1984).

The mean annual air temperature was recorded in December 2003 at 26.2^0 C (Statistical Hand Book 2003, Jaffna District). The evaporation is measured at Thirunelvely Farm School and was found to be 1.663mm. The annual potential vapor transpiration (corrected penman method) is calculated at 1.858.8mm and the pan evaporation ET pan is 1.224.9mm.

3.1.4 Geology

The Jaffna peninsula is underlain by three formations: the pre-Paleozoic basement rocks, the Mannar Sandstone and the Jaffna Limestone. The pre-Paleozoic basement rocks are described as massive, crystalline, igneous and metamorphic. They can be found at a depth of 240 m. The basement rocks are overlain by the quartzitic sedimentary deposits, the Mannar Sandstone formation of early Tertiary up to Miocene age.

It is a gray, coarse to very coarse grained sandstone of 130 m thickness (at Pallai) with minor intercalations of silt and clays. The Jaffna Limestone is overlying the Mannar Sandstone almost flat bedded and dates back to the upper part of the lower Miocene. The limestone is characterized to be light brown to light gray or white, fine crystalline and densely fossiliferous. Its thickness is approximately 90 m

The Jaffna Limestone is capped in places by thin layers of residual soil belonging to the Pliocene-Pleistocene period as well as lacustrine and lagoonal deposits like brown sand and loam, Aeolian sands and coral reefs belonging to the Quaternary Period. The thickness of this formation varies from 1 m to 15 m. (Ground Water in Jaffna, 1968; Market Town Water Supply Jaffna Project, 1984).

3.1.5 Surface water body in the Municipal Council Limit

A characteristic feature of the Jaffna landscape is the “Ponds of Jaffna”.

The total number of ponds within JMC has been estimated to be 40. An inventory of the JMC indicated 40 ponds. With the help of the road map dated 1996, the only existing map of JMC that could be acquired from the survey department, 39 ponds could be located. Most of the ponds seem to be natural

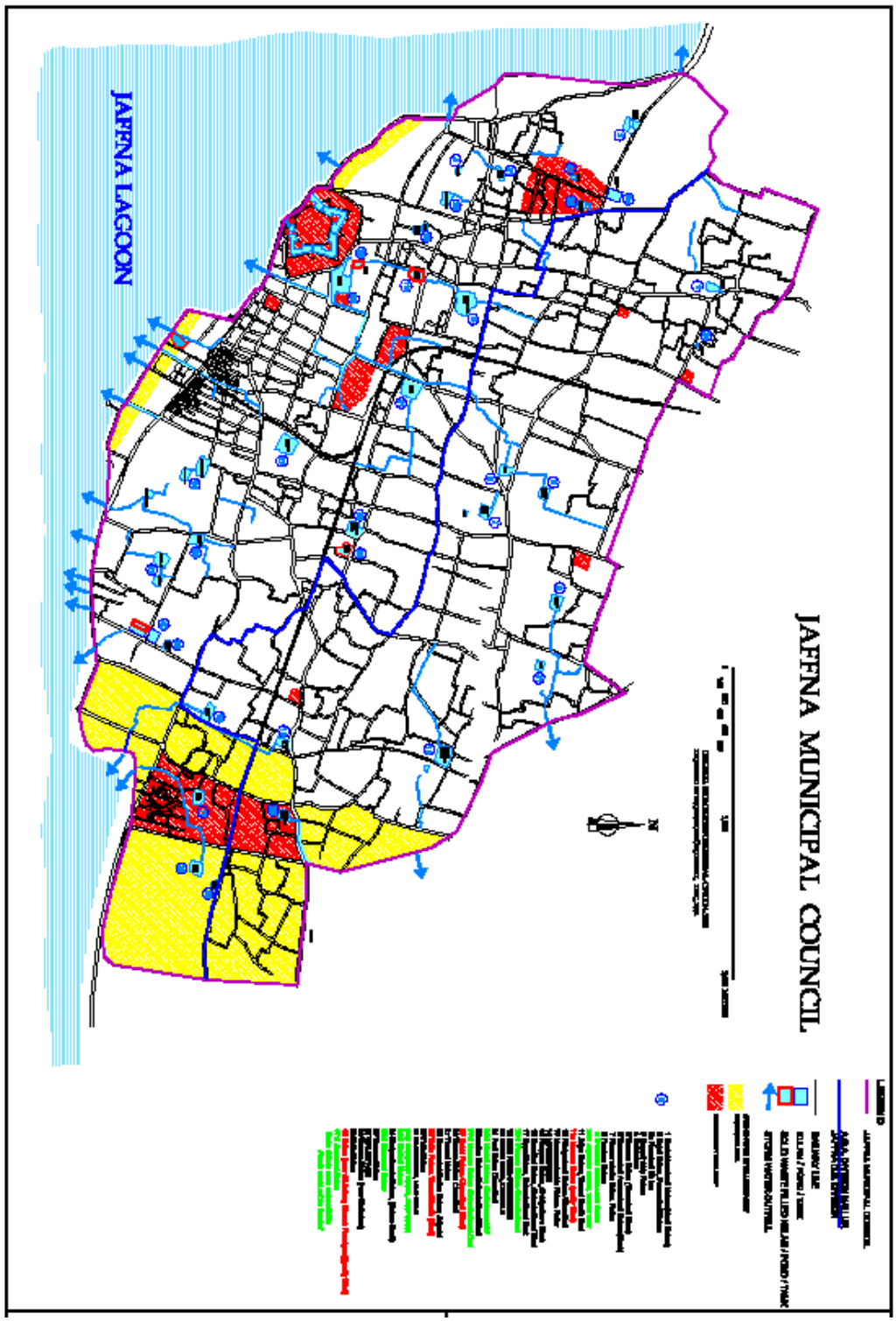
depressions while others have been artificially created for drainage or have been used by the inhabitants for religious purpose, irrigation or washing of clothes. The ponds are located within a network of storm water drains, 4 major and 8 minor drainage channels. Most of the channels drain into the Jaffna lagoon and some drain out on the East and West of the Jaffna City. The ponds are not sealed and have therefore direct contact to the ground water. The ground water is recharged through the ponds. During heavy rains each pond serves as a retention basin, which reduces the peak flow of storm water and allows smaller diameters for the outflow channels. At places where the ponds are next to the paddy fields the regulation of the pond level and the control of the overflow provide water for irrigation.

Stagnant water bodies in this climate have to be kept clean with water of high quality where fish can contain the breeding of insects, especially mosquitoes. In this context the retaining walls play an important role to maintain the water quality and to minimize health hazards for the people living close to the pond.

At present, the storm drains are also utilized to drain waste water from the households, which also gets discharged into the ponds. As a result , the ponds also serve as oxidation ponds treating wastewater and retaining solid waste and other floatable matter that is discharged into the ponds with the storm water. Since it is believed that in the foreseeable time it will not be possible to prevent waste water being discharged into the storm water drains, especially during the dry seasons, the waste water has to bypass the ponds.

If the ponds are de-silted and deepened, the vulnerability of the ground water increases since at present the silt may be functioning more like a filter. The rehabilitation of the ponds is a necessary task to improve the water management in the Jaffna Municipal Council.

Map 3.1.3: Physical Location of the ponds of the Jaffna city



Source: G.T.Z Report 2002

3.1.6 Ground Water

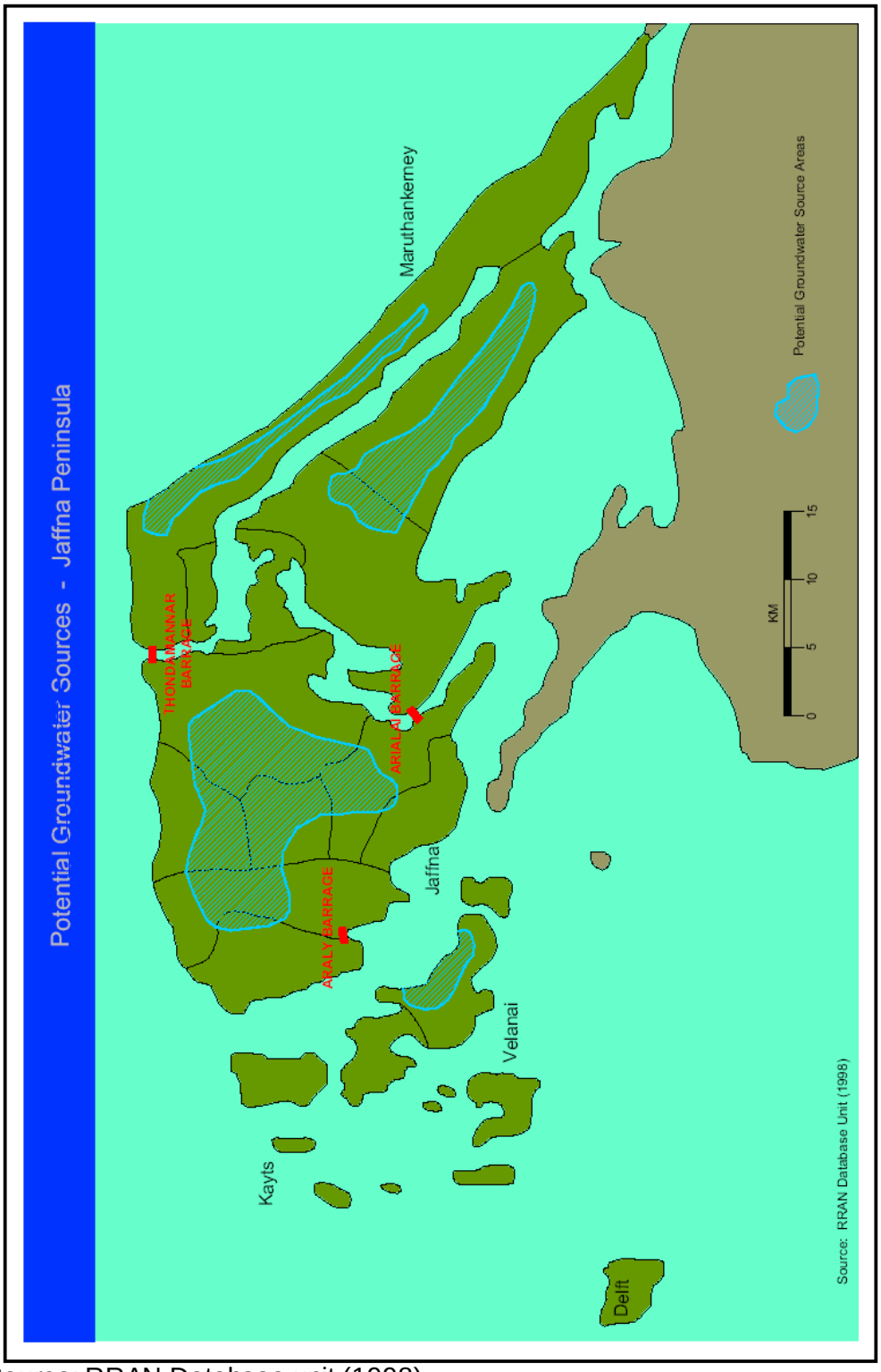
The entire ground water is recharged almost entirely from percolated rainfall and it forms a (Ghyben-Herzberg) fresh water lens beneath the peninsula. It has been found, that the freshwater lenses do not extend below the base of the limestone. According to the Ghyben-Herzberg principle, the fresh water lens of the Jaffna peninsula is sustained by the buoyancy of freshwater in relation to sea water. As the difference in densities is 1.0:1.025 (giving a ratio of 40:1), every meter of freshwater above sea level requires a depth of the freshwater lens of 40 m, when no mixing between fresh and sea water takes place. Since there is no sharp interface between fresh and sea water, in reality there is a transition zone where the ratio 40:1 can be applied to the 50 percent isochlor. The top of the transition zone is determined by the electrical conductivity of 1000 µ mho. The freshwater is floating on saline water, and it is recharged by vertical percolation of rainfall and discharged by horizontal flow to the nearest coastal periphery.

In 1968 the number of wells was reported to be 84.000 in the Jaffna Kachcheri area, of which 66.000 wells are domestic and 18.000 are farm or agricultural wells. In some parts the density of wells was reported to be up to 30 agricultural wells per 100 acres and the largest number of domestic wells was found in the Jaffna Town with a density of 152 per 100 acres (Ground water in Jaffna, 1968). The large high density of wells indicates the large extraction of freshwater and the increase in problems of water quality and quantity that is available for consumption. Over extraction has led to a widespread increase of salination, which has been the main focus of ground water resource management in the past years. The thin (0 to 3 m) cover of soil over the ground water table consisting mainly of sandy soils with an infiltration capacity of 50 m/d (daily 50.000l/m^2) provides no protection against pollution of the ground water from the surface

The sandy soil has very low adsorption and therefore a low purification capacity. Whatever is applied onto this soil or buried into the soil would be expected to leach down into the ground water. Agricultural fertilizers, pesticides, fungicides, herbicides as well as solid and liquid industrial wastes, oil, diesel, petrol, and the wide variety of domestic solid and liquid waste in these circumstances can pollute the ground water if applied and buried in the soil.

The Limestone provides almost no purification capacity and with a very high permeability (500 m/d = 500.000 l/m^2 per day) pollution that reaches the ground water can quickly spread very far. Most of the 100.000 wells are open dug wells of 3 m and more in diameter and some 1.000 tanks and ponds of one ha and more in size are cut into the ground water table. Any pollution that reaches these water bodies will spread into the ground water table.

Map 3.1.4: Physical Location of the Ground water of the Jaffna



Source: RRAN Database unit (1998)

3.1.7 Natural Vegetation

The military conflict has inflicted heavy damage to the vegetation cover of the city. Specially Palmyras and Palm trees have been extensively used as building material for bunkers, sheds, fences and have been cleared for mine fields. In these areas runoff may have increased. A ban on further sand mining and the import of building material may be necessary to protect the ground water resources.

Plate 3.1.1: Palmyra Trees in Ariyalai Area

3.1.8 Land use pattern of the city

The existing land use pattern is shown in the figure. Concerning the land use pattern in Jaffna city there is no more fertile land available for agriculture as 50.9 ha are being paddy cultivated. 243.71ha are being utilized for construction of roads. In general, in the Jaffna peninsula the land use for agricultural purposes, for crops like paddy, Vegetables, fruits, coconut and Palmyra has declined over the past 20 years.

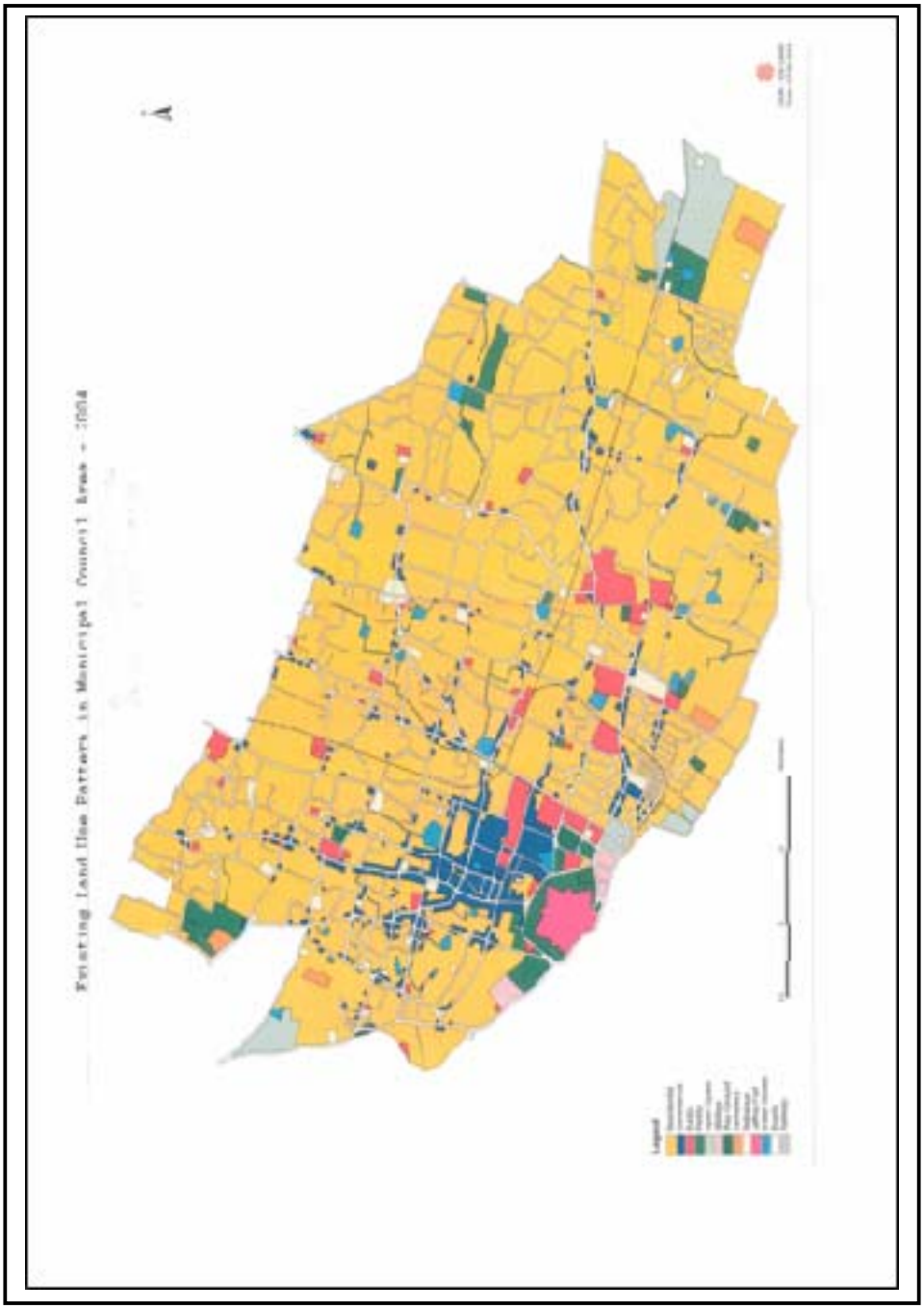
A noticeable extent in land use of the city is for residential. However housing development in the future will give priority to intensive development with high rise housing schemes. Allocation of additional land for commercial and mixed development in the city is expected to come from land that has become available due to relocation of activities and limited lands being allocated for housing development in the city.

Table 3.1.1 Land use pattern in the Jaffna City

Activity	Extent (ha)
Residential	1231.94
Commercial	75.83
Public	56.05
Utilities	5.76
Religious	29.39
Play ground	6.83
Open space	41.99
Cemetery	10.80
Paddy	50.19
Jaffna Fort	13.97
Water bodies	33.82
Roads	243.71
Railway	5.81

Source: UDA

Map 3.1.5: Existing Land Use pattern of Municipal Council Area.



Source: UDA

Chapter 3(2)

3.2 Cultural Environment

3.2.1 Some Important aspects of Socio Economic conditions

3.2.1.1 Population

According to the first census of population carried out in Sri Lanka in 1871, the population of the city of Jaffna was 34,694. According to the last census, population of the city was118, 215 (1981).

The table 3.2.1 shows the inter censual growth of population of the city.

Table 3.2.1: Growth of Population in Jaffna Municipal Council **(**1871-2004).

Year	Number	Growth rate (%)
1871	34,684	….
1881	39,855	14.9
1891	43179	8.3
1901	33,879	21.5
1911	40,441	19.4
1921	42,436	4.9
1931	45,708	7.7
1946	62,543	36.8
1953	77.181	23.4
1963	94,670	22.7
1971	107,814	13.9
1981	118,215	9.6
2002	78,331	33.7
2003	84,226	7.5
2004	82,028	2.6

Source: - Department of Census1981, Divisional Secretary Jaffna and Nallur 2002, 2003& 2004

The total population in Jaffna Municipal Council has been recorded in 2005 to be 80336 inhabitants. Jaffna divisional secretariat has 51625 inhabitants and part of Nallur divisional secretariat which is included in Municipal Council has 28711 inhabitants. The annex 3 shows the distribution of the population according to the Grama Nilathari division.

3.2.1.2 Population Density

The population Density of each Grama Niladathari division varies from 2/per/ha to 1000/per/ha. The annex 4 shows the density of the population according to the Grama Nilathari division.

3.2.1.3 Ethnic Composition

According to the available source the ethnic composition of the city is classified and shown in the annex 5.

3.2.1.4 Religious composition

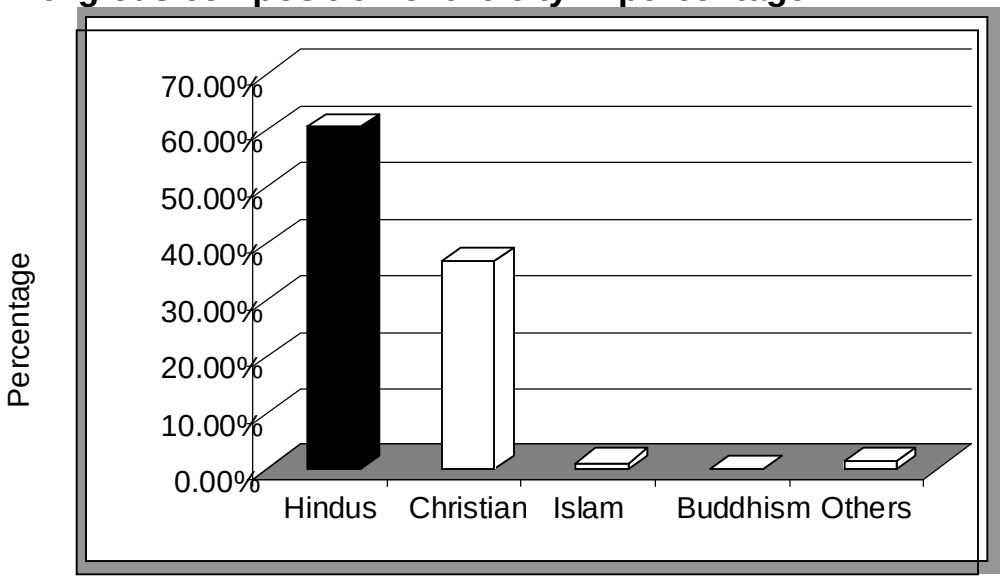
Hindu and Christians are considered as major religious groups Islam and Buddhism are the important minority religious group. Details of the religious groups are shown in the Table 3.2.2 and figure 3.2.1.

Table 3.2.2:
Religious composition of the Jaffna city.

Religious group	Number
Hindus	48,842
Christian	30,960
Islam	1,066
Buddhism	20
Others	1,140

Source: Divisional secretary of Jaffna and Nallur 2004.

Figure 3.2.1:
Religious composition of the city in percentage



Source: Divisional Secretary of Jaffna and Nallur 2004.

3.2.1.5 Impact of Social Factor

The prolonged conflict has in many ways affected the traditional social structure and relations, displacement and refuge in welfare camps, coupled with the rise of militancy and violence had led to the break down of all informal and formal control in society. Traditional and cultural values, public opinion, family unity, religion and cast role of the elders and village leaders all had broken down completely. Formal controls like, law and order and rule of law are ineffective. Community based organizations, involved in providing assistance and relief to vulnerable groups are faced with difficulties. in marinating. The consequences of these changes are far reaching and the distribution of traditional social relations should be taken into consideration in preparation of resettlement and rehabilitations programs.

3.2.1.6 Economic Activities of the city

As far as economic activities are concerned, it is becoming difficult to draw the boundary where the urban activity stops and rural begins. This rural urban continuum has spread to all directions in the Jaffna peninsula. There are many interesting components such as economic, social and political factors, which decided the economic activities of this town. The town has expanded towards the Northern fringe wing due to the situation that prevailed in the early part of 1990s.The market at Thirunelvely is practically the market of the Jaffna town. Establishment of the University has further boosted the development of the Northern fringe and commercial activities were also activated in this part and income is being generated in a number of sectors. Improvements were effected to the housing stock that existed, however, a number of housing units in the vicinity of the University had been razed to the ground in 1995.

After 1996, most of the business establishment moved back to the town. The city continued to provide commercial, educational, medical and other tertiary services. Jaffna town is very weak on manufacturing but strong on Institutions. In the past, city of Jaffna excelled in education. Nearly twenty five years ago, one eighth of the working population, was engaged in Government services, banking, education and other professions. Besides, a sizeable number of family members worked else where in Sri Lanka and abroad. The picture has changed over the period of the last two decades.

There has been an unprecedented drop in the number of persons engaged in farming, manufacturing, construction, electricity supply, pawn broking, transport and telecommunication. All those sectors almost accounted for fifty percent of the total. The drop was caused by a number of factors such as restrictions, prohibitions, and non availability of input for manufacturing, high cost of inputs, lack of market facilities and exodus of entrepreneurs. Only in the communication sector the situation has improved to the earlier level. There was also shrinkage in the state employment. In the city, traditional manufacturing industries such as gold jewelry, tailoring of clothes, footwear and food processing are carried out. Reconditioning and repairing vehicles and metal works are the other notable industries in the city at present

3.2.1.6.1 Population by income Group

According to the available data the income distribution of the Jaffna city is shown in the table 3.2.3.

Table 3.2.3:
Income distribution of the Jaffna city.

Income level	No of families
Below 1500	8829
Above 1500	15069

Source:- Divisional Secretary of Jaffna and Nallur 2004.

3.2.1.6. 2 Employment status

The out break of war in the Jaffna has disrupted development in all sectors of the economy such as agriculture, fisheries, manufacturing and trade. The available information is not sufficient to explain the present situation of the work force in Jaffna city. Government and private are the main employment generating sectors of the Jaffna city. At present considerable number of people engaged in foreign employment. The main source of employment in the Jaffna city is derived from agriculture, fisheries and industries. In addition self skill employment such as masons, carpenters, etc. are found to provide the employment opportunities in the Jaffna city. Details of the work force in 2004 by Divisional secretariat are indicated in the table 3.2.4.

Table 3.2.4:
Details of the work force in 2004

Occupation	Jaffna D.S	Nallur D.S
Government Sector	1871	4081
Cooperative employees	136	242
Farmers	81	721
Fisherman	3633	185
Private Sector	944	2524
Masons	38	852
Carpenters	45	852
Others	5913	2542
Total	12661	11899

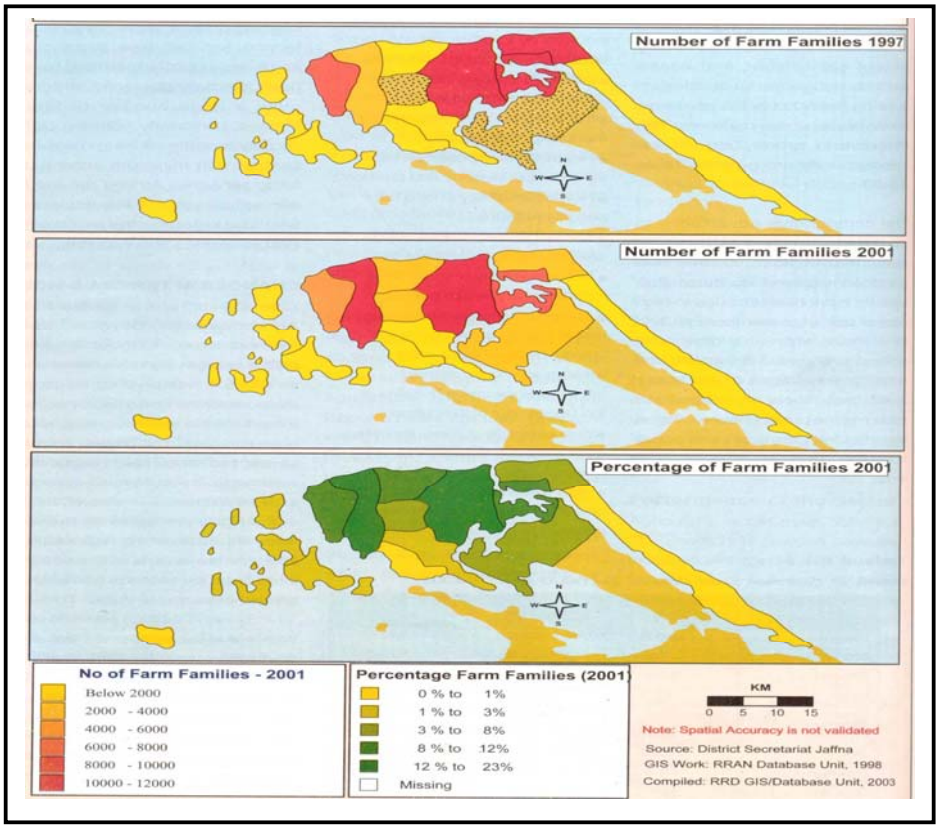
Source:- Statistical Hand Book 2003/2004

3.2.1.6.3 Agriculture

Food production in Jaffna except for certain items has never been and will never be sufficient to meet the local demand. Since the beginning of the conflict in 1983 local productions and supply of food items have declined drastically. Until the signing of Cease Fire Agreement and the MOU, regular and sufficient food supply of good quality was one of the major problems. This situation has been reversed to a certain extent now. It was the availability of agricultural inputs, transport and marketing facilities that encourage local production and there is an improvement in these areas since the signing of the Cease Fire Agreement.

Agriculture is not the main activity in Jaffna city. There are about 100 farming families, which is nearly 1% of the population. Paddy is a major cultivating crop during maha season under the rain fed condition.

Map 3.2.1: Number of Farm families in the Jaffna



Source: Jaffna Rehabilitation Project (JRP) Sri Lanka. 2003.

3.2.1.6.4 Housing

One of the important problems the city is faced with at present is the damage caused to nearly 25% of the housing stock. Another 50% are impoverished housing stock, which has been neglected for a number of years due to unsettled situation. This housing stock urgently needs repairs. A sizeable number of internally displaced people still live within the city on temporary basis.

Most of the dwelling units within the city is not owner occupied but by the tenants. At present remarkable reconstruction work is being carried out and new houses are being made. Building materials are available without any restrictions at present.

The following important characteristics are indicated in the housing system in the city at present.

- 70% of the inhabitants living in their own houses.
- Most of the houses were constructed before 1984, which needs necessary repairs and maintenance.
- There was preference for cement rather than lay bricks and tiles rather than asbestos or other roofing material.
- Resettlement is not allowed in the high security zone.

- ❖ Several hundreds of houses are still occupied by security forces.
- ❖ Resettlement is not possible in areas, which have not been cleared from land mines.
- ❖ There is lack of sufficient technical staff to assess the actual physical damages and the financial requirements for Rehabilitation & Reconstruction.
- ❖ The housing stock is inadequate to house the population satisfactorily.
- ❖ Extensive damage and destruction have been caused to the housing stock during the conflict period.
- ❖ Over crowding of houses in the coastal areas.

Details of the House stock in 2002 by Divisional secretariat are indicated in the table 3.2.5.

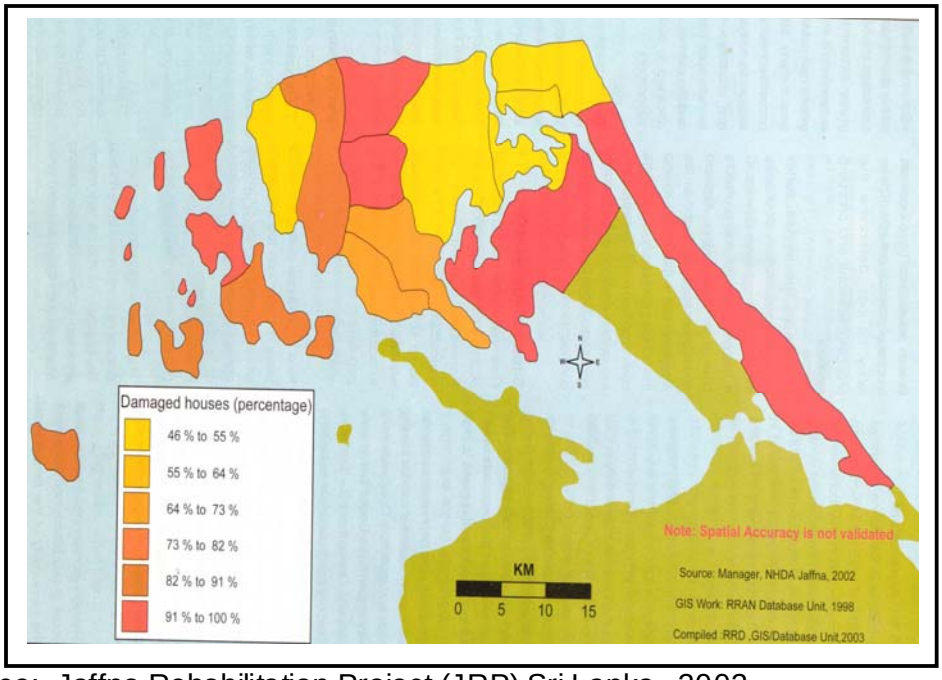
Table 3.2.5:
Details of the House stock in 2002

	Jaffna D.S	Nallur D.S
Housing stock	11,625	5485
Damaged Houses	4628	1062
Partly Damaged Houses	3989	2357

Source:- Statistical Hand Book 2003/2004

The map 3.2.2 shows the damaged houses in Jaffna. More than 50% houses damaged in Jaffna town.

Map 3.2.2 Damaged houses of Jaffna in percentage



Source:- Jaffna Rehabilitation Project (JRP) Sri Lanka. 2003.

3.2.1.6.5 Under Served areas

Any study of the Jaffna City's problems and issues and planning for development of the city would be incomplete if special attention is not paid to the problems of the coastal belt starting from Navanthurai to Columbuthurai. The Gurunagar, Thirunagar, Pommaiveli and Sooriyaveli areas are so badly undrserved and poverty stricken, they have to be classified as slum areas.

The following is a statement of the density of population G.S.division wise in these areas:

1. J/62 Columbuthurai East	2608
2. J/63 Colombuthurai West	563
3. J/64 Passaiyoor East	1199
4. J/65 Passaiyoor West	1304
5. J/67 Thirunagar	1298
6. J/68 Reclamation East	4143
7. J/69 Reclamation West	4256
8. J/70 Gurunagar East	1688
9. J/71 Gurunagar West	1855
10. J/72 Small Bazaar	857
11. J/84 Navanthurai South	1962
12. J/85 Navanthurai North	1863
Total	**23596**

Economic disability	Displacements/loss of employment	
	Relief	Public assistance
1. Gurunagar	3199	365
2. Navanthurai	1003	233

It has been observed that out of the 1628 public assistance cases in the Jaffna Divisional Secretariat area 881, little over 50 percent are from these two areas. A superficial analysis of the above would reveal the higher concentration of population and economic backwardness of these areas.

A casual visit to the Gurunagar, Thirunagar and Navanthurai areas would indicate the poor living conditions of the people. Most of the basic amenities are either lacking or inadequate in these heavily congested areas. Domestic houses or shelters do not conform to the building regulations, especially with regard to lighting, ventilation, side space toilet facilities, access roadways etc.

The area south of the Beach Road from Alupanthy to Old Park Road junction is a reclaimed area. A neatly planned housing scheme with over 400 houses was established in this reclamation area under a slum clearance programme and was administered by the Jaffna Municipal Council on a monthly rental of Rs5/- per house. Initially the scheme had perfect roadways, drainage, and water supply from Thirunelvely. The ownerships of these houses were transferred to the occupiers by the government in 1982/83.

It is very unfortunate that extensions to houses and encroachments on all roads, drains and open spaces have taken place over a long period of time and the entire area has developed to be an imminent threat to the health

and sanitation of not only that area but to the entire city as well. It so happens that people have no space in their houses, they are seen occupying both sides of the narrow roads, thus obstructing traffic movements.

The people of the area are predominantly fishermen and are therefore very reluctant to move out because of the occupational compulsions. Almost 60-70 per cent of the people are economically poor because of unemployment or underemployment. It is an added tragedy that they are subjected to restrictions as regards fishing due to the war situation from the early 1980s.

Their poverty extends to access to land, access to infrastructure and basic amenities and local economic policies. They are not involved in any decision making and cannot influence such decision making. Similarly their access to justice and economic development too are very limited.

It is therefore absolutely necessary to take up Gurunagar, Thirunagar and Navanthurai for special analytical study to improve the living conditions and standards of the people. Failure to do so, would sooner or later lead to serious health problems to the entire city as outbreaks of epidemics have been recorded in these areas in the past.

3.2.2 Social Infrastructure

3.2.2.1 Education

Rehabilitation and Development of the education system in the Jaffna city has to take into consideration the adverse impact of the civil disturbances such as the displacement of families, influx of refugee population into the city, the damage to infrastructure facilities, loss of opportunities for education to a large percentage of students and deterioration in the quality and standard of education.

3.2.2.1.a Preschool Development

There are 54 registered preschools in Jaffna city. More than 2160 children and 108 teachers work in these preschool without any remuneration from the government. In addition there are some preschool which are not registered but these preschools lack the basic facilities such as water sanitation, educational aids and proper accommodation.

The basic common facilities should be made available if the preschools are to be developed. Absorption of preschool activities in the normal education set up is recommended and payment of allowances to the teachers by governments should be considered.

Common curriculum for all the preschools in Jaffna district should be recommended.

3.2.2.1.b Secondary Education

There are fifty one schools in the Jaffna Municipal Council limits. Total number of students is 29216 in the city. Details of the type of schools in the municipal council area are given in the annex 9.

3.2.2.2 Community Centers

There are 68 community centers (Details of the community centers are indicated in the annex 15) within the Jaffna Municipal limits. The Community

Centers play an important role in most of the development activities in the rural areas and in general contribute to the quality and life of the rural population. The Community Centers are involved in rural development activities and they often undertake small infrastructure development work on a shramadana basis. In addition they provide reading rooms and library facilities, preschool and nursery classes and providing space for various types of training. They also serve as centers where meetings and discussions take place among village leaders and elders.

3.2.2.3 Health

The health service facilities have deteriorated during the past 20 years and health indices show a downward trend indicating a fall in the health status of the people. During the past 2 decades no new hospitals were constructed and no new major development programmes were undertaken and on the other hand extensive damage and destruction has been caused to the health sector facilities during the conflict period. As a result of the deterioration of health care services the morbidity and mortality especially among vulnerable groups of the population has increased.

The teaching hospital which is over crowded and unable to cope with the number of outdoor and indoor patients is located in the heart of the Jaffna city. The office of the Medical Officer of Health of the Jaffna Municipal Council has been affected during the conflict. Both preventive and curative health services suffer from inadequate institutional infrastructure facilities and inadequate manpower resources. The Jaffna Municipal Council is providing seven Ayurvedic dispensaries, services nine maternity and child welfare clinics and two western dispensaries to the public who are living in the Jaffna Municipal Council limits.

3.2.2.3.a Mental Health Services

The mental health problem, especially among children and elderly, are above acceptable limits. With return to peace, combatants are expected to return to civilian life. A fair number of them are likely to have been affected by war trauma and they will add to the population that needs mental health services. A mental health service planned for the future will have to take this into consideration.

3.2.2.4 Food Security

Since opening of A9 road, private traders and cooperative societies directly transport food items from Colombo and other major supply sources. As a result, availability of food is not a problem at present, even though prices are relatively higher than in other districts due to local levies, cost of loading and unloading in two checkpoints and delays in transport.

To ensure food security, it is important that food should be available in adequate quantity and quality and at affordable prices at all places at the right time. Lack of employment opportunities and low level of income and lack of purchasing power are the causes for food insecurity and it should be addressed immediately in a systemic and planned manner.

3.2.2.5 Food Sanitation

An important aspect of food sanitation is the slaughter of cattle and goats. There are no suitable slaughter houses in the Jaffna Municipal Council area. One which was within Jaffna municipality was damaged and a “make shift” slaughter house is being used.

The number of cattle and goats slaughtered during the past 6 years at the municipal council slaughter house is given in the annex 10.

3.2.3 Urban Utility Services

3.2.3.1 Water Supply

The responsibility for water supply within the Jaffna District rests with the following institutions.

- National Water Supply Drainage Board (NWSDB)
- Municipal Council , Jaffna (JMC)
- Local Authorities

At present approximately half of the municipal council area only benefit from the piped water supply.

The Town Water Supply Scheme is supplied from the Kondavil well filled through the town supply main up to the town overhead tank. From this tank the supply net work covers the Jaffna Division (D.S) and serves approximately half of the population of Jaffna Municipal Council.

The Gurunagar Water Supply Scheme is supplied from the Thirunelvely Well field through a supply main to the Gurunagar Over Head Tank. The supply network of Gurunagar and adjacent areas are supplied from them.

From this supply the Jaffna Teaching hospital receives water. The overhead tank of the hospital is directly connected to the Thirunelvely supply main. Additionally the market will be supplied from this main.

The supply times for both schemes are only 1.5 hours per day from 6.30 a.m to 7.15 a.m and from 4.45 p.m to 5.30 p.m.

According to the recent water test it can be verified that this supply scheme is placed in the area where the ground water from the traditional well is the worst in the area.

The quality of the water in the Nallur part of JMC is a little better than in the other area. It was therefore recommended to extend the water supply scheme to Nallur to cover the entire Municipal Council.

Due to the water quality 6 Mini Water Supply Schemes (MWSS) have been set up. Each MWSS is facilitated with a well, pump, over head tank, supply network and stand post. Out of the 6 schemes only two are still operational.

Pipe born water supplied to residents through stand pipes only for half the population of dwellers, due to inadequacy of yield from the supply wells at Thirunelvely and Kondavil. Pipe borne water supply is restricted to Southern part of the city and Gurunagar area, the Northern part of the city being dependent on domestic common wells. Attempts to spread city water supply to areas not catered so far have been frustrated due to shortage of water at existing and potential sources.

There are two Major Schemes and six Mini Water Supply Schemes within the Municipal Area and this covers nearly 40 % of the Area. These Schemes cover mostly the needed Coastal and Town Area. 40,000 people are benefited by these schemes.

When the people are resettled within the Water Supplied Area, there will be improvements to the distribution system and erection of additional stand posts to collect water in time. Due to continued war, the ponds contour and exclusion bunds are not maintained and the ground water is not recharged, as a result most of the drinking water wells in Jaffna have become saline. There is high demand for drinking water within JMC area.

Plate 3.2.1: Public Stand Post of the Jaffna Municipal Council near Selvopuram Dumping Yard

3.2.3.1.a Water Quality

Less than half the population of JMC is supplied with piped water through stand posts from the wells at Thirunelvely and Kondavil. In 1980 the water in these wells had a very high concentration of Nitrate, up to 149 mg/l NO^-_3 exceeding the maximum permissible level almost 3 times. The changes in agricultural activities have possibly led to the reduction of the concentration so far, and in November 2001 the concentration in tap water in Gurunagar has been found to be 76.6 mg/l NO^-_3.

From the wells in the direction towards the city boundary the levels of Nitrate seem to decrease through dilution and reduced agricultural activities and increase again towards the lagoon, possibly due to the effect of waste water that is discharged within the city. Besides the high Nitrate content, the tap-water showed very high concentrations of sodium, total alkalinity and electric conductivity.

High concentrations of Nitrate and Chloride combined with low concentrations of Ammonia and Nitrite are indicators for heavy ground water pollution through organic or inorganic waste and waste water.

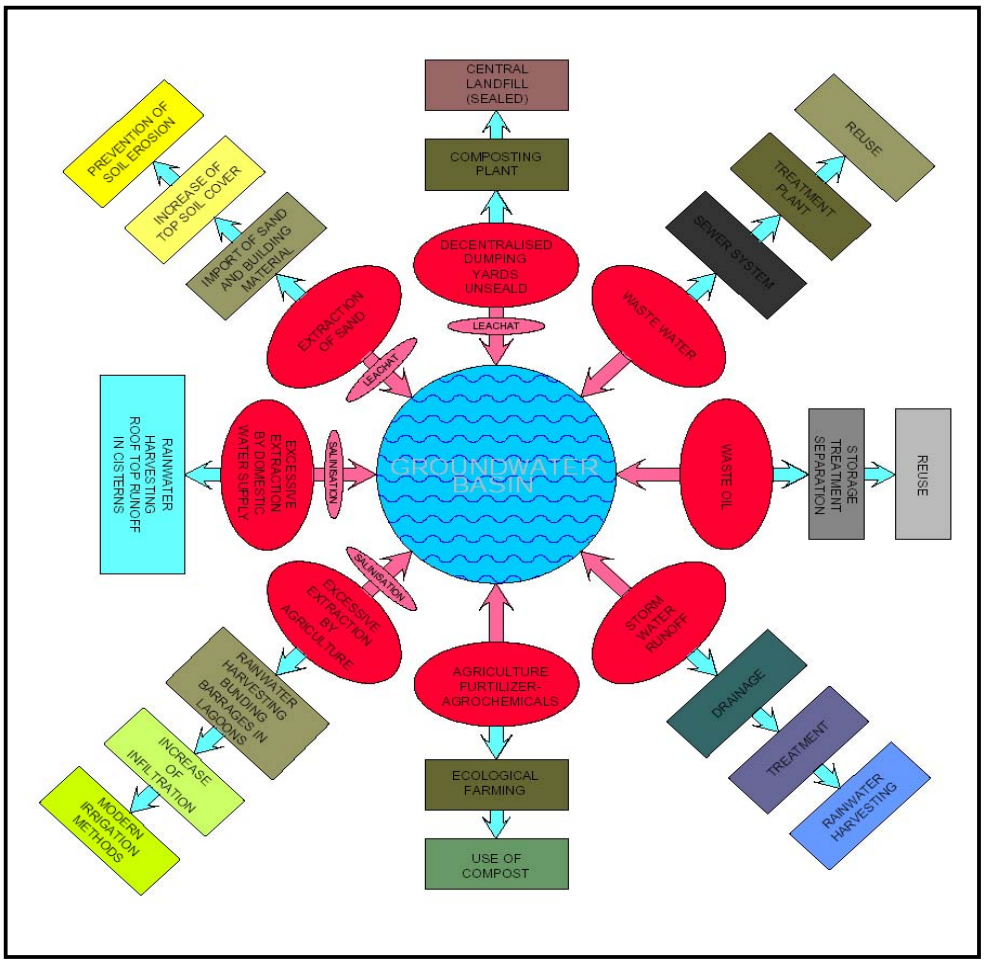
The sensitivity of available analytical methods on the other parameters like heavy metals and phenol has not been sufficient to determine the exceeding of permissible levels. Bacteriological tests had not been carried out until August 2002. Compared to the ground water beneath the city, the

supplied drinking water has the best quality, but it requires further treatment to render it safe for consumption.

Most of the population relies on the supply from open and shallow wells located on the premises. This water is expected to be highly contaminated by waste water. The analyses of the samples taken in December 2001 show a clear influence of waste water indicated by free Ammonia up to 0,34 mg/l + 4 *NH* (limit < 0,05 mg/l + 4 *NH*), nitrite up to 0,263 mg/l - 2 *NO* (limit < 0,1 mg/l - 2 *NO*).

The samples were taken during the peak of the monsoon when the highest dilution can be expected. Towards the dry season, these concentrations can be expected to increase. Since the ground water table is very high and almost unprotected by a soil cover it is vulnerable toward pollution by domestic and commercial waste water, oil spills, fertilizers and agro-chemicals. Especially the supply from open wells within the municipal council is dangerous for human health. Even the supply from the wells at Thirunelvely and Kondavil is not safe, but it can be improved through treatment.

Figure 3.2.3:
Sources of Ground Water pollution in Jaffna City



Source: Jaffna Rehabilitation Project (JRP) Sri Lanka 2002.

3.2.3.1.2 Sanitation

3.2.3.1.2.a Sewerage

The Jaffna Town does not have a proper pipe borne sewerage system. In several places liquid waste is dumped under ground.

Prior to 1984 human waste or night soil disposal were two fold. Bucket latrines and water sealed latrines existed simultaneously. Due to the additional costs involved in the construction of septic tanks, water sealed latrines were the preserve of the economically affluent section of the society.

Though bucket latrines had the advantage of not polluting the ground water table, these had caused serious environmental problems on the one hand and the non availability of labor force and dumping ground for the night soil on the other.

With the view of overcoming these problems steps were taken to convert all bucket latrines into water seal latrines by providing financial incentives and constructing common septic tanks under the UNICEF programme in 1984. As a result, all the latrines within the city are water sealed ones with one, two or three compartment septic tanks.

It is a common factor for every household to have a well because of the non availability of pipe born water supply. Therefore the toilet septic tanks and the wells exist in close proximity to one another contravening the norms prescribed by health and planning authorities. These have the strong effect of polluting the well water that is used by the occupants for washing, bathing and even drinking.

Recent surveys have revealed that 70 percent of the ground water in areas south of Main Street have been polluted and in the area between Hospital Road and Main Street 50 percent of the ground water are polluted. Between Stanley Road and Hospital Road the ground water pollution is around 40 percent. The pollution is considered to be the result of salinity increase and the liquid waste contacts.

All these together have the effect of biological and chemical pollution of water. Considering all the factors the introduction of a comprehensive sewerage system has been a long felt necessity and the successive Municipal Administrations have been projecting it. However the huge financial costs and the inability to find suitable sponsors have delayed the implementation of the proposal up to now. In the larger interests of public health the implementation of a sewerage scheme for the city is absolutely necessary.

Plate 3.2.2:
JTH Treatment Plant, Sludge Thickener (Digester) and JTH Treatment Plant, Grit Chamber

3.2.3.1.2.b Solid Waste management

3.2.3.1.2.b.a Solid waste

In Jaffna municipal council 23532 families with 82028 inhabitants, giving an average of 3.48 persons per families generate the major part of the solid waste that is produced in JMC

Until February 2002 the commercial area town center had a minor role to play in the generation of waste in the town as economic activities in that area were low. The situation has changed gradually. Now, the management of solid waste is one of the serious environmental problems faced by JMC authorities.

The markets, slaughter house, teaching hospital are main producers of solid waste from commercial activities in the town. Some waste in the town is also generated from food stalls, tea shops, service stations, tine shops, bakeries and schools. During the wet seasons tree cuttings and garden waste contribute a significant amount of waste that has to be disposed off. The waste collected from daily cleaning of streets is mixed together with the domestic waste.

3.2.3.1.2.b.b Quantity of waste produced

The Total amount of solid waste produced is estimated at 278.5m^3 . It can be assumed that only 2/3 of the solid waste produced in JMC is being collected at present.

3.2.3.1.2. b.c Composition of solid waste

According to available data the present solid waste generation in JMC can be estimated as follows.

Volume

Domestic waste	190.4m^3/day
Hospital waste	6.4m^3/day
Markets	27.2 m^3/day
Food center	2.0 m^3/day
Drain desilting	1.0 m^3/day
Tree cutting	6.5 m^3/day
Schools	1.0 m^3/day
Solid waste fun often source	40.0 m^3/day
Other	4.0 m^3/day
	278.5 m^3/day

3.2.3.1.2.b.d Existing methods of solid waste management

At present refuse is collected daily from house to house by handcarts from collecting zones and deposited at temporary collecting points. From these points garbage is collected. The street cleansing as well as waste collection from markets and commercial area is undertaken daily.

The collected solid waste is transported to dumping yards within the city using the shortest route possible.

3.2.3.1.2.b.e Labour Distribution

8 tractors, 4 person each:	32	1 shift 6.30 – 2.30
Supervisor:		1 shift 6.30 – 2.30
1mini-tractor, 2 person each:	2	1 shift 6.30 – 2.30
Supervisor	1	1 shift 6.30 – 2.30
Standby	2	1 shift 6.30 – 2.30
dumping yard maintenance	4	1 shift 6.30 – 2.30
Supervisor	1	1 shift 6.30 – 2.30

The Jaffna Municipal Council is divided into 7 refuse collection zones.

Each Zone	1 Supervisor	1 Charge hand	16 Laborers	= 144 and 5 cars
8 Zones	8 Supervisors	8 Charge hand	128 Laborers	= 144
Open drains cleaning	10 Laborers	1 Supervisor	2 Zones	= 22
Only channels	8 Laborers	no Supervisor	3 Zones	= 24

7 Markets				
Bazaar new market	5 Supervisors	12 Laborers	6 am – 2 pm	10 am – 6 pm
Gurunagar market	2 Supervisors	3 Laborers	6 am – 2 pm	10 am – 6 pm
Nallur market	1 Supervisor	3 Laborers	6 am – 2 pm	
Passiyoor market	1 Supervisor	1 Laborers	6 am – 2 pm	
Navanthuri	1 Supervisor	2 Laborers	6 am – 2 pm	
Ariyali	1 Supervisor	2 Laborers	6 am – 2 pm	
Ponkankulam				
Pannanai fish Market				
Sub Total	11 Supervisors	23 Laborers		

Stray dogs division	1 Supervisor	4 Laborers	6 am – 2 pm
Vector control	2 Supervisors	4 Laborers	6 am – 2 pm
Night soil emptier	1 Supervisor	4 Laborers	working by order
Sub Total	4 Supervisors	12 Laborers	

Plate 3.2.3: Pushcart for House-to-House Solid Waste Collection

Plate 3.2.4: Tractor and Trailer for Transport of Solid Waste to the Dumping Yards

Plate 3.2.5: Mini Tractor and Trailer for Transport of Solid Waste to Dumping Yards

Plate 3.2.6: Tools for Street Cleansing

Plate 3.2.7: Tools for Street Cleansing

3.2.3.1.2. b.f Solid waste disposal site

Due to lack of transportation facilities the JMC is forced to use several dumping sites that are in close proximity to the source of the solid waste. Few storm water collection ponds also had been used as dumping yards.

The dumping yards that were being used in 2002 were.

1. Kakaithivu
2. Nayanmarkaddu (Nallur)
3. Muniswaran road (near Regal cinema)
4. Selvapuram (at the lagoon)
5. Cynor (gurunagar)

Two dumping yards are in low-lying area (No.1 and No.3) of which one is located right in the Jaffna lagoon(No 4) where the old harbor was used as the main dumping yard(No.5). From 2004 all dumping yards were abandoning except Kakaithivu dumping site and a new site is also established for sanitary land filling at Kallundai.

The dumping yards have no protection against seepage and have no forces to restrict children, animals, or scavengers, to access the yards. In all dumping yards the waste is in contact with either the ground water or sea water.

Plate 3.2.8: Hospital Waste at Kakaithivu Dumping Yard

Plate 3.2.9: Solid Waste Disposal at Kakaithivu Dumping Yard

3.2.3.1.2.b.g Cultural and social conditions

By comparing JMC with other cities in the Indian sub continent it had to be noted that Jaffna was remarkably clean.

Under the prevailing circumstances, the local administration is managing the daily house to house collection of most of the garbage. When at times garbage is not collected regularly from the temporary collecting points the citizen complaint immediately. If no action is taken the waste is burned. It can be concluded that the peoples participation in any scheme that imp - roves the present solid waste collection and disposal will be high. The participations of the inhabitants in solid waste separation at the house hold level for composting and land filling can also be expected to be high; recycling of waste is already practiced to a large extant.

The demand for organic fertilizer in the Jaffna peninsula is high and use of compost is a common practice. It can there fore be expected that farmers will welcome and accept compost as manure from domestic solid waste.

The residents have complaints regarding the location of the temporary collection points. Ideally they would like to see a reduction of the points. The

reduction of the points would certainly protect them better from this nuisance. Further more this would also help minimize the nuisance and unaesthetic appearance that these collecting points cause and these would certainly be appreciated by the people.

3.2.3.1.3 Roads

Jaffna city has got a well developed road network maintained and administered by three establishments according to class of road and location.

1) Road Development Authority
2) Road Development Department
3) Jaffna Municipal Council

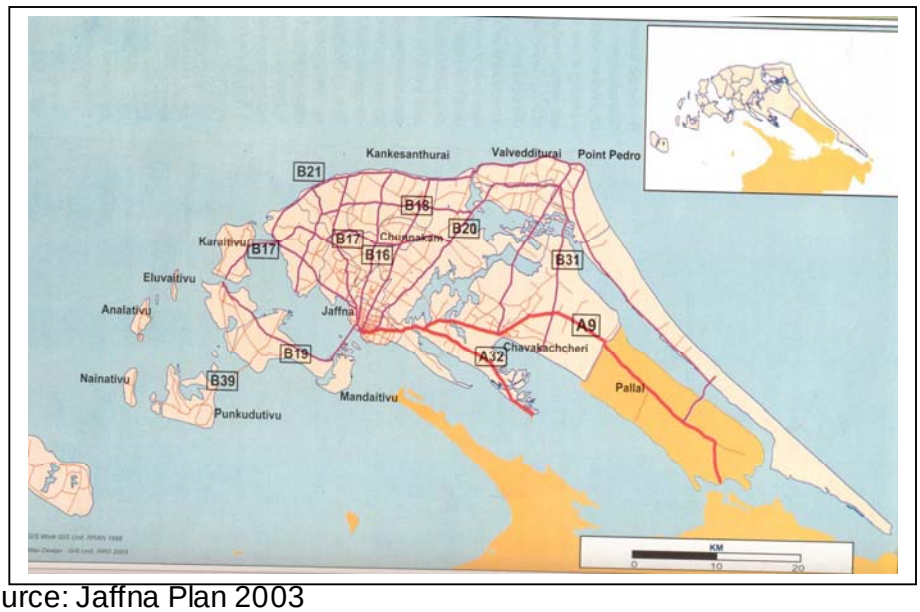
Since 1990 up to year 2000 very little financial allocations were made for road maintenance work in Jaffna city. After signing of the Cease Fire Agreement by the Government with the LTTE in 2002 there was a significant change and the constraints loosened into a more favorable scenario to heavy construction and rehabilitation of infrastructure. The opening of the Kandy-Jaffna road (A9_Road) had a significant impact on availability of materials and development activities. Suppliers and contractors from the south possessing machinery and equipment were also able to participate in the construction process of the road.

Jaffna Municipal Council maintains 200 Km of internal roads and associated drains and culverts. The roads are mostly short lanes and cross roads totaling 98 numbers.

In order to rehabilitate the roads in Jaffna Municipality a complete scientific town planning process is required. Short term proposals to repair damaged pipe converts and box converts (101 Nos) and road surfacing is rupees 500 million. These include complete passing of 110 KM of internal C & A class roads that will not be substantially affected by the master plan.

The Municipal Council's capacity for up keep of maintenance of roads and drains has to be strengthened by preceding the required equipment and machinery and facilitating the recruitment of staff.

Map 3.2.3: Road Network from the city



Source: Jaffna Plan 2003

3.2.3.1.4 Storm water drainage

The Jaffna Municipal Council was once drained by a well designed and well maintained storm water drainage system, using open road side drains and storm water channels into the lagoon. This system has been affected by the previous and ongoing conflict and the required maintenance can not be undertaken due to lack of funds and means. Moreover, the alteration of the old waste water management system has resulted in the misuse of the storm water drainage network which is at present being used for waste water disposal. The rain water collection ponds are now being charged with waste water and are acting as oxidation ponds. The water quality of most ponds has deteriorated affecting the use of the water, and the ground water quality, and is favoring the spreading of malaria and other diseases. The rehabilitation of this storm water drainage system is a precondition to the revitalization of the city of Jaffna.

This includes the reconstruction and lining of the drains and channels, the de-silting and deepening of the ponds as well as the reconstruction of the retaining walls of the ponds.

The entire drainage system requires complete over haul, reconstruction and establishment of proper maintenance protocols with equipment facilities by laws, for enforcement and guidelines maintenance manuals.

Entry of waste water into storm water system has to be prevented rerouted using covered conduits and by passing ponds.

Plate 3.2.10: Storm Water Channel under full load

Plate 3.2.11: Waste Water Flow in Storm Water Channel in City Center

Plate 3.2.12: Waste Water Flow in Storm Water Outfall Channel

Plate 3.2.13: Large Storm Water Drain with integrated Waste Water Channel

3.2.3.1.5 Electricity

According to the sources of Ceylon Electricity Board 16685 of the total energy demand is consumed in Jaffna city. The percentage of electrification is 68% within the city, where as it is more than 48 % in the heart of the city. There is no power supply in Pommaiveli, Ariyalai East High security zone and part of Navanthurai area.

3.2.3.1.6 Telecommunication

Up to 2004 the supply of telecommunication connections are 5839 in Jaffna District, where as in the city it is around 50% of the total number of service connections.

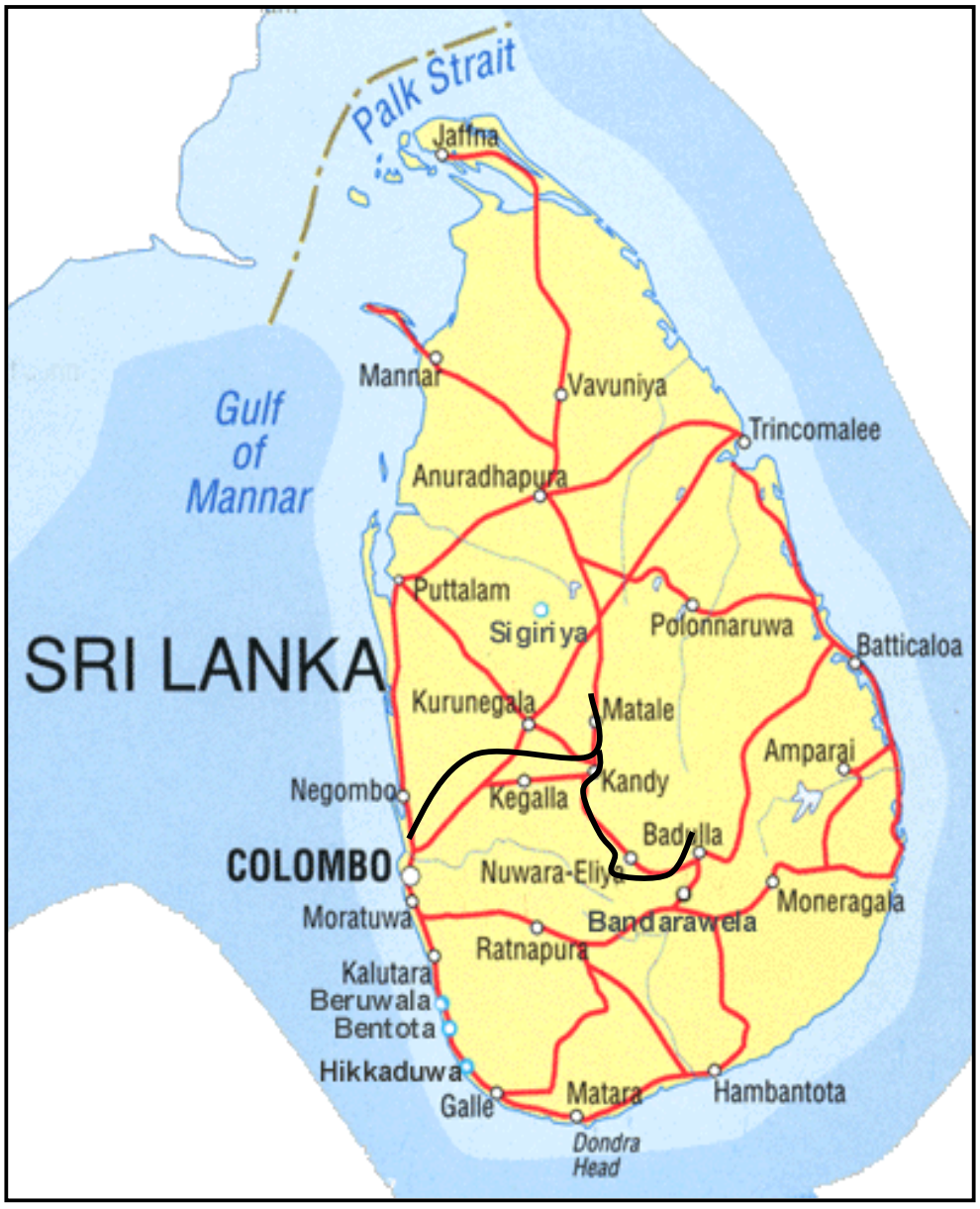
3.2.3.1.7 Transport of the city

The city of Jaffna attracts about 66.41% floating population on any working day with the addition of the resident population in the city. Commuting population uses various forms of transportation to enter the city. According to estimates about 88 buses, operated both by private and public sectors, transport 2804 passengers daily to the city on an average.

Both the number of vehicles and the commuters entering the city are increasing year by year. At the same time the residential population and the ownership of vehicles within the city limits will also experience an unprecedented growth.

A few years ago, the traffic congestion was largely limited to the city, but now it has spread to the entire area during the peak hours. The number of vehicles in the city is not the only factor that contributes to congestion. Shortages of parking areas, inadequate facilities for pedestrians, parking of heavy vehicles on busy roads during normal working hours and poor public transport facilities for pedestrians are also equally significant contributors to the congestion problem.

Map 3.2.4: Transport links to and from the city of Jaffna



Chapter – 4
Proposals for Future Development

Introduction

The Development proposals have been formulated to address the development issues that have emerged in the recent past due to rapid needs of the people of the city. The impact of these needs has been strongly felt in the city of Jaffna and its immediate environs. The following proposals and recommendations are identified for the future development of the city.

4.1 Water Supply

Please refer to 3.2.3.1

4.1 (1). For the long term improvement of the drinking water supply for the population in the Municipal Council area the existing pipe line net work and stand post should be extended.

2. Establishing a pilot denitrification plant.

In order to improve the quality of drinking water supplied by the JMC Water Supply Scheme, it is necessary to reduce the high content of nitrate with the help of denitrification plant at the Thirunelvely well field.

4.1(2) To satisfy the urgent requirement of the drinking water the following proposition is suggested:

1. Nearly 1000 house holds were provided with private water service connection prior to 1987. Supplies to most of these were suspended due to the damages caused to the pipelines and the displacements of the occupants. As at present private service connections are provided to 450 house holds.
2. The NWSDB is of the view that the main AC pipelines laid about 40 years ago may have got damaged and may be leading to leakages. As such the AC pipe lines have to be replaced by PVC pipe lines.

3. Nearly 1400 families are residing at Navanthurai area without safe drinking water facilities because of the close proximity to the lagoon. After 1996 with the return of the displaced people the Municipal Council was able to provide 525 stand post and 450 house connection only. Because Navanthurai is on the western end of the City pressure is so low and the people are unable to obtain satisfactory water supply.
   For this purpose we need to construct an over head tank with a capacity of 90m^3 tank and distribution network for 100 stand posts to meet the demand.
4. Nearly 900 families residing at 5 GS Division at Passaiyoor and Columbuthurai areas are without safe drinking water facilities because these areas are closer to the coastal belt and there are no suitable identifiable drinking water sources. These areas are on the eastern and extreme side of the City and the pressure is low. As the supply tank is limited the people are unable to obtain satisfactory pipe borne water

supply. The suggestion is to construct an under ground sump with a capacity of 90 m3 and pump the water by a booster pump from it.

5. There are some pockets of the city where pipe born water supply can not be provided because of the distance and the lesser number of beneficiaries. We have two tractor trailer mounted bowsers for mobile water supply which are quite inadequate to meet the requirements of the people. There fore we require one chassis mounted water bowser of 7000 liter capacity
6. In order to meet the full requirements of water for the present population of 80000 people (120 liters per person per day) the under ground resources are quality wise inadequate. Therefore it is imperative that water supply has to be drawn from the mainland. It is noted that NWSDB is in the process of finalizing its report about obtaining water supply from Iranamadu Tank.

4.2 Sewerage Scheme for the Jaffna City

The Jaffna Town does not have a proper pipe borne sewerage system. The necessity is very high in the densely populated and congested areas like Gurunagar, where incidence of epidemics like cholera had occurred even in 1974.In view of the huge financial outlay that may be necessary implementation may have to be taken in stages by zoning the areas according to priority please refer to 3.2.3.1.2.a.

Zone (1) Areas South of Main Street from Fort to Columbuthurai Road Pungankulam Road Junction

Zone (2) Areas South of Stanly Road from KKS Road junction up to Rasavinthoddam Road junction and south of Racca Road up to Kachcheri Nallur Road.

Zone (3) Areas West of KKS Road from Fort to Oddumadam Road junction.

Zone (4) Areas South of Navalar Road from KKS Road up to Mampalam Road junction.

Zone (5) Rest of the areas.

In order to design an effective sewerage scheme, a master plan covering the entire Municipal area has to prepare. For this purpose the first step should be the preparation of a Topographical Engineering survey to determine the gradient levels because the city's landscape has undergone considerable changes during the last half a century or more.

It may be noted that the Teaching Hospital which has been discharging its waste water into the surface drains running across the city centre and causing immerse nuisance to the public has implemented a fairly satisfactory sewerage scheme for it in the year 2000. This separate pipeline system leads all waste water into a four sump complex at Pannai. The waste water is treated there by a treatment plant and while recycled water is led into the lagoon the dried sludge is removed and used as manure.

It is therefore necessary to find a suitable location to house the treatment plant in close proximity to the lagoon.

It is relevant to note that a reference to the Kraft report indicates a cost of Rs.225 crores for this purpose. Providing for inflation and the expenses of topographical survey etc, the costs may be in the region of Rs.3000 million.

4.3 Proposals for solid waste disposal

Future Proposition

The following are the requirements to handle the solid waste management effectively (please refer to 3.2.3.1.2.b).

1. 14 covered collection trucks or covered trailers with tractors.
2. At least 3000 compost bins in 3 different colours to implement a collection system of separating organic matter, recycling matter and disposal matter.
3. A 50 acre plot of State land has been allocated by the Government Agent at Kallundai with in the Manipay Prathesha Sabai area for land filling. A scientific study is necessary on this project.
4. A medium size compose plant construction is in progress under a NORAD project implemented through the Ministry of Rehabilitation Resettlement and Refugees.

4.4 Drainage System

Identified issues for improvement of Drainage system are as follows (please refer to 3.2.3.1.4);

Proposition

4.4(1) The 8 storm water channels built during the Dutch period and maintained by the British rulers are still in proper condition. The gravity of all these are highly conducive to unimpeded flow of water. Due to the failure to desilt these during the last 10 years the site bunds have got weakened. As such these require urgent repairs and reconstruction. This programme is in progress with NORAD funding.

4.4(2) Almost all the drains and side drains have got damaged and take free flow of water. It is also relevant to state that the landscape of all the areas have got severely altered and as such a complete engineering survey has to be carried out and fresh plans drawn to implement a satisfactory drainage system.

4.4(3) The entire drainage system requires complete overhaul, reconstruction and establishment of proper maintenance protocols with equipment, facilities, by laws for enforcement and guidelines and maintenance manuals.

4.5 Proposals for Waste Water Disposal

The quality of the ground water in Jaffna Municipal Council area depends mainly on the mode of disposal of the waste water. At present the waste water at each premise in Jaffna Municipal Council area is either infiltrated through soak pits or discharged into the storm water drain. Toilets

are connected to pits as poor flush pit latrines or attached to so-called septic tanks that are usually a one chambered tank followed by a soak pit. The safest way of waste water disposal is through a conventional sewer system with treatment plants that include tertiary treatment for either the reuse of waste water for irrigation or for discharge into the lagoon. The following are the proposals to reduce the waste water problem.

i. For the short-term improvement of the quality of ground water the present waste water disposal system should be abandoned and replaced with sealed three chamber septic tanks that have to be constructed for each household. In the case of collective units, imhoff tanks for primary treatment and root zone treatment plants for tertiary treatment should be used. For the final disposal of the treated effluent the existing storm water drainage system should be used.
ii. For the long-term protection of ground water resources at JMC and to avoid eutrophication and pollution of the Jaffna lagoon it is recommended that a sewerage system including a treatment plant with tertiary treatment allowing the reuse of treated waste water for irrigation should be constructed.

4.6 Proposal for Restoration of Damaged City Landmarks

Most of the buildings which were city land marks like the Railway Station, the Open Air Theatre, and the Town Hall were built nearly 45 years back. It was very unfortunate that the Town Hall had been razed to the ground and the railway station and the Open Air Theatre have been badly damaged due to the war.

4.6(1) Infrastructure Office Buildings (Town Hall)

In planning a Municipal Administrative complex the following essential factors have to be considered.

1. Population growth and the consequent demand for increased Municipal services.
2. It should provide for the expansion in the staff structure and the accommodation for about 1000 persons. It should provide for the council chamber, conference halls, visitors rooms and office rooms for all departments, branches and sections.
3. A City Hall or Town Hall has to be incorporated in it or outside it.
4. Suitable accommodations for vehicle parking of the Mayor, Commissioner, Councilors and officers have to be provided.
5. Suitable parking space for all Council vehicles which may be anything around 40 – 50 has to be made available.
6. Suitable accommodation to house all stores materials has to be provided
7. Provision has to be made for a workshop to handle repairs and maintenance of motor vehicles carpentry works etc.

8. The Architecture has to be in line with the original office building designs and the public Library buildings incorporating the Dravidian Architecture and the cultural heritage of the Tamil people.
9. Soil test to be carried out to determine the number of storey to be constructed.
10. A design for a new building incorporating the Dravidian architected is now under preparation. It provides for modern administrative blocks and other requirements. A tentative financial requirement is around Rs.300 million.

4.6(2) Construction of a Cultural Hall

1. The open Air Theatre at the esplanade had suffered serious damages and is beyond repairs and cannot be used for any public performances.
2. The previous Town Hall at the Municipal office was the centre of the city's main cultural activities, and it is no more in existence.
3. The available public performance halls like the Weerasingham Hall, Jaffna MPCS Hall, the Thirumarai Kala mantram, Nallai Atheenam Hall, Durga Manimandapam, Ilangalaignar mandapam, Venkada Varatharaja Perumal Hall etc are catering mainly for weddings and other limited meetings.

These are not provided with modern artistic and technical requirement like sound and lighting system and seating arrangements.
Therefore a sum of Rs.80 million is required for the construction of a modern cultural hall.

4.7 Improvement of Road Network

Identified issues for improvement of road network are as follows (please refer to 3.2.3.1.3);

1.To rehabilitate the roads in Jaffna Municipality a complete scientific town planning process is required, where one way trafficking, new by pass roads for congested areas, parking areas etc could be laid out.
2. Land acquisition will be required to lay out a proper and adequate road system.
3. Underground services conduits should be planned in the city for water supply, drainage, power, telecommunication etc and laid out before final surfacing of roads.
4. Purchase of essential machinery and equipment to satisfy the acute shortage of the Jaffna Municipal council before implementation of a massive rehabilitation programme.
5. At present the Council is in possession of only one Road Roller which is very old. As such the Council needs at least two more road rollers.
6. The Council requires modern equipment for tar melting and mixing, as are in use in other local authorities like Colombo and Kandy Municipal Councils.

7. The limestone used for road repairs is very soft in quality and as such gets damaged even with a slight rainfall.
8. The new road connecting Hospital road and Manipay road has to be metalled and tarred to make it a deviation road to ease traffic congestion in the city centre.
9. Open channel along Hospital road to be covered to provide parking space.
10. Parking space

Inadequacy of parking space for parking of vehicles is an acute problem in the heart of the city. Suitable steps have to be taken to provide parking space, at least a little away from the business area.

It may be noted that road side parking is difficult due to the roads being narrow.

4.8 Culverts

Almost 60 percent of the culverts within the city have collapsed due to lack of proper maintenance during the last 20 years. The practice whenever cracks and holes were observed in the culverts was to patch up these to make them passable. As such in view of the safety of the vehicles crossing over and the satisfactory maintenance of the drainage system all the culverts have to be reconstructed with widening wherever necessary.

4.9 Proposal for Town Land Development

Town land development especially for coastal area is essential for the future plan. Identified issues for town land development are as follows;

1. The land within the city should be developed in keeping with the policy of the Urban Development Authority. As far as possible only marginal land be utilized for future construction of buildings of Government and Semi Government Organizations. The reclamation of land which commenced in 1885 in Gurunagar has not progressed in a planned manner. Land reclamation should be extended to coastal areas. This will help to ease the land hunger of the coastal population in the long run.
2. A policy for slum clearance for both the short and long term is required. The short term policy will be 'Blanket Policy' for slum clearance. The long term policy will be improved educational attainments and skills of the slum population and make them to generate regular income. This will ultimately improve the economic condition of the people in slums.
3. Establishing Zoning plan and planning regulation to the City. UDA is preparing the Zonal plan.
4. Commercial zones have to be demarcated and planned.
5. Implement the Density regulations strictly in coastal area of the city. Dwelling units to be in accordance with the City Development Plan in the areas which have slum conditions especially the coastal areas, such as Gurunagar, Pasaiyoor and Columbuthurai. A decongestion and dispersal of population strategy necessary.

4.10 Model Market

Two stages of the model market project consisting of 189 shops and stalls have been completed and are functioning now. This building too had suffered substantial damages during the war and ad hoc improvements and repairs were effected to make the markets function. However, a complete rehabilitation of both the stages was not effected and as a result many of the shops in the upstairs of these markets are still not functioning.

There has been a plan for the construction of the third stage of the market on the western side which houses the vegetable stalls, fruit stalls and other miscellaneous stalls. Because this plan was not carried out, the vegetable market is in a very disorderly and unhygienic condition.

Therefore the following actions have to be taken;

a. Stages 1&2 have to be rehabilitated.
b. Proposed stage 3 of the model market on the western side of the grand bazaar has to been taken up with special consideration for basement vehicle parking.
c. The present bus stand has to be relocated according to a UDA suggestion. The model market stage 4 has to be constructed in the bus stand area including the power house premises, providing for basement vehicle parking.

4.11 Under served Area Problem

The following steps have to be taken to improve the living condition of the costal area (please refer to 3.2.1.6.5);

(a) Although there are schools in these areas, the literacy rate is fairly low and the drop out rate is fairly high. As such a serious long drawn awareness creation programme has to be implemented to educate the people about their present living conditions, the health and environmental hazards that may arise due to the critical situation that exists and the remedial measures that are necessary.
(b) Hold regular consultative meetings with the people in groups and draw them into the decision making mechanism. They should be drawn out of the isolation and brought into the active social mainstream of the city. This would apply to the totality of the city population as well.
(c) Identify encroachments that could be removed and that should be removed, and pursue action with the support of the local community.
(d) Explore possibilities of relocating people who are not engaged directly in fishing to some other areas close by. It may be noted that moves are already afoot on this direction at the initiative of a joint organization of most of the social organizations in the area.
(e) Take steps to provide adequate water supply because the ground water is not clean or healthy enough for even washing and bathing purposes because of the close proximities of the septic tanks to the wells,

(f) Provide reasonably good roadways, a healthy environment, satisfactory entertainment and recreational facilities.
(g) Establish support service industries to facilitate income generation.
(h) Remove restrictions and allow free access to the sea for fishing.
(i) Steps to be taken to alleviate and reduce poverty by creating a conducive environment for employment and income generation. This is equally applicable to people living below poverty line outside the coastal areas as well.
(j) Examine afresh the possibility of going for one or two storied housing complexes by providing suitable accommodation for the storage of fishing nets and other related equipments adjacent to the lagoon coast.

4.12 Durayappah Stadium

Durayappah stadium is the only stadium available in the entire Jaffna Peninsula. District level and National level sports meet, Football matches and at times public meetings are held in this stadium.

The stadium too was very badly damaged and it was rehabilitated by the Ministry of Sports and has been handed over to the Municipal Council for management. Although it contains some of the basic requirements, it needs the following improvements.

a. Construction of suitable buildings for covering the public gallery on the western side. Sum of Rs.5 million would be required for this purpose.
b. Electrification of the Stadium to facilitate games and competitions to be held late in the days and in the nights.
c. Water supply has to be provided for the maintenance of the green turf. At present supply is drawn from the Public Library wells. An independent water supply system for stadium is necessary. Therefore two tube wells with over head tank facilities have to be constructed.
d. A gymnasium building was constructed by the Government Agent with the financial support of the Ministry of Sports. But it has not been equipped. Therefore equipping the gymnasium has to be carried out.

4.13 Rain Water Harvesting

This technology can be proposed for safe implementation in Jaffna. Schools, Hospitals and Public buildings that have large roof areas, usually covered with clay tiles and are generally perfectly designed for rain water harvesting.

The main problem is the financial viability, since due to the rainfall pattern and the long period without rainfall, large storage volumes are required. Most of the premises have houses with large roof areas, which could form the rain water catchments. The rain water has to be collected on the roof, using a roof gutter and then conveyed to a cistern. In the salinity areas like the coastal belts and some other pockets rain water harvesting have to be implemented.

4.14 Proposals for Rehabilitation of Ponds

Identified issues for rehabilitation of ponds are as follows (please refer to 3.1.5;

1. The rehabilitation of the ponds within the municipality consisting of desilting deepening and rebuilding of the retaining walls is proposed by the JMC in order to increase ground water recharge.
2. Due to the damaged retaining walls in most ponds, the adjoining premises get washed into the pond and the soft embankments serve as an ideal ground for the breeding of mosquitoes. It is recommended to introduce larvaecidal side fish varieties in lakes and ponds to counteract mosquito vector.
3. The ponds in the centre of the city should be integrated as part of public open place with an architectural concept to raise the recreational value of the area. For this purpose it is very often sufficient to improve the immediate surroundings of the ponds.
4. The proposals to beautify Pullukulam and Ariyakulam have to be implemented.

Desilting and reconstruction of all these ponds are in progress with NORAD funding.

4.15 Restoration of City Entertainment

To improve the city entertainment of the public, identified proposals are as follows;

- Assistance to rehabilitate the hotel industry in the city for providing healthy and affordable accommodation facilities to the local and foreign visitors.
- Reconstruction of Rest House with modern view.

4.16 Recreational Facilities

References have been made regarding the Open Air Theater and the Stadium elsewhere. In addition to these the following recreational facilities should be re-established.

a. P.S Subramaniyam Children Park. This is the only park available in the heart of the city. Basic infrastructure like the parapet walls, landscaping designs etc have been provided with Council funds and UNICEF assistance. It should be provided with all modern facilities and equipment necessary to make it a real children park. It should also reflect the cultural background of the community, for which purpose statues with educational relevance should be installed
b. Nallur Kiddu Park has to be rehabilitated and modernized.
c. UDA has suggested beautification of Ariya Kulam and Pullu Kulam Ponds by providing promenades and benches around to make them suitable for recreation and relaxation.
d. The former Government Agent Mr. C. Pathmanathan has initiated action to make the Old Park as a botanical garden. In the interests of

the students, especially the scouts movement, this proposal has to be implemented.

e. An Open Park has to be established at the esplanade from Muniyappar Kovil up to the point opposite Weerasingam Mandapam by providing seats, shaded umbrellas etc.
f. Two beaches, one at Pannai and the other at Ariyalai – Columbuthurai have to be re-established.

4.17 Public Health Services

The Health Department is the largest department of the Council both manpower wise and financial outlay wise.

The Requirements are:

i. There are 06 Maternity and Child care clinics in operation. Out of these only 3 are Municipal buildings and the other are rented. Out of the Municipal buildings the Jaffna Jubilee Health Centre buildings cannot be used and is damaged beyond repairs.

   As such the council requires at least 02 permanent buildings to house these clinics.

ii. Out of the Sidha Medical Clinics only 3 are Municipal buildings – At least 3 buildings are necessary to house these clinics.

iii. The slaughter House of the Council is situated in a congested area close to the Fish Market. As such the construction of a modern slaughter house is absolutely necessary. Suitable land is available for this purpose at Kakaitivu.

4.18 Fire brigade

1. It has been noted that the fire brigade could not handle some fire accidents due to the inadequacy of fire tenders. The Council is compelled to seek financial assistance to procure at least one or two fire tenders.

Issues to be addressed (Not in order of Priority)

The following issues were identified during discussions with the workinggroups, important stakeholders and general consultative meetings.

1. Economization of expenditure
2. Exploration of additional sources of revenue
3. Motivation of Municipal Staff
4. Construction of Municipal Office and Town Hall
5. Construction of Cultural Hall
6. Rehabilitation of Subramaniyam Park and Kiddu Park
7. Shifting of Bus Stands
8. Alternative Bus stand at Esplanade
9. Shifting of Slaughter House to Kakaitivu
10. Zoning of commercial, residential and recreational areas

11. Improvements to Muneeswaran Road, the roads between Stanly Road and Power House Road,Manipay Road and Hospital Road and Sivan Pannai Road.
12. Redesigning of traffic flow system in the City centre.
13. Reduce pavement hawker nuisance by not allowing new hawkers to come in and by providing alternative accommodation.
14. Regulate parking of vehicles on either side of the roads.
15. Improvements to the garbage collection system.
16. Introduce a satisfactory solid waste management scheme.
17. Expedite construction of the compost plant.
18. Provision of different coloured compost bins.
19. Separation of compostible, combustible and recyclable solid waste
20. To make effective use of the land fill site at Kallundai.
21. Procure covered collection trucks or tractor trailers.
22. UDA to expedite land use plan
23. Defining road widths in keeping with local conditions, without copying the UDA regulations en block.
24. Construction of Modal Market stages III and IV.
25. Allocation of vehicle parking spaces in the City centre.
26. Improvements of all tertiary roads.
27. Procurement of road rollers and other essentials equipments for roads works.
28. Examine possibilities of using granite stones for road making.
29. Introduction of a modern, planned sewerage scheme by preparing a master plan for the entire City.
30. Carry out a complete topographical survey.
31. Installation of suitable sewerage treatment plants.
32. Identification of suitable location for the treatment plant.
33. Steps to be taken to improve the water supply schemes and system to provide safe drinking water for all.
34. Identify suitable source locations for the extraction of additional quantity of water required.
35. Provision of additional stand posts and service connections using pre 1990 quantity situation.
36. Installment of denitrification plants at the intake wells.
37. Create awareness among the people and encourage, educate economic use of drinking water by avoiding waste and misuse.
38. Feasibility study about the possibility of improving the ground water quality by scientific treatment.
39. Explore possibilities of finding the finances for the improvement of the water supply scheme.
40. Introduce rain water harvesting.
41. Replace the existing A.C pipelines of the present water supply scheme with PVC pipe lines.
42. Construction of an over head tank at Navanthura.
43. Construction of a booster sump at Columbuthurai
44. Procurement of a chassis mounted water bowser of 7000 liter capacity.
45. Ensure effective completion of the rehabilitation of ponds programme in progress with NORAD assistance.

46. Beautification of the Ariya Kulam and Pullu Kulam Ponds.
47. Rehabilitation of the drainage system, by carrying out a fresh engineering survey and drawing fresh plans and designs.
48. Waste water disposal to be intergrated with the sewerage scheme.
49. Establishment of an open park at Esplanade.
50. Improvement of Durayappah Stadium.
51. Construction of beaches at Pannai and Ariyalai Columbuthurai.
52. Establishment of a botanical garden at old Park premises
53. Construction of 2 buildings for western clinics and 3 buildings for Sidha Ayurvedic Clinics.
54. Development of Passaiyoor, Ariyalai and Kalviyankadu Senguntha Markets.
55. Reclamation of coastal belts at possible points.
56. Housing problem of Gurunagar, Thirunagar and Navanthurai.
57. Rehabilitation of clock tower.
58. Campaign to popularize the UN HABITAT concept of Good Urban Governance and participatory decision making by constant consultation with the citizenry and all relevant stake holders.
59. Fire Brigade

ANNEXE - 01

Name of wards under the Municipal Council area

1. Fort
2. Grunagar west
3. Grunagar east
4. Cathedral
5. Mathews
6. Koiyathodam
7. Pasaiyoor
8. Columbuthurai
9. Ariyalai East
10. Ariyalai West
11. Kalaimagal
12. Nallur
13. Chundukuli
14. Station
15. Kailasapillaiyar
16. Kantharmadam
17. Hospital
18. Bazar
19. New mosque
20. Navanthurai
21. Old mosque
22. Navanthurai West
23. Navanthurai East

ANNEXE - 02

Number of in habitants in Jaffna Municipal Council

G.N Division	Name of G.N Division	Male	Female	Total
J/61	Nadankulam	192	162	354
J/62	Colompuththurai East	1290	1318	2608
J/63	Colompuththurai West	271	292	563
J/64	Passaiyoor East	577	622	1199
J/65	Passaiyoor West	638	666	1304
J/66	Eachchamodai	1178	1452	2630
J/67	Thirunagar	597	701	1298
J/68	Reclamation East	2050	2093	4143
J/69	Reclamation West	1944	2312	4256
J/70	Gurunagar East	812	876	1688
J/71	Gurunagar West	833	1022	1855
J/72	Small bazaar	413	444	857
J/73	Jaffna town West	1020	1130	2150
J/74	Jaffna town East	1263	1304	2567
J/75	Chundukuli South	862	972	1834
J/76	Chundukuli North	844	872	1716
J/77	Maruthady	661	762	1423
J/78	Athiyady	1013	1137	2150
J/79	Sirampaiyady	916	749	1665
J/80	Grand Bazaar	860	864	1724
J/81	Fort	820	860	1680
J/82	Vannarpannai	1037	1131	2168
J/83	Kodday	1547	1547	3094
J/84	Navanthurai South	977	985	1962
J/85	Navanthurai North	913	950	1863

J/86	Moor Street South	745	734	1479
J/87	Moor Street North	345	366	711
J/88	New Moor Street	345	339	684
J/91	Ariyalai North West	676	767	1443
J/92	Ariyalai Center West	620	733	1353
J/93	Ariyalai South West	421	504	925
J/94	Ariyalai Center North	296	487	783
J/95	Ariyalai Center	785	882	1667
J/96	Ariyalai Center South	467	549	1016
J/97	Iyanar kovilady	605	656	1261
J/98	Vannarpannai North	877	1007	1884
J/99	Vannarpannai N.W	1210	1307	2517
J/100	Vannarpannai N.E	988	1063	2051
J/101	Neeraviyady	804	776	1580
J/102	Kandarmadam N.W	598	626	1224
J/103	Kandarmadam N.E	870	1009	1879
J/104	Kandarmadam S.W	558	642	1200
J/105	Kandarmadam S.E	514	545	1059
J/106	Nallur North	714	770	1484
J/107	Nallur Rajathany	206	257	463
J/108	Nallur South	559	596	1155
J/109	Sangiliyan thoppu	1899	1868	3767

Source: - Divisional secretary of Jaffna & Nallur 2005.

ANNEXE - 03

Population Density in Jaffna Municipal Council

G.N. Division	Area /ha	Population	Density/ha
J/61	52	391	7.52
J/62	18	2472	137.33
J/63	08	554	69.25
J/64	58	1215	20.95
J/65	26	1309	50.35
J/66	42	2206	52.52
J/67	31	1550	50.00
J/68	10	4041	404.10
J/69	10	4256	425.60
J/70	22	1711	77.77
J/71	22	2141	97.32
J/72	18	810	45.00
J/73	42	2304	54.86
J/74	37	1833	49.54
J/75	28	1872	66.86
J/76	43	1700	39.53
J/77	41	1543	37.63
J/78	34	2735	80.44
J/79	20	2557	127.85
J/80	30	1844	61.47
J/81	70	1929	27.56
J/82	31	2168	69.94
J/83	33	3100	93.94
J/84	20	2298	114.90
J/85	19	2074	109.32
J/86	14	1399	999.29

J/87	29	778	26.83
J/88	43	934	21.72
J/91	27	1,419	52.56
J/92	43	1307	30.40
J/93	41	876	21.37
J/94	69	784	11.36
J/95	27	1620	60.00
J/96	484	1016	2.10
J/97	37	1261	34.08
J/98	37	1852	50.05
J/99	09	2488	276.44
J/100	56	2049	36.59
J/101	30	1580	52.67
J/102	38	1199	31.55
J/103	37	1879	50.78
J/104	27	1163	43.07
J/105	24	1041	43.38
J/106	32	1448	45.25
J/107	21	448	21.33
J/108	41	1106	26.98
J/109	89	3668	41.21

Source: Divisional secretary of Jaffna and Nallur 2004.

ANNEXE - 04

Ethnic composition of Jaffna city

Ethnic Category	No. of persons
Tamils	80,743
Muslims	1,062
Sinhalese	101
Others	122

Source: Divisional secretary of Jaffna and Nallur 2004.

ANNEXE - 05

Type of schools in the Municipal Council Area

Type of school	Number
1AB	12
1C	5
Type 2	15
Type 3	19

Source: Department of Education, Jaffna.

ANNEXE - 06

Details of slaughtered cattle and goats

Year	Cattle	Goats	Total
1999	2414	2051	4465
2000	1955	2651	6606
2001	2888	3386	6274
2002	2571	3930	6501
2003	2384	3938	6322
2004	2478	3992	6470

Source: - Jaffna M.C Record 2004.

ANNEXE - 07

Type of Roads in the Municipal Council Area

Type of Roads	Width of carriage way	Total length of road KM
Type A	More than 6.0m	7.7
Type B	4.5-6.0m	56.9
Type C	3.0-4.5m	89.8
Type D	Less than 3.0m	24.5
Gravel Road	-	20.4

Source: Jaffna Municipal Council

ANNEXE - 08

Roads “A”Class 20 Carriageway (6M)

No	Name of Roads	KM
1	Circular Veethy	0.53
2	C.Ponnampalam Road	0.50
3	Clock Tower Road	0.72
4	Front Street	0.55
5	Hospital Road	3.06
6	Mahatma Gandi Veethy	0.58
7	Muneeswaran Veethy	0.32
8	Sivanpannai Road	0.75
9	Sivan North Road	0.22
10	Town Hall West Road	0.15
11	Victoriya Road	0.32

ANNEXE - 09

Roads "B"Class 15Ft Carriageway (4.5M)

No	Name of Roads	KM
1	2nd Cross Street	0.84
2	3rd Cross Street	0.84
3	Bankshall Street	1.08
4	Vembady Road	0.87
5	Chapple Street	0.75
6	Sir Duraisamy Road	0.34
7	Meenachchi Amman Road	0.40
8	4th Cross Street	0.76
9	Sinnakkadai Road	0.27
10	St. James West Street	0.14
11	St. James East Street	0.10
12	St. James East 6 Cross Street	0.21
13	6 Cross Street	0.30
14	Ice Plant Veethy	0.18
15	St. James Mahavidyalaya Road	0.41
16	Water Tank Veethy	0.29
17	Central East Road	0.24
18	Mount Carmel Road	0.55
19	St. Sebastian Veethy	0.30
20	Cathedral Road	0.46
21	David Road	0.63
22	Prees Road	0.30
23	Convent Veethy	0.49
24	St.Patricks Veethy	0.72
25	Rajesingam Veethy	0.72
26	Mathews Veethy	0.43
27	Grusault Veethy	0.45
28	Eachchamoddai Veethy	0.91
29	New Koiyaththoddam Veethy	0.50
30	St. Antony's Road	0.41
31	Sea Beach Road	0.61
32	Swamiyar Veethy	0.68
33	Eachchamoddai Beach Road	0.96
34	Thuudy Veethy	0.73
35	Nedunkulam Road	1.15
36	Ilanthaikulam Road	0.88
37	Ananthan Vadaly Road	1.98
38	Navalar Veethy	4.99
39	Kanagaratnam Veethy	1.22
40	Kovil Veethy	2.61
41	Nallur Cross Street	0.75

42	Chethy Street	0.61
43	Kachcheri Nallur Veethy	1.71
44	Saddanathar Veethy	0.73
45	Kumara Veethy	0.18
46	Raja Veethy	0.46
47	Adiyapatham Road	1.00
48	Jamuna Veethy	0.38
49	Senkuntha Market Circular Road	0.10
50	Racce Veethy	0.83
51	Rasavinthoddam Road	0.52
52	Somasundaram Avenue	0.47
53	Maruthady Veethy	0.46
54	Athiyady Veethy	0.49
55	Ambalavanar Veethy	0.47
56	Athiyadi Pillaiyar Veethy	0.17
57	Station Road	0.21
58	Palam Road	0.56
59	Amman Road	0.48
60	Vyman Road	0.51
61	Sivan Road Thirunelvely	0.67
62	Brown Road	1.48
63	Ramanathan Veethy	1.30
64	Kumarasamy Road	0.46
65	Kasturiyar Road	1.60
66	Kannathiddy Road	0.56
67	Kathi Abubukkar Veethy	0.76
68	Mavady Veethy	0.60
69	Muslim College Road	1.21
70	Pirappankulam Road	0.38
71	JInnah Road	0.30
72	Asad Road	0.30
73	Sivappiragasam Road	0.76
74	Oddumadam Road	0.18
75	Kaladdy AmmanVeethy	0.55
76	College Veethy	0.59
77	Pungankulam Road	0.98
78	Martyn Road	0.50

ANNEXE - 10

Roads "C" Class 10 Ft . Carriageway (3 M)

No	Name of Roads	KM
1	Royal Dispensory Lane	0.12
2	Ramaiyacettvar Lane	0.13
3	Valykinathady Lane	0.37
4	Hospital Road Lane	0.13
5	Viravar Veethy	0.35
6	Viravar Lane I	0.12
7	Viravar Lane II	0.09
8	Viravar Lane III	0.07
9	Meenachchi Amman Lane I	0.14
10	Meenachchi Amman Lane II	0.09
11	Meenachchi Amman Lane III	0.11
12	Muthamil Veethy I	0.20
13	Muthamil Veethy II	0.99
14	Muthamil Veethy III	0.15
15	Muthamil Veethy IV	0.41
16	Subramaniyam Veethy	0.08
17	Karuthar Lane	0.04
18	Kanakasapapathy Lane	0.15
19	Maniyam Lane	0.08
20	College Veethy (Koddady)	0.04
21	Cemetry Veethy	0.05
22	Pannai Hospital Lane I	0.02
23	Pannai Hospital Lane II	0.05
24	Reclamation Ist Cross Street	0.17
25	Reclamation 2 nd Cross Street	0.42
26	Reclamation 3rd Cross Street	0.32
27	Water Tank Veethy Ist Cross Street	0.13
28	Water Tank Veethy 2nd Cross Street	0.11
29	Water Tank Veethy 3rd Cross Street	0.13
30	Water Tank Veethy 4th Cross Street	0.13
31	Water Tank Veethy 5th Cross Street	0.13
32	Housing Scheme Road	0.13
33	Central East Road North I	0.08
34	Central East Road North II	0.09
35	Central East Road North III	0.08
36	Central East Road South I	0.05
37	Central East Road South II	0.08
38	Central East Road South III cross Lane	0.08
39	Kondady Veethy West Ist Lane	0.05
40	Kondady Veethy West 2nd Lane	0.05
41	Puthumaimathakovil west Road	0.11

42	Puthumaimathakovil Eest Road	0.15
43	Balacedayar Veethy	0.14
44	Chakkarai Veethy	0.44
45	Mount Carmel –Kondady Lanel	0.05
46	Mount Carmel –Kondady 2nd Cross Lane	0.05
47	Mount Carmel –Kondady3rd Cross Lane	0.06
48	Lanes Mount Carmel – Kondady Ist	0.05
49	Lanes Mount Carmel – Kondady 2nd	0.05
50	Lanes Mount Carmel – Kondady 3rd	0.05
51	Lanes Mount Carmel – Kondady 4th	0.05
52	Lanes Mount Carmel – Kondady 5th	0.05
53	Puthumaimathakovil Ist Lane	0.10
54	Puthumaimathakovil 2nd Lane	0.10
55	Puthumaimathakovil 3rd Lane	0.11
56	Puthumaimathakovil Veethy	0.32
57	Railway Line West Veethy	0.09
58	Mount Carmel veethy West Veethy	0.07
59	Jupliee Centre Veethy	0.05
60	Catheelral Lane	0.17
61	Bakery Lane	0.30
62	Martyn Lane	0.30
63	Martyn Lane West Veethy	0.14
64	Martyn Veethy East 1st Lane	0.14
65	Martyn Veethy East Lane	0.24
66	Rejendra Veethy	0.29
67	Cemetry Front Veethy	0.16
68	James Statute Patrical Veethy	0.24
69	Park Road	0.26
70	St. Rock C C .Veethy	0.10
71	St. Rock North Veethy	0.10
72	Co-op. Front Veethy	0.13
73	Doctor Abrattam Veethy	0.13
74	Soloman Veethy	0.13
75	Kathimamunivar Veethy	0.21
76	Mathews Lane	0.08
77	Grusault Lane	0.17
78	Santhanamathakovil Veethy	0.18
79	Froest office Lane	0.52
80	Citadal Side Lane	0.08
81	Kachcheri Lane	0.19
82	Preinpanayakam Lane	0.34
83	Pandiyanthulvu Ist Lane	0.09
84	Pandiyanthulvu 2nd Lane	0.16
85	Pandiyanthulvu 3rd Lane	0.13
86	Eachchamoddai Cross Street	0.39
87	Vidan's Lane	0.66
88	St. Andross Lane	0.28

89	Eachchamoddai Lane	0.14
90	Eachchamoddai Ist Lane	0.09
91	Eachchamoddai 2nd Lane	0.13
92	Koiyathodda Ist Lane	0.14
93	Koiyathodda 2nd Lane	0.12
94	Palkulam Lane	0.18
95	Press Lane	0.22
96	Delan Lane	0.23
97	Kovil Lane	0.06
98	Kovil Lane (South)	0.01
99	Passaiyoor Ist Cross Street	0.15
100	Passaiyoor 2nd Cross Street	0.22
101	Passaiyoor 3rd Cross Street	0.23
102	Passaiyoor Street sabestiyan veethy	0.37
103	Passaiyoor 3rd Cross lane	0.09
104	Kadduvary lane	0.33
105	Kadduvary East lane	0.10
106	Kannias Road lane	0.24
107	Kannias Road south lane	0.07
108	Orphan madam lane	0.18
109	Old park Road East lane	0.08
110	Passaiyoor 2nd Cross -3rd Cross lane	0.10
111	Passaiyoor 2nd Cross -3rd East lane	0.18
112	Vilvam Theru	0.38
113	Vepulananthar veethy	0.62
114	Ariyar lane	0.12
115	Kantharmaniyam lane	0.14
116	Ponnampalam lane	0.15
117	Columpuththurai lane	0.15
118	Suvamiyar veethy lane east	0.27
119	Suvamiyar veethy lane west	0.09
120	Suvamiyar veethy lane 3rd west	0.09
121	Orphan veethy lane	0.25
122	Columpuththurai veethy Arasady	0.12
123	Columpuththurai veethy south lane	0.12
124	Upukulam Veethy	0.40
125	Columpuththurai 1St cross street	0.40
126	Columpuththurai 2nd cross street	0.37
127	Columpuththurai 3rd cross street	0.67
128	Columpuththurai 1st-4th street	0.24
129	Columpuththurai 1st 3rd cross street	0.21
130	Aiyanar Ammaan kovil veethy	0.17
131	Columpuththurai 4th cross street	0.58
132	Columpuththurai 5th cross street	0.14
133	3rd cross 5th cross street	0.17
134	Vithanaiyar veethy	0.38
135	Ananthan vadaly 1st lane	0.40

136	Ananthan vadaly 2nd lane	0.15
137	Ananthan vadaly 3rd lane	0.28
138	Elanthakulam- Ananthan vadaly lane	0.22
139	Elanthakulam-Upukulam	0.08
140	Ananthan vadaly 4th cross street	0.12
141	Ananthan vadaly 5th cross street	0.21
142	Sittampalam veethy	0.15
143	Ananthan vadaly lane	0.17
144	Arulampalam veethy	0.45
145	Kovil lane	0.17
146	Kungan veethy	0.52
147	Sinnalankandu lane	0.50
148	Alkaddy Veethy	0.37
149	Alkaddy Valavu Road	0.20
150	Ponnampalam Veethy	0.72
151	Mulli lane	0.67
152	Kerniyadi lane	0.25
153	Athikaddu lane	0.50
154	Arulampalam lane	0.20
155	Mampalam lane	0.09
156	Makeswary veethy	0.30
157	Ramanathan veethy	0.54
158	AmpalVeethy	0.53
159	Rajeswary Veethy	0.69
160	Rajeswary lane	0.15
161	Thirumakal Veethy	0.72
162	Arasady lane	0.19
163	Subramanium Veethy	0.32
164	Vairavar kovil veethy	0.37
165	Vairavar kovil lane	0.13
166	Kanndy veethy central lane	0.27
167	Malarmakal veethy	0.57
168	Central lane	0.13
169	Sathiriyar lane	0.52
170	Kusavama lane	0.07
171	Chemmani lane	0.43
172	Chemmani cross lane	0.09
173	Kandy veethy cross lane	0.26
174	Siththivinyagar lane	0.15
175	Kusavama lane cross lane	0.15
176	Ananthan vadaly Road Cross lane	0.24
177	Poomagal lane	0.24
178	Punkankulam lane	0.17
179	Sinnakkinaththady lane	0.22
180	Noththaris lala	0.26
181	Puvaneswary veethy	0.35
182	Moortha vinayagar veethy	0.84

183	Moortha vinayagar 1st lane	0.20
184	Kalaimagal lane	0.44
185	Nayanmar veethy	0.85
186	Moorthavinayagar 2nd lane	0.11
187	Moortha vinayagar 3rd lane	0.34
188	Labour lane	0.61
189	Kachcheri East lane	0.91
190	Sankiliyan Veethy	0.67
191	Pandarakkulam Veethy	0.61
192	Kondalady veethy	0.12
193	Arasa veethy	0.45
194	Rani veethy	0.32
195	Challar veethy	0.71
196	Aresrrvathappar Veethy	0.85
197	Kaddukkaiyadi Veethy	0.41
198	Aresrrvatham Veethy	0.19
199	St.Petres Veethy	0.13
200	Kurunathansuvamy lane	0.12
201	Ariyakulam lane	0.14
202	Rasavin thodda lane	0.19
203	Viravarkovil lane	0.12
204	Pointpedro 3rd lane	0.15
205	Hospital road 1st lane	0.13
206	Hospital road 2nd lane	0.06
207	Hospital veethy south lane	0.26
208	Stanley veethy 1st lane	0.09
209	Stanley veethy 2nd lane	0.08
210	Palam road 1st lane	0.10
211	Palam 2nd lane	0.08
212	Udaiyar lane	0.20
213	Manaltharai lane	0.55
214	Kanthapurana veethy	0.28
215	Kanthapuranam Veethy	0.09
216	Manaltharai 1st lane	0.16
217	Manaltharai vellavaikkal veethy	0.22
218	Palam road pallaly road lane	0.09
219	Arasady veethy 1st lane	0.18
220	Arasady veethy 2nd lane	0.11
221	Arasady veethy 3rd lane	0.18
222	Arasady veethy 4th lane	0.16
223	Kailasapillaiyar west North lane	0.40
224	Clock Tower lane	0.29
225	Kadaisamy lane	0.26
226	Brown road 1st lane	0.15
227	Brown road 2nd lane	0.26
228	Brown road 5th lane	0.34
229	Sivakurunathar Veethy	0.33

230	Annachachiram Veethy	0.43
231	Arththisoody Veethy	0.55
232	Hindu ladies lane	0.47
233	Clock Tower 1st lane	0.12
234	Clock Tower 2nd lane	0.11
235	C.Ponnampalam 1st lane	0.15
236	C.Ponnampalam 2nd lane	0.09
237	C.Ponnampalam Vairavar lane	0.09
238	Yarll Road	0.46
239	Kalaipulavar Road	0.21
240	Kankadsar Veethy	0.18
241	Sirampaiyady Veethy	0.24
242	Post office lane	0.09
243	Seenivasakam Road	0.58
244	Kopal Lane	0.16
245	Villurnrippillayar veethy	0.17
246	Ummah lane	0.37
247	Katkulam veethy	0.26
248	Mo lane	0.21
249	Kamal lane	0.46
250	Kalvayalmahavidyalayam lane	0.04
251	A.P lane	0.24
252	Kennady	0.30
253	Navanthurai 1st cross street	0.10
254	Navanthurai 2nd cross street	0.10
255	Navanthurai 3rd cross street	0.10
256	St.maris church lane	0.08
257	Ponnappa lane	0.24
258	Lotus Road	0.47
259	Pirappankulam Lane	0.26
260	Pommaivelly 1st cross lane	0.16
261	Pommaivelly 2nd cross lane	0.13
262	Pommaivelly 3rd cross lane	0.14
263	Pommaivelly 4th cross lane	0.14
264	Pommaivelly 5th cross lane	0.15
265	Pommaivelly 6th cross lane	0.14
266	Pommaivelly 7th cross lane	0.15
267	Pommaivelly 8th cross lane	0.18
268	Swartz Lane	0.61
269	New Sivan Veethy	0.73
270	Murugamoorthy Veethy	0.79
271	Thurairaja Veethy	0.43
272	Pechchi Amman Veethy	0.30
273	Periyathampiran Veethy	0.49
274	Kesavilpillayar Veethy	0.58
275	Karaikkal Lane	0.33
276	Poonary Lane	0.70

277	Alady Lane	0.70
278	B.A Thamby Lane	0.34
279	Odai Lane	0.32
280	Devalaya Lane – Church Lane	0.43
281	Arukalmadam Palam Road	1.09
282	Sapapathy Veethy	0.85
283	Thalayady Lane and By Lanes	0.98
284	Seeniyar Lane	0.67
285	College Lane	0.39
286	Kanagasabai Avenue	0.23
287	Sivakurunathar Veethy 1st Lane	0.11
288	Sivakurunathar Veethy 2nd Lane	0.28
289	Sivakurunathar Veethy 3rd Lane	0.06
290	Sivakurunathar Veethy 4th Lane	0.06
291	Arasady Veethy 1st Lane	0.18
292	Kanagasabai Veethy Street	0.38
293	Seeniyar Lane 1st Lane	0.14
294	Seeniyar Lane 2nd Lane	0.28
295	Seeniyar Lane 3rd Lane	0.37
296	Seeniyar Veethy	0.61

ANNEXE- 11

Details of "C "Class Gravel Roads

Class Road	Name of the Road	Nature of Road	Length (KM)
1 " C" Class	Kadukkai Road	Gravel Road	0.30
2" C" Class	Parvathy Vidyalaya Veethy	Gravel Road	0.21
3 " C" Class	New Sivan Veethy	Gravel Road	0.24
4 " C" Class	Manaltharai –New Sivan Veethy	Gravel Road	0.22
5 " C" Class	Panan Kulam Veethy	Gravel Road	0.18
6 " C" Class	Brown Road 5th Lane Arthisoordi Veethy	Gravel Road	0.21
7 " C" Class	Kachchiri Railway Lane	Gravel Road	0.45
8 " C" Class	Thevarikkulam Lane	Gravel Road	0.24
9 " C" Class	Chankiliyan Road Pandarikkulam	Gravel Road	0.24
10 " C" Class	Arthisoody Road West Lane	Gravel Road	0.30
11 " C" Class	Arthisoody North Lane	Gravel Road	0.18
12 " C" Class	Arasady 1st Lane	Gravel Road	0.15
13 " C" Class	Arasady 2nd Lane	Gravel Road	0.11
14 " C" Class	Arasady 3rd Lane	Gravel Road	0.18
15 " C" Class	Koddady Lane	Gravel Road	0.12
16 " C" Class	Cheliyan Veethy	Gravel Road	0.60
17 " C" Class	Arali center –Manipay veethy Lane	Gravel Road	0.60
18 " C" Class	Konar Thoddam all Part	Gravel Road	0.25
19 " C" Class	Water Tank Veethy	Gravel Road	0.35
20 " C" Class	Vembady Veethy 4th Cross Road	Gravel Road	0.15
21 " C"	Columputhurai 5th Cross Road	Gravel Road	0.09

Class	Ananathanvadaly Road		
22 " C" Class	Illanthaikkulam –Anandanvadaly Veethy	Gravel Road	0.25
23 " C" Class	Elilllur 1st Lane	Gravel Road	0.09
24 " C" Class	Elilllur 2nd Lane	Gravel Road	0.09
25 " C" Class	Elilllur 3rd Lane	Gravel Road	0.09
26 " C" Class	Valanpuram 1st Lane	Gravel Road	0.10
27 " C" Class	Valanpuram 2nd Lane	Gravel Road	0.10
28 " C" Class	Valanpuram 3rd Lane	Gravel Road	0.10
29 " C" Class	Valanpuram 4th Lane	Gravel Road	0.10
30 " C" Class	Valanpuram 5th Lane	Gravel Road	0.10
31 " C" Class	Valanpuram 6th Lane	Gravel Road	0.10
32 " C" Class	Valanpuram Main Veethy	Gravel Road	0.12
33 " C" Class	Mulli Veethy	Gravel Road	0.70
34 " C" Class	Muththamil Veethy lane I	Gravel Road	0.20
35 " C" Class	Muththamil Veethy lane II	Gravel Road	0.09
36 " C" Class	Muththamil Veethy lane III	Gravel Road	0.15
37 " C" Class	Muththamil Veethy lane IV	Gravel Road	0.41
38 " C" Class	Savakkalai Veethy	Gravel Road	0.05
39 " C" Class	Reclamation 1st Veethy	Gravel Road	0.16
40 " C" Class	Reclamation 2nd Veethy	Gravel Road	0.42
41 " C" Class	Reclamation 3rd Veethy	Gravel Road	0.32
42 " C" Class	Sarasvathy Lane (Ariyalai –Kandy Road)	Gravel Road	0.22
43 " C" Class	Mountcamel Kondalady 1st Cross Lane	Gravel Road	0.05
44 " C" Class	Mountcamel Kondalady 2nd Cross Lane	Gravel Road	0.056
45 " C"	Mountcamel Kondalady 3rd Cross	Gravel Road	0.06

Class	Lane		
46 " C" Class	Mountcamel Lane Kondalady 1st Lane	Gravel Road	0.05
47 " C" Class	Mountcamel Lane Kondalady 2nd Lane	Gravel Road	0.05
48 " C" Class	Mountcamel Lane Kondalady 3rd Lane	Gravel Road	0.05
49 " C" Class	Mountcamel Lane Kondalady 4th Lane	Gravel Road	0.05
50 " C" Class	Mountcamel Lane Kondalady 5th Lane	Gravel Road	0.05
51 " C" Class	Railway line West Veethy	Gravel Road	0.085
52 " C" Class	Mouncamel West Veethy	Gravel Road	0.073
53 " C" Class	Jupili Center Veethy	Gravel Road	0.05
54 " C" Class	Mathues Lane	Gravel Road	0.079
55 " C" Class	Gusort Lane	Gravel Road	0.167
56 " C" Class	Pandiyanthalvu 1st Lane	Gravel Road	0.09
57 " C" Class	Pandiyanthalvu 2nd Lane	Gravel Road	0.161
58 " C" Class	Pandiyanthalvu 3rd Lane	Gravel Road	0.13
59 " C" Class	Press Lane	Gravel Road	0.22
60 " C" Class	Ponnampalam Lane	Gravel Road	0.15
61 " C" Class	Chemmany Cross Lane	Gravel Road	0.09
62 " C" Class	Kusavama Lane Cross Lane	Gravel Road	0.14
63 " C" Class	Rasavin Thoddam Lane	Gravel Road	0.19
64 " C" Class	Vairavar Kovil lane	Gravel Road	0.12
65 " C" Class	Palam Veethy 1st Lane	Gravel Road	0.10
66 " C" Class	Palam Veethy 2nd Lane	Gravel Road	0.08
67 " C" Class	Pommaivelly 1st Cross Lane	Gravel Road	0.25
68 " C" Class	Pommaivelly 2nd Cross Lane	Gravel Road	0.13
69 " C"	Pommaivelly 3rd Cross Lane	Gravel Road	0.14

Class			
70 " C" Class	Pommaivelly 4th Cross Lane	Gravel Road	0.14
71 " C" Class	Pommaivelly 5th Cross Lane	Gravel Road	0.15
72 " C" Class	Pommaivelly 6th Cross Lane	Gravel Road	0.13
73 " C" Class	Pommaivelly 7th Cross Lane	Gravel Road	0.15
74 " C" Class	Pommaivelly 8th Cross Lane	Gravel Road	0.18
75 " C" Class	Muthalier Lane	Gravel Road	1.99

ANNEXE - 12

Details of the community centers

Name of the Community centre	Location (D.S division)
1) Sanmarkam Community centre	Jaffna
2) Mutpokku Community centre	Jaffna
3) Chundukuli Community centre	Jaffna
4) Koiyathodam Community centre	Jaffna
5) Punithasebestiar Community centre	Jaffna
6) Kurunagar Community centre	Jaffna
7) Reclamation Community centre	Jaffna
8) St.rocke Community centre	Jaffna
9) Geeen Field Community centre	Jaffna
10) VeskiGurunagar Community centre	Jaffna
11) Eachamoddai Community centre	Jaffna
12) Kalaisudar Community centre	Jaffna
13) Passaiyoor Community centre	Jaffna
14) Punitha Community centre	Jaffna
15) Punitha anthoniyar Community centre	Jaffna
16) Columbuthurai West	Jaffna
17) Valanpuram Community centre	Jaffna
18) Punitha Anthoniyar Community centre	Jaffna
19)Columbuthurai west Community centre	Jaffna
20)Valanpuram Community centre	Jaffna
21) Punitha Pathuvaiar Community centre	Jaffna
22) Elliloor Community centre	Jaffna
23) Columbuthurai 3Rd cross street	Jaffna
24) Katpaha Vinayakar Community centre	Jaffna
25) Koddady Community centre	Jaffna
26) Star Community centre	Jaffna
27) Kannapuram Community centre	Jaffna

28) St.neecless Community centre	Jaffna
29) Kalaivani Community centre	Jaffna
30) Kenady Community centre	Jaffna
31) Muththamil Community centre	Jaffna
32) Srimeenachchi Community centre	Jaffna
33) Kavibarathi Community centre	Jaffna
34) Thiruvalluvar Community centre	Jaffna
35) Thirukkudumbam Community centre	Jaffna
36) Yarl Barathi Community centre	Jaffna
37) Yarl Muslim Community centre	Jaffna
38) St.Marys community	Jaffna
39) Arivolee Community centre	Jaffna
40) Aththiyady Community centre	Jaffna
41) Puthumaimatha Community centre	Jaffna
42) Maveerar Community centre	Jaffna
43) Sri Kalimagal Community centre	Nallur
44) Nayanmarkaddu Barathi Community centre	Nallur
45) Moorthavinayagar Community centre	Nallur
46) Nayanmarkaddu Community centre	Nallur
47) Kachcheri East Community centre	Nallur
48) Sankiliyan Community centre	Nallur
49) Kondalady Genavairavar Community centre	Nallur
50) Janasakthi Community centre	Nallur
51) Ganasothi Community centre	Nallur
52) Iyanar Kovil Community centre	Nallur
53) Kalajothi Community centre	Nallur
54) Kamachchi Community centre	Nallur
55) Valluvar Community centre	Nallur
56) Barathy Community centre	Nallur
57) Ganthy Community centre	Nallur
58) Vannai North Community centre	Nallur
59) Kalaivani Community centre	Nallur

60) Kalaivani kalagani Kalamantram Community centre	Nallur
61) Kalimagal Community centre	Nallur
62) Kalaivani Community centre	Nallur
63) Ariyalai Community centre	Nallur
64) Ariyalai Thirumagal Community centre	Nallur
65) Saraswathy Community centre	Nallur
66) Arunothaya Community centre	Nallur
67) Nallur murugan Community centre	Nallur
68) Anna Community center	Jaffna

ANNEXE - 13

Details of ponds in Jaffna city		
Name of the Pond	Location (D.S division)	Extent Sq.Ft
1)Nachchimar kovil kulam	Nallur	46390
2)Rajalikulam	Nallur	15019
3)Kannathiddy kulam	Jaffna	218779
4)Katkulam	Jaffna	16325
5)Vannankulam	Nallur	57436
6)Veeramakali Amman Kovil Kulam	Nallur	54987
7)Piramanakattukulam	Nallur	83822
8)Pandara kulam	Nallur	87882
9)Vannakulam	Nallur	34690
10)Anjuthankulam	Nallur	28296
11)Ariyakulam	Jaffna	148175
12)Pillaiyarkovil kulam	Jaffna	83765
13)Nayanmarkaddukulam	Nallur	141509
14)Moondukulam	Jaffna	159167
15)Pirapankulam	Nallur	57681
16)Illanthaikulam	Jaffna	91147
17)Uppukulam	Jaffna	81896
18)Vannankula	Jaffna	14148
19)Sinnakulam	Jaffna	22038
20)Maravakulam	Jaffna	73734
21)Paalkulam	Jaffna	92806
22)Mudalikulam	Jaffna	12162
230Nedunkulam	Jaffna	85705
24)Vannankulam	Jaffna	27290
25)Thevarikulam	Jaffna	345405

26)Neernochchithalvukulam	Nallur	35588
27)Vattakulam	Jaffna	173424
28)PullukulamNedukkulam	Jaffna	53039
29)Thurambaikulam	Nallur	43533
30)Muthalikulam	Nallur	192388
31)Nariyankundukulam	Nallur	48730
32)Thamaraikulam	Jaffna	10883
33)Muthalikulam	Nallur	10883
34)Nariyankundukulam	Nallur	11509
35)Thamaraikulam	Jaffna	64075

Source: GTZ Report 2002.

ANNEXE - 14

Description of channel	Length (m)
Pandarakulam	1,160
Nayanmarkaddu kulam,inlet channel,outlet channel	3.080
Nachimarkovil Kulam inlet channel,outlet channel	475
Katulam outlet channel	1.070
Thamaraikulam outlet channel	252
Makkikulam outlet channel	120
Pirappankulamoutlet channel	365
Ilanthaikulam outlet channel	882
Vannankulam outlet channel	82
Palkulam outlet channel	194
Nedunkulam outlet channel	1095
Nirnochithalvu kulam outlet channel	1224
Maravakulam outlet channel	42
Paravakulam outlet channel	576
Piramanakaddu kulam outlet channel	116
Veeramakali Ammankovil kulam outlet channel	335
Ariyankulam inlet, outlet channel	772
Pullu kulam outlet channel	457
Mundukulam outlet channel	457
Kannathiddi outlet, inlet channel	600
Vannankulam, Vadukulam outlet channel	340
Anjuthankulam inlet, outlet channel	2.664
Pillaiyarkovil outlet channel	300
Thevarikulam outlet channel	376
Muthalikulam outlet channel	945
Vannankulam outlet, channel Arasady, Nallur	564

ANNEXE – 15

Details of Pavement

NO	Name	LENGTH Ft
1	Point Pedro Road (Nallur) Pavement	7320
2	Point Pedro Road (Beside Hospital)	780
3	C.Ponnampalam Road (Pavement)	1000
4	Kandy Road (pavement)	1260
5	Hospital Road (pavement)	6580
6	Kasthuriyar Road (pavement)	1400
7	Chemmany Road(pavement)	890
8	Stanley Road (pavement)	4860

ANNEXE – 16

Details of R.C.C 2' Pipe Culvert Single

NO	ITEM	D.S AREA
1	Cheliyan Veethy	Jaffna
2	Pommai velly cross road	Jaffna
3	Columputhurai 5th Cross	Jaffna
4	Vembadi Road	Jaffna
5	Stanley Road Link Road	Jaffna
6	Jinnah Road	Jaffna
7	Ashad Road	Jaffna
8	Elilloor by Lane	Jaffna
9	Somachundaram Avenue	Jaffna
10	Kasthurior Lane Jaffna	Jaffna
11	Navalar Road	Jaffna
12	Forest Office	Jaffna
13	Upukulam Road	Jaffna
14	Nedumkulam	Jaffna
15	Columputhurai Barial Lane	Jaffna
16	Punkankulam Road	Jaffna
17	Sathiriyar Lane	Nallur
18	Palkulam Lane	Jaffna
19	Clock Tower Lane	Jaffna
20	Maruthaddy Lane	Jaffna
21	Ponnari lane	Nallur
22	Lotus Lane	Nallur
23	Nayanmar Veethy	Nallur
24	Asirvathappar Road	Nallur
25	Sankiliyan Veethy	Nallur
26	New sivan Veethy	Nallur
27	Palkulam lane	Nallur
28	Kamal Lane	Jaffna
29	Odumadam Road	Nallur
30	Sabapathy Lane	Nallur
31	Kanagasabai lane	Nallur

ANNEXE – 17

Details of Box Culvert

NO	ITEM	D.S Area
1	Senpartics Road	Jaffna
2	Temple Road	Nallur
3	Mount carmel Road	Jaffna
4	Rasavin Thoddam Road	Jaffna
5	Sir Pon Ramathan Road	Nallur
6	Convent Road	Jaffna
7	Nallur Cross Road	Nallur
8	Muneeswaran Road	Jaffna
9	Thevarikkulam Road	Jaffna
10	Arukal Madam Main Road	Jaffna
11	Columputhurai 5th cross Road	Jaffna
12	Mahathmaganthy Veethy	Jaffna
13	Chaphal street	Jaffna
14	Hospital Road Lane	Jaffna
15	Muslim College Road	Jaffna
16	Konanthoddam lane	Jaffna
17	Rajasingam Veethy	Jaffna
18	Rajenthira Veethy	Jaffna
19	Navalar Road	Nallur
20	Navalar Road	Jaffna
21	Mathews lane	Jaffna
22	Ananthanvadaly Road-illanthakkulam	Jaffna & Nallur
23	Jamuna Veethy	NAllur
24	Stanley Road Link Road	Jaffna
25	Alady lane Kompayan madam	Nallur
26	Palam Road	Nallur
27	Kanagasabai Avenue	Nallur
28	Katkulam velantheru lane	Jaffna
29	Villundi Pillaiyar Lane	Jaffna
30	Passiyoor 2nd cross street	Jaffna
31	Eachamodda lane	Jaffna
32	Athiyadi pillaiyar rest veethy	Jaffna
33	Kachchiri nallur Road	Jaffna
34	3rd cross street	Jaffna
35	Pirappankulam lane	Jaffna

ANNEXE - 18

Details of Side Drains

No	Work item	Length in feet
1	Front street	1800
2	Town hall west veethy	500
3	2nd cross street	2750
4	3rd cross street	2750
5	Bankshall street	3550
6	Venbady street	2850
7	Church street	2450
8	Sr. Duraisamy vaithilingam street	1100
9	Mahathama Ganthi veethy	1900
10	Hospital Road(south)	10050
11	Royal Dispensary Lane	380
12	Ramaiyah Chettiar Lane	410
13	Valikkinaru Lane	1225
14	Muneeswaram Road	1050
15	Hospital Road Lane	425
16	Circular Veethy	1750
17	Siva pannai Road	2450
18	Viravar Veethy	1150
19	Viravar Lane I	400
20	Viravar Lane II	300
21	Viravar Lane III	225
22	Meenachchi Amman Veethy	1300
23	Meenachchi Amman Lane I	475
24	Meenachchi Amman Lane II	310
25	Meenachchi Amman Lane III	350
26	Muthamil Veethy I	650
27	Muthamil Veethy II	325
28	Muthamil Veethy III	485
29	Muthamil Veethy IV	1350
30	Subramaniyam Veethy	250
31	Karuthar Lane	125
32	Kanakasabapathy Lane	170
33	Maniyam Lane	250
34	College Veethy(koddady)	125
35	Cemetery Veethy	165
36	Pannai Hospital Veethy LaneI	75
37	Pannai Hospital Lane	175
38	4th Cross Street	2500
39	Sinnakadai Veethy	900
40	St.Jams west street	450

41	St.Jams East street	330
42	St.Jams Eas 6th cross street	700
43	6th cross street	970
44	Ice Plant Veethy Reclamation Lane	600
45	Reclamation 1st cross street	550
46	Reclamation 2nd cross street	1400
47	Reclamation 3rd cross street	1050
48	St.Jams Maha vidyalam	1350
49	Water tank Veethy 1st cross street	440
50	Water tank Veethy 2nd cross street	380
51	Water tank Veethy 3rd street	440
52	Water tank Veethy 4th cross street	430
53	Water tank Veethy 5th cross street	430
54	Housing scheme Road	440
55	Water tank Veethy	950
56	Central East Veethy North 1st cross street	250
57	Central East Veethy North 2nd cross street	280
58	Central East Veethy North 3rd cross street	260
59	Central East Veethy South 1st cross street	180
60	Central East Veethy South 2nd cross street	260
61	Central East Veethy South 3rd cross street	250
62	Mount carmel west veethy	240
63	Railqway line west veethy	280
64	Kondady Veethy west 1st veethy	170
65	Kondady Veethy west 2nd veethy	170
66	Puthumai matha Kovil west Road	350
67	Puthumai matha Kovil East Road	500
68	Bala udayar veethy	450
69	Odaikari veethy	1430
70	St.Sebastiar veethy	1000
71	Mount carmel Kondaddy veethy lane	180
72	2nd cross street lane	186
73	3rd cross street Lane	200
74	Lanes between Konadady Mount camel veethy 1st Lane	180
75	Lanes between Konadady Mount camel veethy 2nd Lane	180
76	Lanes between Konadady Mount camel veethy 3rd Lane	180
77	Lanes between Konadady Mount camel veethy 4th Lane	180
78	Lanes between Konadady Mount camel veethy 5th Lane	180
79	Mount camel veethy	1500
80	Cathedral road	1500
81	Press Road	1000
82	Mount camel veethy	1500
83	Cathedral road	1500
84	David Road	2050
85	Kovil Veethy	1050
86	Convent Veethy	1600
87	6th Cross Street	600

88	Patricks Veethy	2360
89	Martyn road	1650
90	Navalar Veethy	16300
91	Sivan Panai Veethy	2450
92	Kannathiddy Veethy	1850
93	Post Office Lane	310
94	Sivan North Road	755
95	Seenivasagam Road	1900
96	Kasturiyar	5260
97	Jummah Lane	1200
98	Kathi Aboobucker Veethy	2400
99	Mavady Veethy	1218
100	AnanthanVadaly Road	6500
101	Illanthaiklulam Road	2900
102	Nedumkulam Road	4100
103	Temple Road	8550
104	Nallur cross street	2450
105	Chetty Street	2000
106	Kachchari Nallur Road	5600
107	Sadanathar Veethy	2380
108	Addiyapatham Road	3300
109	Palam Road	1850
110	Sivan Road Thuinnelvelly	2200
111	Brown Road	4860
112	Odumadam Road	1580
113	Kaladiamman veethy	1800
114	Arasady Road	4000
115	Vidan's Lane	2030
116	Santhanamahta Kovil Veehty	2240
117	Arulampalam Veethy	1475
118	Vepulanandar Veethy	2020
119	Rajeswary Veethy	2250
120	Thirumagal Veethy	2375
121	Moorthavinayagar Road	2750
122	Nayanmar Veethy	2775
123	Manaltharai Lane	1800
124	Murugamurthi Veethy	2600
125	Seeniyar Lane	2200
126	Chanlian Veethy	2000
127	Kacheri East Lane	3000

ANNEXE - 19

Details of Worships

Name of the Temple	Location (D.S Area)
Hindu Kovils	
1. Vannai Vaitheesvaran kovil	Jaffna
2. Sri Vannai Veeramali Amman Temple	Nallur
3. Vannarpannai Kaladdy Sri Katpaka Vinayakar Temple	Nallur
4. Vamped Pillaiyar Kovil, K.K.S road	Jaffna
5. Muthumari Amman Kovil Pannai Kodaddy	Jaffna
6. Arulmiku Sri Gnanavairavarkovil Muthamil Veethy	Jaffna
7. J/ Vannai East Kalddy Eachchady Sri Mahamari Ambal	Nallur
8. Manonmani Ambal Temble Nallur	Nallur
9. Vannai Kesavil Muthuvinayagar Alayam	Nallur
10. Villoonri Veerakathi Vinayakar Thevasthanam	Nallur
11. Board of Management Villoonri Holy Tank	Jaffna
12. Arulmiku Veerakathi Vinayakar Temple Kallady	Nallur
13. Sri Visvalinga Maha Ganapathy Moorthy Temple	Nallur
14. Kadait Swamykal Guruwara Annasathiram	Jaffna
15. Nallur Sri Saddanathar Temple	Nallur
16. Sri Sivagurunatha Swami Kovil Anaipathy	Jaffna
Churches	
Methodist Church Jaffna Circuit	Jaffna
St.James Church Grunagar	Jaffna
Christ Church	Jaffna
Zion Church	Jaffna

Mosques

Kamal road Mosque	Jaffna
Navalar road mosque No - 1	Jaffna
Navalar road Mosque No - 2	Jaffna
College road Mosque	Jaffna
Manipay road Mosque	Jaffna
Sammantheru Mosque	Jaffna
Hospital road Mosque	Jaffna

CITY CONSULTATION

JAFFNA

Date : 22nd March 2006
Time : 10.30 a.m. to 3.00 p.m.
Venue : Public Library Auditorium, Jaffna

Meeting commenced with the lighting of the traditional oil lamp followed by the address of welcome by the Special Commissioner, Jaffna Municipal Council. Thereafter,

- Dr Fahmy Ismail National Technical Advisor of the Sustainable Cities Program – Urban Governance Support Project (SCP-UGSP) delivered an address on the UGSP and the objectives of the City Consultation.

- Mr. C.V. Kandiya Sivagnanam made a power point presentation on the Jaffna City Profile.

- Dr. M. Mariathasan, Medical Officer of Health, Jaffna made a presentation on the major issues facing the city of Jaffna.

Thereafter discussion took place on the city profile and on the major issues of the city. The following key issues were raised.

1. Improve the solid waste management and prohibit illegal garbage dumping at common places.

2. Approval of toilets only with septic tanks.

3. Relocate the present private bus stand.

4. Steps to be taken to ensure the cleaning process of the entire storm water channels especially at Ariyakulam junction and Middai Kadai junction.

5. Steps to be taken to protect the ground water from being polluted in areas specially from Navanthurai to Columbuthurai.

6. Pedestrian crossings to be drawn opposite the entrance to the General Hospital .

7. Consider Ariyalai area as an underserved area and to provide services.

The city profile presented was approved.

The attendance stood at sixty (60).