

Shrinking cities and their urban impacts: The case of Matale, Sri Lanka

Jayantha Wickramanayake, Janaka Wijesundara
Department of Architecture, University of Moratuwa, Sri Lanka

Abstract

Shrinking is not a new occurrence^{1/}. Literature shows that it results serious social and economic issues leading to population decline and in the worse cases, complete abandonment of blocks of housing, whole neighborhoods or entire towns have happened. Analysis of urban shrinkage takes into the consideration of built and spatial forms of cities and this is a global and multidimensional phenomena. However, little is understood of true manifestations of this process. Thus, as the world's population increasingly becomes urban, the accepted view of urban decline needs greater understanding. It instantly expresses on built structures and later spatially. The understanding of the urban decline though which is not a common occurrence in the Sri Lankan context is important to explore how the physical and social structures of the city changes in the process of its decline and its negative effects, outcomes and the underlying causes. Matale City in Sri Lanka is a case for this.

Key words: Shrinking cities, Built form & Spatial Transformation, urban design, Matale City

Introduction

After decades of urban growth, modern societies now face an increasing number of shrinking cities. The impacts of shrinking cities on inhabitants are many folds. Public discourses mostly focus on the negative effects, since they can be visually witnessed. However, there are ramifications on the built and spatial forms too. Urban growth and urban decline have been parallel throughout the world and have even been considered as the need for urban design. Today, it has become more visible, and has questioned and challenged the conservative and established urban design paradigms. Consequently, shrinkage or urban decline is considered as an urban design tool to measure the intensity of decline or growth of cities. In the recent past some western towns in Europe and America as well as Asian cities such as China, India and Japan, have shown the signs of shirking or urban decline.

Evidence on shrinking city situations in the Sri Lankan context is rare. Hence this study aimed at uncovering its nature by examining Matale city as an example. Matale city, as statistics show as a "dying city", has transformed rather with a negative image socio-economically and physically. This is a clear evidence for an urban decline situation in Sri Lanka. This study shows that de-population is not always the only 'measuring rule' for declining. Other factors similar to slow growth rates, out-migration of younger population, increase of aging population, abandoned or

vacant buildings, decreasing economic rate, could also be considered as influencing aspects of decline.

1.0 Shrinking/Declining Cities

The Term, shrinking cities originated in Germany. German term **Schrumpfends Stadte** (Hartmut Häußermann and Walter Siebel, 1987) refers to the decline in population and economic base experienced by German cities as a result of de-industrialization. The terms used to refer to urban shrinkage have changed over time. history, the process has been described as 'urban decline' (Beauregard, 2003), although a number of authors have used the terms 'shrinking cities' or 'urban shrinkage' to describe the urban decay and deterioration associated with the contraction of the population and economic base in older North Eastern cities (Weaver, 1977; Breckenfield, 1978; Rybczynski and Linneman, 1999).

Most shrinking cities are found in former industrial areas of North America and Europe. Thus, urban shrinkage cannot be understood without referring to American and German discourses (Audirac, 2009; Baron et al., 2010; Fol and Cunningham-Sabot, 2010). At early stages, due to different causes like high unemployment, the increased processes of urbanization, de-industrialization, economic decline, and also general demographical transformation like lower birth rates and changes in population composition changed the intensity to negative developments. This resulted in abandoning of building stocks, making more vacant land areas available, a situation classified as 'Shrinking Cities'.

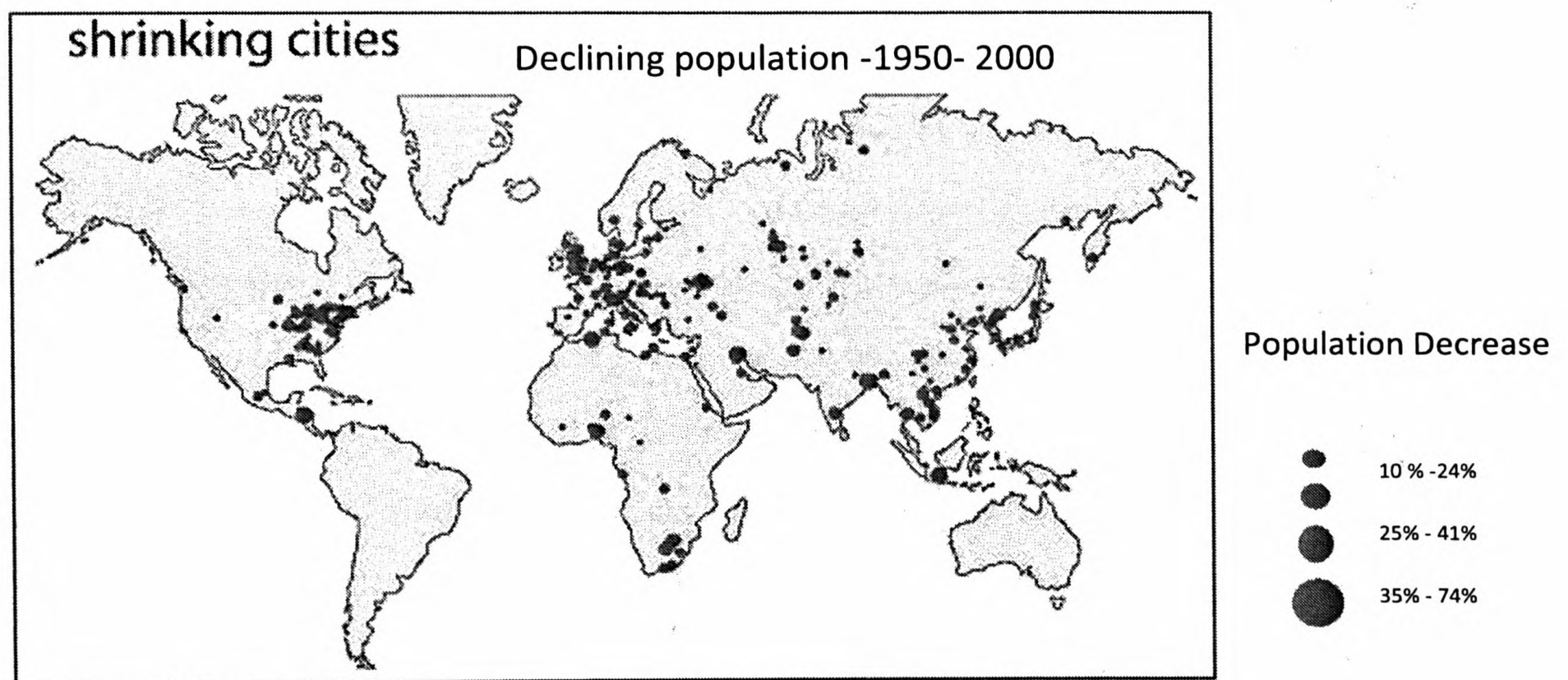


Figure. 1: World map of cities with the highest shrinking rate within the last 50 years

Source- Shrinking Cities: Art Dealing with Vanishing Populations- <http://www.google.lk/article/shrinking12>.

The shrinking of cities could be classified under four aspects, such as demographical shrinkage, economic shrinkage, socio-cultural shrinkage and physical shrinkage. Moreover, natural reasons, war, disasters and environmental changes affect urban decay in some countries. Several

countries have recently experienced changing pattern of production and problems in service based economic sectors which may lead to the shrinkage of cities.

The phenomenon of declining populations in cities of the developing world is relatively new, as prevalent as it is in the developed world. Most of the Asian cities are shrinking due to following reasons

- 1) Migrating from one place to another for better life.
- 2) With the diminishing of industries, Civil war and disasters.
- 3) Seasonal moving from one location to another for the employment opportunities.
- 4) Migrating from urban to suburban areas renting out or selling their original places for economic gain.

Table 1: World Shrinking Cities

Region	No. of cities experiencing declining populations (from 1990 to 2000)	population loss (millions) (1990-2000)
Africa	11	0.37
Latin America and the Caribbean	46	2.8
Asia	86	9.7
China	50	6.8
India	16	0.7
Total	143	13

Source: UN-HABITAT, Global Urban Observatory, 2008. Data from United Nations Statistical Division, Demographic Yearbook, various years (various years, 1985 and 2004)¹¹³

According to Owlet et al., (2004), shrinking does not merely mean depopulation. It rather describes a process, which is composed of several factors such as general decline of birth rate, out-migration, growing unemployment rate and decreasing economic potential. Therefore, a shrinking city would be defined as a city with a decreasing population and arising from that decreasing economic activity.

¹¹³ Data refers to cities of more than 100,000 inhabitants experiencing a real decline in their populations and not just a slowing down of urban growth rates.

2.0 Built and spatial transformation in shrinking cities

The term urban transformation is chosen because the urban fabric is not a fixed unit remaining the same. On the contrary, the urban is ever changeable and continues to transform into new forms. Graham Shane (2005) considers *"urban as being a mutating organism."* He defines the city as being a mutated organism; an organ that is alive and transforming.



Figure 2: Youngstown- Deteriorated Building textures and materials –
Source-<http://shrinkingcities.wordpress.com/>

Buildings are the most noticeable elements in any city and the collection of built features that give each city its unique character. This unique character would be destroyed with the declining, phase, especially in shrinking cities. The awful environment results in the changes in population densities, economic efficiency and social-cultural relationships. The above results the negative transformation of built forms as immediate effects. The forms that flourished in the past and spaces in buildings become transformed to vacant, decaying, less maintained buildings with the negative changes in the urban structure of the city.

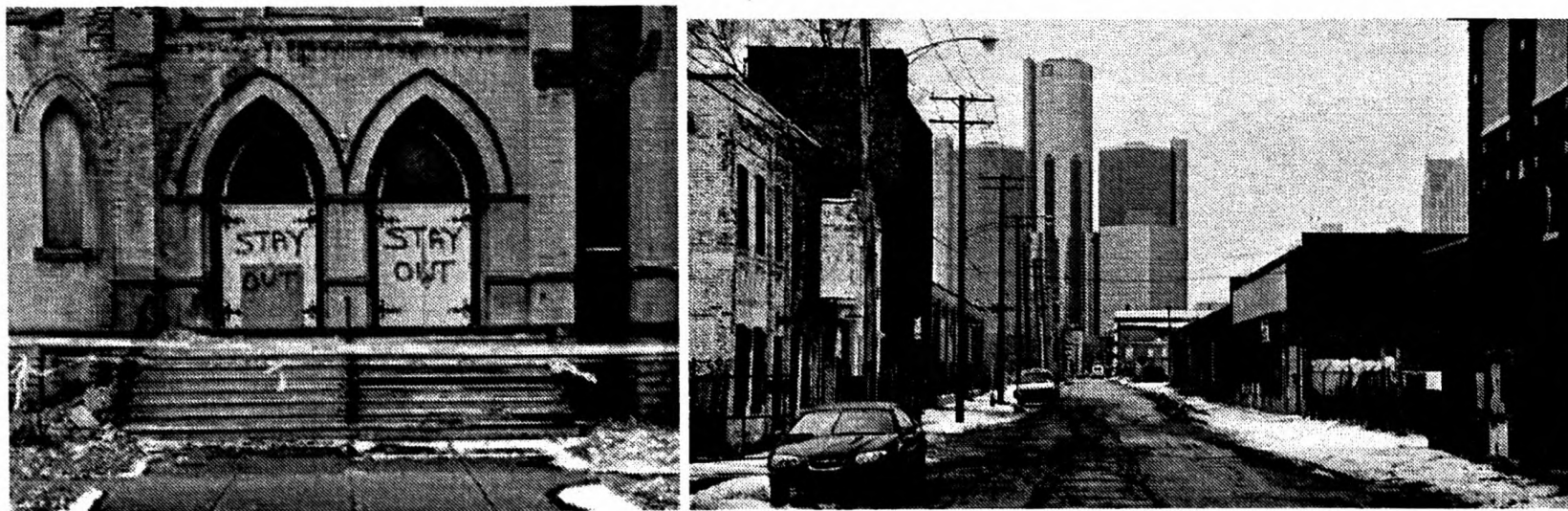


Figure 3: Abandoned of public spaces in shrinking cities
<http://shrinkingcities.wordpress.com/>

The next level of transformation takes place mainly in open and public spaces including roads streets walkways and public gardens. Open space is sometimes treated as a leftover, but it contributes greatly to the quality of urban life. "Hard" spaces such as plazas malls and courtyards provide settings for public activities of all kinds. "Soft" spaces such as parks, gardens, lawns, and nature preserves provide essential relief from harsh urban conditions and serve as space for recreational activities. These "amenities" increasingly influence cities to be perceived as

desirable places to live. Deterioration of these spaces reduces the urban quality and makes them more undesirable places for users.

3.0 Key findings in shrinking / declining cities

As discussed above, the immediate effects of shrinking or declining situations could be witnessed on physical forms and later extend to the spatial forms, and finally become a critical issue on economic activities. Thus the key outcomes would be¹¹⁴:

1. Vacant, abandoned, decaying, less maintained buildings
2. Poor, undesirable spatial forms: walkways, infrastructure facilities, public spaces
3. Decreasing economic potentials
4. High unemployment rate
5. Reduction of daily income in business of down town city centre
6. Reduction of revenue and real- estate taxes
7. Decline population

4.0 Urban decline in the Sri Lankan context

Urban-decline is not a familiar term to discuss yet in the Sri Lankan context. However, understanding of urban economic and population decline is important in terms of maximizing gains, locating or relocating the investments and opportunities, and for planning for more sustainable development in such cities. Most of the war affected areas in Sri Lanka faced gradual decrease in population. Jaffna town could be taken as a prime example as a shrinking city. In the Jaffna district, decrease of population took place due to following reasons.

1. Out migration – to safe city or Country
2. Death due to war
3. Minus growth rates¹¹⁵
4. Tsunami



Figure 4: Ruined houses in war affected Jaffna town Sri Lanka-
Source_ <http://www.google.lk/imgres/war+affected+cities+jaffna+in+srilanka>

¹¹⁴ In shrinking cities, the effects of social- cultural changes are mostly not highlighted or discussed in by the researches.

¹¹⁵ from 1981 to 2001, growth rate was -2.0

Table 2: Population statistics from 1981 to 2001 in war affected districts

District	Population in 1981	Population in 2001	Population increase/decrease	Average %	Growth rate	Density per Km
Hambantota	424,344	526,414	102,070	24.1	1.1	211
Jaffna	738,788	490,621	-248,167	-33.6	-2.0	528
Mannar	106,235	151,577	45,342	42.7	1.7	81
Vavuniya	95,428	149,835	54,407	57	2.2	81
Mullaitivu	77,189	121,667	44,478	57.6	2.2	50
Killinochchi	91,764	127,263	35,499	38.7	1.6	106
Batticaloa	330,333	486,447	156,114	47.3	1.9	186
Ampara	388,970	592,997	204,027	52.5	2.1	140

Source: www.statistics.gov.lk

Other than the war, decrease of population could be witnessed in a number of major well-known cities due to other causes. In 2004, most of the cities along the coastal belt were affected by tsunami and new regulations were brought into in relocating them in original places. Declaring of disaster zones by the disaster management centre, restrictions for construction works, unsuitable areas for living in future and landslides in hilly areas have directly contributed to the gradual reduction of population in identified cities.

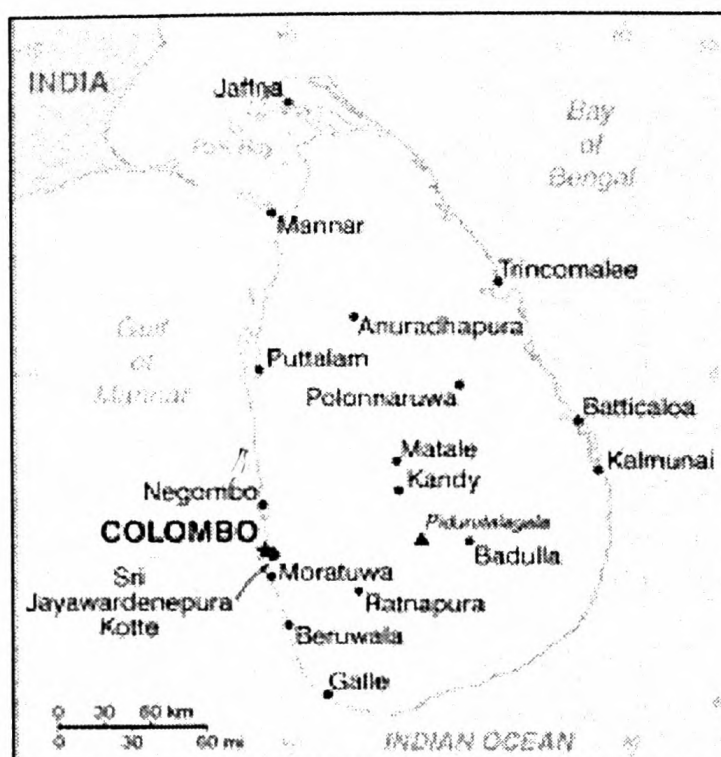
Table 3: Population statistics from 2001 to 2012 in disaster zones districts

	Name	Status	Population Census 2001-07-17	Population Census 2012-03-20	Result
	Badulla	District	779,983	811,758	Increase
1	Badulla	Divisional Secretariat	70,230	74,751	Increase
2	Bandarawela	-do-	60,269	65,111	Increase
3	Ella	-do-	42,894	44,763	Increase
4	Haldummulla	-do-	38,223	37,482	Decrease
5	Hali-ela	-do-	87,476	90,179	Increase
6	Haputale	-do-	50,735	48,485	Decrease
7	Kandaketiya	-do-	22,494	23,189	Increase
8	Lunugala	-do-	33,079	31,092	Decrease
9	Mahiyanganaya	-do-	67,301	75,327	Increase
10	Meegahakivula	-do-	18,650	19,540	Increase
11	Passara	-do-	49,190	48,576	Decrease
12	Rideemaliyadda	-do-	45,759	51,435	Increase

Source - www.statistics.gov.lk

Department of Census and Statistics in Sri Lanka, 2012

5.0 The Case of Matale, Sri Lanka



The methodology of study

The study of the Matale City was done under three different directions, physical, spatial, and specially the social cultural aspect, which has not been paid much attention in previously studies in declining/ shrinking cities. The method used was to analyze previously collected data, site observations and interviews. This analysis was aimed at identifying real issues and causes for the decline of Matale city. The findings were compared with the previously identified problems and issues in declining cities.

Limitation

The study area focused mainly into the down-town city centre, with two parallel main roads with inter-connecting minor roads and peripheral residential areas next to the city centre. This study looked only at the physical, spatial and socio-cultural changes and its effects on the city.

Historical background

Matale is a town in the hill country of Sri Lanka, 142 kilometers from Colombo, the Capital of Sri Lanka. The Matale district contains historical elements such as Sigiriya rock castle, Aluwihara rock cave temple and Dambulla cave temple. The town is surrounded by green Knuckles and Wiltshire mountains. The Knuckles Mountain Range is a special landmark of Matale. The District mainly depends on agriculture where tea, rubber, vegetable and spice cultivations dominate. The Buddhist canon and its commentaries, which were till then handed down orally, were written for the first time at Aluvihara Temple. Hindu's famous sacred place, Sri Muttu Amman Kovil is also located within the town.

Present city

In recent times, the city has encountered a negative development pattern due to numerous socio-cultural changes. These include the shifting of the main economic centre to Dambulla city, changes in occupational patterns, migration of younger generation, increase of older population, less investment on new businesses and slow growth rate. As a result, form of the city structure has changed which can be observed both in built and spatial forms.

Recently, the city has become more of an administrative locality with more residential activities leading to a gradual reduction of larger scale economic activities. Majority of people from the nearby suburban areas have migrated to the city for better facilities. This has improved their financial status as a matter of having resided close to the city centre. The city has gradually become a renowned place for the working class and government offices and most of them have resided after their retirement due to low land values compared to the nearest magnet cities.

Table 4: Present Market Value with the Distance from down town city-(Per Perch)

	Matale	Dabulla	Kandy
City Center	Rs 800,000	Rs 2,000,000	Rs 4-5,000,000
400m away	Rs 200,000	Rs1- 1.5,000,000	Rs 3,000,000
1Km away	Rs 30-40,000	Rs 150,000	Rs 3-400,000
3 Km away	Rs 20,000	Rs 75,000	Rs 100,000-200,000

Source: Property values- Kapruka.com

The land values in Matale are not on the increase compared to other cities. Most of them are selling their lands due to absence of facilities provided by the authorities and have migrated to other closer cities with more amenities. In the mean time, as a result of declaring several areas as disaster zones within the city, land values have even gone down rapidly. This is evident in most shrinking/ declining cities especially in Sri Lankan cities. Lower land values do not attract more people to cities but they consider other factors such as facilities, terrain, disaster zoning etc)

The other factor is that the available land parcels in the city centre are too small in extent which hinders opportunities for larger scale business developments. Even if there are sufficient vacant lands for developments, the fragmented land ownership require amalgamation of many sites.

With the socio-cultural changes, the function of the city has changed. The dominance of one cultural group could be observed and presently the Sri Lankan Moors (Muslims) are dominant at the central area. The wholesale shops located at the northern side of the streets were relocated outside and replaced by small boutiques and groceries catering to present residential neighborhoods. Previously, ground and upper levels functioned as shop houses, and lately upper floors have become empty. Movements of the people and vehicles can be observed more on the Main street and less on the King Street. Conflicts between motor traffic and pedestrian's traffic are observed near the prominent nodes. 90% of pedestrians use roads as their walkways. Existing buildings are too small for many types of businesses and often are in poor condition and are of poor aesthetic qualities. Substantial investment is needed to make the buildings to attract new businesses.

Consequently, many buildings remain vacant and under-utilized. Public infrastructure is also poorly maintained. Limited parking spaces in the city are a discouragement for new developments as people become increasingly dependent on cars. Car owners and middle income groups normally depart to Kandy city to fulfill their needs due to absence of their requirements and facilities in Matale city while nearest magnet cities are close enough to travel. Some of the commercial activities are relocated outside the city to overcome parking issues. Inner-city locations also involve higher costs and have more heavily regulated business environments than outer city locations. Running businesses in the city also involves higher operating costs which include higher taxes, utility, insurance rates and other factors. Development and construction costs are usually on the higher side for inner-city sites due to widespread development regulations, and factors in relation to the timing and location in a busy and dense urban environment. The limited mix of businesses in inner-city weakens their ability to draw a substantial local customer base.

With the present business activities, the city core does not generate sufficient passage to bring in new and stronger merchants needed to draw more customers and rejuvenate economic vitality which can uplift the condition of the city. Social and cultural changes are another determining factor in the transformation of the city structure. According to available data, from 1981 to 2010, the gradual decrease of one main social-cultural group and increase in other minor groups could be witnessed within the city limits.

Table 5: Variation of Religion from 1981 to 2010

Religion	1981		2001		2010 (Projected)	
Buddhists	16,435	55%	16,018	45%	16,438	45%
Hindus	5166	17.3%	7538	21%	7438	20%
Muslims	6700	22.5%	10710	24%	11,054	30%
Catholic	1078	4%	1245	3.4%	1217	3%
Others	435	1.2%	462	1.6%	448	2%

Source: Urban development plan for Matale city 2006-2020
Urban Development Authority - 2006

Majority of buildings are owned by Muslim and Tamil businessmen. Their religion also acts as significant element in their daily life. Presently, 3 Kovils for Hindus and 2 mosques for Muslims are located along the two streets. There are no temples found. 95% of Muslims have their residences on the east side of the Main Street closer to the business areas, and 80% of the Tamil and Sinhalese live on the east side of the King street closer to City.

The private sector investments are hardly seen within the city limits other than the institutions and banks. Government owned lands are very few compared to the private. The unemployment rate has been increased in the last decade. The resources available in and around the city are not efficiently utilized for tourist attractions, although there are many attractive locations nearby. The direct benefits are not received by the city, since many travelers to northern cities by-pass the town. This situation has adversely impacted on regional economic development. During the past, the city was famous as a collecting center for spices. With the diminishing of

spices and introduction of other non-agriculture related activities, the city has been transformed into service providing and administrative center. The lush greeneries in the city had disappeared converting it in to a collection of development sites.

Table 6: Occupational Pattern of Matale city -

Description of the jobs	1981	2001	2010
Professional/Technical	13%	37%	38%
Business/Managers	2%	3%	3%
Clerks	9%	6%	8%
Groceries/ Businessmen	35%	14%	13%
Agriculture/ Fisheries	7%	2%	2%
Production Related	31%	17%	14%
Others	3%	21%	22%

Source: UDA- development plan for Matale City 2006-2020
-Urban Development authority-2006

5.1 Causes for Shrinkage:

The forces frequently cited as contributing factors to the decline of Matale inner city business district in recent time are,

- 1) The shifting of economic centre to Dambulla
- 2) slow growth rate of population
- 3) Migration of younger generations
- 4) Increase of ageing population and high unemployment rate
- 5) Scarcity of land availability for expansion

5.1.1. Decreasing of Economic Activities with the reduction of travel time to nearest magnet cities-

Table 7: Economic Growth Rate in Matale City

Year	Growth Rate
1997	2.14%
2005	2.0%
2010	1.76%

Source: UDA- development plan for Matale City-2006-2020
Urban Development Authority -2006

The percentage of economic growth rate has gradually decreased in the last few decades. Matale district came into being as an agricultural district and later was transformed into a district administrative centre. With the developments of the other nearest magnet cities, the economic activities were transferred to those cities due to political decisions and other factors. At times, there is a sharp decrease in economic activities caused by the departure of small businesses, industries and manufacturers to more prosperous and dynamic areas where

adequate services and infrastructure are in place and where development opportunities exist due to better accessibility, income, customers and less congestion. Therefore, these changes affected dramatically the viability of business district that was tied to surrounding neighborhoods.

Previously functioned larger retailers such as department and grocery stores that anchored some neighborhood business district have relocated to outside of the city core. Changes in transportation system, rise of automobile use and reducing travelling time to magnet cities such as Kandy, Dambulla, Kurunegala have also contributed to the weakening of the central business district activities.

Table 8: Travel time from Matale to nearest cities in Minutes

	Kandy	Dabulla	Kurunegala	Galewela
Matale	35	40	60	35

Source- author

Table 9: Gradual reduction in Operation of business in Matale City

	Commercial/Office Buildings	1981	1991	2001	2013
1	Main Street	710	640	615	437
2	King Street	267	256	243	240

Source—Solid waste collection Project Report-2012, Matale Municipal Council

Table 10: Present closed and abandoned Buildings and lands in Matale City

	Commercial/Office Buildings	Total in 2013	Closed Shops	Abandoned Buildings/Land	Vacant Percentage
1	Main Street	437	44	42	19%
2	King Street	240	28	32	25.5%
	average	774	72	51	16.85%

Source- Solid waste collection Project Report-2012, Matale Municipal Council

5.1.2. Plot sizes, frontages and parking in the city centre

The present parceling layout and the small plot sizes are also identified as factors for shrinkage. The narrow frontages (3-4m) and small plot sizes (100sqm- 150 sq.m) lead to restrict the construction of larger buildings with the prevailing rules and regulations. The lack of parking facilities immensely contributes to the negative economic growth. Nearly 1658 families (List of Registered Motor Vehicles -2012 in central province- annual report, 2012) own motorized vehicles within Matale city limits.



Figure 5: Narrow frontages and parceling layout of Matale city centre

Source- author

5.1.3. Out migration

Furthermore, in 1983, the Sinhala-Tamil riots changed the entire scenario of the city structure. Before 1983, several large scale industries such as biscuits and chocolate factories, and cinema halls which were run by the Tamil owners were located within the city limits. With the riots, most of the owners migrated to India with their families, abandoning their properties and factories. Some of the factories and wholesale shops were burnt by the rioters. After 1983, with the out migration of main business holders of the city, the daily income levels dropped. The abandoned properties were sold by the owners and most of them were bought by the Muslim businessmen. These socio-cultural changes indirectly contributed to the transformation of the urban structure. Gradual increase of older population is considered another influencing factor.

Table 11: Population – with age (increasing of ageing population) of Matale

Age	1981	2005	2010
Below 14	32%	27%	22%
15- 19	12%	10%	9%
20-29	20%	19%	15%
30-39	14%	14%	13%
40-49	9%	13%	16%
50-59	7%	10%	15%
65 and above	6%	7%	10%

Source: Urban development plan for Matale City 2006-2020, UDA, 2006
-Urban Development Authority -2006

Table 12: Unemployment rate

Year	Rate
1981	8%
2001	3%
2005	14%
2010	23%

Source: Urban development plan for Matale City 2006-2020
-Urban Development Authority -2006

Some of the youth have migrated to other cities, such as Colombo and Kandy seeking new job opportunities while others have migrated to western countries. This has lead to a decline in investment on their traditional businesses. Most young people are interested in getting white collar-jobs. Parents often discourage them to continue their traditional businesses and finally lack of maintenance and vacant building stocks result n the decay of the town.

5.1.4. Political interest and local governance

90% of respondents are of the opinion that the city is “dying” due to lack of improvements or progress compared to the past. Lack of political attention and negative attitude of the local authority has led the city from bad to worse. Prevailing political structure of the country is blamed for not having any demarcated electorate to elect parliament representatives.

5.1.5. Declared disaster zones

Within the Matale city limits, several areas have been identified and declared “disaster prone zones”. Such areas have been introduced with additional restrictions and regulations for constructions by the National Building Research Organization. This has caused the decrease of land values and construction activities in the city resulting in the migration of residents to nearest cities.

5.1.6 Limited state owned lands

Table 13: Landowner ships of Matale Town

	Land Distribution	
1	Private lands	84%
2	Municipal	1.7%
3	Government	14.3%

Source: Urban development plan for Matale City 2006-2020
-Urban Development Authority-2006

The crown lands and municipal owned lands are limited within the main city limits. This leads to difficulties in implementing public projects when necessary. Most of the private lands are already developed as low density scale projects. The former police station land currently vacant has not been properly utilized by the municipal Council. Also old single storied government quarters built in larger plots are potential development sites for residential activities.

5.1.7. Lack of effective development policies and guides

Presently, development control by the authorities' is not based on an urban design master plan or any such guidelines other than the zoning plan. Lack of professional involvement for implementation of projects is another significant factor. However the concerns are on mostly the individual projects rather than a comprehensive approach interlinking with several projects. The local authorities are bent more on maintaining the rigid laws and regulations only and are not being flexible enough to understand the present context of the city.

5.1.8 Socio- cultural changes

Table 14: Present population distribution of Matale city

Religion	1981		2001		2010	
Buddhists	16,435	55%	16,018	45%	16,438	45%
Hindus	5166	17.3%	7538	21%	7438	20%
Islam	6700	22.5%	10710	24%	11,054	30%
Catholic	1078	4%	1245	3.4%	1217	3%
Others	435	1.2%	462	1.6%	448	2%

Table 15: Building Ownership of Matale city

Ownerships of Buildings	King Street	Main Street
Sinhalese	40%	40%
Muslims	30%	40%
Tamils	30%	20%

Source: Urban development plan for Matale City 2006-2020
-Urban Development Authority-2006

The ownerships of the buildings have gradually been transferred to major social group to minor socio-cultural groups, rapidly from 1981 to 2010. Previously, the city centre had more economic related activities and gradually they have become "dead spaces". With this socio-cultural transforming process, the city center buildings have become vacant and have been abandoned.

The tables above exemplify such situations. It is evident that the increase of one social cultural group has led to change the entire scenario of the physical structure of the city.

Key Reasons are:

- 1) The use of traditional business ventures
- 2) Reluctant to invest money on their own businesses
- 3) Lack of proper knowledge on other influencing factors – (architectural, structural and spatial qualities)
- 4) Operating business in other magnet cities from here
- 5) Thinking pattern and their own systems-(extended families, believes and traditions)
- 6) Social-cultural restrictions

5.2 Impacts to Urban form of the city:

5.2.1 Impacts on Physical form

The present city structure is dominated by less maintained abandoned and vacant building plots, thus coursing visual unpleasantness and chaotic urban fabric.



Figure 6: Chaotic built forms abandoned buildings and deteriorated urban fabric – City of Matale
Source- author



Figure 7: Developed City- Organized built forms, fully operated buildings and diverse urban fabric
– City of Kandy -
Source- author

Table 16: Present closed and abandoned Buildings and lands

Commercial/Office Buildings	Total in 2013	Closed Buildings	Abandoned Buildings/Land	Vacant Percentage
Main Street	437	44	42	19%
King Street	240	28	32	25.5%
average	774	72	51	16.85%

Source: MMC records from Solid waste collection Project-2012- Matale Municipal Council

17% of the abandoned and vacant buildings are identified on the two main streets in the city. The remaining built forms are chaotic, have less interrelationships, and have been built in an environmentally questionable manner with poor architectural and environmental qualities.



Figure 8: Poor architectural and environmental qualities- City of Matale
Source- author

Visual unpleasantness, obstructions to infrastructure facilities, empty upper floors, unfinished buildings, and re-use of old materials are other symptoms of the declining urban fabric in the current city.

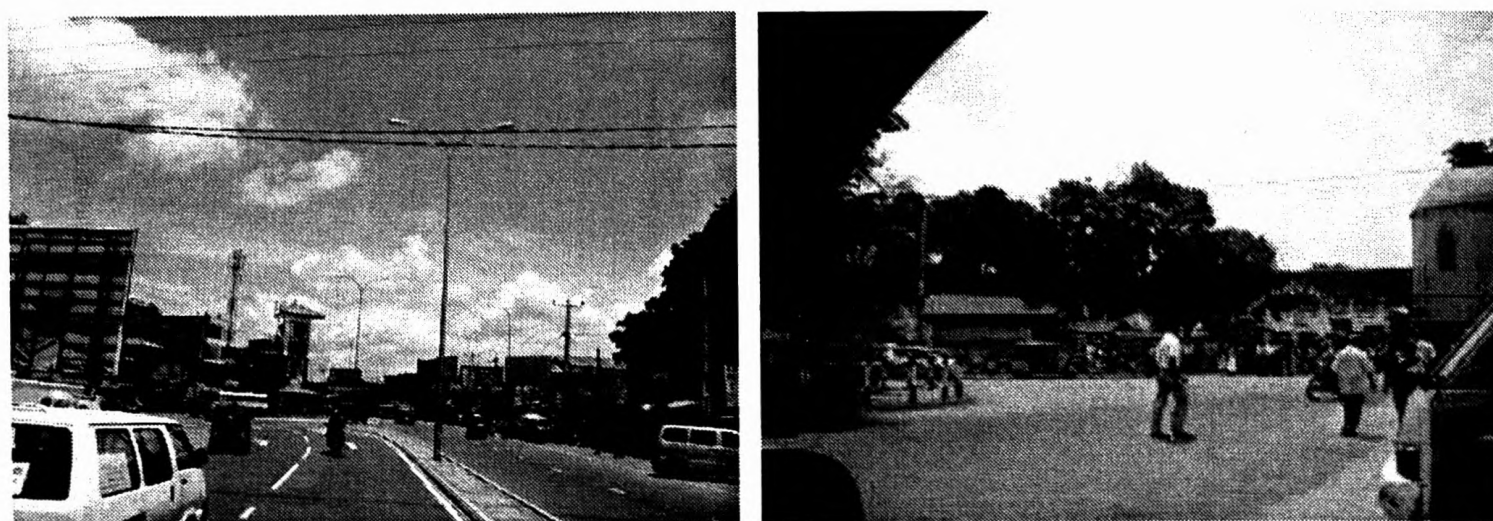


Figure 9: Wider roads with more spaces for people- City of Dambulla (left) and Kurunegala(right)
Source: author

5.2.2 Factors effecting to transformation on built form

Following factors are the causes of the transformation of the built forms.

- 1) Economic transition: Shifting of economic centre to Dambulla and transferring of commercial to administration and residential centre
- 2) Social culture changes: Increasing of minor social groups in recent decades and their life style pattern
- 3) Drop of daily income levels of down town businessmen
- 4) Less attention and involvement of guiding and responsible authorities
- 5) Poor awareness of building owners on aesthetic and architectural qualities and their responsibilities to town
- 6) Reluctant to invest money on structures
- 7) Less involvement of professionals
- 8) Less attention of politicians due to their incapability and ignorance
- 9) Scarcity of lands for developments and expansions
- 10) Closer distance of income generating magnet cities and less travel time

5.3 Impact on spatial forms

Further, the transformation of spatial qualities is seen to be similar to the declining condition of the built form of the city and their impacts are visible throughout the city.

Key factors are,

- 1) Neglecting of valuable public spaces
- 2) Change of use- commercial to office spaces
- 3) Less attention to public spaces
- 4) Obstructions in walkways and weakly connected
- 5) Having no proper shadings for pedestrians
- 6) Speedy movements of motorized vehicles and conflicts between traffic and pedestrians
- 7) Neglect of the need for a central transport hub instead of three locations



Figure 10: use of main roads as walkways
Source- author



Figure 11: Obstructions on walkways
Source- author

5.3.1 Factors effecting to spatial transformation

The spatial configuration qualities inherent in the built-up environment have seen severely affected. There is a noticeable fall in the attractiveness of the places in the city. Following identifiable factors are considered key reasons.

- 1) Less involvement of relevant authorities
- 2) Attention given to motorized vehicles
- 3) Scarcity of resources
- 4) Limited government and council lands
- 5) Not well utilized of existing government lands
- 6) Poor political involvement and less financial investment on public facilities
- 7) No inter- linkage between city service providers (Telecom/water supply/roads etc)

5.4 Findings

Studies dealing with the issues of shrinking city in the Sri Lankan context are rare, except few cases that have observed war times in the past. Now many of these towns are back to normal situations after the end of the armed conflict. As seen in some western shrinking cities, complete shrinking cities cannot be observed in Sri Lanka. Some similarities of such cases can be experienced in very few Sri Lankan towns. Shrinking cities are products of losing populations due to disappearing of industries in larger scale cities or converting products to service oriented cities. The transformation process had intensely occurred in industrialized cities. The situation is totally different in agricultural based countries like Sri Lanka. For example, minor seasonal population reduction could be witnessed in between harvesting and non harvesting time. The significant factor is, that in the Sri Lankan cities, most of the deterioration of towns result from the lack of attention of political and administrative agencies.

5.4.1 Shrinking symbols and factors affecting in Sri Lankan cities/ towns

- 1) Deteriorated Physical and spatial forms (totally or partly vacant, abandoned, less maintained, poor visual qualities, poor infrastructure facilities, less public amenities, use of material etc.)
- 2) Not identified totally de-populated areas, except war affected towns
- 3) Reduction of land values. Declaration of disaster prone zones and regulations, landslides etc.
- 4) Less involvement of professionals (Involvement of architects to design buildings in Matale city is 1.29% only 10 out of 774 buildings)
- 5) Increased number of magnet cities closer to towns.
- 6) Socio-cultural changes, beliefs and their traditions. (requirement is only to live or business within a space not the quality of the space and its effects to the surroundings)
- 7) Increase of ageing population
- 8) Drop of daily income at down town city center.

- 9) Less attention of city governing bodies and the involvement representatives with little knowledge on the city developments and related subjects in city governing bodies (from Council members, to Mayors ,chairmen etc)

5.4.2 Potentials to cope with urban decline in Matale city

- 1) Availability of A9 highway, one way road system and direct connections to other cities.
- 2) Efficiency in public transport service
- 3) Closer distance to archeological sites- (Sigiriya, Dambulla, Aluwihare etc)
- 4) Availability of Wasgamuwa National Park within the district
- 5) Interconnected railway system with magnet cities
- 6) Touristic activities and business oriented activities happening closer to the city centre. (Spice gardens and herbal centers)
- 7) Under- utilized government lands and empty spaces
- 8) Availability of residential facilities
- 9) High floating commuters. (Daily nearly 40,000 to 50,000)
- 10) Matale city acting as the district capital (all administrative works)
- 11) Natural views, international hockey ground and other grounds and parks
- 12) More sports activities, national meets happen throughout the year
- 13) Low land values
- 14) Introduction of new income generated economic activities using vacant and abandoned railway lands.

6.0 Conclusion

The nature of urban decline seen in Sri Lanka is different to the situations in Western countries. The several physical and spatial shrinking indicators could be witnessed here, as seen in western countries. These physical and spatial qualities inform the present city condition. This study focus was to identify physical and spatial indicators of shrinking, although it discovered some hidden factors. The key aspects of Matale city decline are the issues of urban governance and weak multiple involvements. Transfer of the city from one social-cultural group to another also could be considered as a unique indicator of declining Sri Lankan cities where Matale city could be taken as a prime example.

It is proposed that how the socio-cultural aspects and political intervention and involvement to city affect the deterioration process would be an area for further investigation. In this regard, immediate attention is needed by the governing authorities to overcome the prevailing situation. As discussed, the city is having a number of advantages that can be considered to improve the quality of living and environment. These resources are not well-utilized and still have the opportunity to be considered for the development process. To avoid further deterioration of the city, urgent attention is very much needed through urban design interventions, The negative transformation process can be controlled by implementing proper urban design strategies and guidelines forecasting several decades ahead, and implemented through local authority and relevant government institutions.

Bibliography

- Beauregard, Robert A. (2003) Aberrant cities: urban population loss in the United States, 1820– 1930, in: *Urban Geography*, 24/8, 672-690.
- Bergelin, C. Cooper, A. Jones M. Hoffman, D. Huang, F. Power, D. (2012) Strengthening Shrinking Cities, University of Michigan | Student Capstone Presentation |
- City shrinking as a challenge for new EU member States – Learning from the eastern German experience <http://policy.rutgers.edu/faculty/popper/ShrinkingCities.pdf> -2011
- Cunningham-Sabot E. and Fol S. (2009) "Shrinking cities in France and Great Britain: a silent process." *Future of Shrinking Cities-Problems, Patterns and Strategies of Urban Transformation in a Global Context*, University of Berkeley.2009
- Development plan for Matale city, (2006-2020) Urban development authority, Batharamulla, Sri Lanka, Government printing press.2006
- Dr. Winder, Gordon, Shrinking Cities, presentation done for summer term, 2008,
- Gehl, Jan, (2000) *Cities for People*, Island press, Washington.
- Gehl, J.and Litt, D. (1998) *Public Spaces for a Changing Public Life*, Copenhagen: Danish Architectural press. (www.arkfo.dk/)
- Grahame, S. D. (2005) *Recombinant Urbanism, Urban Design, and City Theory*, Chichester, John Wiley & Sons, West Sussex
- Harvey, D. (2000) *Space of Hope*, Edinburgh University press, Edinburgh.
- Hartmut Häußermann and Walter Siebel, 1987, *Neue Urbanität, Volume 432 of Edition Suhrkamp; 1432. N. F*
- Journal Dietzsch, Durham University Perceptions of decline Crisis, shrinking and disappearance as narrative schemas to describe social and cultural change *DAJ- Durham Anthropology* - 2010: 11–34
- Pallagst, K. M. (2006) Center for Global Metropolitan Studies, University of California at Berkeley, California,
- Lash, S. and Friedman, J. (1998) *Modernity and Identity*, Blackwell, Cambridge, USA.
- Lynch, K. (1960) *The image of the city*, Massachusetts Institute of Technology, Cambridge, London.
- Neuma, Ingo (2009) *Learning in Shrinking Cities. Findings from the Case Study Aschersleben, Dresden*
- Varley, R. E. (2004) *Getting to the Bottom of Shrinking Cities*, University of Amsterdam, Amsterdam,
- Schett, S. (2012) *An analysis of Shrinking cities*, Institute für Städtebau und Raumplanung Universität Innsbruck,
- Sílvia Ávila de Sousa, (2010) *Planning for shrinking cities in Portugal*, Submitted to the Faculty of Engineering of the University of Oporto, in partial fulfillment of the requirements for the degree of Doctor in Civil Engineering,
- Schilling, Joseph, (2010) *Blueprint Buffalo—Using Green Infrastructure to Reclaim America's Shrinking Cities*, Metropolitan Institute, Virginia Polytechnic University, Alexandria,
- Thorns, C. D. (2002) *The Transformation of Cities*, Palgrave Macmillan, New York,
- Urban Strategies Inc. (2000) *Youngstown 2010—Sharing a vision for a better tomorrow.* <http://www.youngstown2010.com>
- Zukin, S. (1991) *Landscapes of Power*. University California Press, London
- Sabot-Cunningham, Fernandez-Martinez, Audirac Ivonne (2012) *Shrinking Cities: Urban Challenges of Globalization*, *International Journal of Urban and Regional Research*, Volume 36.2 March
- Solid waste collection Project report (2012) Matale, Sri Lanka. Parakrama publishers.
- Shrinking Cities: Art Dealing with Vanishing Populations- <http://www.google.lk/article/shrinking12>.
- Shrinking Cities: Urban Challenges of Globalization - www.onlinelibrary.wiley.com/doi/10.1111/j.1468-2427...x/references
- ? (1992) *The city assembled*, Hudson and Thames ltd, London.