



---

## Community perception on the urban sprawl towards rural hinterland in Wattala-Mabole UC area in Gampaha district, Sri Lanka

Rewathy K.<sup>1\*</sup>, Hettiarachchi H.A.N.<sup>2</sup>, and Thennakoon T.M.S.P.K.<sup>2,3</sup>

<sup>1</sup> Department of Geography, University of Colombo

<sup>2</sup> Department of Geography, Faculty of Humanities and Social Sciences, University of Sri Jayewardenepura

<sup>3</sup> International Center for Multidisciplinary Studies, Faculty of Humanities and Social Sciences,  
University of Sri Jayewardenepura

---

### ABSTRACT

*Urban sprawl is one of the current popular topics around the world. Due to rapid urbanization without adequate planning or management, Sri Lanka experiences problems and challenges similar to many other developing nations. This study aims to investigate the public perception on the urban sprawl towards rural hinterland from economic, environmental, and social perspectives. In this study, 20 in-depth interviews and a questionnaire survey with 120 participants were carried out to investigate community perception of urban sprawl in the Wattala-Mabole UC area and its surrounding 14 Grama Niladhari (GN) divisions. Following a purposive sampling technique, one person was selected from each of the twenty GN divisions for the in-depth interview. For the questionnaire survey, sampling was done following a 1: 1000 population ratio. Therefore, 120 participants were randomly selected for the questionnaire survey. According to the public perception, the majority (53%) of respondents were not fully aware of the negative effects of urban sprawl, which may increase their vulnerability and precautions towards the impacts of urban sprawl. The majority (63%) lived on a low income and were exposed to urban poverty with the increased value of goods and accommodation. Participants' experience and exposure to the impacts of the urban sprawl varied based on their age, residential period, level of income they earn, and the type of their job. Dwellers' perceptions were recorded and classified under social, environmental, and economic impact factors. Participants from both urbanized and adjacent regions expressed the belief that the urban sprawl brings economic benefits whilst creating a negative effect on their environment. Elderly participants regretted and missed the old calm rural environment before the urbanization but, the youngsters preferred urbanization since it provides economic benefits. Adjacent areas mostly face environmental effects while the urban areas are affected by social problems. On the whole, the findings of the study suggest that an appropriate policy framework and specific programs can enhance the dwellers' perception regarding the effects of urban sprawl. Proper urban planning could improve the design, acknowledgment and development of more sustainable urban expansion, thereby contributing to a less negative impact on the rural hinterland of developing countries.*

**KEYWORDS:** Public perception, rural hinterland, urban sprawl, UC area, Wattala

## 1 INTRODUCTION

According to the United Nations, more than half of the world's population now lives in cities, with the urban proportion growing from roughly one-third in 1950 to around two-thirds in 2050 (United Nations 2018). Urbanization is accelerating in the modern society (Hatab et al. 2021), promoting a swift movement of people into urban areas. Prompt urbanization processes in developing countries frequently result in urban sprawling, which has become more prominent in Asia and Africa where urbanization is occurring at a rapid pace (Abu Hatab et al. 2019; Hatab et al. 2021). Urban sprawl has been variously defined by scholars based on its pattern (Sudhira et al. 2007), density (Bekele 2005), transportation (Laidley 2016), and expansion (Habibi & Asadi 2011), etc. However, there is no universally agreed-upon definition for urban sprawl as yet (Wang 2020).

Previous studies have manifested that an urban sprawl frequently leads to multiple negative impacts on the rural hinterland including rural outmigration, slums and nonstructural housing in the fringe of cities, traffic congestion and pollution, elimination of public spaces, deterioration of inner city neighborhoods, aesthetic impacts on the city and its peripheral areas, and public health issues (Ewing et al. 2014; Adeboyejo & Abolade 2007; Cobbinah & Amoako 2012; Amarawickrama et al. 2015; Antalyn & Weerasinghe 2020).

While most urban growth studies focus on large cities and metropolises (Dadras et al. 2014), a few studies have indicated that small cities often result in urban sprawling. For instance, Weng (2002) reports that the maximum urban growth involves relatively small cities such as Nanhai, Bao'an, Dongguan, and Zhuhai. Most developing nations have small cities which are gradually expanding towards their outskirts. Moreover, certain issues can be associated with urban sprawling due to unplanned and unorganized growth. Sustainable urban growth depends on how urban environments are

planned and shaped (Adeboyejo & Abolade 2007) but, in developing countries such as Sri Lanka, implementing and applying sustainable development strategies can be very challenging (Antalyn & Weerasinghe 2020).

Existing studies on urban sprawl in developing countries have predominantly focused on assessing its socio-economic and physical impacts, land encroachment, health issues, and overall causes and consequences of urban growth (Botzat et al 2016; Adeboyejo & Abolade 2007; Ewing et al. 2014). However, a few studies have also investigated the public perceptions of urban sprawl and the role of cognitive, emotional, and behavioral factors in shaping and influencing public opinions (Hatab et al. 2021; Botzat et al. 2016; Saksena 2011). People who live in urban areas and their outskirts may view urban growth differently depending on a number of factors, such as automobile use (Ewing 2014), land value and population (Glaeser & Kahn 2014), environment quality (Surya et al. 2021), etc..

Similar to other developing countries, Sri Lanka has been facing rapid urbanization processes in recent decades. A 1.88 percent increase from 2020 has increased the country's urban population in 2021 to 4,178,622 (World Bank 2021). According to the prevailing reports and studies, it is without dispute that Sri Lanka's urban population will continue to increase in the future. According to Amarawickrama et al. (2015), nearly 25 percent of the Sri Lankan population live in urban areas in 2015, it is expected to become 65 percent by 2030. Therefore, sustainable urban growth challenges are progressively felt in the countries where there was rapid urban growth (Abhisek et al. 2017 & Hatab 2021) more acutely in Sri Lankan cities and among urban communities in the Western part of Sri Lanka (E.g. Colombo and Gampaha), since these regions are urbanizing rapidly.

Correspondingly however, not much work has been done to study how urban and peri-urban dwellers' perceptions correlate with the

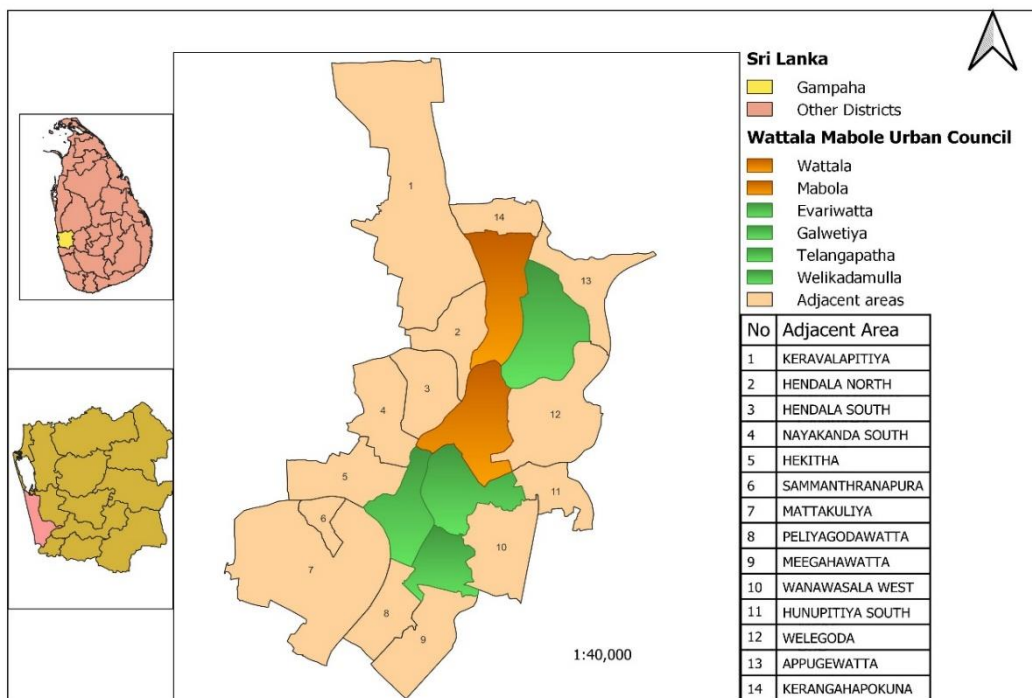
effectiveness of urbanization and urban expansion (Saksena 2011). In this context, the objectives of this paper are twofold. The first aim is to investigate the public perception on urban sprawl along the economic, environmental, social and economic dimensions. Secondly, the paper examines the determinant factors of the perceptions of urban and sub-urban dwellers. Most importantly, this study focuses on urban growth and its related problems that focus on the perception of the people who live in the urban and peri-urban areas. Understanding the perception of the people towards the urban sprawl is especially important for a sustainable urban development (Hatab 2021).

## 2 RESEARCH METHODOLOGY

Urban growth and urban sprawl are global concerns, since the majority of the world's population lives in urban areas (Gruebner et al. 2012). Unlike developed countries, developing countries like Sri Lanka face difficulties in managing the urbanization and rapid growth of the urban population. *Wattala-Mabole* Urban Council (UC) area is one of the fastest growing areas in the Western province, with a total popula

2019). *Wattala-Mabole* area has developed mainly as a residential and commercial corridor along either side of the Negombo road (Ministry of Housing and Construction 2012). Wattala has the highest volume of urban sprawl in the surrounds of the Colombo municipal area (Amarawickrama et al. 2015).

Colombo district had 77.1% of urban population around 2015 and was one of the fastest growing regions in Sri Lanka (Weerakoon 2015). At present (2023), its urban population has increased to 96.42%. The selected study area lies on both Colombo and Gampaha districts which have many urbanized areas. Since Wattala is one of the nearest cities to the capital city of Colombo, six Grama Niladhari (GN) divisions of Wattala Divisional Secretariat (DS) division have been urbanized and amalgamated as an UC. This study also includes the 14 GN divisions which are located near the UC and has rural (mixed rural and urban) characteristics. The adjacent areas are from three DS divisions; Colombo, Mahara, and Kelaniya. Areas within the Colombo DS division are urbanized, whereas other periphery areas have a mixed rural and urban environment.



**Figure 1:** Research area; Source: Compiled by author from Arc GIS 10.8, 2023

This study relies on both primary and secondary data. Primary data was gathered from field observation, questionnaire survey, and in-depth interviews. Published articles, books, internet sources, GN reports, DS reports, UC profiles and census reports were used to obtain secondary data. Figure 2 depicts the research design. This study attempts to categorize the perception of people on the urban sprawl into two broad categories. One is the perception of residents in UC area, and the other is the perception of residents in the adjacent areas of the UC. Furthermore, questionnaire survey results were analyzed quantitatively, while interview results were analyzed qualitatively.

Both electronic and printed questionnaire were designed to investigate the perceptions of the urban sprawl among the urban and outskirt residents in the study area. To collect empirical data, 120 questionnaires were delivered to

study participants. Stratified random sampling method was used to select 120 participants based on a population ratio of 1:1000. In addition, simple random sampling with conditions was utilized to distribute the questionnaire survey. Questionnaire survey was done with the head of the household or with a member of the household aged 18 and above. A limit of one questionnaire per household was strictly followed. Because of the prevailing economic crisis and pandemic concerns, some questionnaires were delivered as printed copies, while others were sent via Google Forms. Collected primary data from questionnaire survey were tabulated using Excel spreadsheet, and descriptive statistical analysis methods (measures of central tendency & spread of data) were used to retrieve the outcomes. The ultimate results were shown in the form of charts, tables, and graphs.

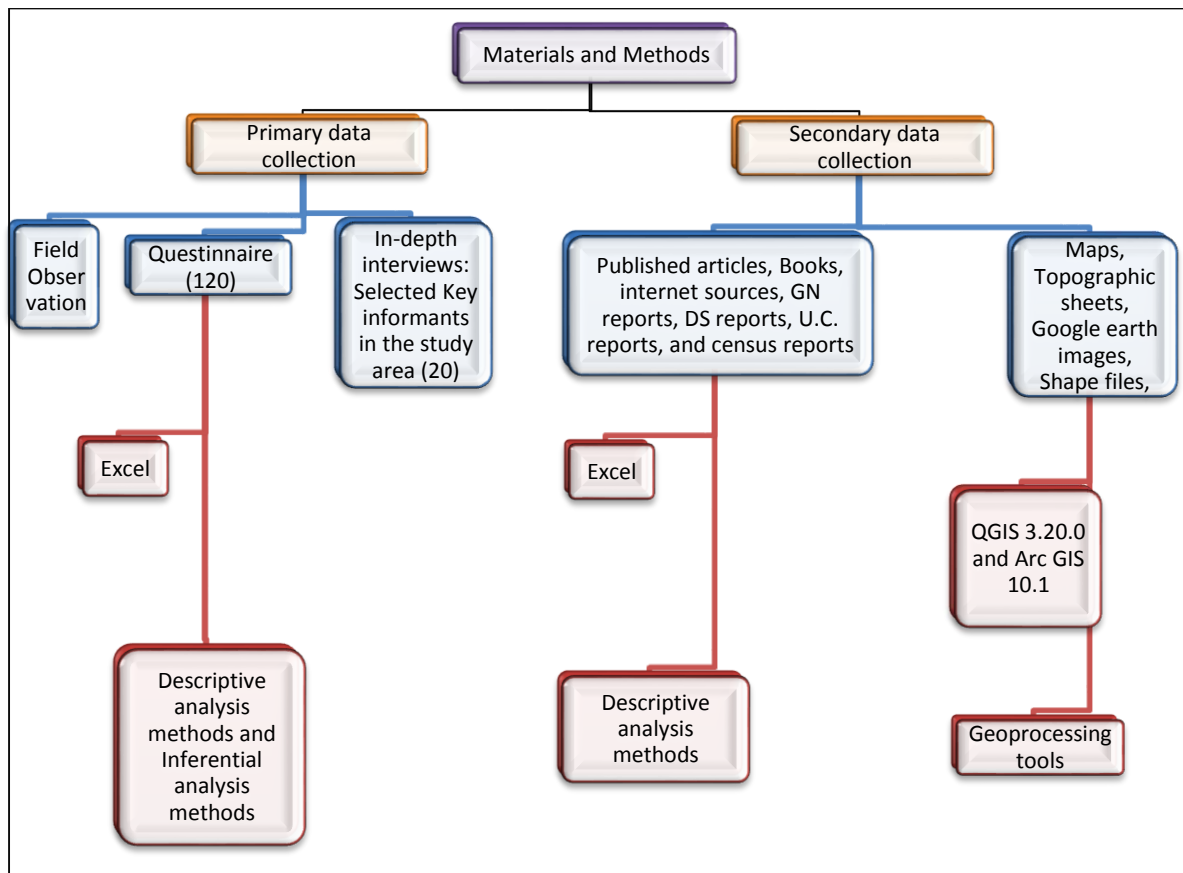


Figure 2: Research design; Source: Compiled by author, 2022

Twenty respondents from the study area were selected for in-depth interviews. The respondents were selected as one resident from each of the GN divisions. The backgrounds of the interviewees are given in Table 1. A purposive sampling method was used to identify the interviewees and the interviews were conducted in Tamil, Sinhala and English languages over a period of three months. A common interview guide was used, which consisted of a short list of guiding questions. The duration of an individual in-depth interview was 30 to 45 minutes.

Interviews conducted in Tamil and Sinhala were translated into English.

Theoretical thematic analysis (Braun & Clarke 2006; Liyanage & Adikaram 2019) was carried out to obtain the results from in-depth interviews. Segments of text were labeled with appropriate codes, the initial codes were categorized into broader themes, and the underlying economic, social, and environmental related public perception of urban sprawl from both the categorized regions were identified (Hatab et al. 2021).

Additionally, field observation was carried out to obtain visual evidence of the study area. Land use and land cover maps were generated through QGIS 3.26.1. Geo processing tools (Clip operation, intersect, buffer, and overlay) were used to generate the maps.

**Table 1:** Background of the participants in the in-depth interview

Respondents	Occupation/ Job title	Firm	GND	Urban Council or Adjacent	Age	Sex
1	Business	Jewelry	Wattala	Urban Council area	52	Male
2	Beautician	Saloon	Ewariwatta		26	Female
3	Manager	Electrical	Mabole		34	Male
4	Team leader	Garments	Galwetiya		32	Female
5	Supervisor	Soap	Thelangapatha		37	Male
6	Machine operator	Garments	Welikadamulla		27	Female
7	Assistant Manager	Hotel	Kerwalapitiya	Adjacent area	55	Female
8	Teacher	School	Hendala North		48	Female
9	Accountant	Bank	Hendala South		35	Male
10	Cashier	Food city	Nayakanda south		65	Male
11	Customer care executive	Textiles	Hekitha		42	Female
12	Homemaker	-	Sammanthranapura		29	Female
13	Driver	Bus	Mattakuliya		32	Male
14	Business	Fish market	Peliyagodawatta		60	Male
15	Business	Retail Shop	Meegahawatta		55	Male
16	Landlord	Renting houses	Wanawasala west		50	Female
17	Warehouse Executive	Logistics	Hunupitiya south		37	Male
18	Laborer	Shops	Welegoda		62	Female
19	Security	Furniture	Appugewatta		38	Male
20	Teacher	School	Kerangahapokuna		45	Male

Source: Compiled by author based on in-depth interview, 2022

### 3 RESULTS & DISCUSSION

The drawn results were discussed in a few sub sections such as the demographic profile of the study participants, descriptive analysis of respondents’ perceptions of urban sprawl, perception of urban sprawl impacts, field survey participants’ perception of the urban sprawl, limitation and recommendation for future research.

#### 3.1 Demographic profile of the survey respondents

**Table 2:** Sociodemographic characteristics of questionnaire survey participants

Characteristics	Description	% of the respondents
Age (Years)	<30	37.5
	31-40	23.3
	>50	<b>39.2</b>
Residential area	Urban dwellers	25
	Peri-urban dwellers	75
Household income	Low income	<b>63</b>
	Middle income	41
	High income	16
Work Place distance	<10 km	23
	10-15 km	<b>49</b>
	>15 km	28
Education	Below advanced level	49.2
	Advanced level or above	50.8
Household type	Own house	32.5
	Rental house	<b>67.5</b>
Place of work	Government / Semi-government	9.1
	Private	<b>58.3</b>
	Other	32.5

Source: Questionnaire survey, 2022

The perception of the urban sprawl and its impacts might differ for people of different age categories. According to Pereira et al. (2014), younger respondents were more concerned

about the environment impacts, distance travels to the works, air pollution, and gave more importance to the problem, than older respondents. Therefore, this study considered the respondents from different age categories and recorded their perceptions regarding the urban sprawl. Since the urbanized area has only six GN divisions, 25 percent of the participants were chosen, with the remaining 75 percent coming from the surrounding region. Even though the study area was situated close to the most developed city of Sri Lanka, the income level of the people was very low: 63% of the survey respondents reported having a low income from job roles such as waiter, sales man, security, laborer, fisherman, tailoring, house maid, etc., while 41% earned a middle-level income and worked primarily in government and semi-government jobs.

The outskirts of the Wattala-Mabole U.C. is very popular among the migrants. Therefore, people who move from villages and other cities often find suitable accommodation in the adjacent region. Since there are a lot of job-oriented migrants in the outskirts of the U.C area, the traffic congestion is very high in the morning and evening. Hence, it is manifested in the survey that the majority of the residents travel 10 to 15 km daily for their work.

The area is in demand for its residential characteristics, yet most of the people (67.5%) live in rental houses (Table 2). The high demand for rentals is due to the high value of land, increased cost of living, and the large numbers of temporary migrants in search of job opportunities. Nowadays most people prefer to work in the private sector where they can find jobs easily. In the study area, too, the majority (58.3%) of respondents work in the private sector. Further, they claimed to receive very low wages in the private firms. According to the U.C. report, many private industries are sprouting up in the low-lying areas of the U.C. area and neighboring territories (Wattala-Mabole U.C. 2019).

### 3.2 Community perception of urban sprawl

Urban sprawl occurs due to various reasons, such as overpopulation in the cities, rapid development, swift migration and standard of living (Paramasivam, & Arumugavelu 2020). Prior researches have demonstrated that massive rural-to-urban migration flows are connected to the urban sprawl (Hossain 2013; Potts 2015). Though multiple suggestions and ideas have been given, according to Sudhira et al. (2007), the most suitable way to reduce the negative impact is through proper urban planning and regulated development of urban areas. Therefore, an in-depth understanding of prevailing urban processes will aid to formulate

new urban policies (Manawadu & Wijeratne 2022).

According to Pereira et al. (2014), public perception and opinion are key aspects to influence policy making. Therefore, this study intended to collect the perceptions of the public on various aspects of urban sprawl. In accordance with the highlighted impact aspects indicated above, questionnaire respondents were asked to rate the level of their (dis)agreement with each statement on a five-point Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’. Figure 3 contains the statements that reflect the three impact aspects (economic, environmental, and social) derived from the questionnaire survey.

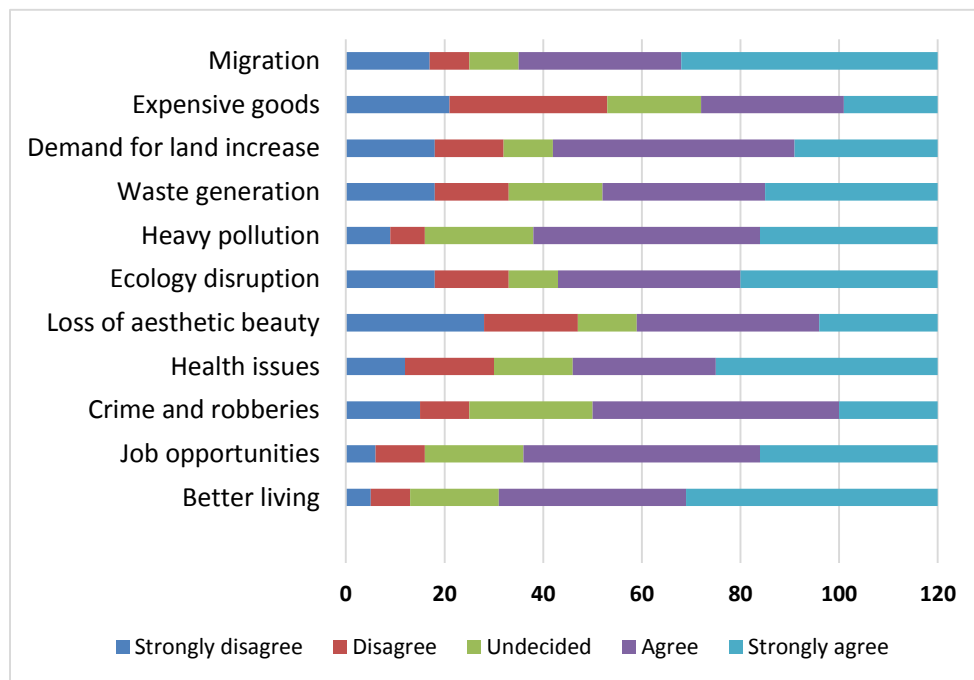


Figure 3: Frequency distributions of respondents' perception of various effects of urban sprawl

Source: Field survey, 2021-2022

Regarding the economic effects, the respondents were split evenly between favoring and disfavoring the idea that urbanization raises food prices, though more than half (65%) agreed on increased land prices. Moreover, the majority of the respondents agreed or strongly agreed that urbanization created more job opportunities (80%), and accordingly,

increased migration (70.8%). In contrast, only around 13.3 percent of the respondents regarded urbanization as having negative impacts on employment opportunities. Concerning the environmental impacts, a majority of the surveyed agreed or strongly agreed that urbanization degraded aesthetic beauty (50.8%), led to ecological disruption

(64.1%), increased pollution (68.3%) and increased solid waste generation (56.6%). Furthermore, with respect to the social effects of urban expansion, 58.3 percent of respondents agreed or strongly agreed that crimes and robberies were frequently heard and witnessed on their streets. As they reported, the majority of the robberies were carried out by drug addicts. Conversely, 28.3 percent of the respondents disagreed or strongly disagreed that urban sprawl increased crime and robberies in their neighborhood, whereas 20.8 percent were unsure about the crimes and robberies. Additionally, 75 percent of the respondents said that their overall standard of living had improved, though 25 percent were unsure and the remainder at some level of disagreement. According to the responses given by the residents, the majority (53%) of them were not fully aware of the positive and negative impacts of urban sprawl.

### 3.2.1 The impact of urban sprawl as experienced by the respondents

Table 3: Measurements of the interviewed respondents' perception on the impacts of urban sprawl

Impact Aspect	Dwellers' Perception	Impact status (Positive= P or Negative= N)	Area (UC = Urban Council or Adjacent area= A.A)
<b>Economic</b>	• Urban sprawl helps to leverage the income of the local people	P	A.A
	• Goods prices keep increasing	N	U.C & A.A
	• Land value is high/ increasing	N	U.C & A.A
	• More job opportunities	P	A.A
	• More industries and businesses	P	U.C & A.A
<b>Environmental</b>	• Aesthetic beauty of the environment is lost	N	A.A
	• Traffic congestion	N	U.C
	• Pollution; land, water and air	N	U.C & A.A
	• Crowded places	N	U.C
	• Loss of biodiversity	N	U.C & A.A
	• Land fragmentation	N	U.C & A.A
	• Increased solid waste generation	N	U.C & A.A
	• Drainage issues	N	U.C
	• More organized infrastructure	P	U.C & A.A

In-depth interviews with the dwellers from both the UC and its outskirts revealed a plethora of impacts they experienced and witnessed in their neighborhoods due to the urban sprawl and rapid urbanization. Table 3 documents the impacts shared by the respondents in their environment.

Participants' experience of and exposure to the above impacts differed based on their age, residential period, level of income and their job. People who had high income faced less negative impacts while the low earning dwellers stated more negative impacts rather than positive. From the array of responses to the impacts of urban sprawl, three major categories were formed to amalgamate the impacts as economic, environmental, and social. Furthermore, both urban dwellers and adjacent area residents' perceptions are indicated (Table 3).



<b>Social</b>	• Number of slums and shanty areas have increased	N	U.C & A.A
	• Easy access to services	P	U.C
	• Crimes and robberies are increasing	N P	U.C & A.A
	• Improved standard of living	-	U.C & A.A
	• More migrants	P	A.A
	• Mix of different cultures, languages and religions in the neighborhood	P & N	U.C & A.A U.C & A.A

Source: In-depth Interview, 2022

As indicated in the table 3, the study participants identified the economic impact of urban sprawl as both positive and negative. But they stated that there were more negative impacts on the environment. People found the crowded city unattractive and were afraid of crimes and robberies. Conversely, the interviewees believed that the urban sprawl improved their standard of living by providing more job opportunities or creating business opportunities. However, they also believe that urban expansion caused rapid migration and created traffic congestion, environment pollution, crowded neighborhood, shanty houses, and conflicts.

The perceptions of respondents on the impact of urban sprawl differs in accordance with their place of residence, work they engaged in, and their experiences at the place. Hence the perceptions were categorized as those of the respondents who lived in the U.C. area and of the residents from the adjacent areas.

### 3.2.2 Perception of economic impact

There were six people representing each GN division that comprised the UC area. Their perceptions towards the urbanization and urban sprawl varied according to their standard of living, job title and accommodation type. For instance, interviewee No. 15 from the U.C. area was a businessman running a retail shop. He genuinely appreciated the urban sprawl and the development process which was taking place in the city.

He highlighted that:

*Urbanization and related development activities help to gain more profit for a businessman like myself. The land value also keeps increasing.*

Therefore, he claims that the urban sprawl has more economically positive impacts. People who belong to the hinterland area are the ones who live in GN divisions close to the U.C. area. The common characteristics of this dwellers are that most of them were automobile dependent, migrant, and mostly affected by the socio-economic and environmental impacts of the urban sprawl. Concerning the economic impact, interviewee No. 16 said that:

*These areas are mostly famous for rental houses and boarding rooms. Because there is a railway station, a university, and numerous manufacturing companies, most migrant workers and students come to look for lodging. As a result, landlords benefit economically from urban sprawl which caused the migration.*

According to Hatab (2021), urban sprawl generally has positive economic impacts in terms of creating more job opportunities, business, investment, employment opportunities, and improving living standards. But at the same time it causes intense migration. The native dwellers who own a house there get benefitted by proving lodging to migrant workers and students in the sprawled region. At

the same time, people who earn low wages suffer through the increase of the prices of goods, increase of land value and increase of boarding fees.

### 3.2.3 Perception of environmental impact

Some of the participants from the developed U.C. area believe that urban expansion brings chaos to the surrounding with lot of environment and health impacts.

Interviewee No.4 from UC area said that:

*Due to the city being crowded and automobile congestion, I can't live peacefully. Our neighborhood wasn't this dense when I was young but it gradually filled with migrants who live on a rental basis. Nowadays, the street is very busy and noisy.*

According to the above, rapid migration and movement of people towards the city has resulted in the U.C. area becoming densely populated. Participants revealed that people who own a house in a developed region relocate to a more peaceful area and rent their houses out to migrants. Similarly, Cobbinah & Amoako (2012) find that wealthy urban residents with small children wish to make a good investment in properties in the outskirts. In addition, the streets are getting noisier with the street vendors and commuters who continue to grow in the peripheries.

The adjacent region has an increasing number of manufacturing companies, warehouses and factories which offer more job opportunities but, at the same time, they cause many environmental effects. Almost all the participants tend to perceive the environmental effects of urbanization and urban sprawl negatively. They stated that the environment surrounding such companies and warehouses had lost its aesthetic beauty. Due to the busy automobile services, the neighborhoods were found to be very noisy.

Interviewee No.11 remarked that,

*Continuous process of development in our area benefits us socially and economically but the loss of natural environment and calm lifestyle is very much missed.*

People who have lived in the adjacent region to the U.C. for more than twenty years seem to have witnessed both the rural and urban characteristics of their hometown. Some elderly participants agreed that they still missed their old environment and calm nature whilst the young participants emphasized the positive side of the urban sprawl such as economic benefits and high standards of living.

### 3.2.4 Perception of social impact

In the study area, the main use of land has been for commercial and mixed development activities concentrated mainly on either-side of the Negombo road, Welikadamulla road, Railway Avenue, Hendala road, Averiwatta road, Old Negambo road, Thelangapatha road and Sri Wickrama Mawatha. Interior areas which are served by a developed road network such as Averiwatta road became good residential areas. Therefore, people from the UC think that the urban development enhances their societal status.

Both the dwellers from urban and adjacent areas complain about the continuation of illegal activities in their neighborhood. Crimes and robberies were increasing due to multiple reasons such as current economic problems, addiction to drugs, un-employment in the town, etc.

Interviewee No.16 complained that,

*Our neighborhood was very peaceful and safe to be alone at home earlier. But the present situation is not very good. There are lots of drug users who often steal our belongings at night. This is due to the movement of new young people to our area.*

This respondent claimed that robberies kept occurring due to the poverty of the youth and the lack of employment nowadays due to the prevailing economic crisis. However, this kind of acts emerge a safety less environment in society.

Overall, both the urban and adjacent dwellers consider the economic benefits of the urban sprawl to be important and are less concerned about the environment consequences despite being well aware of the circumstances. The advancement in the standards of living often lead the study area dwellers to support the urban sprawl without much consideration for the future occurrences.

In accordance with the findings of this study, the following recommendations should be considered. Most of the dwellers were concerned about the economic benefits but not the environment consequences. People who lack green city awareness were only focused on the opportunities offered by urbanization but this attitude towards the urbanization should be changed and more awareness on green city development ought to be cultivated in the study area community. Though they are aware of the negative circumstances caused by rapid urban expansion towards rural hinterland, they are bound to be silent with the current economic crisis of the country (as commented by an interviewee). The green city aspect can be developed by the local government and initiated by the U.C. Some of the green city concepts are; utilization of public transport, use of eco-friendly vehicles, planting suitable trees on both sides of roads, paths and highways, planting of eco-friendly plants in terraced floors, introducing green city building methods during building construction, carrying out proper waste disposal projects (Nijas & Ruzaik 2022).

#### **4 CONCLUSION & RECOMMENDATIONS**

The suburban environment is far from the desired ideal and in fact is an aberration (Flynn 2006). Urban agglomeration has an effect on economic growth and is positively correlated with changes in the land-use structure, spatial pattern, typology, and morphology that contribute to environmental degradation of Wattala-Mabole UC and its surrounding areas. Findings of the present study contributed new evidence that emphasizes the previous claims that urban sprawl affects sustainable urbanization and becomes an obstacle to the urban planners in developing countries (Rana 2011). Particularly, the analysis of the impacts of urban expansion on the local economy demonstrated the positive perception of the respondents. Development of industries, food supply, migration, urban transformation and community development provide a prospective path for economic gain for the people in urban outskirts. Social impacts were negative and have to be addressed in a wide range. This study has identified the social impact of urban sprawl from a simple perspective and did not cover the core problems. But, these can be addressed broadly with sophisticated methods. In the aspect of environmental impacts, the rapid bloom of the industries, factories, automobile, population density, and construction activities cause environmental pollution and degradation.

In the UC and its adjacent hinterland region of Wattala, socio-economic and environmental impacts are a continuous phenomenon. Dwellers from both regions face negative and positive impacts. Most of the positive impacts are from economic activities and negative impacts are on the environment. It is from the adjacent areas that more environmental changes and impacts are reported while UC area has more societal effects. Therefore, there is a need to maintain a counterpoise planning to achieve sustainable urban development. To minimize the negative effects and maximize the positive effects of associated rapid urban sprawl, adaptable and flexible city planning methods should be conducted for the sustainable management of urbanization. In this regard,

involving the residents of the city and its outskirts is a critical component in improving the management and decision-making process of urban planning toward urban sustainability.

## REFERENCES

- Adeboyejo, AT & Abolade, O 2007, 'Household responses to urban encroachment on the rural hinterland in the Ogbomoso urban fringe', Nigeria. Urban Population–Development–Environment Dynamics in the Developing World: Case Studies and Lessons Learned, 41-76.
- Amarawickrama, S, Singhapathirana, P & Rajapaksha, N 2015, 'Defining urban sprawl in the Sri Lankan context: With special reference to the Colombo Metropolitan Region'. *Journal of Asian and African studies*, Vol. 50, no. 5, pp. 590-614.
- Antalyn, B & Weerasinghe, VPA 2020, 'Assessment of urban sprawl and its impacts on rural landmasses of Colombo District: A study based on remote sensing and GIS techniques'. *Asia-Pacific Journal of Rural Development*, Vol. 30, no. 1-2, pp. 139-154.
- Botzat, A, Fischer, LK & Kowarik, I 2016, 'Unexploited opportunities in understanding liveable and biodiverse cities. A review on urban biodiversity perception and valuation'. *Global environmental change*, Vol 39, pp. 220-233.
- Braun, V & Clarke, V 2006, 'Using thematic analysis in psychology'. *Qualitative research in psychology*, Vol. 3, no. 2, pp. 77-101.
- Cobbinah, PB & Amoako, C 2012, 'Urban sprawl and the loss of peri-urban land in Kumasi', Ghana. *International Journal of Social and Human Sciences*, Vol. 6, no. 388, pp. 397.
- Dadras, M, Mohd Shafri, HZ, Ahmad, N, Pradhan, B & Safarpour, S 2014, 'Land use/cover change detection and urban sprawl analysis in Bandar Abbas City, Iran'. *The Scientific World Journal*, 2014.
- Department of Census & statistics Sri Lanka 2011, 'Census of Population and Housing'. Retrieved from <http://www.statistics.gov.lk/pophousat/cph2011/index.php?fileName=Activities/TentativelistofPublications>. Accessed on 19<sup>th</sup> Sep 2022
- Divisional secretariat. 2019, 'Sampath Pethikada'. Divisional secretariat division, Wattala.
- Drishti the Vision Foundation (DTVf) 2022, 'Urban poverty'. Retrieved from <https://www.drishtiiias.com/daily-updates/daily-news-editorials/urban-poverty>. Accessed on 24<sup>th</sup> Sep 2022.
- Ewing, R, Meakins, G, Hamidi, S & Nelson, AC 2014, 'Relationship between urban sprawl and physical activity, obesity, and morbidity–Update and refinement'. *Health & place*, Vol. 26, pp. 118-126.
- Ewing, R., Schmid, T Killingsworth, R., Zlot, A. & Raudenbush, S 2003, 'Relationship between Urban Sprawl and Physical Activity, Obesity, and Morbidity'. *American Journal of Health Promotion*, Vol. 18, no. 1, pp. 47–57. <https://doi.org/10.4278/0890-1171-18.1.47>
- Ewing, RH 2008, 'Characteristics, causes, and effects of sprawl': A literature review. *Urban ecology*, pp. 519-535.
- Flynn, M. S 2006, 'Suburban typologies': historical examples and alternatives.
- Glaeser, EL & Kahn, ME 2004, 'Sprawl and urban growth'. In *Handbook of regional and urban economics*, Vol. 4, pp. 2481-2527. Elsevier.
- Gruebner, O, Khan, MMH., Lautenbach, S, Müller, D, Krämer, A., Lakes, T & Hostert, P 2012 'Mental health in the slums of Dhaka-a geoepidemiological study'. *BMC public health*, vol. 12, no. 1, pp. 1-14.

- Habibi, S & Asadi, N 2011, 'Causes, results and methods of controlling urban sprawl'. *Procedia Engineering*, Vol. 21, pp. 133-141.
- Hatab, AA., Ravula, P, Nedumaran, S & Lagerkvist, CJ 2021, 'Perceptions of the impacts of urban sprawl among urban and peri-urban dwellers of Hyderabad', India: a Latent class clustering analysis. *Environment, Development and Sustainability*, pp. 1-26.
- Hossain, S 2013, 'Migration, Urbanisation and Poverty in Dhaka, Bangladesh'. *Journal of the Asiatic Society of Bangladesh (Hum.)*, Vol. 58, no. 2, pp. 369–382.
- Huang, D, Tan, X, Liu, T, Chu, E & Kong, F 2020, 'Effects of hierarchical city centers on the intensity and direction of urban land expansion': A case study of Beijing. *Land*, Vol. 9, no. 9, pp. 312.
- Laidley, T 2016, 'The problem of urban sprawl'. *Contexts*, Vol. 15, no. 3. pp. 74-77.
- Liyanage, D. M & Adikaram, A 2019, 'Accepting or rejecting the label: how gay employees cope with harassment at work'. *Gender in Management: An International Journal*, Vol. 34. No. 8, pp. 644-664.
- Manawadu, L., Wijeratne, V.P.I.S 2022, 'The Methodological Approach of Assessing Urban Vertical Expansion Using Satellite Remote Sensing Techniques'. In: Mustafa, F.B. (eds) *Methodological Approaches in Physical Geography. Geography of the Physical Environment*. Springer, Cham. [https://doi.org/10.1007/978-3-031-07113-3\\_10](https://doi.org/10.1007/978-3-031-07113-3_10)
- Ministry of Housing and Construction 2012, 'Housing and Sustainable Urban Development in Sri Lanka'. National Report for the Third United Nations Conference on Human Settlements Habitat III. Ministry of Housing & Construction of the Government of Democratic Socialist Republic of Sri Lanka.
- Paramasivam, B. and Arumugavelu, I., 2020. Urban sprawl. In *Sustainability in Urban Planning and Design*. IntechOpen.
- Pereira, P, Monkevičius, A & Siarova, H 2014, 'Public perception of environmental, social and economic impacts of urban sprawl in Vilnius'. *Socialinių mokslų studijos*, Vol. 6, pp. 259-290.
- Potts, D 2015, 'Debates about African urbanisation, migration and economic growth: What can we learn from Zimbabwe and Zambia?' *The Geographical Journal*, Vol. 182, no.3, pp. 251–264. <https://doi.org/10.1111/geoj.12139>
- Rana, M.M.P., 2011. Urbanization and sustainability: challenges and strategies for sustainable urban development in Bangladesh. *Environment, Development and Sustainability*, Vol. 13, pp.237-256.
- Saksena, S 2011, 'Public perceptions of urban air pollution risks'. *Risk, Hazards & Crisis in Public Policy*, Vol. 2, no. 1, pp. 1-19.
- Sudhira, HS, Ramachandra, TV & Bala Subrahmanya, MH 2007, 'July Integrated spatial planning support systems for managing urban sprawl'. In Presentation at 10th International Conference on Computers in Urban Planning and Urban Management (CUPUM), Iguassu Falls, pp. 11-13.
- Surya, B, Salim, A, Hernita, H, Suriani, S, Menne, F & Rasyidi, ES 2021, 'Land use change, urban agglomeration, and urban sprawl: A sustainable development perspective of Makassar City, Indonesia'. *Land*, Vol. 10, no.6. pp. 556.
- United Nations, "World urbanization prospects 2018, Highlights", Retrieved from: <https://www.un.org/development/desa/pd/news/world-urbanization-prospects-2018>, accessed on 30<sup>th</sup> July, 2022.
- Wang, X, Shi, R & Zhou, Y 2020, 'Dynamics of urban sprawl and sustainable development

in China'. Socio-Economic Planning Sciences, Vol. 70, pp. 100736.

Wattala-Mabole UC 2019, 'City Profile'; Sustainable (Sri Lankan) cities programme (SCCO II)

Wattala-Mabole Urban Council 2019, City Profile.

Weerakoon, P 2015, 'How and Where is Urban Growth Analysis of Urban Growth in Colombo District, Sri Lanka'. An Advances in Environmental Biology, Vol. 9, no. 4, pp. 233-236. Retrieved from <http://www.dr.lib.sjp.ac.lk/bitstream/handle/123456789/6657/How%20and%20Where%20is%20Urban%20Growth%20Analysis%20of%20Urban%20Growth%20in%20Colombo%20District%20Sri%20Lanka.pdf?sequence=1&isAllowed=y>. Accessed on 19<sup>th</sup> Sep 2022.

Weng, Q 2002, 'Land use change analysis in the Zhujiang Delta of China using satellite remote sensing, GIS and stochastic modeling'. *Journal of environmental management*, Vol. 64, no. 3, pp. 273-284.