


Application of research experience into teaching

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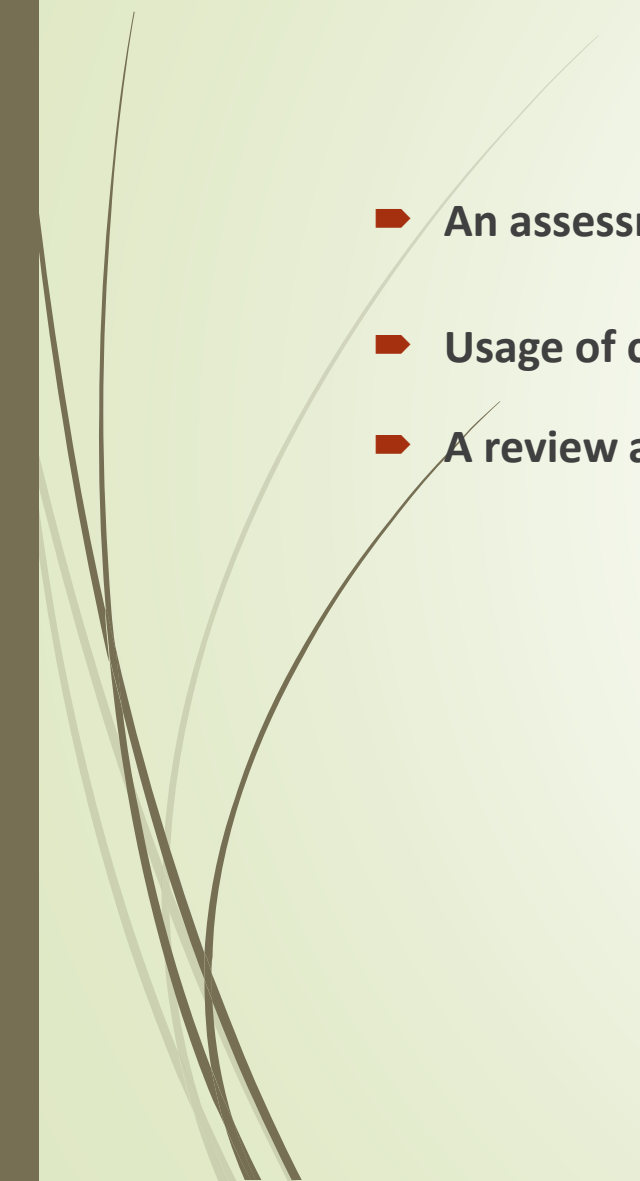


Recent research publications-2020/21

1. **Assessment of public perceptions in designing Colombo Municipal Council area as a Green City, 2021.**
2. **Geographical Measurements to Resolve Issues Associated with Municipal Solid Waste Disposal - Empirical evidences from wet and intermediate Agro-ecological zones of Sri Lanka, 2021.**
3. **Socio-Economic Challenges of COVID-19 in Sri Lanka: Special reference to human wellbeing, 2021.**
4. **An Assessment of loss of biodiversity in the 21st century, 2021.**
5. **The concept of Green City, 2021.**
6. **Air pollution caused devastating impacts on children's health in urban area of Sri Lanka, 2021.**
7. **Impacts of noise pollution on people's health, dwelling in surrounding areas of industrial zones of Gampaha District in Sri Lanka, 2020.**
8. **Health Issues of Dwellers around the Urban Solid Waste Dumpsites in Sri Lanka: Comparative Analysis of Colombo, Kandy, Kurunegala and Badulla Urban Areas, 2020.**
9. **Assessment of Economic Losses Caused by the Mangrove Degradation: Case study-Fishing community in Puttalam Lagoon, 2020.**
10. **Impacts of Soil Degradation: Case Study in Bogawantalawa South Grama Niladhari Division, Nuwara Eliya District, 2020.**
11. **Evaluation of Environmental Education as a Strategy for Sustainable Development: Sri Lankan Perspective, 2020.**



Ongoing research activities..

- ▶ **An assessment on Child Maltreatment in Sri Lanka - 2021**
 - ▶ **Usage of cosmetic items and its adverse reactions: a case study on University female students-2021**
 - ▶ **A review about the positive effects of Covid-19 in different areas -2021**
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Research Vs. Teaching:

Assessment of Public Perceptions in Designing Colombo Municipal Council Area as a Green City : Applied Medical Geography (GYG 4199)

Research Objective

- Assessment of Public Perceptions in Designing Colombo Municipal Council Area as a Green City.

Specific Objectives

- To identify the public perceptions about the problems and challenges of the existing conditions of the city-CMC area.
- To assess the level of awareness of public about the green city concept.
- To recommend the possible ways for reforming CMC area as a green city with the participations and support of relevant key stakeholders.

Course Objectives:

- To impart a practical understanding about the spatial distribution of health issues for specific geographical area, through selected case studies.

Expected outcomes:

- To distinguish the geographical differences on the status of health from a social and environmental perspective.
- To construct a research report/paper on human health issues in geographical perspectives, consolidating all the skills, knowledge and applications gained during the course.

GYG-4199

- Risk reduction and preventive measures
 - Eco-system services and human health

Why the concept of Green City has become a hot topic?

Ecosystem services and human health & well-being

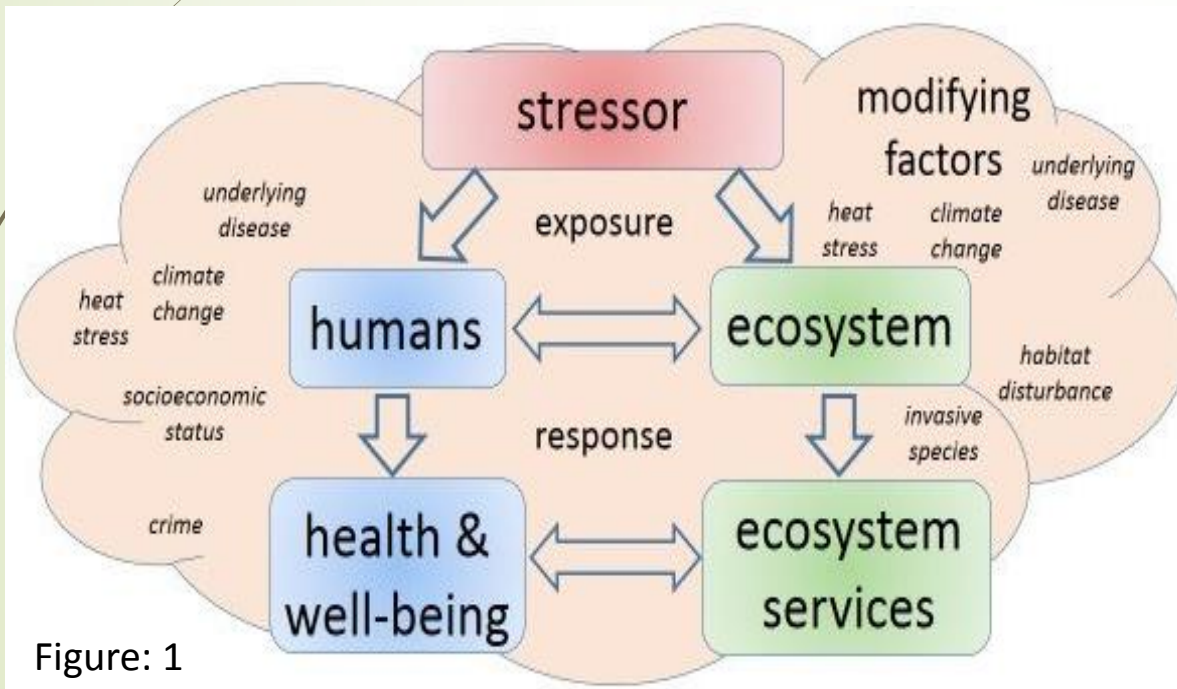


Figure: 1

<https://www.britannica.com/science/ecosystem-services>

Background information

- Key terms
- Relation between environmental and human health
- Important of environmental health
- Importance of Ecosystem services
- Green city concept and SDGs



Figure: 2

Introduction

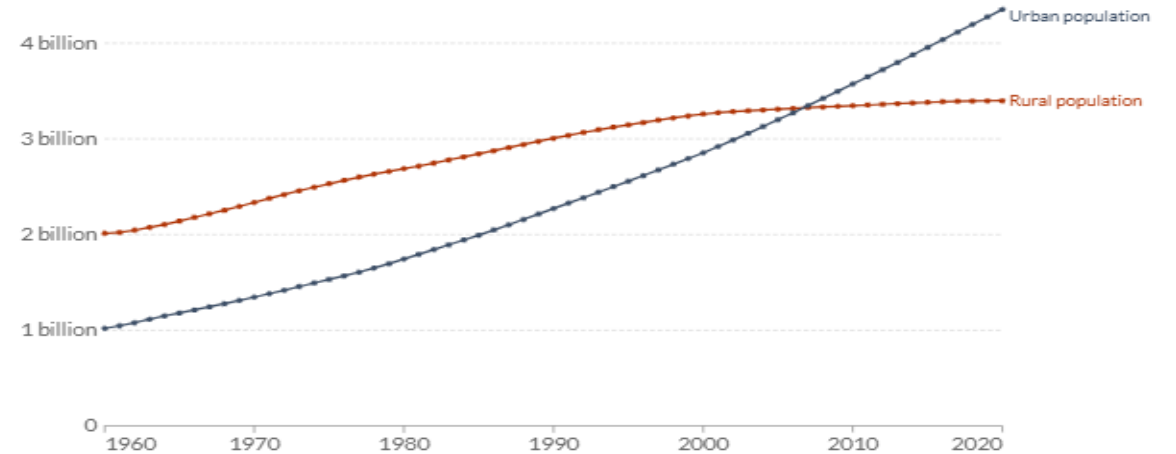
- **Cities are growing rapidly in the 21st century. By 2020, 56.2% of the world's population live in the cities.**
- **18.59% of the total population of Sri Lanka lives in the cities.**
- **The total population of CMC area 619,000 (2021).**

Figure:4

Number of people living in urban and rural areas, World, 1960 to 2020

Our World
in Data

Change country

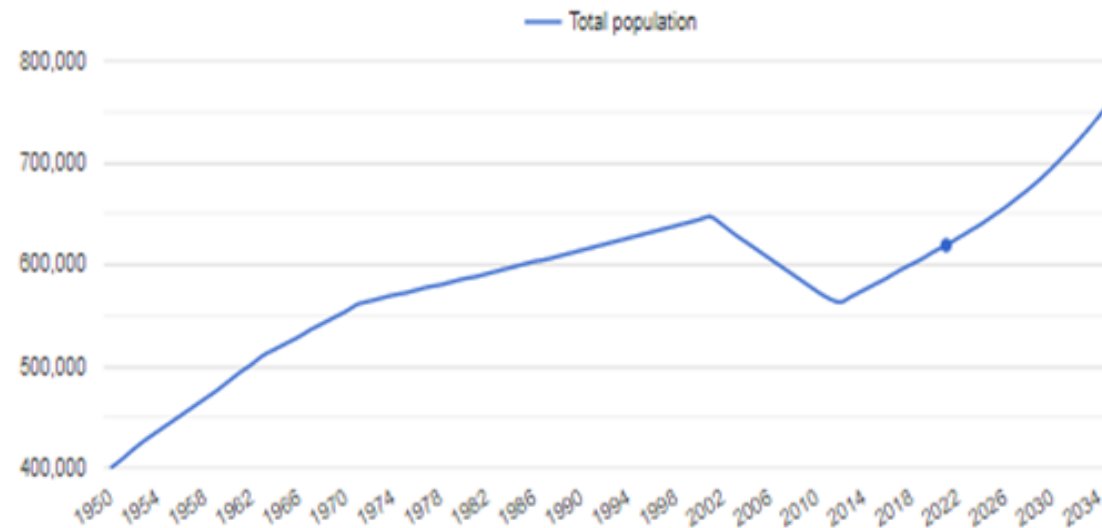


Source: World Bank based on data from the UN Population Division
Note: Urban populations are defined based on the definition of urban areas by national statistical offices.

OurWorldInData.org/urbanization • CC BY

Figure: 3

Colombo Urban Area Population Graph



<https://populationstat.com/sri-lanka/colombo>

Study Area

Colombo Municipal Council area consists of 47 administrative wards within the five administrative districts.

City Size and Population Density

Total land area of 14.41 square miles

Population density of over **52,000** per square mile.

Table-1

Year	Population	Growth rate (%)
2020	612,535	1.05
2025	647,557	1.21
2030	695,243	1.59

<https://www.citiesabc.com/city/colombo/>

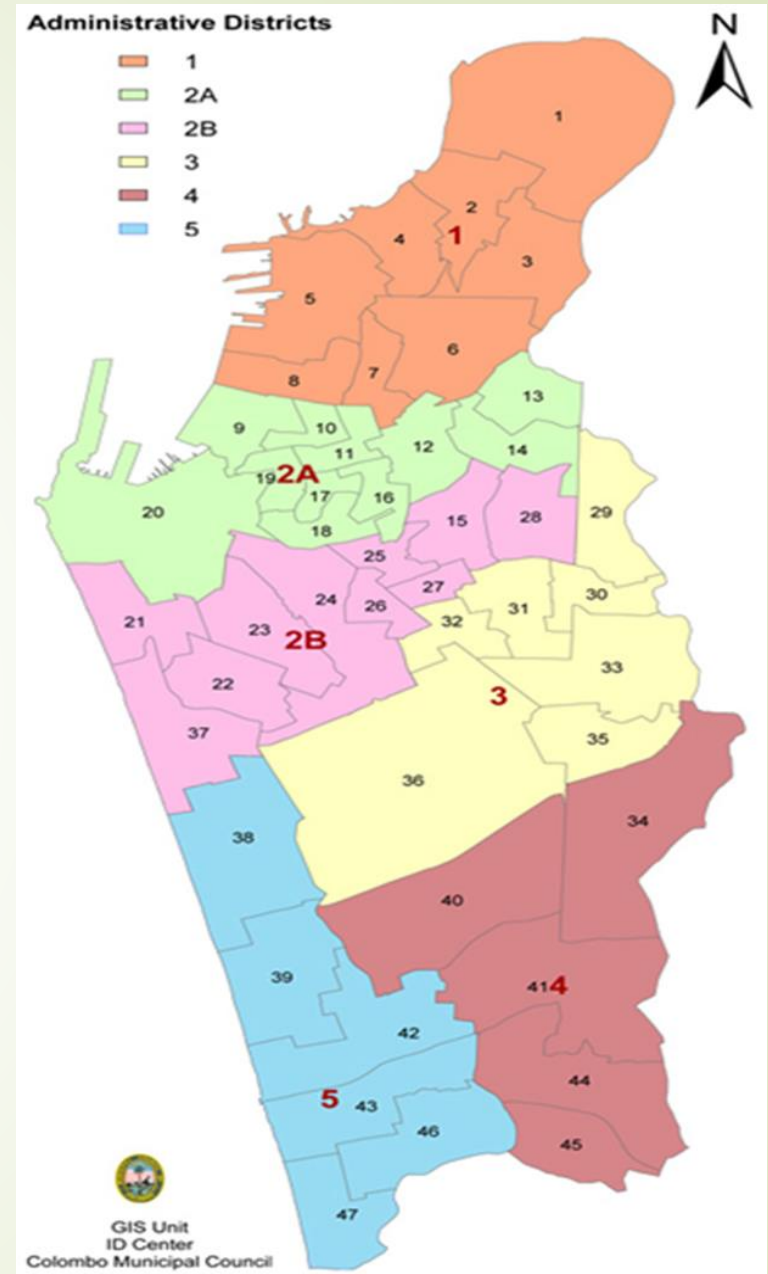


Figure: 5

Source: - Sustainable Housing and Urban Development 2019

Methodology

- **Primary and secondary data collection**-questionnaire survey and secondary sources.
- Sampling methodology- **Stratified random sampling method**.
- **170 participants** have responded to the **questionnaire survey** as appended below.

Table-2: Category of the respondents of the study

Different target groups	Number of questionnaires	Completed questionnaires					
		Administrative Divisions of CMC					
		1	2A	2B	3	4	5
1. Professionals	40	-	-	10	10	10	10
2. Undergraduates	40	-	-	10	10	10	10
3. Drivers	20		5	5		5	5
4. Merchants	20	5	5	5	5	-	-
5. Visitors	30	6	6	6	6	-	6
6. General public	20	5		5		5	5

• **Data Analysis** - Microsoft Excel /SPSS

Results and discussion

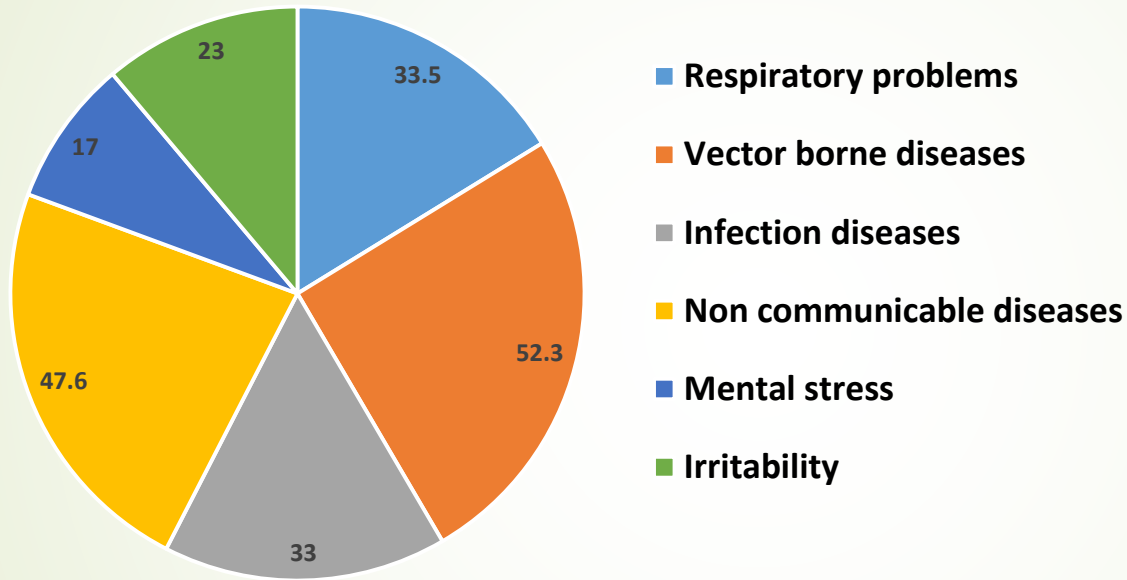
Table-3 Public perceptions about the existing condition of CMC area

Opinions	Frequency	Percentage
✓ Disturbance of road traffic	85	50.0
✓ Improper drainage systems	77	45.2
✓ Unplanned urban structure	56	33.0
✓ Politician's intervention	39	23.0
✓ Slums and shanties	61	35.8
✓ Issues of solid waste management	43	25.3
✓ More usage diesel vehicles	40	23.5
✓ Light pollution	39	23.0
✓ Increasing level of flood disaster	74	43.5
✓ Air and dust pollution	27	16.0
✓ Lack of greeneries	32	19.0
✓ Respiratory problems	57	33.5
✓ Vector borne diseases	89	52.3
✓ Increasing heat level /warmer	42	24.7
✓ Infection diseases	56	33.0
✓ Non communicable diseases	81	47.6
✓ Increasing Social crimes	79	46.5
✓ Mental stress	29	17.0
✓ Irritability	39	23.0

Source – Field survey 2021

Figure 6 – Main health problems faced by the public in the CMC area

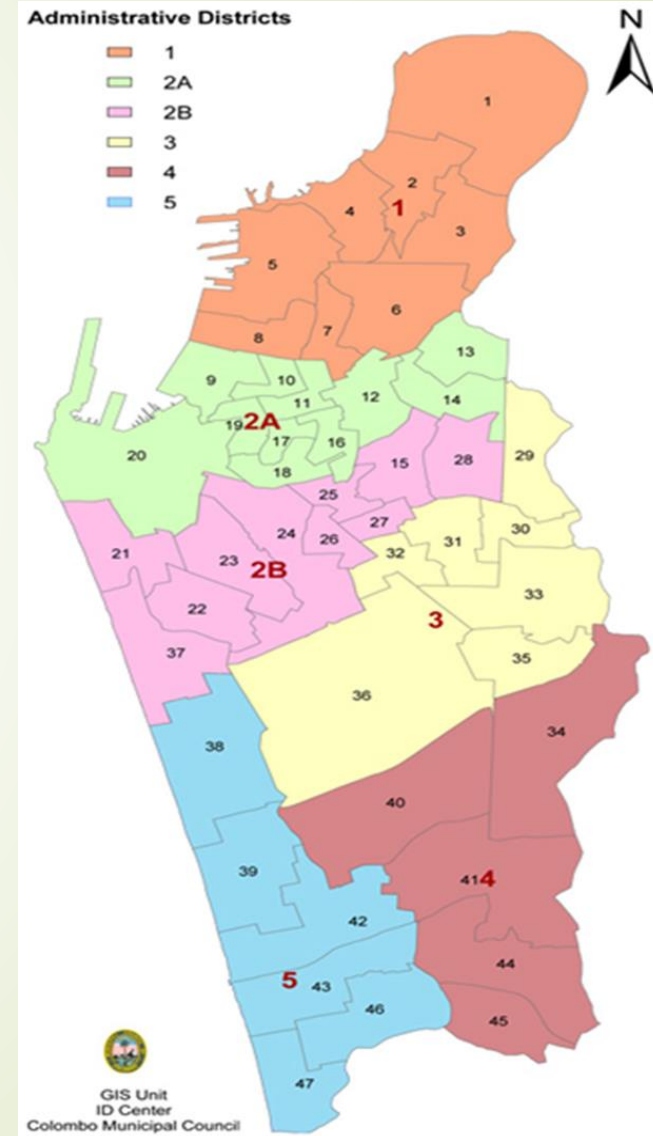
Existing key Health issues (%)



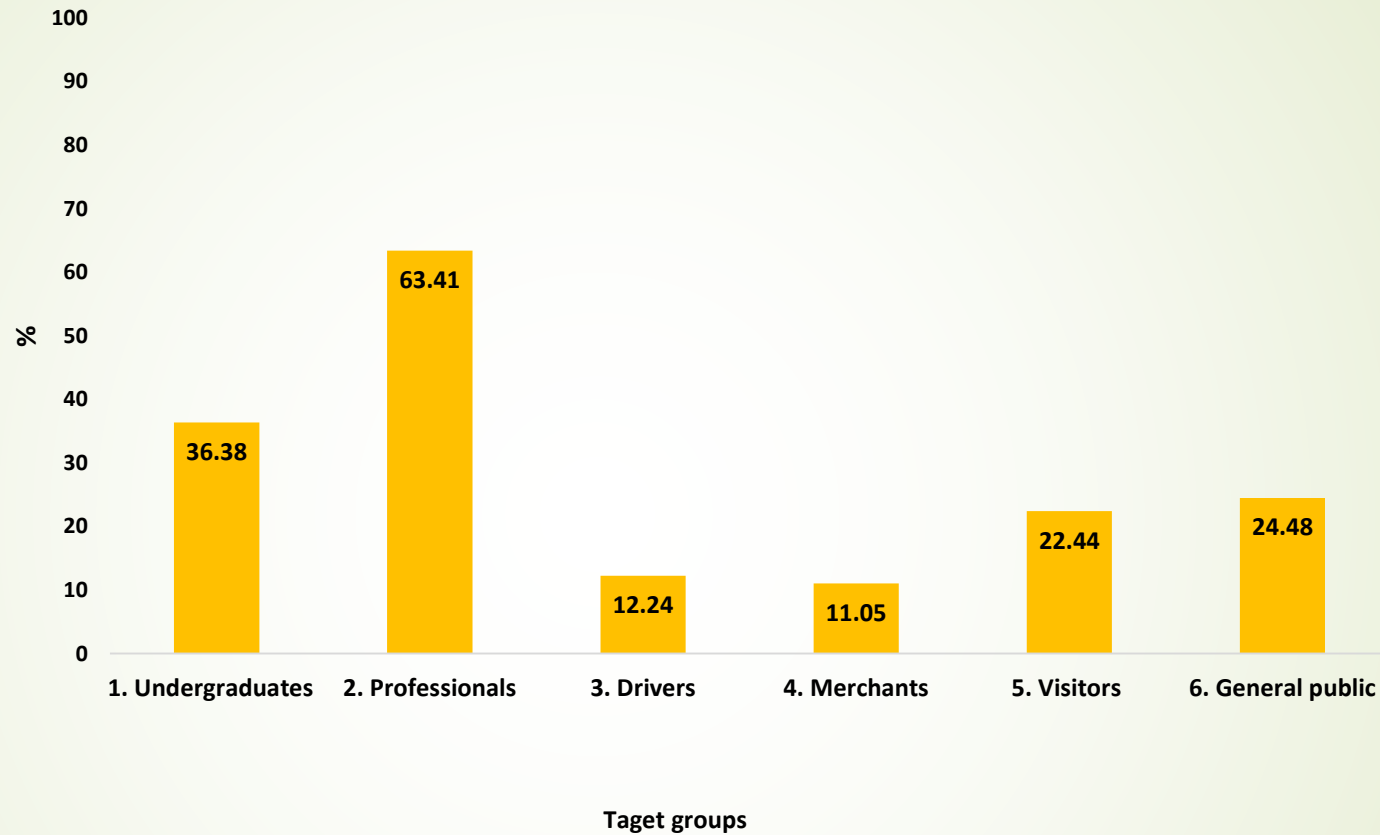
Source – Field survey 2021

Discussion

- Causes of the health issues
- Geographical distribution health issues
- Minimization strategies on identified health issues



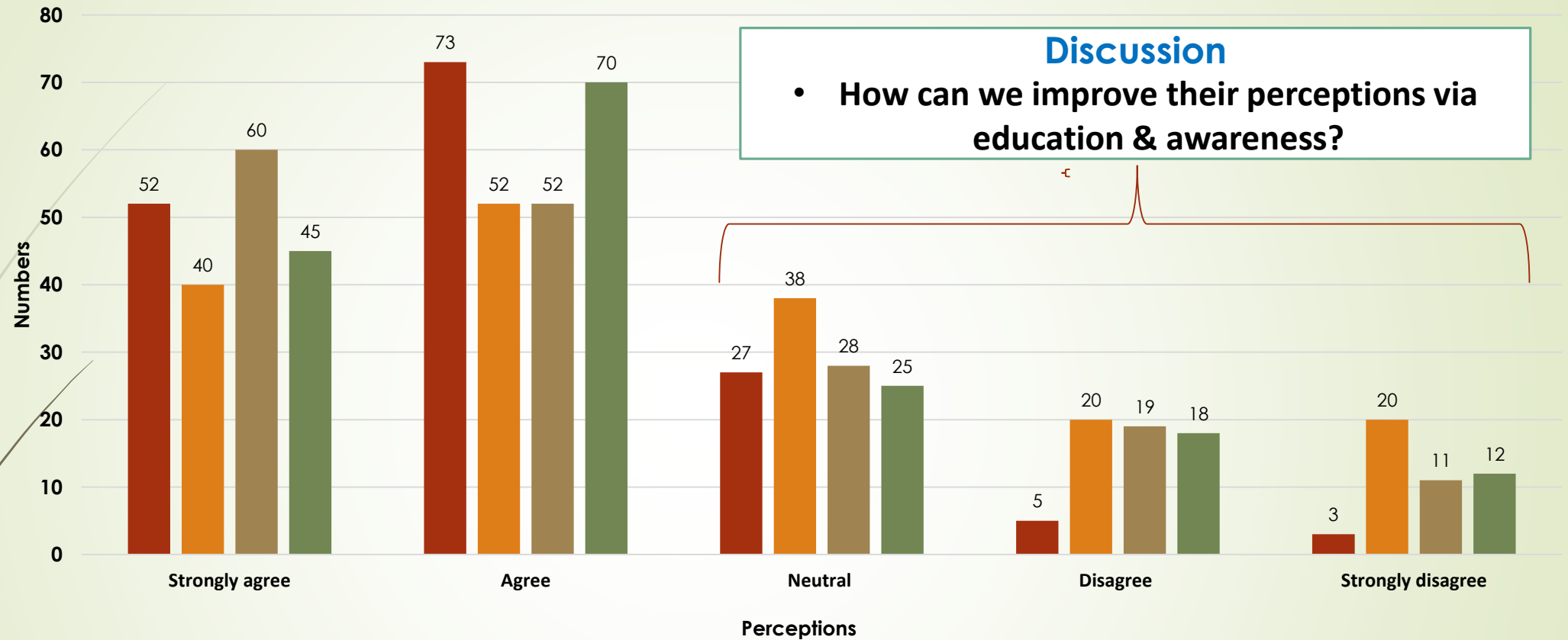
**Figure:7 Level of understanding on green city
(target group wise (%))**



Discussion

- We as a teacher could educate /promote this concept via teaching/learning mechanism , while performing and showcasing research experiences.

Figure: 8 To which extent do you agree with below statements?



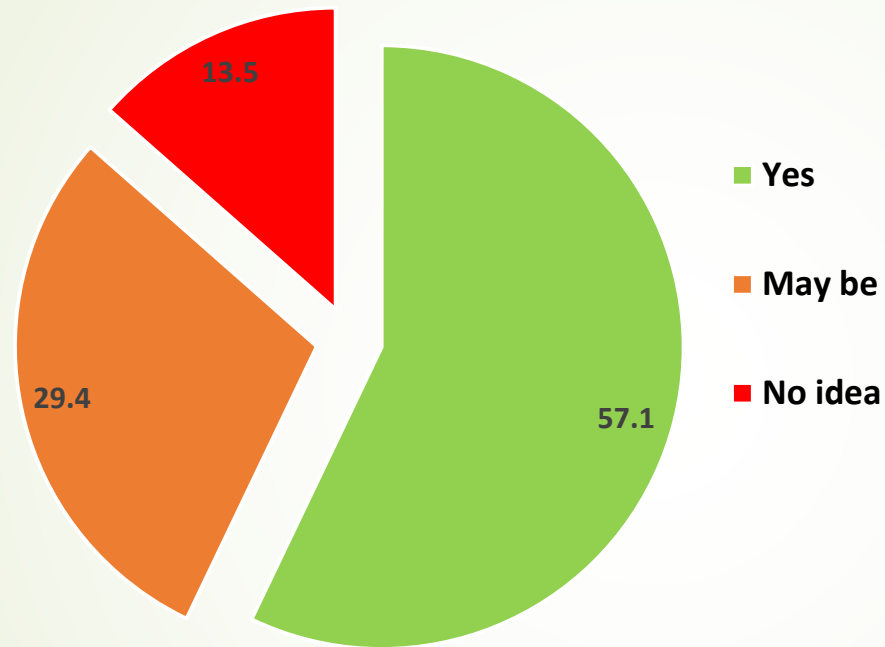
Discussion

- How can we improve their perceptions via education & awareness?

- 1. GC contributes to SDGs.
- 2. GC will change the individual and social behaviours.
- 3. GC will bring positive changes in the economy of the country
- 4. People intend to provide their support to convert CMC area as a green city

Figure: 5

Figure-9 Public perceptions in incorporating green city concept into SDGs



Source – Field survey 2020/21



Discussion

How can we reduce the red category?

Conclusion and recommendations

- Existing situation of CMC area leads to **respiratory, vector borne & non-communicable health issues**, which are resulted due to the brown environment and ecological challenges.
- It is required an imperative transformation of CMC area from brown to green in order **to achieve the SDGs**.
- Also, it is required to implement a **proper waste disposal scheme, minimize unsafe vehicles usage, traffic congestions and implementation of more tree planting projects** covering entire area of the CMC.
- It is vital to obtain **key stakeholder's** (CMC, CEA, UDA, RDA,) supports to restructure and maintain greeneries of the CMC area to achieve SDGs.
- Continuous **public awareness programme** is more important to maintain a nature-friendly life style of dwellers of CMC.
- **Policy level restrictions should be enforced to prohibit politicians' undue influences** on environmental-related matters.

Establish a nature-friendly courageous and compassionate professional community!



<https://www.youtube.com/watch?v=oSCq3nHG09o>

**Brave Devani Jayathilaka
Young Forest Officer**

Thank you

Dissemination of knowledge *via* Webinars –Performing and showcasing SDGs

