



# Understanding Multidimensional Vulnerabilities: Impact on People of Sri Lanka

A Policy Report Based on the Multidimensional Vulnerability Index  
derived from UNDP's National Citizen Survey 2022-2023







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We sincerely apologize for any inconvenience that may have arisen due to errors in the print version of this report that was used during the launch on the 1<sup>st</sup> September 2023. We understand the importance of accuracy and strive to provide you with the most reliable information. We kindly request you to refer to this final electronic version (dated 6<sup>th</sup> December 2023 ) for the most up-to-date and accurate information and content. Your understanding and patience during this process are greatly appreciated.

A full list of revisions can be seen below:

Page 9 – Updated infographic

Page 30 – Updated infographic

Page 50 – Revisions to Figure 8

Page 82 – Revisions to Table 12

Page 85 – Inclusion of sample weights

# Table of Contents

Acknowledgements	1
Message from the Prime Minister	3
Foreword	5
Acronyms and Abbreviations	6
Glossary	7
Executive Summary	10
INTRODUCTION	15
Sri Lanka's current landscape	17
Strategic alignment of SDGs	18
Ongoing recovery efforts in Sri Lanka	18
Coping strategies among vulnerable Sri Lankans	19
Multidimensional vulnerabilities and the Multidimensional Vulnerability Index	20
CHAPTER 1: BUILDING THE MVI	23
Data	25
Methodology	26
Structure	27
Comparison of MVI structure with Sri Lanka's National MPI	30
Weights	31
Deprivation cutoff and vulnerability cutoff	33
Justification for vulnerability cutoff	33
Limitations of the study	34
CHAPTER 2: NATIONAL RESULTS	37
Key results	39
Unpacking the MVI	40
Intensity gradient of vulnerability	42
CHAPTER 3: VULNERABILITY ACROSS SRI LANKA	45
Vulnerability by rural/urban areas	47
Vulnerability by provinces	49
Vulnerability by districts	51
Vulnerability by disability status	56
Vulnerability by gender of household head	58
Drawing insights from MVI, National MPI and monetary poverty	60
CHAPTER 4: POLICY AND PROGRAMMATIC IMPLICATIONS FOR REDUCING VULNERABILITY	63
Summary of findings	65
Recommendations	66
APPENDICES	75
Appendix 1: The Multidimensional Vulnerability Index (Methodology and Properties)	77
Appendix 2: Robustness analysis of the MVI	79
Appendix 3: National Citizen Survey	82
Appendix 4: Additional results from the MVI	86
Appendix 5: Justification for the deprivation cutoff	94



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# Message from the Prime Minister

It is indisputable that Sri Lanka has faced some of the most difficult years it has ever encountered in its post-Independence history. These multiple crises meant that a vast majority of Sri Lankans faced increasing hardships and deprivation. We see that much of the developmental progress made in the country has unraveled as a result of these events, and so, as the Government increasingly focuses on the country's recovery and resilience-building, it is imperative that measures are taken to ensure the most vulnerable sections of the society are protected.

It is vital to, first and foremost, identify who these vulnerable groups are, and to pinpoint what difficulties and challenges they are experiencing. I wish to express my appreciation towards the efforts taken by the United Nations Development Programme (UNDP) in Sri Lanka to work with esteemed institutions such as the Oxford Poverty and Human Development Initiative (OPHI), the UNDP SURGE Data Hub, and the Citra Social Innovation Lab (which is anchored within the Prime Minister's office) to take the necessary steps towards building a strong evidence base through which we can draw these inferences in order to effectively design national policies for these vulnerable groups, during this important time.

Given recent events, it is timely that we have taken the first step towards increasing our understanding of the multidimensional nature of vulnerabilities. This will certainly assist policymakers to be equipped with the information they need to determine where help is most needed. Similar to how the Multidimensional Poverty Index (MPI) was adopted some years back to provide a more holistic picture of poverty in the country, it is indeed worthwhile to take this step to include the MVI in future national statistical exercises. It is my firm belief that only once we take steps to better understand the issues those on the ground are facing - be it related to nutrition, education, household debt or risks of disasters - that we can hope to bring Sri Lanka back on track and onto a more sustainable development pathway. Therefore, I thank the team that has worked on this report and capturing insights from 25,000 households through a national level survey based on citizen science and for taking the initiative to do so.

I encourage all policymakers, as well as the private sector and civil society, to use this analysis to first understand and then implement measures to help move Sri Lanka away from vulnerability in the future.



Dinesh Gunawardena  
Prime Minister of the Democratic Socialist Republic of Sri Lanka



# Foreword

We live in a world of uncertainty, riddled with cascading and inter-connected crises. The situation we are in makes decision-making ever more challenging. The COVID-19 pandemic has taught us - particularly policymakers and leadership of the governments - the importance of making timely and bold decisions with data and evidence that were available at hand.

The recent experience of Sri Lanka has been nothing but a series of challenging situations that have had a direct impact on the wellbeing of its people. The Easter Sunday attacks in 2019, the COVID-19 pandemic, and the onset of the country's worst economic crisis in 2022, have had devastating impact on the livelihoods and resilience of the Sri Lankan people. These events have significantly impacted the socioeconomic landscape and quickly created new pockets of vulnerable communities across the country. Meanwhile, the erratic weather patterns, coupled with the increased intensity and more frequent occurrence of disasters, add an extra layer of challenges to the already daunting task of anticipatory planning in response to the climate emergency.

Over time, it has become very clear that the acuteness of the hardships experienced varied from one individual to another and one household to another. For those who faced sudden and drastic shocks, the risks of being trapped in the perpetual cycle of deprivations has increased. We therefore needed to better understand who was being hurt the most and left furthest behind.

To bridge the data gap, we at UNDP embarked on Sri Lanka's first National Citizen Survey 2022-2023. It was intended to capture the ground realities faced by 25,000 households across the country to ensure national coverage. Drawing from the data collected through the Survey, the Multidimensional Vulnerability Index (MVI) was developed to supplement Sri Lanka's National Multidimensional Poverty Index 2019. Its primary purpose is to help capture and frame the multidimensional and overlapping nature of vulnerabilities, including those arising from climate-induced disasters. Recognising the complex nature of the impact created by the poly-crisis, we saw the value of examining multidimensional vulnerabilities instead of relying on conventional measures of poverty like income-based indicators, which play a crucial role in assessing the extent of vulnerabilities in times of crises.

Amidst a rapidly shrinking fiscal space, deepening the understanding of these diverse experiences and vulnerabilities is an important first step towards designing impactful policy and programme interventions. The findings presented in this policy report have far-reaching policy and programme implications as Sri Lanka embarks on a series of interventions to ensure sustainable, inclusive and green recovery pathways from the crises. These insights are invaluable for policymakers, stakeholders, and development partners in crafting better targeted, focused and citizen-centric interventions.

It is our sincere hope that the body of knowledge presented in this report will influence and shape evidence-based policies and interventions that prioritize the needs of the most vulnerable communities and underline the critical significance of timely data collection and regular monitoring to measure the effectiveness of such endeavours directed towards accelerating Sustainable Development Goals.



Azusa Kubota  
Resident Representative, UNDP in Sri Lanka

## Acronyms and Abbreviations

DCS	Department of Census and Statistics - Sri Lanka
FGD	Focus Group Discussions
LNOB	Leaving No One Behind
MPI	Multidimensional Poverty Index
MVI	Multidimensional Vulnerability Index
OPHI	Oxford Poverty and Human Development Initiative
PwDs	Persons with Disability
SDGs	Sustainable Development Goals
UNDP	United Nations Development Programme

# Glossary

## Key terms and statistics in the MVI<sup>[1]</sup>

Multidimensional Vulnerability Index (MVI)	The MVI is the product of the incidence and the intensity of multidimensional vulnerability. The value ranges between 0 and 1, with 1 indicating that everyone is multidimensionally vulnerable and deprived in all indicators.
Headcount ratio (H)	The headcount ratio of multidimensional vulnerability or incidence of multidimensional vulnerability. It refers to the proportion of people who are multidimensionally vulnerable. It ranges from 0 to 100%.
Average intensity (A)	The average intensity of multidimensional vulnerability refers to the average deprivation share among the multidimensionally vulnerable population. It ranges from vulnerability cut-off $k$ to 100%.
Uncensored Headcount Ratio	It refers to the proportion of people who are deprived in a particular indicator. Expressed in percentage, it ranges from 0 to 100%
Censored Headcount Ratio	It is reported for each indicator and refers to the proportion of people who are multidimensionally vulnerable and deprived in a particular indicator. It ranges from 0 to 100%.
Deprivation cutoff	The headcount ratio of multidimensional vulnerability or incidence of multidimensional vulnerability. It refers to the proportion of people who are multidimensionally vulnerable. It ranges from 0 to 100%.
Vulnerability cutoff $k$	$k$ refers to the vulnerability cut-off. It acts as the multidimensional vulnerability line that is a minimum value of weighted deprivations score based on which individuals or households are classified as vulnerable or non-vulnerable. It is reported as a percentage.
Weights	Refers to weights assigned to both dimensions and indicators. Weights are normalized (that is total weight sums up to 1), and indicate the importance of each indicator within the overall vulnerability index.

<sup>1</sup> These definitions are precisely the same for the MPI. The difference between the MPI and MVI is that the indicators of the MVI refer to vulnerability instead of poverty.

# Sri Lanka Multidimensional Vulnerability Index

Derived from UNDP's National Citizen Survey 2022-2023

## Key Results

### MVI structure: 3 Dimensions and 12 Indicators

#### Education

1. School attendance
2. Male years of schooling
3. Female years of schooling

#### Health and Disaster

1. Physical condition
2. Food stock
3. Water source
4. Experienced disaster
5. Adaptive capacity to disaster

#### Living Standards

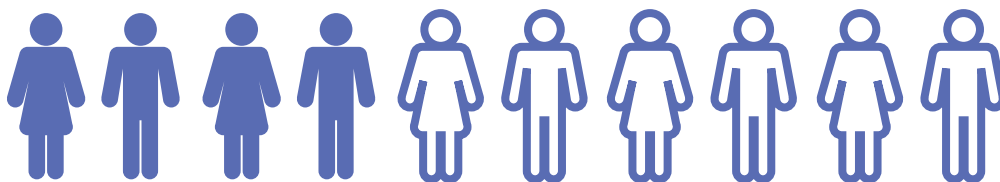
1. Assets
2. Debt
3. Unemployment
4. Informal employment

### Multidimensional Vulnerability Index for Sri Lanka: **0.206**

MVI values range from 0 to 1, with 0 indicating that no one is vulnerable and 1 suggesting that everyone is vulnerable and deprived in all indicators.

**55.7%** of Sri Lankans are multidimensionally vulnerable.

**12.34 million** out of a **22.16 million** population are multidimensionally vulnerable.



Approximately **6 in 10** are multidimensionally vulnerable.

**82%** of the multidimensionally vulnerable live in rural areas.



Rural areas require more policy focus. Out of **12.34 million** vulnerable people, **10.13 million** live in rural areas.

Incidence of multidimensional vulnerability, though high in all the districts, shows some variability.

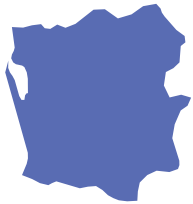


Puttalam has the highest MVI value, with an incidence of **71.8%**.



Matale has the lowest MVI value and the lowest incidence of **41.5%**.

Since **Gampaha** and **Colombo** have the highest population share, they have the highest number of multidimensionally vulnerable population.



**1.37 million** in Gampaha.



**1.23 million** in Colombo.

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Percentage of population who are vulnerable and deprived in:



### Adaptive Capacity to Disasters

48.8% of the population



### Water Source

35.6% of the population



### Household Debt Status

33.4% of the population

# Executive Summary

Sri Lanka's socioeconomic progress has been marked by periods of progress and challenges. Over the past decade, the country embarked on a journey of recovery and revitalization culminating in its categorisation of upper-middle-income in 2019, before falling below the threshold in 2020 in the wake of the COVID-19 pandemic. Successive governments' efforts to encourage foreign investment, diversify industries, and promote tourism led to a notable expansion of the economy. Robust growth rates were witnessed in sectors like services, construction, and manufacturing, contributing to improved employment opportunities and income levels for many citizens. However, this period also saw its share of economic imbalances, with concerns about public debt, trade deficits, and income inequality.

Consecutive exogenous shocks to the economy, made worse by long-standing structural weaknesses, contributed to the onset of a severe and unprecedented economic crisis in 2022. The current economic crisis, together with the global poly-crisis, has posed a multidimensional threat to progress towards the Sustainable Development Goals (SDGs) in Sri Lanka by creating new and intensified adverse economic and social conditions that have exposed an increasing proportion of the population to a range of vulnerabilities, both pre-existing and new, particularly structural vulnerabilities. Projections of rising headcount poverty (SDG1), increasing food insecurity (SDG2), input shortages affecting the functioning of the health system (SDG3), disruptions to education (SDG4), increasing high-risk protection incidents involving women and children (SDG5) and increasing susceptibility to climate-induced disasters (SDG13) reflect the multidimensional nature of Sri Lanka's current crisis.

These intersecting vulnerabilities create unique challenges that require an integrated and holistic approach towards understanding vulnerability. It is only by understanding how different vulnerabilities interact and compound that policymakers and development practitioners can gain a more comprehensive and accurate picture of the overlapping vulnerabilities experienced by communities. The significance of constructing a Multidimensional Vulnerability Index (MVI) for Sri Lanka, therefore, resides in its ability to provide a more comprehensive and nuanced picture of the population's vulnerabilities.

This report presents findings from the MVI using the National Citizen Survey initiated by the United Nations Development Programme (UNDP) in Sri Lanka with the objective to capture a snapshot of vulnerabilities experienced by Sri Lankans during the economic downturn. The timing of the National Citizen Survey for an MVI is particularly significant as it allows the first-ever assessment of vulnerabilities post-COVID-19, which may have been further exacerbated by the economic crisis.

Amidst a post-economic recovery period, numerous countries have taken the initiative to develop an MVI as a strategic policy tool. For instance, Honduras<sup>[2]</sup> developed an MVI to distribute electronic vouchers for essentials to workers, including self-employed individuals severely affected by COVID-19. Similarly, Iraq also calculated an MVI to assist the government's COVID-19 crisis response. Bhutan<sup>[3]</sup> implemented an MVI to guide governmental strategies in addressing the challenges posed by the COVID-19 pandemic. Given the ongoing economic crisis and the need for post-COVID recovery, Sri Lanka also stands to benefit from the development and implementation of an MVI.

This report uncovers the multifaceted challenges that shape Sri Lanka's vulnerability landscape across various groups at national, provincial, and district levels. Data drawn from a citizen science-based,

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2 <https://www.mppn.org/honduras-uses-a-multidimensional-vulnerability-index-for-policy-targeting/>

3 <https://www.unicef.org/bhutan/media/2486/file/MVI-Bhutan.pdf>



nationally representative sample of 25,000 households of the Survey has been complemented with Focus Group Discussions (FGDs) held in August 2023, enhancing the comprehension of poverty and vulnerabilities in Sri Lanka. Additional insights are drawn from Sri Lanka's National Multidimensional Poverty Index (MPI) based on data from the Household Income and Expenditure Survey 2019 (HIES 2019). In terms of its structure, the MVI encompasses 12 indicators that are categorized into three distinct dimensions. These dimensions are education, health and disaster, and living standards. Indicator selection was based on extensive consultations with key stakeholders, including an Advisory Panel.

By examining the synergies between poverty and vulnerability,<sup>[4]</sup> policymakers can identify individuals and communities facing both extreme poverty and a high likelihood of falling deeper into deprivation during adversities. Both indices focus on measuring multiple deprivations, and the integration of MPI and MVI findings offers valuable insights for budget allocation, policy formulation and targeted interventions. Policymakers can prioritize resources to address the specific needs of vulnerable populations, especially those who are vulnerable to being trapped in poverty due to shocks and risks.

## **Key results of the Sri Lanka Multidimensional Vulnerability Index (MVI) 2022-2023**

- Approximately six in ten (55.7 percent) people in Sri Lanka are multidimensionally vulnerable. That is, they are deprived in at least three of the 12 weighted indicators. This amounts to 12.34 of 22.16 million population being multidimensionally vulnerable.
- Among the 12.34 million individuals facing vulnerability, a considerable 10.13 million are rural residents, notably concentrated in the Eastern, North, and North Central provinces. Prominent factors contributing to rural multidimensional vulnerability encompass indebtedness (17.8 percent), resilience to disasters (13.1 percent), and access to water sources (10.7 percent).
- The national results of the MVI indicate that debt status, adaptive capacity to disaster and years of schooling are the primary factors driving Sri Lanka's MVI.
- The highest contributor to the MVI is the indicator related to household debt. 33.4 percent of the population experience vulnerability and deprivation in debt-related indicators, including getting into debt for essential needs like food, medical care, and education, as well as pawning jewellery or selling items. In light of the economic crisis, it is highly probable that individuals' debt situations have deteriorated, consequently resulting in elevated deprivations in the debt indicator.
- Adaptive capacity to disaster is the second largest contributor to the MVI. Nearly half of Sri Lanka's population (48.8 percent) lacks disaster preparedness, a key vulnerability factor aggravated by accelerating climate risks. Notably, the adaptive capacity indicator exhibits the most substantial deprivation levels, emphasizing Sri Lanka's inadequate readiness during disasters, which in turn exposes the population to heightened vulnerability.
- Male and female years of schooling stand out as the third most contributing indicators to the MVI, highlighting the critical need for key interventions to enhance education levels among both genders.
- 35.6 percent are vulnerable and deprived in relation to water sources, highlighting the critical need to prioritize efforts aimed at ensuring widespread access to water.

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<sup>4</sup> Comparisons will have to be done with caution since they are from different data sets (National MPI 2019 and MVI 2023).

- Several districts, including Ampara, Batticaloa, Kilinochchi, Mullaitivu, Nuwara Eliya, Puttalam, and Vavuniya, exhibit notable multidimensional vulnerability values, with over 65 percent of their populations identified as vulnerable. Gampaha and Colombo emerge as regions with the highest concentration of vulnerable individuals, attributable to their substantial population sizes.

## Key recommendations

The MVI offers a set of key policy and programmatic recommendations, drawn from the analysis of the MVI 2023 results and enriched by insights gathered through the FGDs.

- Leverage the MVI for long-term policy and programme interventions and decision-making, by introducing a comprehensive policy coherence framework to enable seamless collaboration between various tiers of government. Crucial vulnerability indicators can be used to guide resource allocation and welfare programmes, ensuring effective assistance to vulnerable populations.
- Strengthen the use of the MVI and vulnerability indicators in social protection schemes to capture the depth and breadth of deprivations, offering a more holistic view of vulnerabilities, and allowing for tailor-made interventions and improved targeting of beneficiaries.
- Enhance resilience among Persons with Disabilities (PwDs) through the collection of sex/age/disability-disaggregated data for better planning, resource allocation and targeting of service delivery on PwDs to ensure their social and economic participation; and develop tailor-made programmes that enable PwDs to access employment opportunities in the public and private sectors and engage in self-employment activities.
- Design a sustainable approach to alleviate vulnerabilities of debt-burdened households by undertaking a comprehensive assessment to better understand how formal and informal credit markets function, including financial intermediaries, and their relationship with different types of households (female-headed, PwDs, MSMEs, etc.), that can contribute towards policy improvements.
- Develop a comprehensive strategy to enhance preparedness for climate-induced disasters by investing in and enhancing early warning systems, implementing sustainable farming methods that are adaptable to changing climatic conditions, and investing in improved oversight and enforcement mechanisms.
- Build climate-resilient water systems that safeguard equitable access to water resources in the face of climate challenges by initiating greater investments in rural water infrastructure, integrated water resource management initiatives, and conducting regular assessments on water productivity to enhance knowledge and implement policies that can advance equitable water allocation in the country.
- Invest in expanding equitable access to quality education by broadening study streams and learning pathways, improving access to tools and platforms in schools to enable integration of technology into education, and placing less weightage on final, summative examinations and increasing emphasis on formative, potentially project-based assignments that evaluate critical thinking, analytical skills, and other competencies.

- Establish systems and mechanisms to incorporate the MVI as the government's overarching metric for measuring multidimensional vulnerability, and as a reliable monitoring and assessment tool.

Multidimensional vulnerabilities often intersect across various aspects of people's lives, necessitating a holistic approach that draws on expertise and resources from diverse sectors. Therefore, to help reduce multidimensional vulnerabilities, the significance of cross-sectoral collaboration cannot be overstated. Collaborating across sectors enables the pooling of knowledge, skills, and resources to design interventions that address vulnerabilities comprehensively. By understanding these complexities, policymakers, stakeholders, and international partners can work collaboratively to formulate targeted strategies that enhance resilience, mitigate risks, and pave the way for a more secure and sustainable future for Sri Lanka.



# Introduction



## Sri Lanka's current landscape

Sri Lanka is on a gradual path of stabilisation following the onset of a severe and unprecedented economic crisis in 2022. Following the cessation of a 26-year armed conflict in 2009, the country experienced a period of strong economic growth and poverty reduction, culminating in its categorisation of upper-middle-income in 2019, before falling below the threshold in 2020 in the wake of the COVID-19 pandemic. The middle-income status obscured the level of risk and vulnerability the country continued to face due to long-standing structural weaknesses. Although Sri Lanka has recorded a relatively high level of human development for its rate of economic development,<sup>[5]</sup> compounded crises threaten to erode these achievements.

In 2022, a decades-long build-up of fiscal and debt burden, exacerbated by a series of shocks,<sup>[6]</sup> pushed the country into a crisis of illiquidity and insolvency.<sup>[7]</sup> High inflation, rising commodity prices, power outages and shortages of fuel and other essential items and services left households struggling to meet essential needs, harming their welfare, and leading to increased vulnerability. The economy contracted by 7.8 percent (year-on-year) in 2022 due to sharp contractions during the latter half of the year (2022).

Due to the economic contraction, national poverty is projected to have doubled to 25 percent and urban poverty is estimated to have tripled to 15 percent in 2022. This increase has added an additional 2.5 million poor people, aggravating two consecutive years of poverty increases in the country. Half a million jobs were lost in industry and manufacturing,<sup>[8]</sup> concentrated in subsectors such as construction, transport, food and accommodation that are predominantly based in urban areas and affect households in the lower middle quartile of the income distribution.<sup>[9]</sup> As a result, the 'new poor' created by the pandemic and the economic crisis are more likely to live in urban areas than households who were poor before 2020. Non-poor households living close to the poverty line are highly vulnerable to falling into poverty in the event of a negative shock. Vulnerable population groups are likely to be disproportionately affected by these trends.

Continued food insecurity may prompt livelihood-based coping strategies affecting human capital accumulation, health and well-being and income-generating potential – particularly for children.<sup>[10]</sup> The levels of unaffordability for families to have a healthy diet means more are at risk of falling into the vicious cycle of malnutrition, poor health, and poverty, which, in the longer term, results in reduced human capital development and poor health outcomes.

Access to education services experienced significant disruptions in 2022. Government schools in urban areas were closed for nearly one month in response to transport issues faced by staff and students as a result of an island-wide fuel shortage – the fourth instance of government school closure in 2022.<sup>[11]</sup> These events follow a two-year period during the COVID-19 outbreak where full or partial closure of schools caused considerable disruption to educational activities.

The pandemic and the economic crisis have exacerbated gender inequalities and worsened power imbalances, which are likely to increase as the economy continues to contract. The economic, social and

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5 UNDP. 2021. [Reaching Every Sri Lankan: Human Development Achievements and Challenges](#).

6 Including but not limited to the Constitutional Coup of 2018, building ethno-religious tensions in 2018, the Easter Attacks in 2019, the COVID-19 Pandemic in 2020, an overnight chemical fertilizer ban and a burgeoning global poly-crisis and recession which adversely impacted Sri Lanka

7 United Nations. 2022. [United Nations Sustainable Development Cooperation Framework 2023-2027 for Sri Lanka](#).

8 World Bank. 2023. [Sri Lanka Development Update – Time to Reset](#).

9 WFP. 2022. [Country Strategic Plan 2023-2027](#).

10 United Nations. 2022. [Sri Lanka Common Country Analysis 2022 Update](#).

11 Ibid.

health impacts of compounded vulnerabilities and risks disproportionately affect rural and urban women, hampering their economic empowerment and the realisation of their human rights.

Sri Lanka is also highly vulnerable to the impacts of climate change - in particular, rising sea levels, increasing temperatures, changing precipitation patterns, and intensifying extreme events such as flooding, storms and droughts.<sup>[12]</sup> These factors combine to hamper national socioeconomic progress, undermine the coping mechanisms of already vulnerable communities and strain institutional capacity. Consecutive years of climate-related disasters have undermined the resilience of affected communities, damaging harvests and livelihoods, and thus causing indebtedness, food insecurity and malnutrition among vulnerable communities and eroding their capacity to adapt and respond. Livelihoods dependent on natural resources are expected to be heavily affected by increasingly severe and frequent weather events; workers in these sectors already experience higher poverty rates compared to other sectors.<sup>[13]</sup>

## Strategic alignment of SDGs

The current economic crisis, together with the global poly-crisis, has posed a multidimensional threat to progress towards the Sustainable Development Goals (SDGs) in Sri Lanka by creating new and intensified adverse economic and social conditions that have exposed an increasing proportion of the population to a range of vulnerabilities, both pre-existing and new, particularly structural vulnerabilities. Projections of rising headcount poverty (SDG1), increasing food insecurity (SDG2), input shortages affecting the functioning of the health system (SDG3), disruptions to education (SDG4) and increasing high-risk protection incidents involving women and children (SDG5) reflect the multidimensional nature of Sri Lanka's current crisis.<sup>[14]</sup> A protracted period of import restrictions due to foreign exchange shortages prior to and during the economic crisis - particularly on intermediate inputs - affected production and economic activity in the short to medium terms, affecting income and employment outcomes for firms and workers. Government institutions are at risk of becoming overstretched, affecting service provision and making communities more vulnerable.

## Ongoing recovery efforts in Sri Lanka

Sri Lanka is navigating a narrow and uncertain path towards stability and sustainability.<sup>[15]</sup> In March 2023, the International Monetary Fund (IMF) Board approved a 48-month Extended Fund Facility (EFF) of USD 3 billion to support Sri Lanka's economic policies and reforms. The EFF-supported programme aims to restore Sri Lanka's macroeconomic stability and debt sustainability, mitigate the economic impact on the poor and vulnerable, safeguard financial sector stability, and strengthen governance and growth potential. The reform programme, if not managed carefully, holds a risk of disproportionately affecting the most vulnerable and compounding the effects of the current crisis. Adverse effects from cost-reflective pricing of utilities, revenue mobilization efforts, and a slow economic recovery could worsen the poverty outlook.<sup>[16]</sup>

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12 United Nations. 2021. *Common Country Analysis for Sri Lanka*.

13 United Nations. 2021. *Common Country Analysis for Sri Lanka*.

14 United Nations. 2022. *Sri Lanka Common Country Analysis 2022 Update*.

15 World Bank. 2023. [Sri Lanka Development Update – Time to Reset](#).

16 World Bank. 2023. [Sri Lanka Development Update – Time to Reset](#).



A consolidated welfare system 'Aswesuma' was launched in 2023, aiming at moving towards a modern, adaptive and unified system with less fragmentation. The Government has demonstrated clear intent to address challenges the system has encountered thus far, in terms of targeting and selection of beneficiaries.

Despite the mounting challenges, there are cautiously optimistic signs of recovery.<sup>[17]</sup> Inflation, which peaked at 69.4 percent year-on-year in September 2022, has reduced gradually to 6.3 percent over the year to July 2023.<sup>[18]</sup> The gradual revival of tourism is improving the outlook of the hospitality sector which has suffered through recurring crises. Increased flows of remittances, although below pre-pandemic levels, are contributing to the reduction of the current account deficit. The Government has gradually eased import restrictions, and the Central Bank has systematically reduced interest rates supporting economic activity to rebound in the period ahead.

## **Coping strategies among vulnerable Sri Lankans**

As numerous recovery-focus endeavours unfold at the national level, the National Citizen Survey concurrently gathered data on coping strategies employed by Sri Lankans in the face of adversities. The following are some of the strategies adopted by Sri Lankans.

Individuals facing difficulties appear to primarily resort to pawning jewellery to address their financial requirements, with 38.6 percent of those encountering challenges reported relying on this practice. This is closely followed by borrowing from friends and relatives without any interest, constituting 29.1 percent. Approximately 14.2 percent opt for acquiring additional work opportunities. Additionally, over 11 percent borrow from friends or relatives with an interest component. A similar percentage, around 11 percent, resort to purchasing using local credit, thereby increasing their status of indebtedness.

More than half of Sri Lankans (59.2 percent) turn to cheaper and affordable food alternatives. This implies a compromise in their nutritional intake during challenging circumstances. About 30.8 percent opt to decrease meal portions to prolong the period of sustenance, while approximately 20.9 percent limit the number of daily meals for the same purpose. Around 19.5 percent resort to buying food on credit. Another 3 percent of Sri Lankans report skipping meals for days due to their circumstances.

These findings signify that individuals facing economic difficulties in Sri Lanka resort to various coping strategies in response to their challenging circumstances. These strategies include pawning jewellery, borrowing from friends and relatives, taking on additional work, reducing meal portions, purchasing food on credit, and even skipping meals. These actions highlight the lengths people are willing to go to manage their financial constraints and basic needs. However, these strategies also indicate the significant impact of economic hardships on their overall well-being, nutrition, and financial stability. The data emphasizes the urgent need for targeted interventions and support systems to address these vulnerabilities and improve the overall resilience of the population.

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17 EconomyNext. 2023. [Over 65 pct of Sri Lanka's Aswesuma appeals are requests to change category: official](#)

18 CBSL. 2023. [Inflation in July 2023 – CCPI](#).

## Multidimensional Vulnerabilities and the Multidimensional Vulnerability Index (MVI)

Sri Lanka, like many other countries, faces a variety of shocks, hazards, and challenges that can have a detrimental impact on people's well-being and livelihoods. It is important to recognize that these vulnerabilities can be multifaceted, going beyond income vulnerabilities and the risk of falling into monetary poverty, but also involving concerns such as health, education, housing, access to essential services, and vulnerability to natural disasters or economic downturns.

In light of the above, it is evident that multiple intersecting vulnerabilities shape the lives of people in Sri Lanka. Overlapping vulnerabilities disproportionately harm already marginalized and disadvantaged populations; women, children, the elderly, ethnic minorities, and those with disabilities, for instance, may face several forms of vulnerability, resulting in compounding disadvantages. Further, when vulnerabilities overlap, they can also create poverty traps in which individuals and communities struggle to break free from a cycle of deprivation.

These intersecting vulnerabilities create unique challenges that require a nuanced and holistic approach towards understanding vulnerability. It is only by understanding how different vulnerabilities interact and compound with each other that policymakers and development practitioners can gain a more comprehensive and accurate picture of the overlapping vulnerabilities experienced by communities. The significance of constructing an MVI for Sri Lanka, therefore, resides in its ability to provide a more comprehensive and nuanced picture of the population's vulnerabilities.

The Multidimensional Vulnerability Index (MVI) was developed to complement Sri Lanka's National Multidimensional Poverty Index 2019, and in particular to help capture and frame the multidimensional and overlapping nature of vulnerabilities in Sri Lanka. The MVI focuses on vulnerabilities as opposed to poverty – i.e., what factors could put someone at risk of falling into poverty. It goes beyond conventional measures of poverty, such as income-based indicators, and considers a broader range of intersectional factors, which are crucial in gauging the extent of vulnerabilities during a crisis. By integrating insights from both the MVI and the National MPI, policymakers gain a deeper understanding of the multidimensional vulnerabilities prevalent in the country, enabling them to design targeted policies and interventions that are crucial for building resilience and promoting sustainable development.

The combination of the MVI and National MPI can amplify and reinforce Leaving No One Behind (LNOB) policies. The National MPI 2019 gives a complete picture of poverty and deprivation by highlighting the categories and places where people encounter multifaceted challenges - but is based on 2019 data. The MVI, on the other hand, sheds light on the vulnerabilities that individuals and communities experienced in 2022, particularly during crises and shocks. By combining these two indices, policymakers might find overlapping groups that are not just poor, but also extremely sensitive to external hazards. This synergy enables policymakers to design tailored initiatives that address the underlying causes of deprivation and vulnerability, ensuring that no one falls behind in the development process.



## Realities of unstable livelihoods, economic disparity and the informal working sector

As an unregistered worker in a family-owned tailor's shop, 32-year-old Lanka experiences fluctuations in her income. Depending on the availability of work, her earnings vary greatly from month to month, making it challenging to support her family of three. While Lanka's husband works in formal employment, the recent reduction in work opportunities for both of them has strained their finances. Additionally, Lanka's employment status as an informal worker denies her access to benefits or social protection mechanisms. The couple relied on temporary financial assistance from the Samurdhi authorities for a brief period, but their experiences with unreliable support and lack of trust in the system left them feeling vulnerable.

In Kotte, 56-year-old resident Rathnawathi was formerly engaged in artistic woodworking and running a grocery store. The household income supports her, her sister and her husband, both of whom suffer from health issues. Her husband's arthritis and sister's long-term COVID-19 symptoms limit their ability to work. Her 27-year-old son recently lost work as a pharmacist and is working part-time.

Forced to close her store during the pandemic, Rathnawathi and her husband now rely on informally subletting their premises. She also has debts, both from her grocery store venture and her husband's loans.

*\*Names have been changed to protect the identity of the individual. This interview was conducted in June 2023 and the individual was a respondent of the National Citizen Survey 2022-2023.*



## CHAPTER 1

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# Building the MVI



## Data

The MVI relies on data from the National Citizen Survey 2022-2023.<sup>[19]</sup> Furthermore, the analysis in this report is substantiated by the findings of a series of FGDs conducted in August 2023 across all nine provinces, specifically targeting women (housewives/mothers), informal sector workers (men/women), Persons with Disabilities (PwDs)/parents or caregivers for PwDs, and youth (engaged in higher education).

The survey was designed to assess the vulnerabilities of Sri Lankans in the aftermath of the COVID-19 pandemic and the economic crisis. A total of 25,000 households covering 25 districts were surveyed, and the questionnaire was pre-tested through a pilot survey targeting 50 households. The results and feedback from the pilot survey were used to fine-tune and refine the questionnaire and data collection methodology. The survey covers a range of topics, many using perceptual questions, to provide insights into the households living situations and coping strategies. The survey includes the following major elements:

- 1. Employment and Livelihoods:** The National Citizen Survey collects information on employment status and job options of people. It covers questions on assets, both at the household level, as well as land and transport. It incorporates information on access to necessities, such as water and electricity, and services, such as banking.
- 2. Household Expenditure and Consumption Patterns:** The National Citizen Survey examines family expenditure and consumption patterns, which assists in determining the influence of economic conditions on families' ability to meet their basic necessities.
- 3. Education and Healthcare Access:** The National Citizen Survey includes questions on access to school and healthcare facilities. It covers information on the educational qualifications of each of the household members and self-reports on physical health conditions. The survey collects information on coverage of social protection programmes (as of March 2023 - i.e., prior to the introduction of the *Aswesuma* programme).
- 4. Social Cohesion and Governance:** The questionnaire covers citizens' trust in public institutions, discrimination, civic engagement and access to justice which are critical for understanding their perspectives of governance and democracy.
- 5. Coping Mechanisms:** The National Citizen Survey records household coping mechanisms throughout the COVID-19 pandemic and economic crisis in terms of food shortages and educational needs among others. Households that have been impacted by natural disasters are also covered.

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<sup>19</sup> In April 2022, the UNDP survey team began mapping data points that were publicly available for the period between 2019 and 2022 using government, UN and other non-government institutions sources. While several robust rapid assessments had been conducted, very few larger-scale household-level surveys were administered that allowed for disaggregation at the sub-national level. The Department of Census and Statistics' (DCS) Household Income and Expenditure Survey (HIES) that is administered every three years, owing to the pandemic, delayed its 2022 round. In addition, the team explored areas that appeared to be under-reported, unavailable, not updated, or contentious — such as on persons with disabilities, intra-household dynamics, and the care burden. During this stage, it was important to consider what kind of data would be useful for policymakers in the immediate future, as well as what data was likely to be collected by other agencies during this time.

## Methodology

The MVI is constructed at the household level and starts by asking whether each household has experienced deprivations in each of the indicators of vulnerability. This information is treated using the Alkire-Foster method or AF method.<sup>[20]</sup> By examining various indicators of vulnerability at the same time, the AF method overcomes the limits of standard unidimensional poverty measures, such as those based exclusively on income or consumption levels. It offers a more complete and nuanced assessment of poverty by capturing deprivation in numerous aspects of life, such as health, education, standard of living, and other crucial indicators.

### The AF method essentially involves two main steps:

- 1. Identification:** The first step is to identify the dimensions and indicators that are relevant to measuring vulnerability in a particular context. These dimensions can vary based on the goals of the study and the data available. Each of the indicators will be assigned a deprivation cutoff which defines whether or not a household experiences this vulnerability. Applying the deprivation cutoffs would classify individuals or households into two categories, namely, deprived and non-deprived.
- 2. Aggregation (Counting Deprivations):** The second step is to determine the share of deprivations an individual or household experiences in the selected set of weighted indicators. A person is considered 'multidimensionally vulnerable' if they experience a certain share of deprivations out of the total indicators considered. This outcome is generated by applying a 'vulnerability cutoff' (equivalent to the 'poverty cutoff' in the estimation of the MPI.) The vulnerability cutoff is a normative assessment regarding what percentage of weighted deprivations will make a person considered to be multidimensionally vulnerable. Technical robustness tests validate this cross-dimensional cutoff.

The AF method produces an index that measures the incidence (H, also called headcount ratio) and intensity (A) of multidimensional vulnerability, providing insights into which components of vulnerability are more widespread and how severely they affect vulnerable people. Various international organisations, governments, and researchers have used the approach to comprehensively quantify and track poverty, women's empowerment, time use, quality of work, and vulnerability. Its indices give a single headline measure, as well as specific information on the country's and distinct sectors of the population's poverty levels and composition by each indicator. The AF method-based indices have a strong policy focus and are used to track poverty over time and across population subgroups, and to inform policy design, budget allocation, and programme targeting for public programmes. Appendix 1 provides a full explanation of the AF method.

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<sup>20</sup> The Alkire-Foster (AF) method was created by Sabina Alkire and James Foster (Alkire and Foster 2011) and is most widely used to measure multidimensional poverty. It is a flexible methodology that can be tailored to diverse regional, national, or global contexts, and to different objectives (e.g. vulnerability) making it an invaluable tool for policymakers and researchers assessing and tracking multidimensional phenomena through time.



# Structure

## Unit of identification and analysis

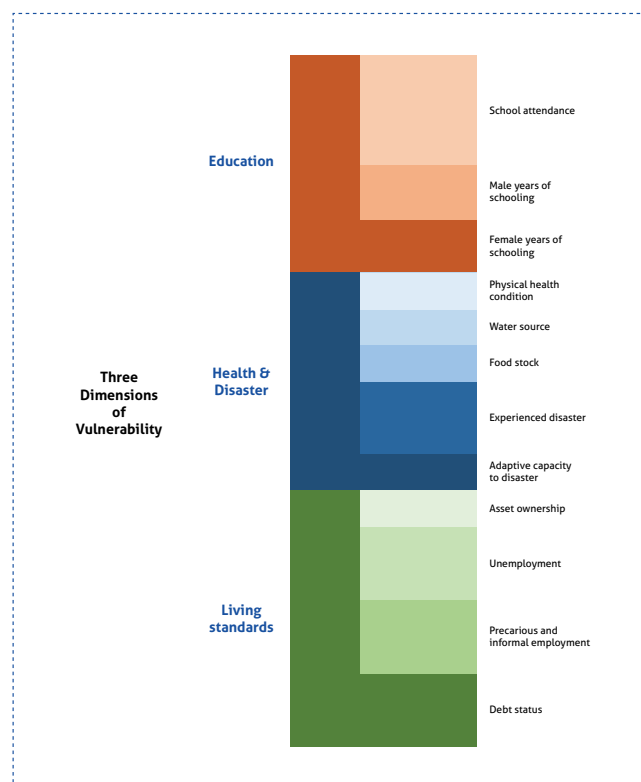
The unit of identification<sup>[21]</sup> in Sri Lanka’s MVI is the household. This means that all household members’ information is analysed together, and every household member receives the same deprivation score. Using a household as a unit of identification recognizes sharing and caring within households. For example, if one member of a household is educated then they might read for, or support, other members. Likewise, in terms of physical health conditions, other household members are affected if another member of their household suffers from a serious health issue.

The unit of analysis, meaning how the results are reported and analysed, is the individual. This is a standard convention and means that the headcount ratio is the percentage of people who are identified as vulnerable (not the percentage of households that are identified as vulnerable).

## Dimensions and indicators

Figure 1a provides the structure of the MVI, which was developed using a collaborative approach that was aimed at adapting to Sri Lanka’s present socioeconomic conditions. **The MVI assesses vulnerability in three critical dimensions: Education, Health and Disaster, and Living Standards.** The three dimensions are measured by 12 indicators.<sup>[22]</sup> By combining the deprivations encountered by each household in each of these 12 indicators, the MVI presents a picture of vulnerability.

**Figure 1a: Structure of the MVI in Sri Lanka**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

21 The unit of identification refers to whether an individual or all members of the same household are identified as vulnerable or non-vulnerable.

22 The indicator selection process was collaborative and motivated by their relevance to the vulnerabilities common in the Sri Lankan setting. Furthermore, it was driven by the data available in the National Citizen Survey 2022 - 2023.

This section explains the motivation for including each dimension and its associated indicators, while the price definition of each indicator is given below (Table 1).

**Education:** From a vulnerability perspective, education equips individuals with the skills and knowledge they require to make well informed decisions and effectively adapt to evolving circumstances. They are also more ready to understand early signals and make informed judgements in the event of an emergency, enhancing their resilience and diminishing their susceptibility to adverse situations. It creates opportunities for better employment, higher earning potential, and better socioeconomic situations. The education dimension comprises three indicators: school attendance, male years of schooling, and female years of schooling.

- 1. School attendance:** Monitoring school attendance highlights children's active participation in the educational system. Regular school attendance demonstrates access to education, and also families' and communities' willingness to participate in human capital development. School attendance rates can help to enhance resilience to future obstacles and provide the basis for skilled employment.
- 2. Male years of schooling:** This indicator measures male educational attainments and provides information about the educational opportunities that boys and men have and seek. Higher male schooling years are frequently associated with enhanced access to economic possibilities, which can therefore contribute to increased household resilience and lower vulnerability to economic shocks.
- 3. Female years of schooling:** Similarly, tracking female years of schooling provides a critical perspective on girls' and women's educational chances and achievements. Investing in female education has been related to a variety of favourable outcomes, including better maternal and child health, and more economic empowerment. Higher levels of female education can promote family and community resilience by facilitating better decision-making and resource management.

**Health and Disaster:** The decision to combine health and disaster was motivated by the limited health and disaster indicators captured in the National Citizen Survey. Combining the two aspects helped develop a more robust and well-rounded measurement framework for health and disaster.<sup>[23]</sup> This dimension highlights the integral role of health and disaster resilience in determining vulnerability levels. It comprises five indicators in total, including self-reported assessments of physical health condition, access to quality water, household food stocks, a household's experience of natural disasters and their stated capacity to effectively respond to and recover from future shocks.

- 1. Physical health condition:** Assessing physical health condition takes into account factors such as the prevalence of diseases among members of the household. This provides insights into the population's susceptibility to health-related shocks, the capacity to respond effectively to health crises, and the potential economic and social impacts of poor health.
- 2. Water source:** Access to quality water in households is equally significant, as it influences hygiene, sanitation, and overall health outcomes. Reliable access to clean water reduces the risk of waterborne diseases and contributes to improved living conditions. This aspect is particularly relevant in vulnerability assessments, as inadequate water access can exacerbate health vulnerabilities, especially in times of emergencies or disasters.

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<sup>23</sup> However, health and disaster vulnerabilities can vary widely depending on the context, region, and population. Combining dimensions may overlook specific nuances that could be better captured through separate assessments. To overcome this, indicator level findings have been shared throughout the report.

3. **Food stock:** The food stock indicator refers to the stock available at home to last for a week for three meals a day for all household members. It assesses whether the household has an adequate supply of dry food items, such as rice, dhal (lentils), sugar, coconut, onion, potatoes, and similar items. The indicator attempts to determine the level of food security within a household, reflecting its ability to meet basic nutritional needs over a specified period. This measure is particularly important for understanding the resilience of households in times of food scarcity, emergencies, or disruptions in the food supply chain. It can also reflect the economic situation of the household, as having a sufficient food stock indicates the ability to plan and allocate resources for basic sustenance needs. Overall, the availability of a one-week food stock serves as an indicator of a household's ability to withstand short-term food shortages and maintain a certain level of food security.
4. **Experienced disasters:** This indicator measures the occurrence of disasters in households in the previous year. It gives significant information regarding the frequency and intensity of disasters in a certain area and aids in determining households' immediate vulnerability to such calamities.
5. **Adaptive capacity to disasters:** This indicator evaluates household readiness to cope with disasters. It assesses whether households have sufficient financial resources, availability of medical supplies, necessary emergency equipment, and adequate information for seeking help during disasters. By measuring these multiple aspects of disaster preparedness, this indicator provides a comprehensive overview of a household's ability to mitigate the impact of disasters and enhance its resilience.

**Living standards:** The living standards dimension is critical for decreasing vulnerability to economic shocks and ensuring a basic quality of life. It comprises four indicators: asset ownership, employment status, underemployment and debt status. The indicators attempt to assess multiple aspects of economic well-being and stability, offering insights into the financial resilience of individuals or households.

1. **Employment status:** Employment status is an important indicator for a vulnerability index because it provides insights into an individual's or household's economic stability, access to resources, and overall resilience. Having a steady job can act as a buffer against sudden economic shocks or emergencies. Individuals with secure employment are better equipped to handle unexpected expenses or disruptions.
2. **Precarious and informal employment:** Measuring whether people work in casual jobs in the informal sector is essential from the standpoint of vulnerability. Individuals involved in such jobs may encounter inconsistencies in their income, leaving them more vulnerable to economic shocks and financial insecurity. Workers in the informal sector frequently have limited access to social protection mechanisms such as insurance, healthcare, and pension plans. Additionally, informal sector jobs may feature hazardous working conditions, longer work hours, and fewer legal protections. These factors can make you more vulnerable to accidents, health risks, and exploitation. Informal sector workers may experience a cyclical pattern of vulnerability, moving in and out of jobs as economic conditions change. This can lead to repeated exposure to vulnerability over time.
3. **Asset ownership:** Ownership of more than two assets, such as a TV, mobile phone, vehicle,<sup>[24]</sup> refrigerator or agricultural land, among others, is essential from a vulnerability standpoint, particularly during shocks, because these assets can considerably influence a household's ability to cope with and recover from adverse occurrences. This can prevent them from falling into debt traps or making hasty decisions that worsen their vulnerability.

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<sup>24</sup> Bicycle, motorbike, three wheeler, boat, car, truck

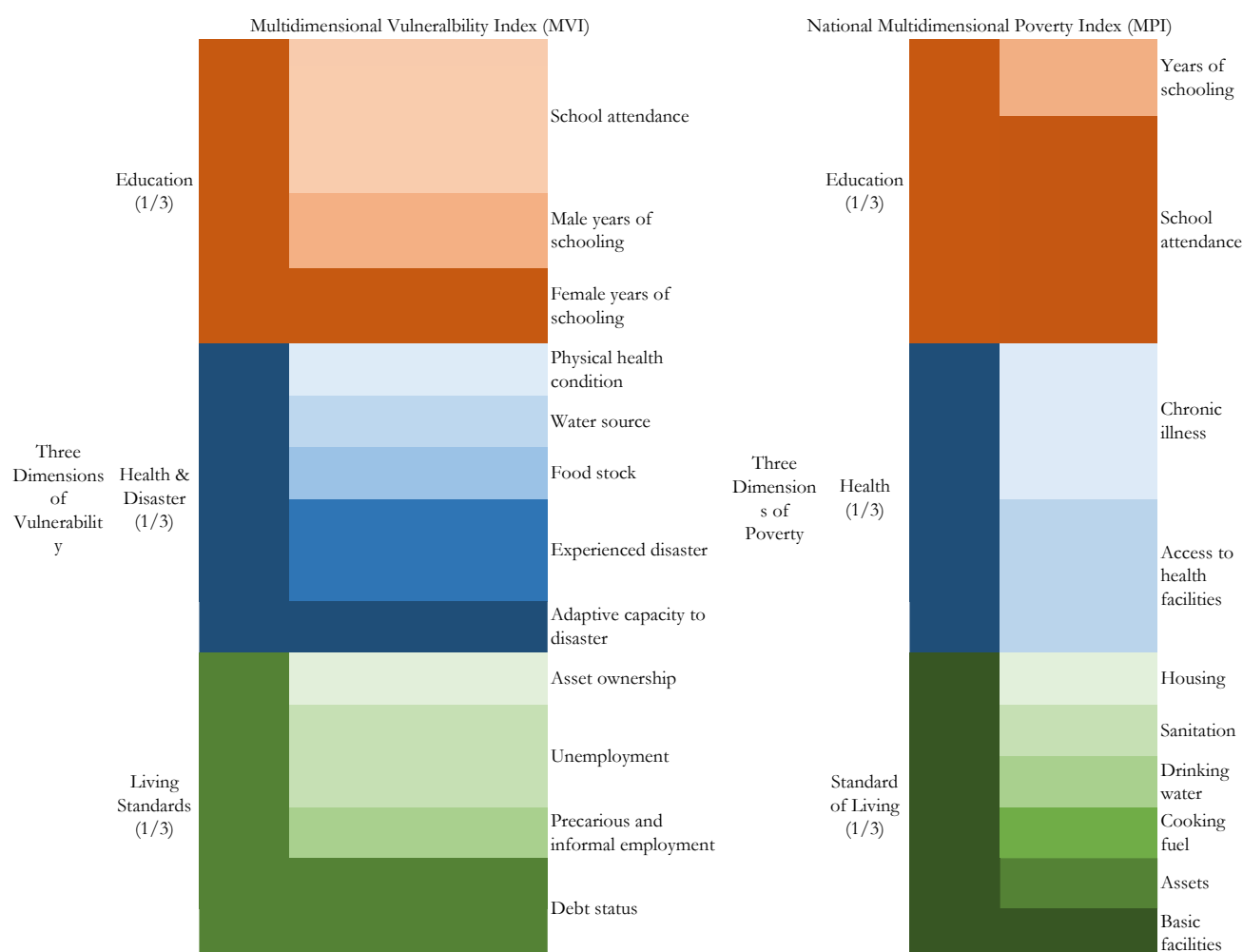
4. **Debt status:** Households debt situation is essential in determining their level of vulnerability. High amounts of debt can put a strain on households, making it harder to cover basic requirements and deal with unforeseen bills. This financial stress might make people more vulnerable to economic shocks and calamities. Debt responsibilities might make it difficult for a household to save and create financial buffers. Individuals and families may be more sensitive to rapid changes in circumstances as a result of their lower ability to tolerate unforeseen catastrophes. The debt indicator includes not only the debt status of households, but also whether jewellery has been pawned or items have been sold to cover basic needs.

The incorporation of these three dimensions and 12 indicators into the MVI framework results in a more comprehensive assessment of vulnerability. This approach recognises the interdependence of multiple elements that contribute to vulnerability and serves as a foundation for developing tailored interventions that address specific challenges faced by Sri Lankan communities within each dimension.

### Comparison of MVI structure with Sri Lanka’s National MPI

The National MPI of Sri Lanka, provides a more detailed and nuanced understanding of poverty, complementing monetary measures. It captures multiple deprivations that people experience simultaneously, allowing for a more accurate policy response to poverty.

**Figure 1b: MVI and National MPI structure**



Source: Calculations for the MVI based on data using the National Citizen Survey 2022-2023.

The MVI is like the MPI in that both are counting measures computed using the Alkire-Foster method. They both utilise a multidimensional framework, assessing different dimensions simultaneously. As observed in Figure 1b, both indices consist of three dimensions: Education, Health (& Disasters for MVI), and Living Standards, which are weighted equally. While they share some similarities, they have differ in terms of the indicators and weights they consider.

1. **Indicators:** With regard to education unlike the MPI, the MVI includes gendered years of schooling. The health indicators in the MVI include self-reported physical health condition, water source, and food stock, which provide additional insights to the MPI indicators of access to health facilities or chronic illness. Additionally, the MVI health dimension also includes indicators related to whether a household has experienced disasters and adaptive capacity to disasters, recognizing that vulnerability can be influenced by a population's ability to cope with and recover from disasters.

To assess living standards, the National MPI contains indicators for housing, sanitation, drinking water, cooking fuel, assets, and basic services. They address essential needs and amenities that contribute to a person's standard of living. The MVI, on the other hand, assesses living standards through a different set of indicators. It includes unemployment, precarious employment, and debt status. These indicators focus on employment-related factors and financial stability, reflecting the economic dimension of vulnerability that surged in the recent crisis. By including these indicators, the MVI aims to capture dimensions of vulnerability related to economic instability and financial resilience. This aligns with the MVI's focus on vulnerability to various shocks, including economic and environmental ones.

2. **Indicator weighting:** While both weigh each dimension equally, the weighting of indicators in the MVI and Sri Lanka's MPI differ.
3. **Indicator definitions and cutoffs:** Note that the MVI employs higher deprivation cutoffs than the MPI in school attendance, where it requires people aged 17 and 18 to attend school or be employed (the MPI requires school attendance for people up to the age 16), and in water, where it requires a direct water line. In these two indicators, the MVI captures a broader range of vulnerability.

It is crucial to highlight that the choice of indicators, cutoffs, and weighting in both indices is influenced by the data available in each survey, and data constraints deeply shape the MVI indicator selection. For example ideally, an MVI might include more objectively comparable indicators of nutritional and health outcomes, or disaster preparedness, as well as job security, to name a few. Within feasible options, the specific context, motivation, priorities, and challenges of the population shaped the structure of each index.

## Weights

The MVI and MPI use equally nested weights for the dimensions, **assigning a weight of 1/3 to each of the three dimensions** (Table 1). Within education, school attendance is assigned a weight of 1/6, while male years of schooling and female years of schooling are assigned weights of 1/12. Together, they comprise the other half of the education dimension. In the dimension of health and disaster, experienced disaster has a weight of 1/9 as a clear marker of vulnerability, while the remaining four indicators have weights of 1/18. Within the living standards dimension, unemployment and debt status are given a weight of 1/9 each, while asset ownership and precarious employment are each assigned weights of 1/18.

**Table 1: Dimensions, Indicators and Weights for the MVI**

Domain	Indicator	Deprivation cutoff	Weight
<b>Education (1/3)</b>	School attendance	Deprived if at least one person of school-going age is not attending school OR if at least one person who is 17-18 years old is neither attending school nor employed	1/6
	Male years of schooling	Deprived if no male aged 18-65 years has passed at least Ordinary Level	1/12
	Female years of schooling	Deprived if no female aged 18-65 years has passed at least Ordinary Level	1/12
<b>Health &amp; Disaster (1/3)</b>	Physical health condition	Deprived if at least one member aged 18-65 has a health condition (have included others)	1/18
	Water source	Deprived if the household does not have a direct water line	1/18
	Food stock	Deprived if the household does not have sufficient stocks of dry food (rice, dhal, sugar, coconut, onion, potatoes, etc.) at home to last the household, for a week for at least one meal a day, for all household members	1/18
	Experienced disaster	Deprived if household has been impacted by a natural disaster in the last year	1/9
	Adaptive capacity to disaster	Deprived if the household does not even have one of the following capacities to deal with future disasters (sufficient financial resources/medical supplies/emergency equipment/sufficient information on who to inform and approach)	1/18
<b>Living standards (1/3)</b>	Asset ownership	Deprived if the household does not own more than two of the following items: radio, mobile, TV, laptop, bicycle, motorbike, washing machine, fridge, three wheeler, boat, and does not own a car or truck.	1/18
	Unemployment	Deprived if any of the members aged 18-65 years are unemployed and looking for job	1/9
	Precarious and informal employment	Deprived if any of the members 18-65 years are working as a casual/domestic/unpaid worker	1/18
	Debt status	Deprived if the household is indebted to cover basic consumption/education/medical treatments or have pawned jewellery or sold belongings to meet income needs	1/9

## Deprivation cutoff and vulnerability cutoff

The AF method uses two types of cutoffs to determine whether a person is deprived in an indicator and whether they are multidimensionally vulnerable.

1. **Deprivation cutoff:**<sup>[25]</sup> This cutoff assesses whether a person is deprived or non-deprived in each indicator based on the level of their achievement. Table 1 provides the deprivation cutoffs for the 12 indicators.
2. **Vulnerability cutoff (k):** The vulnerability cutoff sets the minimum share of deprivations (or deprivation score) needed for a person to be considered multidimensionally vulnerable.

In Sri Lanka's MVI, the vulnerability cutoff is chosen to be 25 percent of all weighted indicators; that is, a person who is deprived of 25 percent of the weighted indicators is considered multidimensionally vulnerable. The vulnerability cutoff (k) determines the minimum amount of joint weighted deprivations required for a person to be identified as multidimensionally vulnerable. Those with deprivation scores equal to or greater than the vulnerability cutoff are classified as multidimensionally vulnerable. Given that the vulnerability cutoff is set at 25 percent, those with a deprivation score of 25 percent or less are multidimensionally vulnerable.

### Justification for vulnerability cutoff

The MVI is new for Sri Lanka, and has fewer international implementations than the MPI, so the justification of the vulnerability cutoff is still under development. The justification for setting the MVI threshold at 25 percent (individuals are vulnerable if they are deprived in at least two deprivations) in the context of Sri Lanka's vulnerability assessment is rooted in the need to capture a broader spectrum of individuals given Sri Lanka's current context – post-war, post-pandemic, post-economic crisis, and seeking a wider vulnerability measure.

First, vulnerability is a broader concept than poverty. It considers a person's exposure to potential risks and shocks, which can lead to adverse outcomes even if they are not currently in poverty.

Second, in terms of policy implications, a lower cutoff enables targeted assistance to enable individuals and households to prevent or overcome challenges before they escalate - that is, it includes those at the edge of experiencing greater hardships. It therefore supports a preventative and proactive approach, allowing for early identification and intervention for individuals at risk of falling into poverty or deeper vulnerability if left unsupported. However, it must be noted that a lower cutoff also has budgetary implications, creating challenges for a fiscally constrained state to support vulnerable households.

Finally, and most importantly, given the economic downturn and post-COVID-19 challenges that Sri Lanka is facing, multiple and overlapping vulnerabilities can emerge or be compounded rapidly. With the vulnerability cutoff set at 25 percent, households experiencing deprivations in at least two of the 12 indicators are classified as vulnerable, which aligns with the purpose of addressing the current complex and uncertain situation. Setting a lower threshold supports resilience-building in Sri Lanka, given that it allows for the addressing of a broader range of potential challenges, creating a more sustainable development pathway for Sri Lanka in the process.

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<sup>25</sup> A detailed justification for the 12 deprivation cutoffs have been provided in Appendix 5.

## Limitations of the study

It should be noted that the strength of the current MVI is limited by data restrictions in the National Citizen Survey. Among the difficulties are:

- 1. Incomplete coverage of vulnerability dimensions and indicators:** A number of dimensions and indicators emerged in expert discussions and FGD as definitive of vulnerability in Sri Lanka, but as the National Citizen Survey had already been conducted, more information on these dimensions and indicators was not available. Indicators on nutrition and job security, for instance, were missing but should be considered if the MVI exercise is repeated or included as part of national statistical exercises. If core dimensions of vulnerability are not effectively captured by available data, the MVI may not enjoy broad public and policy support.
- 2. Weak indicator structure:** The current questionnaire's effectiveness in capturing the range of responses and aligning with the real-world conditions in Sri Lanka needs further enhancement, particularly on debt status, health, and adaptive capacities. For instance, the physical health condition indicator does not encompass the distinction between major and minor conditions that may affect daily functioning. Similarly, the water source indicator does not consider the presence of a consistent flow of quality water.
- 3. Lack of objective and externally validated data:** The National Citizen Survey relies on self-reporting, which may affect the reliability of responses.
- 4. Designed response codes:** The current approach of using binary responses (yes/no) to measure adaptive capacity simplifies the assessment by categorizing individuals into two distinct groups: those who have sufficient resources and those who do not. While this approach might be easy to interpret and analyse, it lacks the ability to capture the nuances and gradations of individuals' preparedness levels. This could result in an oversimplified representation of the population's adaptive capacity. Introducing a wider range of response options, such as a Likert scale or multiple-choice options, can provide a more comprehensive view of people's adaptive capacity. This allows respondents to express their preparedness on a spectrum, indicating varying degrees of resource sufficiency.
- 5. Inadequate representation of vulnerable groups or estate areas:** While the survey is representative at the provincial and district levels, the survey sampling method does not incorporate representativeness across specific disadvantaged groups or estate areas, and hence is excluded from the survey. As a result, the MVI fails to reflect their unique challenges, resulting in policy gaps. It may also potentially result in a disproportionate representation of vulnerabilities across the country.
- 6. Temporal constraints:** The National Citizen Survey is a one-time survey, so it is not anticipated that it will be regularly repeated. Ideally, the MVI would be officially computed by DCS, using a data source that will be regularly updated to show changes in vulnerabilities over time.

To solve these caveats, it is necessary to consider computing an MVI from an official household survey – possibly the same survey that is used for the National MPI – and adjusting the survey questions and response codes to create a rigorous MVI that is linked to the MPI (that includes all the indicators of the MPI plus additional indicators for disasters and employment, and higher standards on some indicators, for example).



In this case, all poor persons would also be vulnerable, and all poverty reduction policies would also reduce vulnerability. In addition, the MVI would profile environmental and economic vulnerabilities that must be addressed in the event of natural disasters or financial crises. To this end, the current study also draws insights from qualitative FGDs to provide useful insights into vulnerabilities that could inform the future collection of quantitative data. Finally, the findings are viewed in parallel to the insights from National MPI 2022 to inform policy recommendations that address vulnerabilities and serve the most vulnerable groups effectively.

After outlining the structure of the MVI with its three dimensions and 12 indicators, our attention now shifts to an in-depth investigation of the national results. The subsequent chapter will delve into national MVI values, headcount, and the intensity of vulnerability.

## Struggling Entrepreneurs: setbacks in the wake of disasters and economic challenges

Pradeep Kumara is a 28-year-old entrepreneur living in Kottala, within the Rakwana region. The business he built operates out of a rented space, both as a physical shop and an online platform known as 'Pradeep's Collection.' Through various digital channels such as social media and his website, he reaches customers in the neighbouring Hatton and Nuwara Eliya areas, posting items either through the local postal service or with the assistance of travelling friends.

Pradeep's shop experienced a temporary surge in sales during the pandemic, as demand for non-essential products increased among his customers. However, the economic crisis that followed resulted in his customers prioritising essential purchases and saving money.

Pradeep's business and family received no financial assistance, particularly during the hardships they faced throughout the pandemic. Instead, they relied on familial support, community and religious institutions. Notably, Pradeep does not qualify for Samurdhi welfare benefits, as he is a businessman and has a family member residing abroad.

*\*Names have been changed to protect the identity of the individual. This interview was conducted in June 2023 and the individual was a respondent of the National Citizen Survey 2022-2023.*



## CHAPTER 2

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# National Results



## Key results

**Table 2: Incidence (H), Intensity (A) and Multidimensional Vulnerability Index (MVI), 2022-2023**

Vulnerability cutoff (k)		Value	Confidence Interval (95%)		Number of vulnerable (in thousands)	Total population (in thousands)
k=25%	MVI	0.206	0.201	0.212	12,340	22,156
	Headcount ratio (H, %)	55.7	54.4	57.0		
	Intensity (A, %)	37.0	36.8	37.3		

Source: Calculations based on data using the National Citizen Survey 2022-2023. Population figures from the Statistical Pocketbook<sup>[26]</sup> (Department of Census and Statistics, Sri Lanka).

Table 2 shows the key results of the MVI 2022, along with the incidence of vulnerability (H), which refers to the proportion of individuals identified as multidimensionally vulnerable, and the intensity of vulnerability (A), which reflects the share of deprivations each vulnerable person experiences on average.

The incidence of multidimensional vulnerability (H) is 55.7 percent. This means that around 55.7 percent of the population or 12.34 million people are multidimensionally vulnerable in Sri Lanka, because they experience deprivations in at least 25 percent of the weighted indicators. The estimate contains a margin of error (confidence interval) because it is based on a sample of the population. We can say with 95 percent confidence that the true multidimensional vulnerability headcount ratio lies somewhere between 54.4 percent and 57 percent.

The average intensity of vulnerability is 37 percent. This means that each vulnerable person is, on average, deprived in more than one-third of the weighted indicators.

The MVI, which is the product of the incidence (H) and intensity (A), amounts to 0.206. This indicates that multidimensionally vulnerable people in Sri Lanka experience 20.6 percent of the total deprivations that would be experienced if all people in Sri Lanka were vulnerable and deprived in all indicators. Essentially, MVI values range from 0 to 1, with 0 indicating that no one is vulnerable and 1 suggesting that everyone is vulnerable and deprived in all indicators.

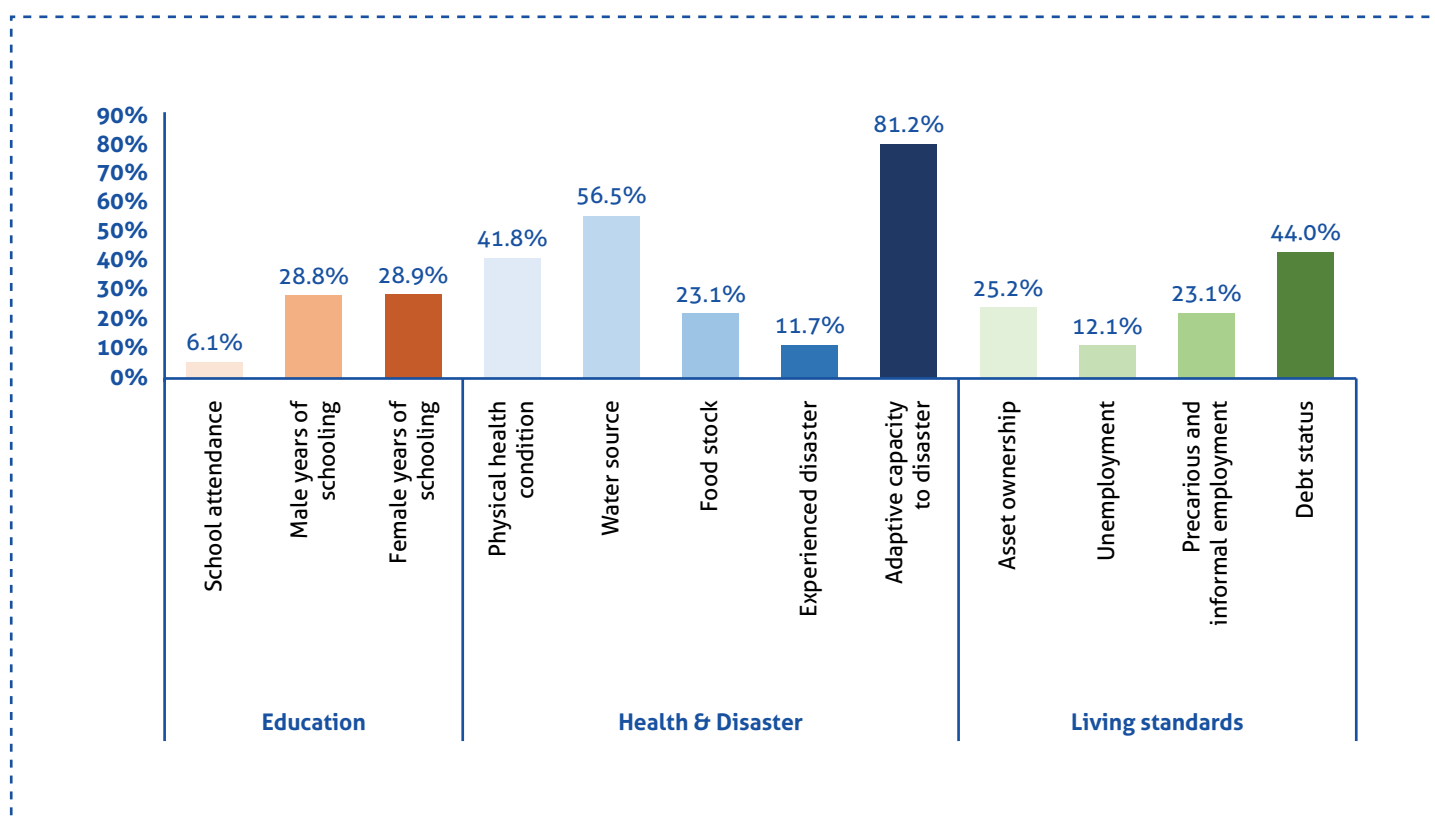
<sup>26</sup> <http://www.statistics.gov.lk/Publication/PocketBook>

## Unpacking the MVI

What deprivations create multidimensional vulnerabilities in Sri Lanka? To answer this question, the MVI is broken down by indicators and its composition is examined by looking at the uncensored headcount ratios, censored headcount ratios and the weighted contribution of each indicator to the MVI.

The uncensored headcount ratio of each indicator is defined as the proportion of people who are deprived in that indicator across the total population (including people who are vulnerable and non-vulnerable). Figure 2 presents these rates based on the National Citizen Survey dataset. The highest levels of deprivation are seen in adaptive capacity to disasters (81.2 percent), followed by water source (56.5 percent), both of which fall under the health and disaster dimension. Debt status (44 percent) and physical health condition (41.8 percent) are also markers of significant deprivation. School attendance shows the lowest level of deprivations (6.1 percent).

**Figure 2: Uncensored headcount ratios**



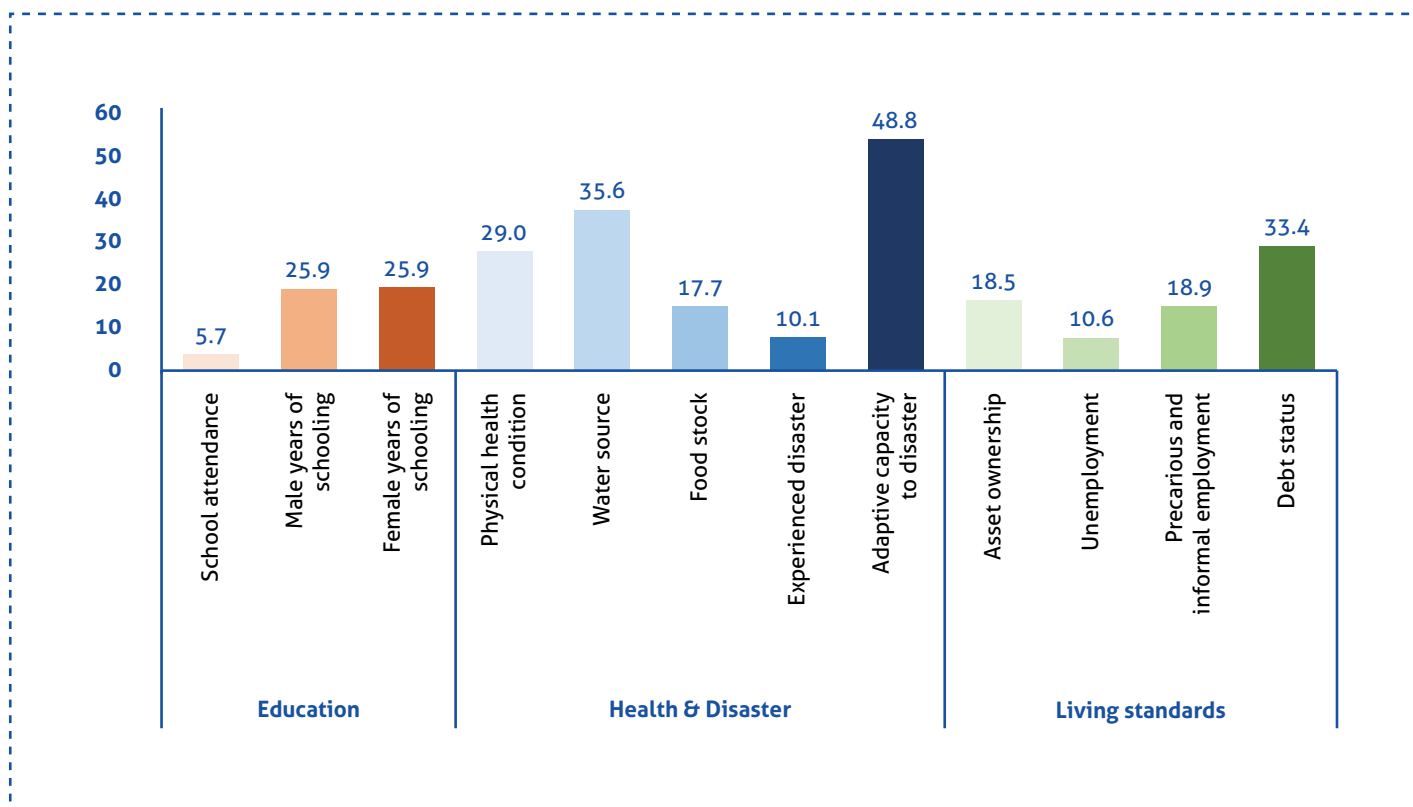
Source: Calculations based on data using the National Citizen Survey 2022-23

The censored headcount ratio is the proportion of the population that is multidimensionally vulnerable and deprived in an indicator. The MVI can also be calculated by adding the weighted censored headcount ratios. Reducing any of the censored headcount ratios reduces the MVI. Censored headcount ratios provide a precise measure of the vulnerable population facing a particular deprivation. This specificity allows policymakers to target interventions to the right number of people.

Figure 3 shows the censored headcount ratios. Nearly half of the population is vulnerable and deprived in the adaptive capacity to disaster indicator (48.8 percent). This means that nearly half of the population lacks sufficient money, medical supplies, emergency equipment, or information to ask for assistance during a disaster. Around one-third of the population is vulnerable and deprived in water source (35.6 percent) and debt status (33.4 percent).

29 percent live in households that have at least one member suffering from some deprivation around physical health conditions. Around 26 percent of people live in households in which no male or female member has passed their Ordinary Level examination and are also multidimensionally vulnerable. It is worth noting that the levels of male and female deprivations are the same, showing gender parity. 18.5 percent live in households that are deprived in the indicator related to asset ownership and are, also vulnerable. Similarly, nearly 19 percent of the population lives in vulnerable households with at least one person working as a casual/domestic worker/unpaid family worker. Deprivation levels in the indicators related to whether the households have experienced disasters and unemployment are comparatively lower at the national level, although this varies between subnational regions, as will be discussed later on.

**Figure 3: Censored headcount ratios**

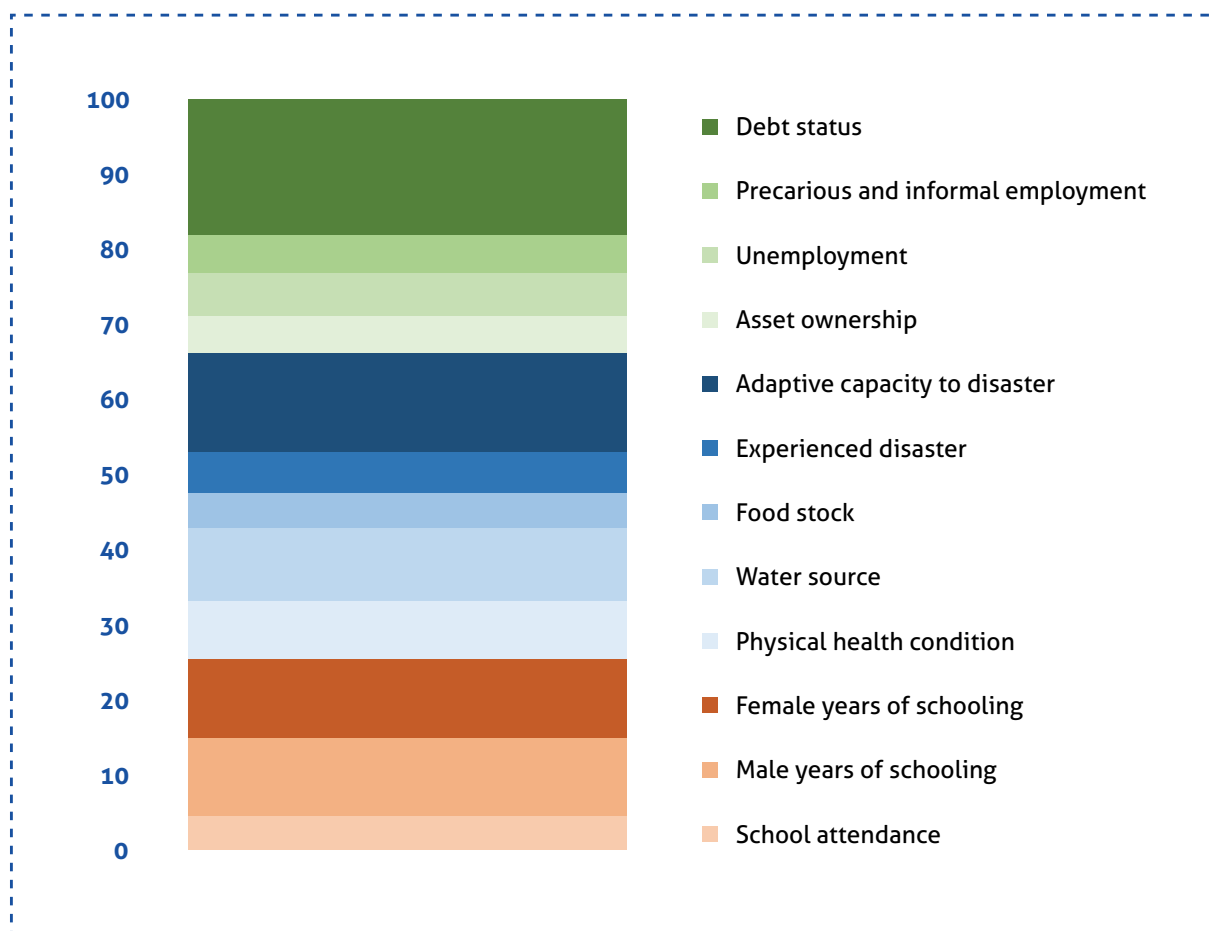


Source: Calculations based on data using the National Citizen Survey 2022-2023.

Figure 4 illustrates the composition of multidimensional vulnerability, by showing the weighted percentage contribution of each indicator. While dimensions are equally weighted, higher weighted indicators are likely to contribute more to the MVI.

Debt status (18 percent) is the highest contributor to overall multidimensional vulnerability followed by adaptive capacity to disaster (13.2 percent). Male and female years of schooling (10.5 percent each), which examine household members possessing their Ordinary Level qualification, are the third highest contributors.

**Figure 4: Percentage contribution of each indicator to MVI, 2023**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

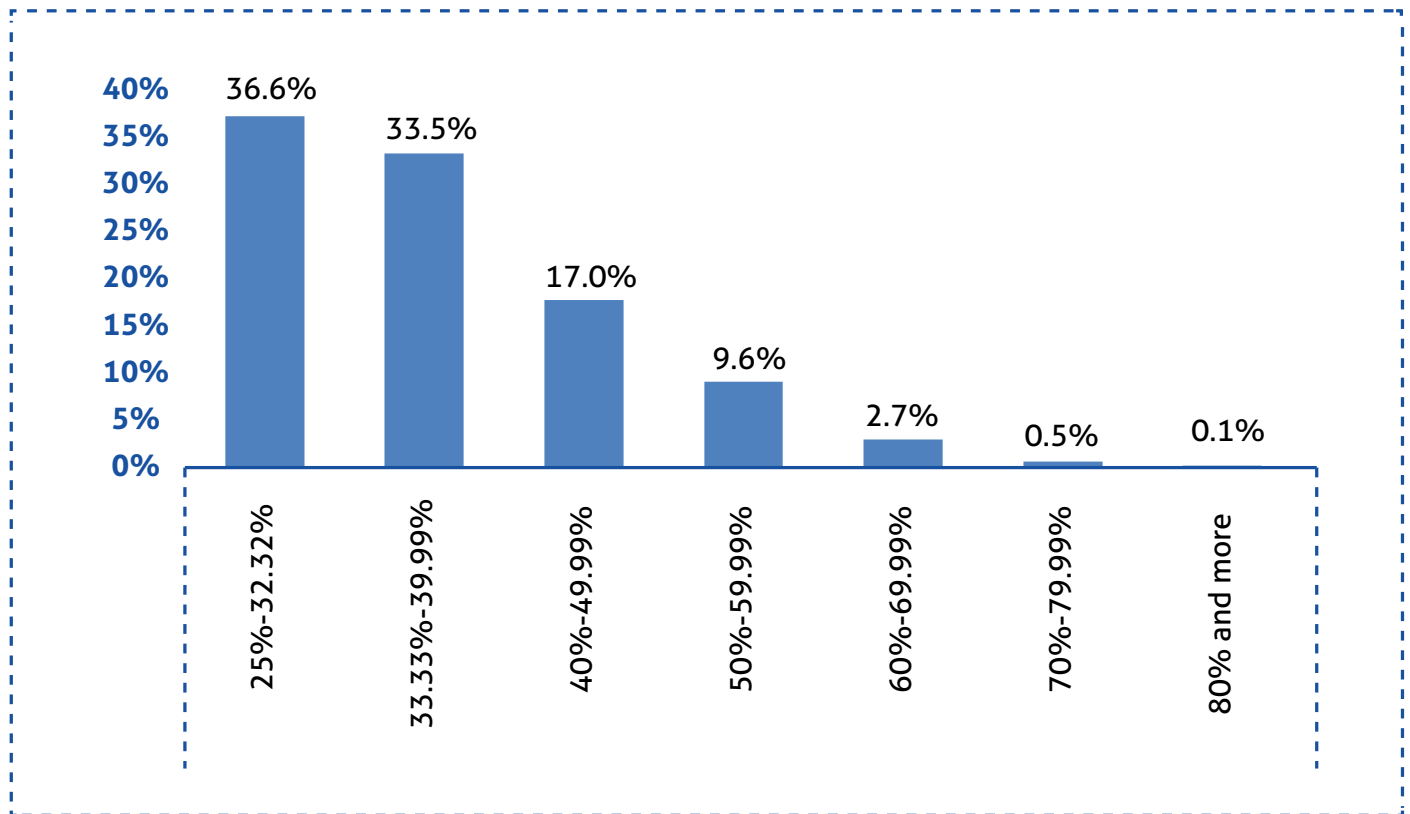
## Intensity gradient of vulnerability

Figure 5 depicts the distribution of vulnerability intensity across vulnerable people by different deprivation score ranges. A deprivation score refers to the percentage of weighted deprivations that people are deprived of. The gradient shows the percentage of vulnerable people that experience each band of deprivation score.

The majority (over 36 percent) of vulnerable Sri Lankans live in the lowest intensity band, which implies that their deprivation score is between 25 percent and 33.32 percent, as shown in Figure 2. Around one-third of vulnerable people (33.5 percent) experience deprivations in the next highest intensity band (33.33 percent to 39.99 percent). Around one-sixth (17 percent) of the vulnerable people experience 40 to 49.99 percent of deprivations. Less than one-seventh (12.9 percent) of vulnerable people face an intensity of vulnerability of 50 percent and beyond. Only 0.1 percent of the vulnerable population experience the highest intensity of vulnerability, as they are deprived in at least 80 percent or more of the weighted indicators. Overall, the majority live near the vulnerability cutoff line ( $k=25\%$ ).



**Figure 5: Percentage of vulnerable persons experiencing each level of intensity (percentages sum to 100%)**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

With an understanding of these national findings, the next chapter shifts towards analysing vulnerability across Sri Lanka, considering different geographic areas, disability status, and other pertinent aspects.

## Healthcare Inequalities: an estate worker's fight for his children's well-being

In Lower Pundaluoya of Sheen Paranawatte, Nuwara Eliya, 43-year-old Nanda Kumara, father of three, faces challenges in providing appropriate healthcare for his family. Nanda's two older children - 17 and 12 - suffer from severe disabilities. The family's limited financial resources have made it difficult for them to access specialized care and therapy that could improve their quality of life.

Nanda and his wife rely entirely on their jobs at the estate for their income, with no additional sources of support.

The COVID-19 pandemic posed new challenges, in the form of school closures and reduced work hours. Nanda, whose shifts were primarily at night, experienced a significant reduction in income (almost one-third of what he used to previously earn) as his work hours were limited to 3–5 hours per day, as opposed to 8 hours for 4–5 days pre-pandemic.

Transportation costs, made worse by the economic crisis from 2022, added to their financial burden. Nanda's youngest child requires Rs. 50 daily to go to school, while monthly hospital visits for the two older children cost the family approximately Rs. 5,000 - 6,000 by a three-wheeler. The family often avoids using public buses due to the stress it causes the children, but when finances are tight, they reluctantly resort to this option.

*\*Names have been changed to protect the identity of the individual. This interview was conducted in June 2023 and the individual was a respondent of the National Citizen Survey 2022-2023.*



## CHAPTER 3

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# Vulnerability Across Sri Lanka



Understanding vulnerability in various contexts, such as rural and urban areas, provinces, and districts, assists policymakers in identifying areas in need of focused action. It enables more effective resource allocation and tailored policy solutions to specific requirements. This chapter examines vulnerability across Sri Lanka by assessing the MVI across these contexts. Additionally, this chapter evaluates the MVI across households that have PwDs and those benefiting from social protection programme coverage.

## Vulnerability by rural/urban areas

Applying the property of subgroup decomposability, levels of vulnerability are investigated by rural and urban areas, and by provinces. Since the National Citizen Survey did not capture the urban/rural/estate split that is often unique to Sri Lanka, analysis was limited to rural and urban areas. **In forthcoming iterations of the MVI, it is recommended to ensure sample representativeness of estate areas.**

Table 3 presents the MVI, the incidence (H), and the intensity (A) of vulnerability by urban and rural areas. **The incidence of rural vulnerability (56.4 percent) is slightly higher than the one for urban areas (52.2 percent), but the difference is not significant, as the confidence intervals are overlapping.** It is worth noting that more than three-fourths of Sri Lanka’s population live in rural areas. There was no significant difference in the intensity of vulnerability across urban and rural areas. **This finding suggests that vulnerability is a pervasive issue that affects both urban and rural populations in Sri Lanka.**

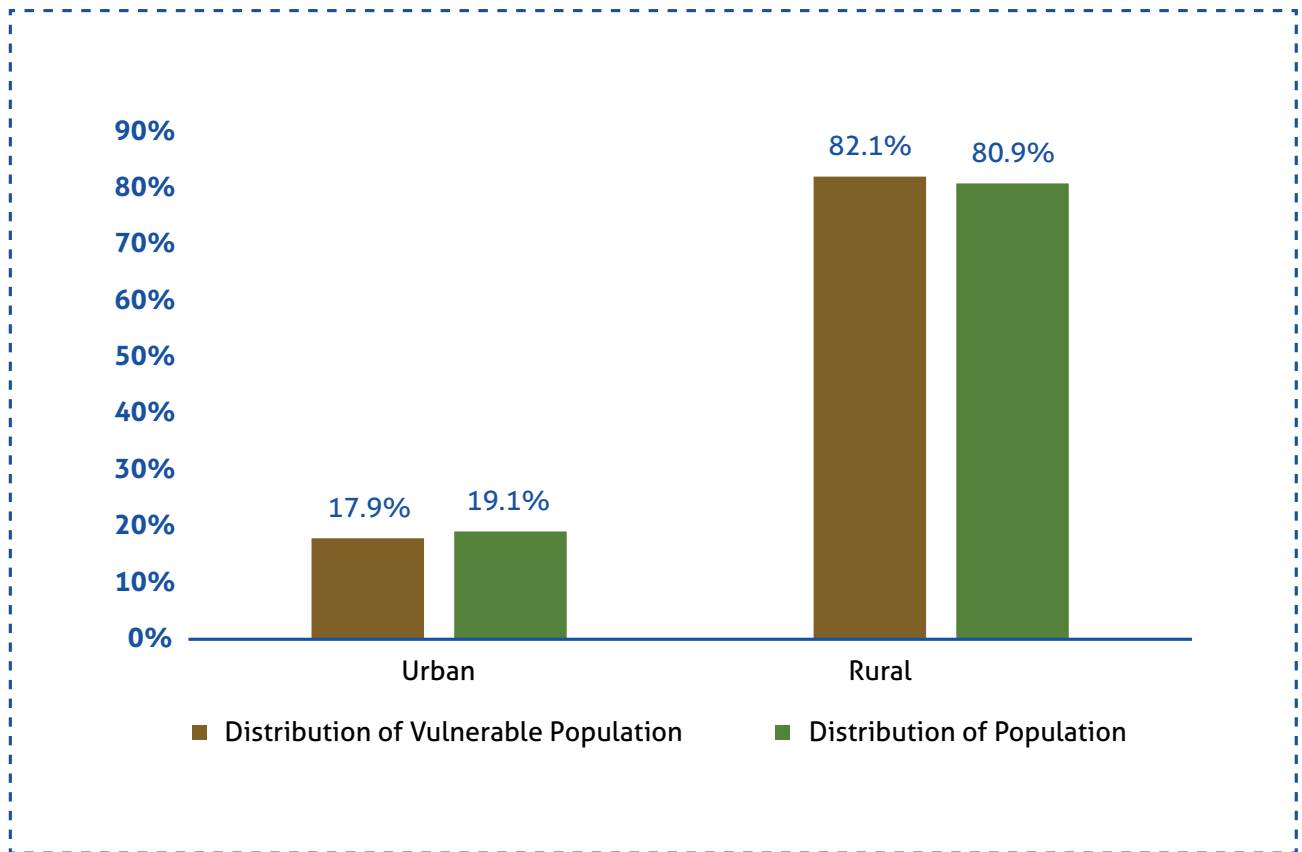
**Table 3: Multidimensional vulnerability by area**

Vulnerability cutoff (k)		Urban			Rural		
		Population share	Value	Confidence Interval (95%)	Population share	Value	Confidence Interval (95%)
k=25%	MVI		0.195	0.180 0.209		0.209	0.202 0.215
	Headcount ratio (H, %)	19.1	52.2	49.1 55.4	80.9	56.4	54.9 57.9
	Intensity (A, %)		37.3	36.5 38.0		37.0	36.7 37.3

Source: Calculations based on data using the National Citizen Survey 2022-2023.

Figure 6 compares the distribution of the vulnerable population and the general population by area. **Although the incidence of vulnerability is nearly similar across areas, considering population shares, around 82 percent of the multidimensionally vulnerable reside in rural areas.** The remaining 17.9 percent live in urban areas. The observation that rural areas have a disproportionately large share of the population that is multidimensionally vulnerable underscores the importance of targeted policy attention to address this imbalance and strengthen the resilience of rural communities.

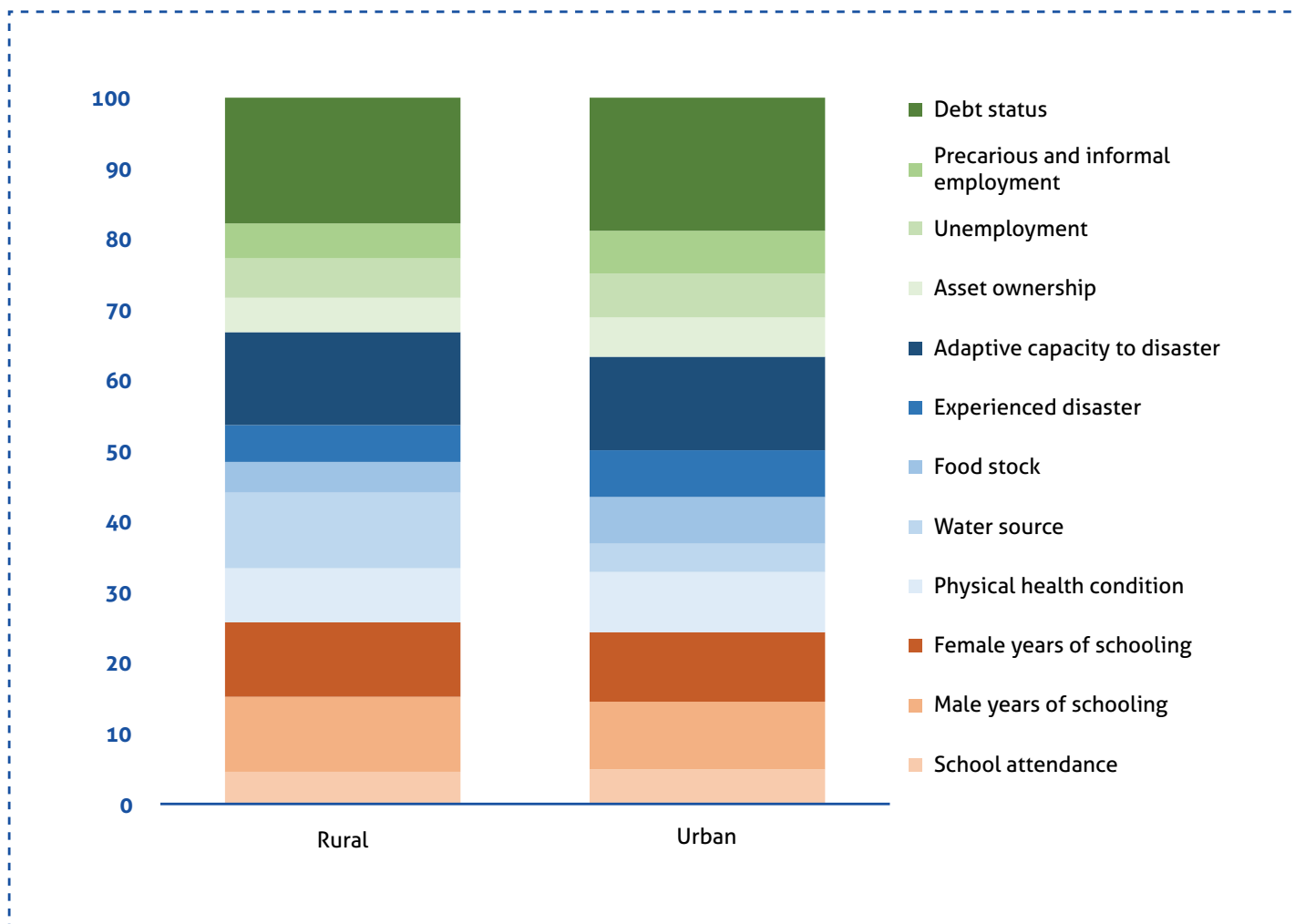
**Figure 6: Distribution of the population and those who are multidimensionally vulnerable by urban and rural areas**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

A similar pattern of indicator deprivations is observed in both urban and rural areas. Figure 7 illustrates that the highest contributors to urban or rural vulnerability are the deprivations in household debt status and financial liquidity, followed by adaptive capacity to disaster. Overall, the contribution of the Health and Disaster dimension is the highest, at 39 percent for urban and 41.1 percent for rural. The dimension of Living Standards is the second largest, with a contribution of 33.2 percent for rural areas and 36.7 percent for urban areas. The dimension of Education has the lowest contribution to overall vulnerability.

**Figure 7: Percentage contribution of each indicator to Rural and Urban MVI**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

## Vulnerability by provinces

Provinces and districts have unique socioeconomic, cultural, and environmental contexts that influence vulnerability. Analysing vulnerability at this level provides insights into localised challenges and opportunities.

The observations made based on Table 4 and Figure 8 highlight important patterns in vulnerability across provinces in Sri Lanka. Vulnerability is not significantly different in most provinces and that confidence intervals overlap indicates a level of equity in the challenges faced by these regions. However, the Eastern and Northern Provinces have higher vulnerability compared to the Western, Central, and Southern Provinces.

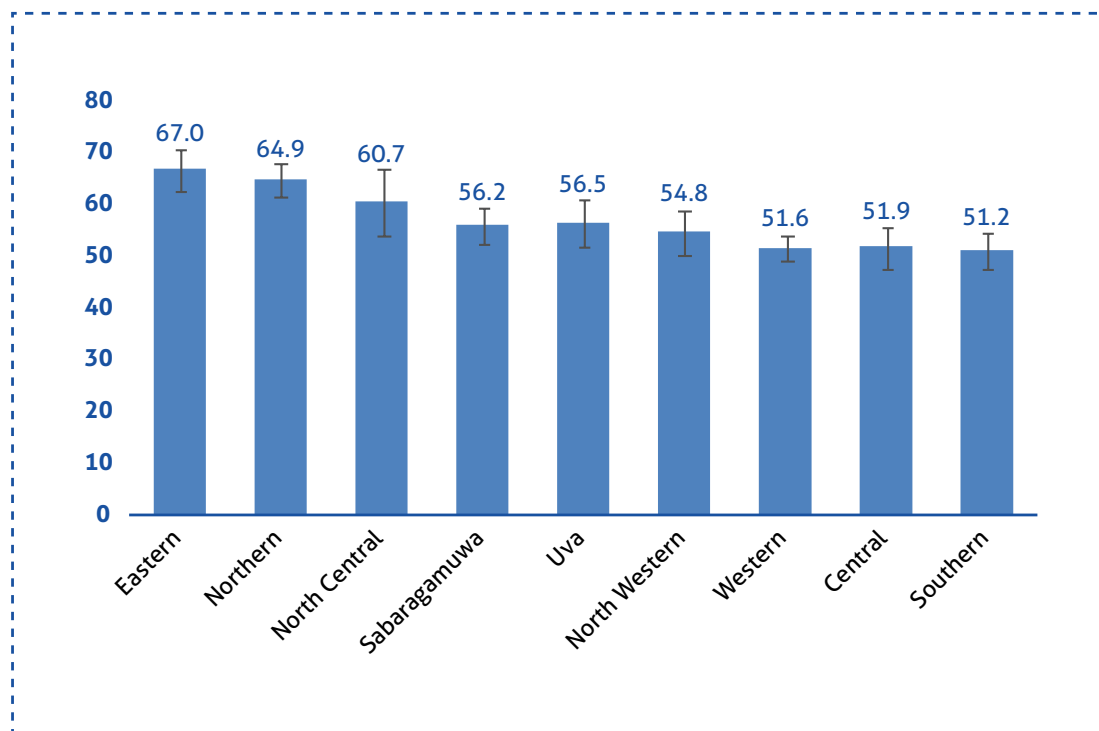
While the level of vulnerability is crucial to examine, it is an insufficient guide for policies and budget allocations, because provinces' populations vary. Table 4 shows that although the **Western Province has one of the lowest MVI values, it houses the largest number of vulnerable people, followed by the Central Province. This insight highlights the importance of considering not only the level of vulnerability, but also the sheer magnitude of vulnerable people in each province.**

**Table 4: MVI by provinces**

Province	Population share	MVI	Confidence Interval (95%)		Headcount ratio (H, %)	Confidence Interval (95%)		Intensity (A, %)	Confidence Interval (95%)		Number of vulnerable (in thousands) <sup>25</sup>
			0.171	0.206		47.7	56.1		35.6	37.1	
Central	12.7%	0.189	0.171	0.206	51.9	47.7	56.1	36.4	35.6	37.1	1,458.9
Eastern	8.0%	0.253	0.233	0.272	67.0	62.9	71.0	37.7	36.7	38.8	1,193.9
North Central	6.3%	0.227	0.199	0.255	60.7	54.0	67.4	37.5	36.6	38.3	850.6
North Western	11.7%	0.205	0.184	0.226	54.8	50.3	59.3	37.5	36.3	38.6	1,420.0
Northern	5.3%	0.241	0.227	0.255	64.9	61.8	68.1	37.2	36.5	37.8	756.5
Sabaragamuwa	9.4%	0.211	0.195	0.228	56.2	52.6	59.7	37.6	36.7	38.5	1,172.6
Southern	12.2%	0.185	0.171	0.199	51.2	47.7	54.7	36.2	35.6	36.8	1,379.9
Uva	6.3%	0.206	0.186	0.226	56.5	51.9	61.1	36.4	35.5	37.4	790.9
Western	28.1%	0.191	0.180	0.202	51.6	49.1	54.2	37.0	36.5	37.6	3,210.1

Source: Calculations based on data using the National Citizen Survey 2022-2023.

**Figure 8: Incidence (H) of multidimensional vulnerability by province (sorted by H)**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

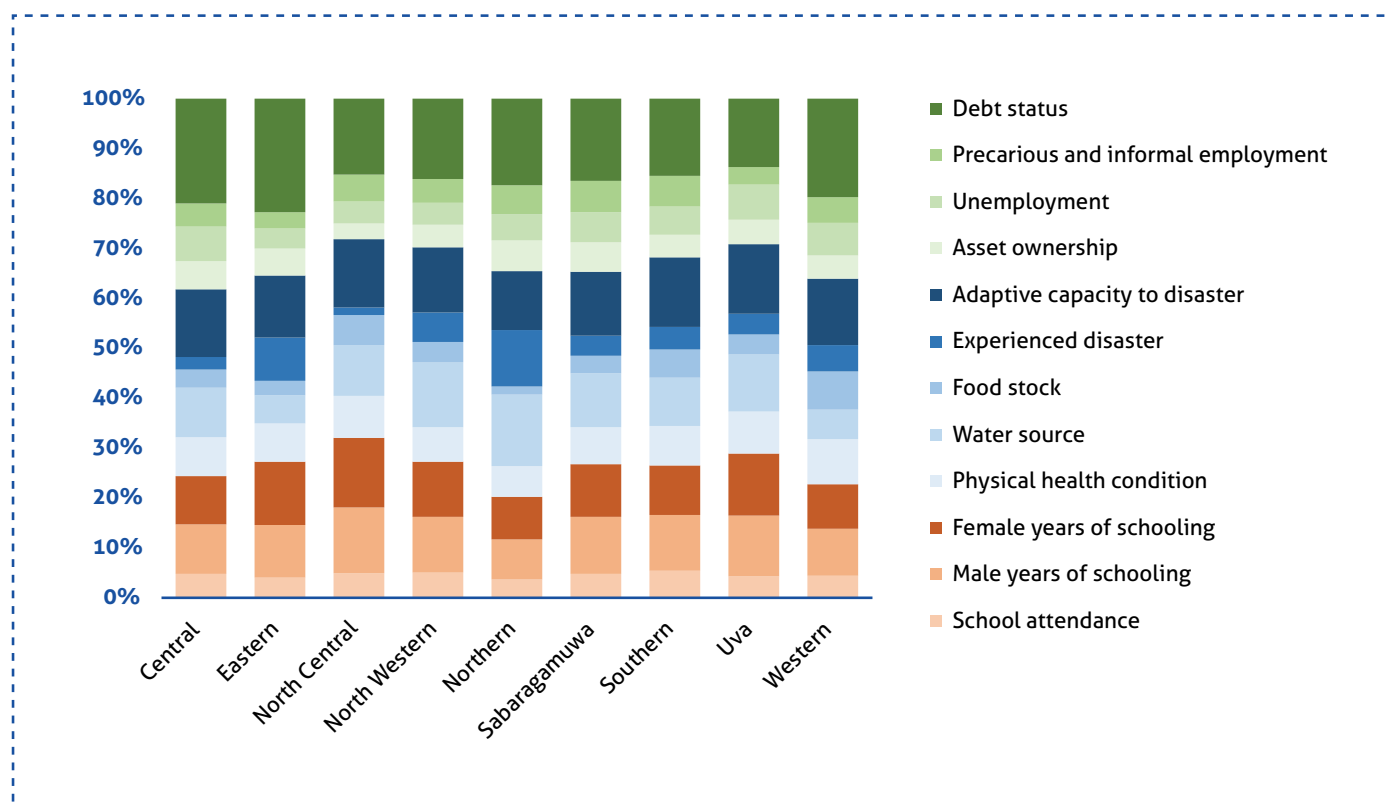
Since the AF method allows for sub-group decomposability and dimensional breakdown, it is possible to explore the indicator composition of the MVI, not only at the national and urban/rural level, but also at the provincial level. Each province can focus on the indicators that contribute most to MVI.

27 Province figures for 2022 drawn from <https://www.citypopulation.de/en/srilanka/prov/admin/>



As observed in Figure 9, there is some variation in terms of the weighted percentage contributions. For example, debt is a significant problem in the Central and Eastern provinces, prompting policy attention with high percentage contributions followed by adaptive capacity. In Uva, however, adaptive capacity is more problematic than debt, followed by female years of schooling.

**Figure 9: Percentage contribution of each indicator by provinces**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

## Vulnerability by districts

Table 5 shows how multidimensional vulnerability varies greatly at the district level. The district level findings of the MVI highlight specific areas in Sri Lanka where vulnerabilities are particularly pronounced. Notably, districts such as **Puttalam (0.288)**, **Batticaloa (0.279)**, **Mullaitivu (0.279)**, **Kilinochchi (0.270)**, **Ampara (0.263)**, **Vavuniya (0.248)**, and **Nuwara Eliya (0.246)** exhibit the highest MVI values; more than 65 percent of the populations residing in these districts are vulnerable based on the MVI.

The MVI ranges from 0.288 in Puttalam to 0.142 in Matale. **Every district identifies at least 40 percent of its residents as multidimensionally vulnerable.** The intensity of vulnerability varies from 34.3 percent (Matale) to 40.1 percent (Puttalam).

Nonetheless, when analysing the count of vulnerable individuals, **Gampaha and Colombo** emerge with the highest numbers of vulnerable people, standing at 1.37 million and 1.23 million respectively. Consequently, directing resources to these areas for vulnerability reduction efforts could be strategic.

**Table 5: Multidimensional vulnerability by district**

District	Population	MVI	Confidence Interval (95%)		Headcount ratio (H, %)	Confidence Interval (95%)		Intensity (A, %)	Confidence Interval (95%)		Number of vulnerable (in thousands)
Ampara	3.4%	0.263	0.239	0.287	70.1	65.1	75.1	37.6	35.8	39.3	527.2
Anuradhapura	4.3%	0.226	0.186	0.266	60.1	50.6	69.6	37.6	36.5	38.8	573.4
Badulla	4.0%	0.205	0.176	0.235	55.9	49.2	62.6	36.7	35.3	38.2	500.3
Batticaloa	2.7%	0.279	0.241	0.318	71.1	63	79.2	39.2	37.8	40.6	419.5
Colombo	11.2%	0.189	0.167	0.211	49.7	44.9	54.5	38	36.8	39.2	1232.6
Galle	5.2%	0.162	0.142	0.182	46.3	41.1	51.6	34.9	34.1	35.7	531.1
Gampaha	11.0%	0.205	0.191	0.219	56.1	52.7	59.4	36.6	35.8	37.3	1370.5
Hambantota	3.1%	0.212	0.187	0.238	57.5	51.7	63.3	36.9	35.6	38.3	388.7
Jaffna	2.8%	0.209	0.186	0.232	58.2	52.6	63.8	36	34.9	37.1	364.3
Kalutara	5.8%	0.171	0.151	0.191	47	42.1	52	36.4	35.4	37.3	609.1
Kandy	6.8%	0.176	0.151	0.201	48.1	42.2	54	36.6	35.4	37.8	722.0
Kegalle	4.1%	0.178	0.146	0.209	48.8	41.4	56.2	36.4	34.8	38	438.2
Kurunegala	7.9%	0.167	0.15	0.184	46.9	42.7	51.2	35.6	34.8	36.3	817.5
Kilinochchi	0.6%	0.27	0.238	0.303	70.8	64.4	77.2	38.2	36.6	39.8	94.2
Matale	2.4%	0.142	0.114	0.17	41.5	33.5	49.6	34.3	33.2	35.4	220.0
Matara	3.9%	0.189	0.163	0.216	51.4	44.8	58	36.8	36	37.7	448.7
Monaragala	2.3%	0.207	0.183	0.23	57.4	51.8	63.1	36	34.9	37	289.9
Mannar	0.5%	0.221	0.187	0.256	61	52.7	69.3	36.3	34.5	38	69.5
Mullaitivu	0.4%	0.279	0.244	0.314	72.4	65.2	79.6	38.6	37.2	39.9	71.0
Nuwara Eliya	3.5%	0.246	0.218	0.274	66.7	59.9	73.5	36.9	35.6	38.2	520.3
Polonnaruwa	2.0%	0.23	0.201	0.259	61.9	55	68.7	37.2	36	38.4	277.3
Puttalam	3.8%	0.288	0.248	0.328	71.8	64.6	79	40.1	38.2	42.1	609.6
Ratnapura	5.4%	0.237	0.217	0.258	61.8	57.5	66.1	38.4	37.2	39.6	735.4
Trincomalee	2.0%	0.198	0.169	0.226	55.9	49.7	62.2	35.4	33.5	37.3	246.5
Vavuniya	0.9%	0.248	0.216	0.28	66.9	59.1	74.6	37.1	35.6	38.5	129.8
<b>National</b>	<b>100%</b>	<b>0.206</b>	<b>0.201</b>	<b>0.212</b>	<b>55.7</b>	<b>54.4</b>	<b>57.0</b>	<b>37.0</b>	<b>36.8</b>	<b>37.3</b>	

Source: Calculations based on data using the National Citizen Survey 2022-2023.

Which deprivations constitute district vulnerabilities and more importantly, how can they be reduced? To answer these questions, the MVI is broken down by indicator, in order to examine its composition. The censored headcount ratio of an indicator represents the proportion of the population that is multidimensionally vulnerable and deprived in that indicator. The MVI can also be computed as the sum of the weighted censored headcount ratios. **Therefore, reducing any of the censored headcount ratios by addressing deprivations for vulnerable individuals will lead to a reduction in the overall MVI.** Censored headcount ratios show which vulnerabilities are most common and pressing in each district. Policymakers may focus their attention on the indicators that have the highest ratios in their respective districts. **Sectors can also utilize these censored headcounts as benchmarks or objectives to guide their efforts in progressively reducing vulnerability over time.**

As depicted in Table 6, the censored headcount ratio varies significantly across districts. For example, the highest level of deprivation among the vulnerable in Puttalam is in adaptive capacity; a household's level of disaster preparedness in terms of sufficient financial resources, medical supplies, emergency equipment, and information to call during a disaster (63.7 percent). This is followed by water source deprivation (58.6 percent), which occurs when households lack direct water pipes in the dwelling, and female years of schooling - that is when no female household member has completed their Ordinary Level examination (43.4 percent). For Batticaloa, it is adaptive capacity (61.9 percent) and household debt status (55 percent), which represents households who have debt or have pawned jewellery or sold belongings to cover basic needs.

In the districts of Mullaitivu and Kilinochchi, the predominant concern is not household debt, but rather the availability of a reliable water source. With censored headcount ratios of 71.7 percent and 69.8 percent, respectively, a substantial portion of the population in these areas face challenges in accessing safe and sustainable water sources. This issue takes precedence over debt, although debt-related vulnerabilities remain a significant factor in both districts. This is also mirrored in the findings from the FGDs conducted in Vavuniya (also in the Northern Province), where respondents highlighted that some areas have water containing a high amount of minerals that is difficult to drink, resulting in households searching for water from other areas.

In the Ampara district, a nearly equal proportion of its residents experience vulnerability and deprivation in the indicators of adaptive capacity (54.9 percent) and debt (54.8 percent). This is closely followed by the indicator on female years of schooling (43.5 percent), reflecting the complex interplay of factors contributing to vulnerability in the region.

Nuwara Eliya, which comes up as one of the most multidimensionally poor districts as per the National MPI,<sup>[28]</sup> is also worst off in adaptive capacity (58.9 percent are vulnerable and deprived), water source (58.5 percent are vulnerable and deprived) and debt status (47.2 percent are vulnerable and deprived) indicators.

Similarly, in the case of Monaragala, which records high levels of both multidimensional poverty (National MPI) and monetary poverty, approximately half of its inhabitants face vulnerability and deprivation in adaptive capacity indicators (50.6 percent), while around one-third experience vulnerability and deprivation in terms of access to a reliable water source (35.8 percent).

Emerging prominently from the vulnerability index is the concern of disaster preparedness, which holds significance even in districts with relatively lower vulnerability levels, such as Matale. Here, over one-third of its population experiences deprivation and vulnerability in terms of the disaster preparedness indicator (39.9 percent). This finding was further substantiated by the insights that emerged from the FGDs conducted, where many respondents indicated that in landslide, drought and flood-prone areas, while the government was aware of perennial risks, little action has been taken towards prevention. **It accentuates the need for comprehensive disaster risk reduction strategies even in areas that might not appear highly vulnerable through other dimensions.**

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28 UNICEF. 2019. Sri Lanka's Multidimensional Poverty Index 2019 Results: National and Child Analyses.

**Table 6: Censored headcount ratios by district (sorted by MVI value)**

	School attendance	Male years of schooling	Female years of schooling	Physical health condition	Water source	Food stock	Experienced disaster	Adaptive capacity to disaster	Asset ownership	Unemployment	Precarious and informal employment	Debt status
Puttalam	5.3	37.8	43.4	30.2	58.6	22.1	28.6	63.7	30.5	6.4	25.5	40.2
Batticaloa	7.4	31.8	37.3	34.6	49.7	6.9	29.5	61.9	23.5	10.4	10.3	55.0
Mullaitivu	4.4	29.8	32.0	29.2	71.7	5.9	34.9	36.2	25.1	17.4	29.3	47.4
Kilinochchi	3.8	26.1	23.5	27.9	69.8	1.9	34.3	50.4	29.3	11.1	32.8	48.9
Ampara	6.4	38.0	43.5	39.2	15.7	20.0	17.5	54.9	21.4	9.9	16.8	54.8
Vavuniya	5.3	21.0	26.7	36.5	66.8	27.8	9.1	64.3	30.9	10.3	16.2	38.7
Nuwara Eliya	6.4	25.4	30.3	29.6	58.5	9.0	8.3	58.9	23.2	17.2	16.3	47.2
Ratnapura	6.7	34.3	33.5	30.0	40.1	14.8	6.9	53.0	24.5	13.4	27.4	37.3
Polonnaruwa	8.6	36.1	36.5	40.3	30.8	14.0	2.7	53.7	13.5	12.8	17.6	39.1
Anuradhapura	5.7	36.0	39.0	30.9	47.0	30.2	3.2	57.4	12.3	7.3	24.3	27.1
Mannar	7.9	23.8	18.9	16.6	47.2	0.1	18.4	53.7	38.0	18.0	9.3	36.3
Hambantota	8.1	35.8	30.5	29.1	25.0	28.3	3.5	51.7	14.3	12.3	22.2	28.3
Jaffna	5.1	18.7	24.2	24.4	57.9	3.1	24.6	52.7	16.1	5.1	33.6	24.9
Monaragala	3.9	30.7	32.5	33.2	35.8	15.9	4.1	50.6	15.7	11.8	15.3	33.4
Badulla	6.2	29.4	29.6	29.8	46.1	14.3	10.0	52.4	19.3	14.1	11.1	20.5
Gampaha	5.3	23.0	21.1	33.1	31.5	27.8	10.2	51.1	16.3	10.8	17.1	34.1
Trincomalee	4.3	20.9	31.4	27.2	9.8	11.0	9.8	52.2	30.8	6.3	18.8	41.4
Colombo	4.9	22.0	22.1	30.4	5.3	30.0	10.3	42.8	18.4	10.9	21.5	33.7
Matara	6.8	25.1	23.5	26.2	40.5	13.6	8.1	47.9	16.5	6.1	22.8	25.6
Kegalle	5.4	21.5	18.0	25.8	42.4	12.1	8.4	43.8	18.9	9.2	19.4	23.4
Kandy	5.0	21.8	21.1	25.7	21.1	17.1	2.9	41.4	18.6	12.0	17.0	33.5
Kalutara	4.8	18.3	16.3	28.5	27.1	17.6	5.1	41.0	12.2	12.2	13.3	33.8
Kurunegala	6.6	22.8	20.0	22.9	43.4	11.5	3.0	40.9	10.3	8.9	14.2	24.8
Galle	3.9	16.6	14.6	23.9	30.6	16.7	9.8	41.3	14.3	10.3	17.0	24.3
Matale	5.2	20.0	12.3	24.2	33.3	5.2	2.0	39.9	14.8	4.0	11.1	25.9

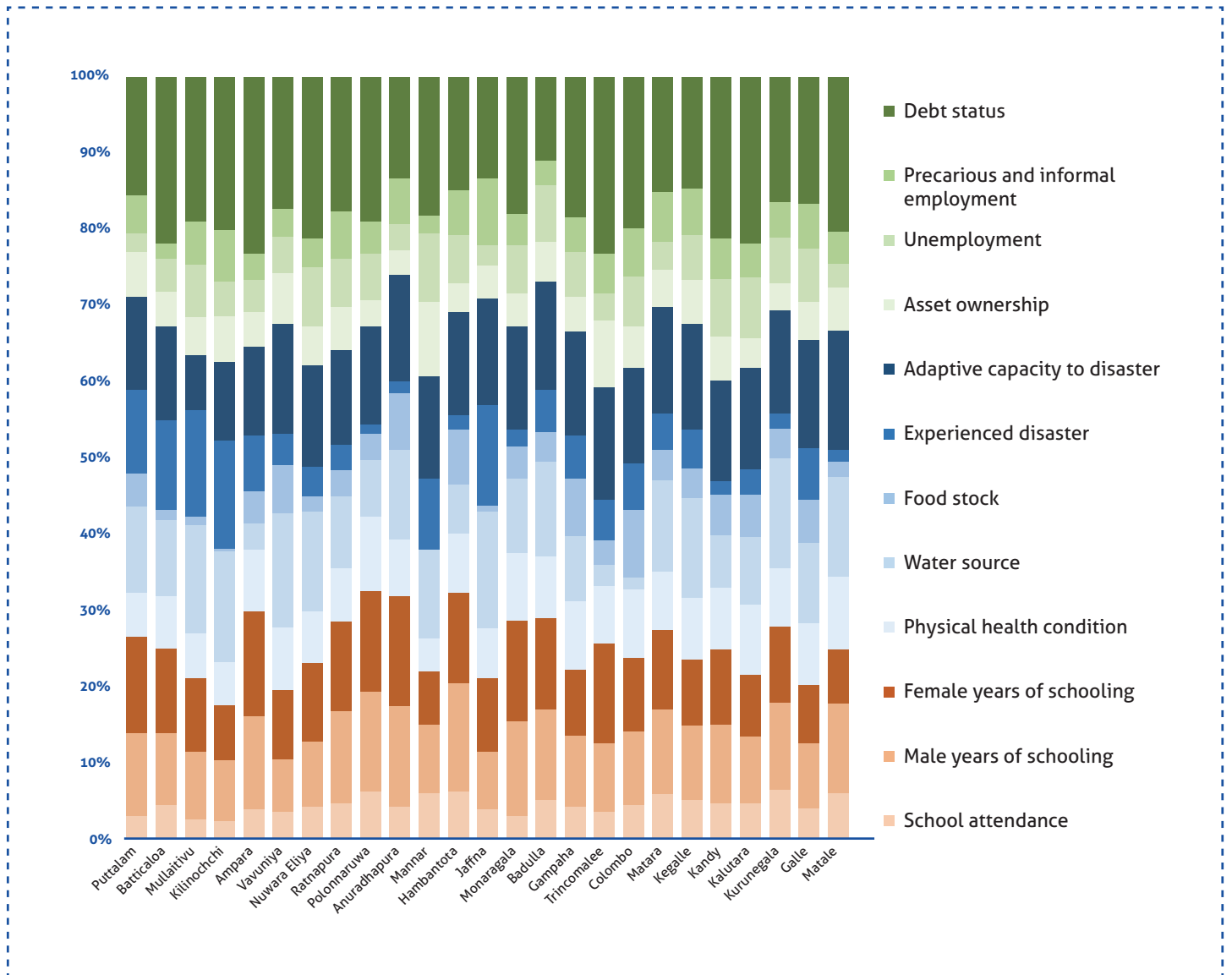
Source: Calculations based on data using the National Citizen Survey 2022-2023.

Assessing the weighted percentage contribution of each indicator to overall multidimensional vulnerability at the district level can provide a more actionable perspective on addressing poverty and vulnerability. By concentrating efforts on the largest contributing indicators of vulnerability, districts can optimise the use of available resources, maximising the effectiveness of interventions. Figure 10 illustrates the percentage contribution of each indicator to multidimensional vulnerability for each district.

At first glance, it is clear that the composition of multidimensional vulnerability varies somewhat across districts. The most stable are asset ownership and school attendance.

Overall, regardless of district, **debt status and adaptive capacity consistently present themselves as significant challenges, underscoring the pervasive impact of economic wellbeing (debt) and resilience (adaptive capability) on the overall wellbeing of communities.** There also exists some interconnection between debt and disaster preparedness. For instance, high levels of debt can lead to financial insecurity, limited access to resources, and thereby, reduced ability to cope with shocks.

**Figure 10: Percentage contribution of each indicator to MVI by districts (sorted by MVI value)**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

Addressing debt-related vulnerabilities could involve financial literacy programmes, debt management strategies, and livelihood diversification. This will also require the development of sustainable livelihoods strategies and options that focus on increasing employment opportunities, higher productivity and the creation of assets at the local level that provide higher and sustained incomes, in order to provide a stronger buffer against household debt-related vulnerability.

Enhancing adaptive capacity might involve disaster risk reduction, early warning systems, community-based disaster management, and strengthening local institutions.

Water is the second greatest contributor to vulnerability after household debt in Mullaitivu, Kilinochchi, Vavuniya, Kegalle, Kurunegala, and Matale. Male and female years of schooling are among the top three contributors in Monaragala, following debt and adaptive capacity. **The significance of water as a vulnerability contributor in several districts highlights the importance of addressing water scarcity, quality, and access issues.** Interventions might include water resource management, infrastructure development, and community-based initiatives to improve water availability.

## Vulnerability by disability status

The importance of analysing the MVI by disability status, specifically comparing households with PwDs to those without, stems from the unique challenges and disparities faced by PwDs and their families. Households with PwDs refers to those households with at least one member who is living with a disability in terms of high level of difficulty or inability to perform essential activities such as hearing, seeing, walking, concentrating, communicating, or self-care.<sup>[29]</sup> As revealed in Table 7, 23 percent of people live in households with PwDs.

Households with PwDs have a significantly higher MVI value (0.229) compared to the households without PwDs (0.200) implying that these households are experiencing greater levels of vulnerability across multiple dimensions. **Similarly, the significant difference in the vulnerability incidence between households with PwDs (60.4 percent) and those without (54.4 percent) highlights the significant impact that disability can have on overall vulnerability.** This disparity emphasises the need for comprehensive policy interventions and support systems to address the challenges faced by households with PwDs.

**Table 7: MVI by disability status**

	Sample share	MVI	Confidence Interval (95%)		Headcount ratio (H, %)	Confidence Interval (95%)		Intensity (A, %)	Confidence Interval (95%)	
Households with PwDs	23.2	0.229	0.221	0.237	60.4	58.6	62.2	38.0	37.5	38.5
Households without PwDs	76.8	0.200	0.194	0.206	54.4	52.9	55.8	36.7	36.4	37.0

Source: Calculations based on data using the National Citizen Survey 2022-2023.

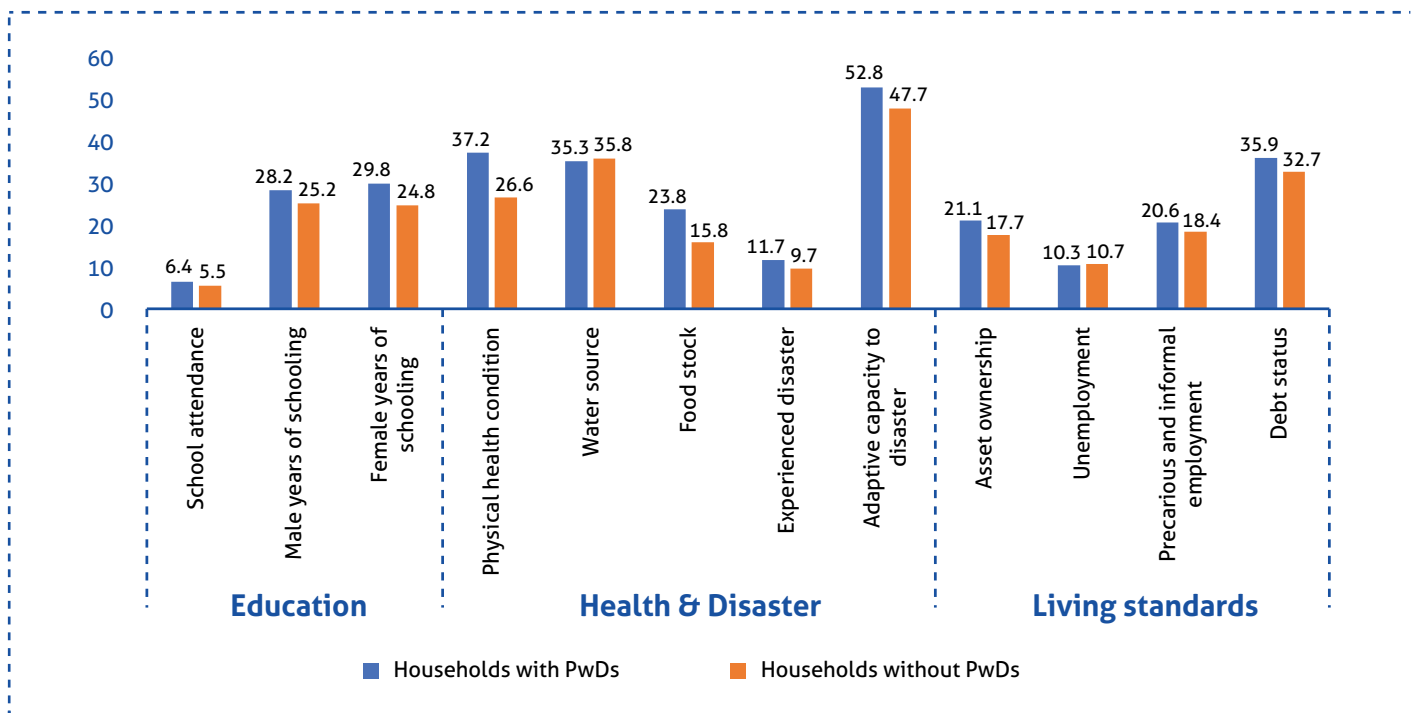
Figure 11 illustrates the censored headcount ratios - that is, the share of population who are vulnerable and deprived in the indicators, providing important insights into the vulnerability and deprivation experienced by households with PwDs compared to those without.

The observation that **households with PwDs experience higher deprivations in almost all indicators suggests a higher degree of vulnerability for these households.** For instance, the higher level of deprivation in disaster preparedness among households with PwDs (52.8 percent) **highlights the need for tailored disaster management strategies that consider the specific challenges faced by PwDs during emergencies.** Likewise, households with PwDs also have higher deprivations in terms of food stock (23.8 percent). Additionally, the elevated levels of debt (35 percent) and informal work deprivations (20.6 percent) in households with PwDs suggest potential economic vulnerabilities. This may be due to challenges in securing stable employment and financial stability for disabled individuals.

The wide range of indicators with higher deprivations indicates that vulnerability for households with PwDs is not limited to a single dimension. **The findings highlight the need of ensuring that policies and programmes consider the special needs and rights of disabled people and their families.**

<sup>29</sup> Household with PwDs: Households with at least one member who has responded as 'a lot of difficulty' or 'cannot do at all' either in terms of hearing, seeing, walking, concentrating, communicating or self-care.

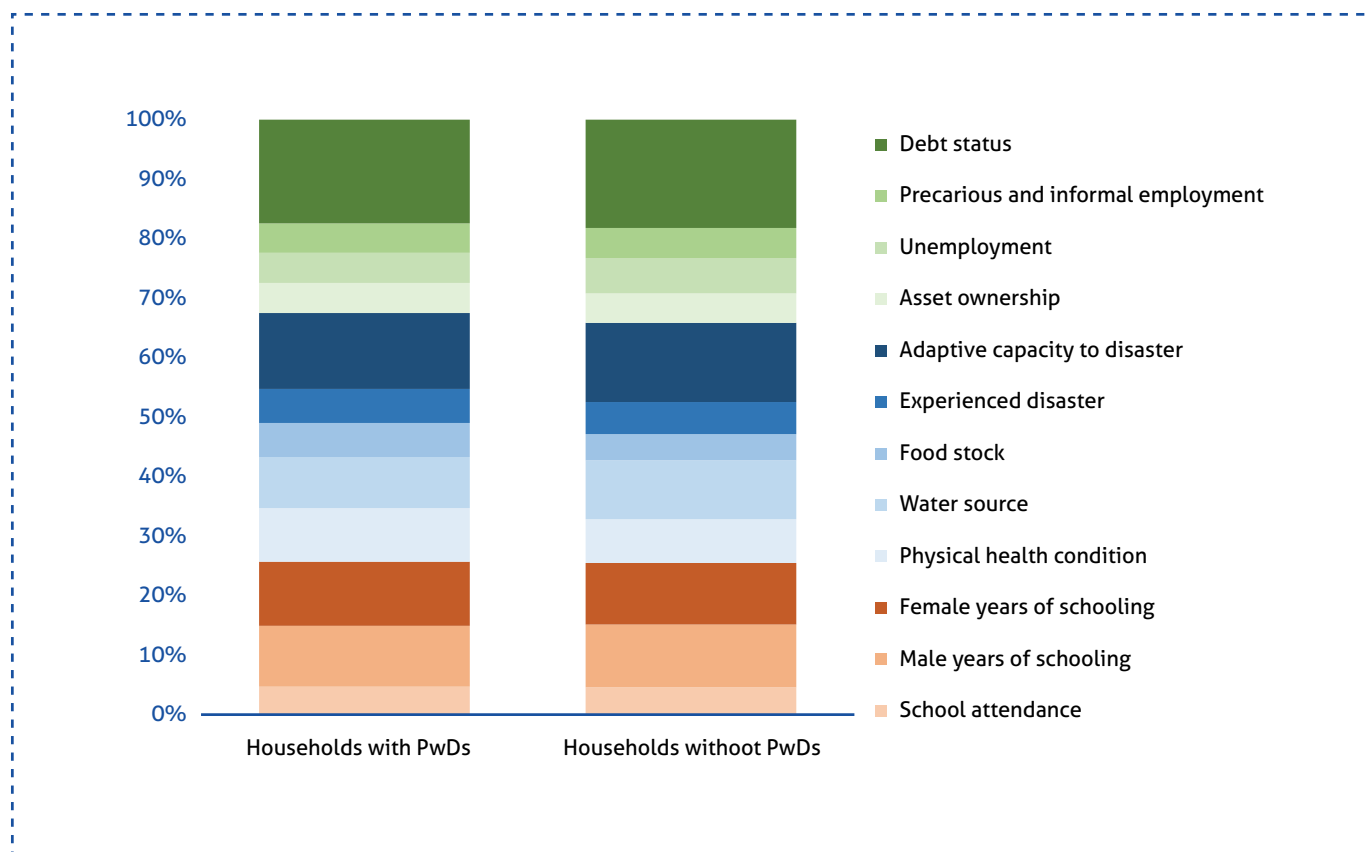
**Figure 11: Censored headcount ratios by disability status**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

Figure 12 depicts comparisons of the weighted contributions between households with PwDs and without. **The similarity in trends for debt and adaptive capacity between households with and without PwDs suggests that these challenges are not unique to households with persons with disabilities.** Both groups of households face similar issues, indicating the broader impact of these challenges on overall vulnerability.

**Figure 12: Percentage contribution of each indicator to MVI by disability status**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

## Vulnerability by gender of household head

Table 8 shows that there is a significant difference in the MVI between male and female-headed households, though marginally. Female-headed households experience slightly lower levels of vulnerability (0.196) compared to male-headed households (0.212). However, it is important to note that the sample size is not representative in terms of male or female-headed households, which could influence the results. Therefore, these findings should be considered as indicative rather than confirmatory.

**Table 8: MVI by household head**

	Sample share	MVI	Confidence Interval (95%)		Headcount ratio (H, %)	Confidence Interval (95%)		Intensity (A, %)	Confidence Interval (95%)	
Female-headed household	33.9	0.196	0.189	0.203	53.6	51.9	55.3	36.5	36.1	36.9
Male-headed household	66.1	0.212	0.206	0.218	56.9	55.4	58.3	37.3	37.0	37.6

Source: Calculations based on data using the National Citizen Survey 2022-2023.

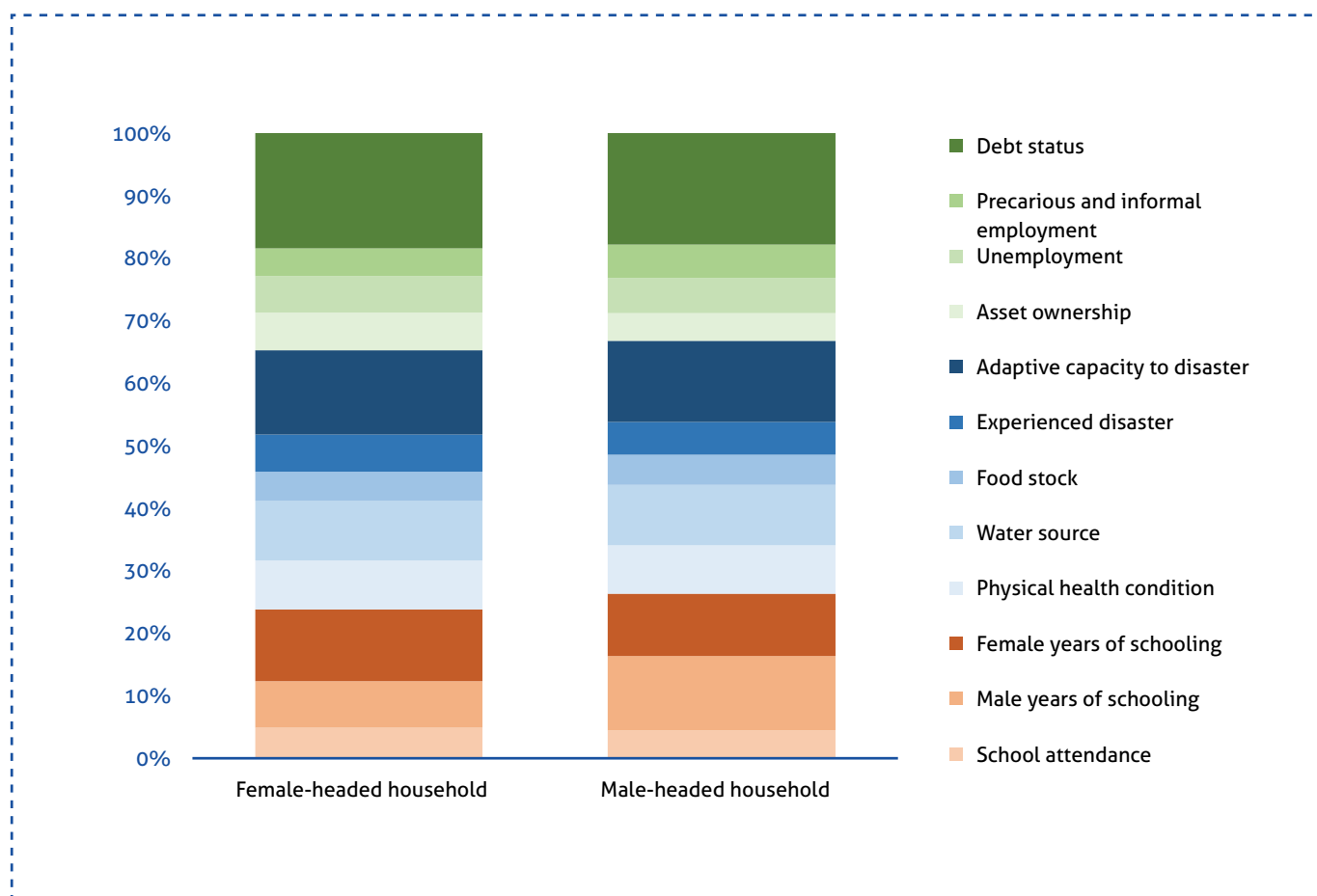


The similarity in the trends of weighted indicator contributions across female-headed and male-headed families, as shown in Figure 13, implies that certain vulnerabilities are shared by both groups. Debt status (18.4 percent for female-headed households and 17.8 percent for male-headed households) and disaster preparedness (13.5 percent for female-headed households and 13 percent of male-headed households) consistently rank as the top contributors to vulnerability.

Female years of schooling is the third-highest contributor in female-headed households, while male years of schooling is the third-highest contributor in male-headed households. Gendered expectations might place greater emphasis on girls' domestic roles, leading to reduced investments in their education in female-headed households. Similar expectations might drive boys to leave school early to support the family financially.

The observed divergence in the contribution of education indicators between female-headed and male-headed households in Sri Lanka suggests gender-specific challenges related to education within these household types. This phenomenon could be influenced by a combination of social, cultural, economic, and structural factors that impact educational opportunities and outcomes differently for females and males. For instance, traditional gender norms might prioritize male education over female education, leading to unequal access to educational resources. Likewise, geographic location and distance to schools can be barriers to education, particularly for females who might face greater safety concerns when traveling longer distances.

**Figure 13: Percentage contribution of each indicator to MVI by household head**



Source: Calculations based on data using the National Citizen Survey 2022-2023.

## Drawing insights from the MVI, National MPI and monetary poverty

Table 9 illustrates the district level results derived from the National MPI 2019, monetary poverty assessments, and the MVI, offering a comprehensive comparison across policy recommendations. Recall that the three measures – National MPI, MVI, and monetary poverty – are not directly comparable. Nevertheless, a degree of both convergence and divergence can be discerned with respect to their policy implications.

As depicted in Table 9, the district of Mullaitivu consistently appears as high poverty and vulnerability. According to the National MPI, approximately 13.8 percent of its population falls under the category of multidimensional poverty; considering monetary poverty<sup>[30]</sup> also positions it as the district with the highest income poverty rate at 44.5 percent. Furthermore, the MVI indicates a notable level of vulnerability, with an incidence of multidimensional vulnerability reaching 72.4 percent.

In the Mullaitivu district, the National MPI 2019 reveals that the primary contributor to multidimensional poverty is the lack of access to health facilities, followed by challenges related to drinking water and cooking fuel. Considering the MVI, the key policy focus areas are household debt, adaptive capacity, and reliable access to water. Although the specific water-related indicators differ between the MPI and the MVI, the overall priority of water-related indicators converge.

Nuwara Eliya similarly stands out as one of the districts with significant multidimensional poverty according to the National MPI, with an H value of 44.2 percent. The district also grapples with considerable monetary poverty, with approximately 26.3 percent of its population categorised as income poor. When evaluating vulnerability, the district faces a notable challenge, as 66.7 percent of its residents fall under the category of multidimensional vulnerability.

Batticaloa also features in both the National MPI 2019 and income poverty assessments. According to the MVI, more than a third of its residents experience multidimensional vulnerability, with significant weighted contributions from indicators such as household debt, adaptive capacity, water source, and female years of schooling. The National MPI emphasises access to health facilities and school attendance as key focus areas for the district.

Puttalam and Ampara emerge as notable districts with heightened vulnerability. In both areas, there are pronounced deprivations in terms of households having experienced disasters experiences and disaster preparedness indicators. It is noteworthy that these districts do not prominently feature in the National MPI and income poverty assessments, suggesting that they might be effectively capturing the crucial disaster-related component, which holds significant relevance given the prevailing circumstances in Sri Lanka.

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30 World Bank. 2021. Sri Lanka Poverty Update: Background Report to Sri Lanka Poverty Assessment. <https://documents1.worldbank.org/curated/en/703091634229318506/pdf/Sri-Lanka-Poverty-Update-Background-Report-to-Sri-Lanka-Poverty-Assessment.pdf>

**Table 9: District level results from National MPI, monetary poverty and MVI**

	National MPI (2019)		Monetary poverty (2022) (Incidence)	MVI (2022-3)	
	MPI value	Incidence (H)		MVI value	Incidence (H)
Ampara	0.058	13.9	17.2	0.263	70.1
Anuradhapura	0.071	18.0	8.1	0.226	60.1
Badulla	0.153	36.6	32.3	0.205	55.9
Batticaloa	0.085	20.2	20.8	0.279	71.1
Colombo	0.014	3.5	2.3	0.189	49.7
Galle	0.041	10.0	13.2	0.162	46.3
Gampaha	0.019	5.1	5.7	0.205	56.1
Hambantota	0.081	20.4	13.6	0.212	57.5
Jaffna	0.039	10.0	25.8	0.209	58.2
Kalutara	0.046	11.5	12.2	0.171	47
Kandy	0.096	21.9	14.3	0.176	48.1
Kegalle	0.075	18.2	20.8	0.178	48.8
Kilinochchi	0.06	15.2	26.4	0.27	70.8
Kurunegala	0.048	11.8	12.5	0.167	46.9
Mannar	0.112	27.0	8	0.221	61
Matale	0.081	20.4	19.6	0.142	41.5
Matara	0.074	17.4	11.1	0.189	51.4
Monaragala	0.141	32.7	21	0.207	57.4
Mullaitivu	0.054	13.8	44.5	0.279	72.4
Nuwara Eliya	0.193	44.2	26.3	0.246	66.7
Polonnaruwa	0.085	20.2	17	0.23	61.9
Puttalam	0.044	10.0	10.5	0.288	71.8
Ratnapura	0.116	28.0	24.9	0.237	61.8
Trincomalee	0.059	14.6	18.3	0.198	55.9
Vavuniya	0.11	26.3	13.9	0.248	66.9

Source: Calculations based on data using the National Citizen Survey 2022-2023.

## Surviving Against the Odds: the impact of crises on education and lower-income families

In the small town of Kikiliyamanne in Nuwara Eliya, K.D. Shiromi, a 31-year-old woman, resides with her husband and their three children. Her husband has worked as a three-wheel driver for many years; however, while he noted that this was once a reliable source of income, it is no longer the same today.

Shiromi has worked as an estate worker for several years. After the birth of their youngest child, she sought alternative employment at a local daycare centre, bringing home additional income. Nonetheless, this is insufficient to cover the family's expenses, despite Shiromi working without sick leave while juggling her responsibilities as a mother.

School closures with the onset of the pandemic forced the couple to also become makeshift educators. The transition to digital learning presented an obstacle, as the family lacked access to the internet and smart devices. Shiromi's husband refinanced his three-wheeler to purchase a smartphone. The disruptions caused by the pandemic resulted in a halt in Shiromi's work, further reducing their income.

With the birth of their youngest child, their household receives some support through the Sarvodaya programme, a community-based entity that provides them with Rs. 5,000 per month for six months. However, their most significant hurdle remains ensuring their children's financial needs are met, even affording school items, such as their older son's jersey priced at Rs. 2,800, is reflective of their circumstances.

*\*Names have been changed to protect the identity of the individual. This interview was conducted in June 2023 and the individual was a respondent of the National Citizen Survey 2022-2023.*



## CHAPTER 4

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# Policy and Programmatic Implications for Reducing Vulnerability



## Summary of findings

Sri Lanka's first MVI presents a deeper understanding of compounded vulnerabilities that people face. It provides a holistic perspective on vulnerabilities by evaluating 12 indicators across education, health and disaster, and living standards. The MVI findings reveal that approximately 55.7 percent of the population are multidimensionally vulnerable, based on a vulnerability cutoff of 25 percent.

Rural areas are marked by a disproportionately high concentration of the population that are multidimensionally vulnerable. Of the 12.34 million vulnerable individuals, a significant 82 percent (equivalent to 10.13 million) reside in rural areas. Key contributing indicators to the rural MVI include household debt (17.8 percent), adaptive capacity to disaster (13.1 percent), and water source (10.7 percent).

Across provinces, the Eastern, Northern, and North Central regions stand out as having significant vulnerabilities, with over 60 percent of their populations categorised as vulnerable. Among the three provinces, the Eastern Province exhibits a particularly acute issue with debt status, constituting a substantial 22.7 percent of its weighted contribution, followed by female years of schooling and adaptive capacity to disasters. Similarly, the North Central Province follows a comparable trend. In the Northern Province, however, the highest contributor remains household debt, closely followed by indicators representing adaptive capacity and experienced disaster.

District-level findings reveal notable MVI values in several areas, with districts such as Puttalam (0.288), Batticaloa (0.279), Mullaitivu (0.279), Kilinochchi (0.270), Ampara (0.263), Vavuniya (0.248) and Nuwara Eliya (0.246) standing out. In these districts, over 65 percent of their respective populations are identified as vulnerable which underscores the pressing need for targeted interventions that address multidimensional vulnerabilities, with a specific focus on disaster preparedness, debt relief, water source accessibility, and female years of schooling.

However, it is important to highlight that across all districts, a significant proportion - no less than 40 percent - of residents are identified as facing multidimensional vulnerability. This observation suggests that Sri Lanka is currently grappling with a widespread incidence of multidimensional vulnerability that transcends geographical boundaries.

Likewise, the notable contrast in vulnerability rates between households with PwDs (60.4 percent) and those without (54.4 percent) emphasizes the substantial influence disability can wield over overall vulnerability levels. This disparity serves as a stark reminder of the profound impact that disability can exert on a household's susceptibility to adverse conditions.

Overall, the MVI serves to enhance the National MPI by incorporating additional indicators, such as those on disaster, household debt, and employment, while the MPI has more comprehensive indicators in health, and additional measures of living standards. Policy actions should strategically harness the synergies presented by both indices, leveraging their combined strengths to effectively address multidimensional poverty and vulnerabilities.

It is timely for Sri Lanka to complement its ongoing poverty reduction endeavours by focusing on reducing vulnerabilities and strengthening resilience within its population. The current challenges faced by

Sri Lanka present a strategic opening to transition towards a low-carbon, human-centered development pathway that may otherwise be difficult in normal circumstances.

Moreover, the process of resilience building entails embracing an anticipatory approach that should be applied to Sri Lanka's development strategy, especially in the context of a fast-changing and uncertain world. By proactively integrating foresight, innovation and strategic planning into our policies and programmes, we can effectively mitigate potential future risks and challenges. This approach serves as a pivotal tool for reducing vulnerabilities that may emerge and for navigating uncertain terrains with resilience.

This chapter outlines key policy and programmatic recommendations, drawn from the analysis of the MVI 2023 results. The policy action areas are further enriched by insights gathered from a series of FGDs held across all nine provinces, in the following districts: Anuradhapura, Badulla, Colombo, Galle, Kandy, Kurunegala, Ratnapura, Trincomalee and Vavuniya.

Furthermore, based on consultations with national stakeholders, understanding the need to complement national priorities, and leveraging the expertise gained by UNDP's active participation in numerous development programmes in Sri Lanka. UNDP's valuable past experiences serve as a vital compass, offering the necessary policy and programmatic orientation for a more resilient Sri Lanka.

## Recommendations

### 1. Leverage the MVI for long-term policy and programme interventions and decision making.

Sri Lanka has a tiered system of government – national, provincial, and local. In theory, these tiers enable more inclusive decision-making. In practice, there risks a vacuum in coordinating policy coherence across the different levels of government and stakeholders. To leverage the MVI effectively, alongside the National MPI, a comprehensive policy coherence framework is required to enable seamless collaboration between various tiers of government and across different institutions transcending beyond their respective sectoral mandates. Such a collaborative platform, enabled through legislation, would facilitate purposeful consultations, robust data sharing mechanisms and integrated decision-making processes. A multisectoral policy coordination platform, such as the proposed National Policy Commission,<sup>[31]</sup> should, in principle, enable the effective harmonizing of policies aimed at addressing crucial structural weaknesses within the sectors highlighted in the MVI - education, disaster preparedness, household debt, and other vulnerable aspects highlighted in the National MPI, such as access to affordable and quality healthcare and public transport, particularly in estate and rural areas.

Policy prerogatives and programmes that are derived from such a platform must be supported by a complete cycle of planning, budgeting, monitoring, and oversight by the Executive and the Legislature. Given the tiered system of government, enabling legislation may be required to unblock redundancies and enable the efficient channelling and use of resources. An institutionalized, locally-based monitoring system would not only complement the processes at the national level, but also help improve equity and inclusiveness in interventions.

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31 The Parliament of Sri Lanka. 2023. [Steps to establish a National Policy Commission in Sri Lanka](#). Accessed 23 August 2023.



The MVI offers an opportunity to address regional and location-specific vulnerabilities. The unique challenges and dynamics that vary across different regions and communities require interventions to be tailored. The MVI and the National MPI can be incorporated into local-level planning, monitoring and resource allocation exercises, including the performance-based block grant allocation formula to ensure differentiated needs of communities are directly addressed. Area-based programming could considerably improve the impact of results by consolidating interventions targeted within a region or locality.

The successful execution of integrated programme interventions must be accompanied by adequate financing. The current fiscal constraints limit the space to undertake new initiatives. However, continuing fiscal consolidation, improving expenditure rationalisation, scaling up digitalisation, and accelerating transparency and accountability efforts, can bring in significant savings, cost efficiencies and divert resources towards socioeconomic investments. Further, noting that repeated cycles of macroeconomic stress have greatly exacerbated multidimensional vulnerabilities, clear frameworks must be put in place for data-driven and forward-looking macroeconomic policy-making.

## **2. Strengthen the use of MVI and vulnerability indicators in social protection schemes.**

Sri Lanka continues to move towards a modern, adaptive, and unified social protection system with less fragmentation that provides income support and opportunities for economic inclusion for the poorest and most marginalized. Multilateral partners are supporting reforms to establish more integrated information management and delivery systems for social assistance payments, a unified social registry containing data on all current and former programme beneficiaries and new applicants, and a single technology solution to include a beneficiary registry, citizen grievance redress mechanism, and beneficiary targeting.<sup>[32]</sup>

The MVI can complement this much-needed structural reform with an evidence-base for determining eligibility with the changing nature of vulnerabilities. Incorporating the MVI or comparable indicators that capture the depth and breadth of deprivations, can offer a more holistic view of vulnerabilities, allowing for tailor-made interventions and improved targeting of beneficiaries. The recently launched 'Aswesuma' social protection programme could benefit from the MVI as it transitions into a comprehensive social protection programme.

Building in a livelihood support-based graduation system is critical to ensure households will not be trapped in a perpetual cycle of vulnerabilities nor remain indefinitely in a social protection programme. The implementation of livelihood and business development support programmes to strengthen micro, small, and medium enterprises (MSMEs) and enabling access to formal credit schemes, will enable the transition from social safety nets to economic opportunities. As the economy gradually stabilises, opportunities in the industry and service sectors will be key to shift employment from low-paying and often informal and unstable jobs in the agriculture, plantation, and non-agriculture sectors. Measures to manage this reorganisation of the economy through re-skilling of workers are an important part of the ongoing process of structural adjustment.

Investments in long term support to sustainable livelihoods and options that focus on increasing opportunities for regular employment with social protection, higher productivity, and the creation of assets at the local level that provides higher and sustained incomes will help build households' resilience to further shocks, especially among women and women-headed households.

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32 United Nations. 2022. Sri Lanka Common Country Analysis 2022 Update.

### **3. Enhance resilience among Persons with Disabilities through inclusive and life cycle based social protection schemes.**

The National Census 2012 records 8.7 percent of Sri Lanka's population as PwDs.<sup>[33]</sup> Out of 1.1 million PwDs, only 29 percent are engaged in economic activities. Rates of unemployment and poverty are high among PwDs. Income generation is limited by lack of employment opportunity for both wage and self-employment.<sup>[34]</sup>

The MVI highlights a notable contrast in vulnerability rates between households with PwDs (60.4 percent) and those without (54.4 percent) underscoring the substantial influence that disability exerts on overall vulnerability. This disparity highlights the need for all-encompassing policy interventions and robust support systems to effectively address the compounded hardships encountered by households with disabilities. However, the scarcity of reliable and timely data prevents the design and delivery of programmes targeting PwDs. Little information is available with regards to their living conditions and quality of life, or the barriers they face in attending school, accessing services and participating in economic activities. Collection of sex/age/disability-disaggregated data for better planning, resource allocation and targeting of service delivery on PwDs are critical to ensure their social and economic participation.

Insights collected from the National Citizen Survey and FGDs revealed that PwDs still face barriers in accessing quality and relevant education. These barriers might be physical, hampered by inaccessible physical environments, or attitudinal, where societal prejudices limit their educational opportunities. Inclusive educational spaces and practices can help improve accessibility, and sensitization campaigns can challenge biases. However, it is the enforcement of laws and regulations pertaining to PwDs that can meaningfully enable their inclusion in all aspects of society. Sri Lanka has ratified the UN Convention on Rights of Persons with Disability in 2016. The adoption of a local bill is pending, and the current crisis calls for expediting its approval to ensure the protection of vulnerable communities.

Institutions involved in the provision of vocational and skills-based training should tailor programmes that enable PwDs to access employment opportunities in the public and private sectors and engage in self-employment activities. This would pave the way for them to become financially independent and resilient. For job and skills matching to happen effectively, Sri Lanka currently lacks accurate data on PwDs and a system to objectively assess their differentiated abilities. This is another area that requires urgent attention.

### **4. Design a sustainable approach to alleviate vulnerabilities of debt-burdened households.**

Households have encountered significant challenges as inflation rose to record highs in 2022, impacting their purchasing power and the real value of their earnings. A contracting economy and high lending rates made borrowing through formal mechanisms significantly challenging. This has driven most vulnerable households without access to collateral to borrow from predatory lenders and private creditors.

The MVI identifies debt status as a significant challenge, underscoring the pervasive impact of economic well-being on the overall well-being of communities, with some districts indicating a higher percentage of debt vulnerability. Due to limitations in the National Citizen Survey, the MVI does not distinguish between

<sup>33</sup> Department of Census and Statistics. 2012. Census of Population and Housing 2012.

<sup>34</sup> Open Government Partnership. 2023. Sri Lanka – Participation for Persons with Disabilities. Accessed 23 August 2023.

formal and private creditors and thus, may obscure the impact debt plays on households. To better understand how formal and informal credit markets function, including financial intermediaries and their relationships with different types of households (female headed, PwDs, MSMEs etc.), a comprehensive assessment is required to identify policy improvements. This is a critical area for policymakers as it contributes towards improved targeting and tailoring of programmes to address issues faced by debt-burdened households.

Digitisation, improved transparency, monitoring and oversight could offer development banks the potential to provide concessionary lending to MSMEs, particularly in the informal sector and women-owned businesses. Backed by government, state-owned development banks can extend repayment periods and employ vulnerability-based criteria for working capital loans that can offer much needed fiscal space in times of crises.

Government extension services, in partnership with the private sector and NGOs, can provide financial literacy programmes and livelihood diversification strategies that can improve resilience at the household and community levels, creating alternate sources of income that can serve as a buffer against debt-related vulnerability.

## **5. Develop a comprehensive strategy to enhance preparedness for climate-induced disasters.**

Climate-induced disasters are increasing in frequency, and investment in early warning mechanisms and disaster preparedness could minimise losses. The MVI identified adaptive capacity as a significant challenge across the country. Enhancing adaptive capacity might involve disaster risk reduction, early warning systems, community-based disaster management, and strengthening local institutions.

A continued investment in and enhancement of early warning systems based on real-time data will play a critical role in providing timely alerts and promoting preparedness for a wide range of hazards, safeguarding vulnerable communities from the adverse impacts of disasters. This is especially important in areas that have demonstrated that they are disaster-prone. Given a significant share of the labour force is engaged in agricultural activities, such early warning systems will be very useful for farmers in rural communities and fishermen in coastal areas.

Similarly, implementing sustainable farming methods that are adaptable to changing climatic conditions is critical to sustaining food security and community resilience. Some recommended disaster risk mitigation practices include launching an extensive awareness campaign to educate farmers about the benefits and techniques of climate-smart farming practices, promoting the cultivation of climate-resilient crop varieties that are adaptable to changing weather patterns, and collaborating with agricultural research institutions to identify and distribute drought-tolerant and flood-resistant seeds that are suitable for various agro-climatic zones in Sri Lanka.

Education and awareness-building programmes are essential to ensure that households and communities are well-informed, equipped, and ready to respond effectively in the face of emergencies and disasters. Involving communities in planning, decision-making, and ongoing training, creates ownership and sustains their commitment towards these initiatives.

Sri Lanka has relevant sectoral policies, guidelines, and regulations to address disaster risk reduction. However, enforcement of these regulations remains inconsistent. Policymakers need to invest in improved oversight and enforcement mechanisms that can significantly enhance preparedness and response to disasters. In many disaster-prone areas, this would also involve relocation and resettlement of households and even communities exposed to obvious disaster risks, taking into account their diverse livelihood and other needs.

## **6. Build climate-resilient water systems that safeguard equitable access to water resources in the face of climate challenges.**

The timing and duration of seasonal precipitation patterns are anticipated to vary due to climate change, leading to negative impacts on water availability. Existing vulnerabilities in the country's water infrastructure, coupled with climate variability, can result in devastating consequences to livelihoods, especially in sectors such as agriculture.

The MVI and the National MPI both revealed that lack of reliable access to safe water is one of the strongest contributors to vulnerability. The analysis calls for greater investments in rural water infrastructure, enabling equitable access to clean drinking water across rural and urban populations to address these vulnerabilities. Other measures could include integrated water resource management initiatives, such as water-saving irrigation techniques and rainwater harvesting, to optimize water use and ensure consistent crop growth and food security even during dry spells. In view of the prevailing drought-like situation, anticipatory interventions before the next farming season must be initiated to mitigate the impact.

Structural issues, such as unequal access to piped water across the country may compound the country's ongoing economic and social challenges. Policymakers will benefit from conducting regular assessments on water productivity to enhance knowledge and implement policies that can advance equitable water allocation in the country.

## **7. Invest in expanding equitable access to quality education.**

The onset of the economic crisis has resulted in education-related expenses becoming increasingly unaffordable to vulnerable households. The MVI and complementary FGDs revealed the cascading crisis has further widened gaps in educational opportunities for many. Children in the households whose vulnerabilities have increased have had to forgo some educational opportunities, particularly given the increased cost of inputs such as transport and tuition fees. The analysis indicated that the gender indicators relating to education were statistically significant.

The ongoing education reform processes should incorporate interventions that target gender-specific challenges, including dropouts prior to and after the completion of the Ordinary Level examinations. Study streams should be broadened while guaranteeing 13 Years of Education, to provide basic life skills during Grades 1-5 (Primary Stage), foundation for life for Grade 6-9 (Junior Secondary Stage) and foundation for career readiness at Grades 10-11 and foundation for academic, vocational and professional life at Grades 12-13 (Senior Secondary Stage). The Ordinary Level Examination should not be a pass/fail examination, but a Completion Certificate that allows children to access further education pathways. Less

weightage should be placed on final summative examinations, and there should be increased emphasis on formative, potentially project-based assignments that evaluate critical thinking, analytical skills, and other competencies throughout the year.

Access to tools and platforms in schools should be widely improved to enable integration of technology into education, aiming to enhance learning experiences, improve student engagement, and provide educators with innovative teaching methods. Greater emphasis must be placed to ensure the safety of female students by implementing measures such as well-lit pathways, safe transportation, and gender-sensitive policies in schools to improve overall education outcomes.

## **8. Establish systems and mechanisms to ensure effective use of MVIs.**

An MVI can be a powerful and innovative tool for decision-makers. Valid and reliable indicators are key to developing a robust MVI. Several dimensions and indicators emerged in expert discussions and FGDs as indicative of vulnerability in Sri Lanka. The absence of the required indicators in the survey, however, prevented its inclusion in the MVI analysis. For instance, indicators on nutrition, job security, sanitation, food security, social exclusion, among others that were missing in the National Citizen Survey, should be considered if the MVI exercise is nationally adopted by DCS as part of their regular statistical exercises. Furthermore, such exercises should ensure representative sampling across key demographics and sectors. This is vital, in order to reflect the unique challenges experienced by communities and to ensure that policy gaps are minimized.

Considering the prevailing poly-crisis and the heightened vulnerabilities experienced by Sri Lanka, a National MVI could serve as the government's overarching metric for measuring multidimensional vulnerability, with the potential to comprehensively reflect the current socioeconomic landscape. A repeated National MVI, that builds on and goes beyond Sri Lanka's official National MPI, can serve as a reliable monitoring and assessment tool. In the event of its adoption by the DCS and incorporation into a relevant survey instrument, improved versions of indicators relating adaptive capacity to disasters, household debt burden, and employment status in the national measures could be considered. A National MVI will enable a more accurate representation of certain multifaceted challenges faced by households and individuals, providing a foundation for targeted policy interventions and effective poverty reduction strategies.

For the MVI to be a useful policy tool, that synergises with the National MPI and other relevant metrics, its methods, findings and recommendations must be widely shared through an effective communication plan. By embracing openness and responsiveness, the MVI progresses from being only an index to ensuring that stakeholders understand the results, recognise their significance, and take appropriate action. Experts and decision-makers will benefit from more technical knowledge, while the public will benefit from simplified information. This guarantees that the findings are applicable to and understandable to all stakeholders.

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It is of paramount importance that this report sets in motion a ripple effect aimed at reducing poverty and vulnerability, leading to the initiation of tangible interventions that address the challenges faced by people on the ground through a coordinated approach.

These recommendations are not meant to be exhaustive. But rather, it is our hope that the MVI will open a space for dialogue and thought leadership around the multidimensional nature of vulnerabilities in Sri Lanka. Furthermore, we also anticipate that the findings of the National MPI are taken into consideration during the integration of the MVI results by policymakers. This approach aims to identify and examine potential synergies between the two indices, with the intent of strategically utilizing these synergies to effectively address and mitigate both vulnerability and poverty.

Our aspiration is that the insights derived from both the MVI and the MPI will serve as catalysts for executing necessary institutional changes as well as policy and programmatic responses. The goal is to ensure that every individual and community is inclusively accounted for, leaving no one behind in the pursuit of a human-centered sustainable development.



## Clean Drinking Water: a lifeline amidst economic instability

H. A. P Kusumalatha, a 49-year-old single mother residing in Ikiri Weva, Anuradhapura, has fought against numerous odds; including single-handedly raising her two children. Her 13-year-old son, battles liver complications and thalassemia (a genetic blood disorder caused by a lack of haemoglobin). The medical expenses associated with her son's treatment often strain her limited resources, and access to clean drinking water was once a pressing concern for Kusumalatha's family.

In the past, unclean water sources contributed to the rising cases of chronic kidney disease and deteriorating quality of life for many residents. However, over the past decade, certain projects have ushered in a game-changing solution: clean water from wells and lakes.

Nevertheless, the COVID-19 pandemic and subsequent poly-crisis in 2022 wreaked havoc on Kusumalatha's livelihood as a daily wage earner. Through the Samurdhi welfare programme, she received a modest assistance of LKR 5,000 for three months; however, it was insufficient to meet her family's needs. The soaring prices of food plunged them into periods of hunger, with Kusumalatha often sacrificing her own meals to ensure her son's sustenance.

*\*Names have been changed to protect the identity of the individual. This interview was conducted in June 2023 and the individual was a respondent of the National Citizen Survey 2022-2023.*





# Appendices



## Appendix 1: The Multidimensional Vulnerability Index (Methodology and Properties)

The below reflects the methodology utilised for the MPI, which is the same methodology utilised to calculate the MVI. Suppose at a particular point in time, there are  $n$  people in Sri Lanka and their wellbeing is evaluated by  $d$  indicators.<sup>[35]</sup> We denote the achievement of person  $i$  in indicator  $j$  by  $x_{ij} \in \mathbb{R}$  for all  $i = 1, \dots, n$  and  $j = 1, \dots, d$ . The achievements of  $n$  persons in  $d$  indicators are summarized by an  $n \times d$  dimensional matrix  $\mathbf{X}$ , where rows denote persons and columns denote indicators. Each indicator is assigned a weight based on the value of a deprivation relative to other deprivations. The relative weight attached to each indicator  $j$  is the same across all persons and is denoted by  $w_j$ , such that  $w_j > 0$  and  $\sum_{j=1}^d w_j = 1$

In a single-dimensional analysis, people are identified as poor as long as they fail to meet a threshold called the 'poverty line' and non-poor, otherwise. In a multidimensional analysis based on a counting approach - as with the adjusted headcount ratio - a person is identified as poor or non-poor in two steps. In the first step, a person is identified as deprived or not in each indicator subject to a deprivation cut-off. We denote the *deprivation cut-off* for indicator  $j$  by  $z_j$ , and the deprivation cut-offs are summarized by vector  $\mathbf{z}$ . Any person  $i$  is deprived in any indicator  $j$  if  $x_{ij} < z_j$  and non-deprived, otherwise. We assign a *deprivation status score*  $g_{ij}$  to each person in each dimension based on the deprivation status. If person  $i$  is deprived in indicator  $j$ , then  $g_{ij} = 1$ ; and  $g_{ij} = 0$ , otherwise. The second step uses the weighted deprivation status scores of each person in all  $d$  indicators to identify the person as poor or not. An overall *deprivation score*  $c_i \in [0, 1]$  is computed for each person by summing the deprivation status scores of all  $d$  indicators, each multiplied by their corresponding weights, such that  $c_i = \sum_{j=1}^d w_j g_{ij}$ . A person is identified as poor if  $c_i \geq k$ , where  $k \in (0, 1]$ , and non-poor, otherwise. The deprivation scores of all  $n$  persons are summarized by vector  $\mathbf{c}$ .

After identifying the set of poor and their deprivation scores, we obtain the adjusted headcount ratio ( $M_0$ ). Many countries refer to this as the MPI or Multidimensional Poverty Index.

The focus axiom requires that while measuring poverty the focus should remain only on those identified as poor.<sup>[36]</sup> This entitles us to obtain the censored deprivation score vector  $c(k)$  from  $\mathbf{c}$ , such that  $c_i(k) = c_i$  if  $c_i \geq k$  and  $c_i(k) = 0$ , otherwise. The *MPI* is equal to the average of the censored deprivation scores:

$$M_0 = MPI = \frac{1}{n} \sum_{i=1}^n c_i(k).$$

### Properties of the MPI

We now outline some of the features of MPI that are useful for policy analysis. The first is that MPI can be expressed as a product of two components: the share of the population who are multidimensionally poor, or multidimensional headcount ratio ( $H$ ), and the average of the deprivation scores among the poor only, or intensity ( $A$ ).

$$MPI = \frac{q}{n} \times \frac{1}{q} \sum_{i=1}^n c_i(k) = H \times A;$$

<sup>35</sup> The meaning of the terms 'dimension' and 'indicator' are slightly different in Alkire and Foster (2014) and in Alkire and Santos (2010). In Alkire and Foster (2014), no distinction is made between these two terms. In Alkire and Santos (2010), however, the term 'dimension' refers to pillar of wellbeing and dimension may consist of several indicators.

<sup>36</sup> In the multidimensional context, there are two types of focus axioms. One is a deprivation focus, which requires that any increase in already non-deprived achievements should not affect a poverty measure. The other is a poverty focus, which requires that any increase in the achievements of non-poor persons should not affect a poverty measure. See Bourguignon and Chakravarty (2003) and Alkire and Foster (2014).

Where  $q$  is the number of poor.<sup>[37]</sup> This feature has an interesting policy implication for intertemporal analysis. A certain reduction  $MPI$  in may occur either by reducing  $H$  or by reducing  $A$ . This difference cannot be understood by merely looking at  $MPI$ . If a reduction in  $MPI$  occurs merely as the result of a reduction in the number of people who are marginally poor, then  $H$  decreases but  $A$  may not. On the other hand, if a reduction in  $MPI$  is the result of a reduction in the deprivation of the poorest of the poor, then  $A$  decreases, but  $H$  may not.

The second feature of  $MPI$  is that if the entire population is divided into  $m$  mutually exclusive and collectively exhaustive groups, then the overall  $MPI$  can be expressed as a weighted average of the  $MPI$  values of  $m$  subgroups, where the weights are the respective population shares. We denote the achievement matrix, the population, and the adjusted headcount ratio of subgroup  $l$  by  $X^l$ ,  $n^l$  and  $MPI(X^l)$ , respectively. Then the overall  $MPI$  can be expressed as

$$MPI = \sum_{l=1}^m \frac{n^l}{n} MPI(X^l).$$

This feature is also known as *subgroup decomposability* and is useful for understanding the contribution of different subgroups to overall poverty levels<sup>[38]</sup>. Note that the contribution of a sub-group to overall poverty depends both on the poverty level of that subgroup and that sub-group's population share.

The third feature of  $MPI$  is that it can be expressed as an average of the censored headcount ratios of indicators weighted by their relative weight. The censored head count ratio of an indicator is the proportion of the population that is multidimensionally poor and is simultaneously deprived in that indicator.

Let us denote the censored headcount ratio of indicator  $j$  by  $h_j$ . Then  $MPI$  can be expressed as

$$A = \frac{MPI}{H} = \sum_{j=1}^d w_j \frac{h_j}{jH} = \sum_{j=1}^d w_j h_j^p.$$

Breaking down poverty in this way allows an analysis of multidimensional poverty to depict clearly how different indicators contribute to poverty and how their contributions change over time. Let us denote the contribution of indicator  $j$  to  $MPI$  by  $\Phi_j$ . Then, the contribution of indicator  $j$  to  $MPI$  is

$$\Phi_j = w_j \frac{h_j}{MPI} = w_j \frac{h_j^p}{A}$$

37 This feature is analogous to that of the poverty gap ratio, which is similarly expressed as a product of the headcount ratio and the average income gap ratio among the poor.

38 See Foster, Greer and Thorbecke (1984) for a discussion of this property.

## Appendix 2: Robustness analysis of the MVI

This section presents robustness tests for the choice of the k-value (vulnerability cut-off). The analysis confirms that the MVI results are not overly sensitive to changes in the vulnerability line.

Given that the MVI is based on a sample of the Sri Lankan population, it is subject to sampling error. Thus, it is important to consider the standard errors when assessing the robustness of the ordering of the districts according to their vulnerability. To do this, we first compare the MVI values for each pair of districts under the chosen vulnerability cut-off of 25 per cent, accounting for the MVI standard errors. We then assess whether it is possible to establish, for example, that i) district A is more vulnerable than district B, ii) district B is more vulnerable than district A, or if iii) we cannot statistically determine which one is more vulnerable. This district ordering is taken as the baseline. We then perform robustness tests to changes in the vulnerability cut-off to 33 per cent and 34 per cent as follows.

We estimate the district MVI for the alternative poverty cut-offs  $k=33$  per cent and  $k=34$  per cent. We consider a pairwise comparison to be robust if the district ordering established at baseline is preserved. We found that half (50.3 per cent) of the 300 possible pairwise comparisons of MVI levels across districts are significantly different at the baseline, and around 81 per cent are also significantly different under the alternative cut-offs and maintain the same ordering of which is more vulnerable. This shows that the district orderings by the MVI levels are largely stable with respect to changes in the poverty cut-off.

The pairwise ordering analysis above is the most authoritative analysis and the one that is used to assess the robustness of the MVI. However, because some readers will be more familiar with rank correlations, we present these analyses below, keeping in mind that rank correlations are less precise because they do not consider sampling errors.

Table x presents the Spearman and Kendall Tau-b rank correlation coefficients for the rankings of the districts using the selected poverty cut-off,  $k=25$  per cent, and the ranking for alternative poverty cut-offs of 16 per cent, 33 per cent, 34 per cent and 40 per cent. The Spearman coefficient is higher than 0.9 for all alternative vulnerability lines. Similar results are found when using the Kendall Tau-b correlation coefficient, which is above 0.8 for each of the alternative, and even rises to 0.9 for  $k=16$  per cent and  $k=34$  per cent.<sup>[39]</sup> This means that the ranking comparisons of the districts according to their MVI using a vulnerability cut-off of 25 per cent is preserved to a very large extent (at least 80 per cent of the time) when we consider alternative vulnerability lines between 16 per cent and 40 per cent.

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<sup>39</sup> The Kendall Tau-b rank correlation coefficient is always lower than Spearman as it accounts for tied ranks.

**Table 10: Correlation among districts ranks for different vulnerability cut-offs**

		k=25%
k=16%	Spearman	0.984
	Kendall Tau-b	0.913
k=33%	Spearman	0.976
	Kendall Tau-b	0.893
k=34%	Spearman	0.988
	Kendall Tau-b	0.927
k=40%	Spearman	0.968
	Kendall Tau-b	0.887

Source: Calculations based on data using the National Citizen Survey 2022-23.

## Redundancy analysis of the MVI measure

### Redundancy

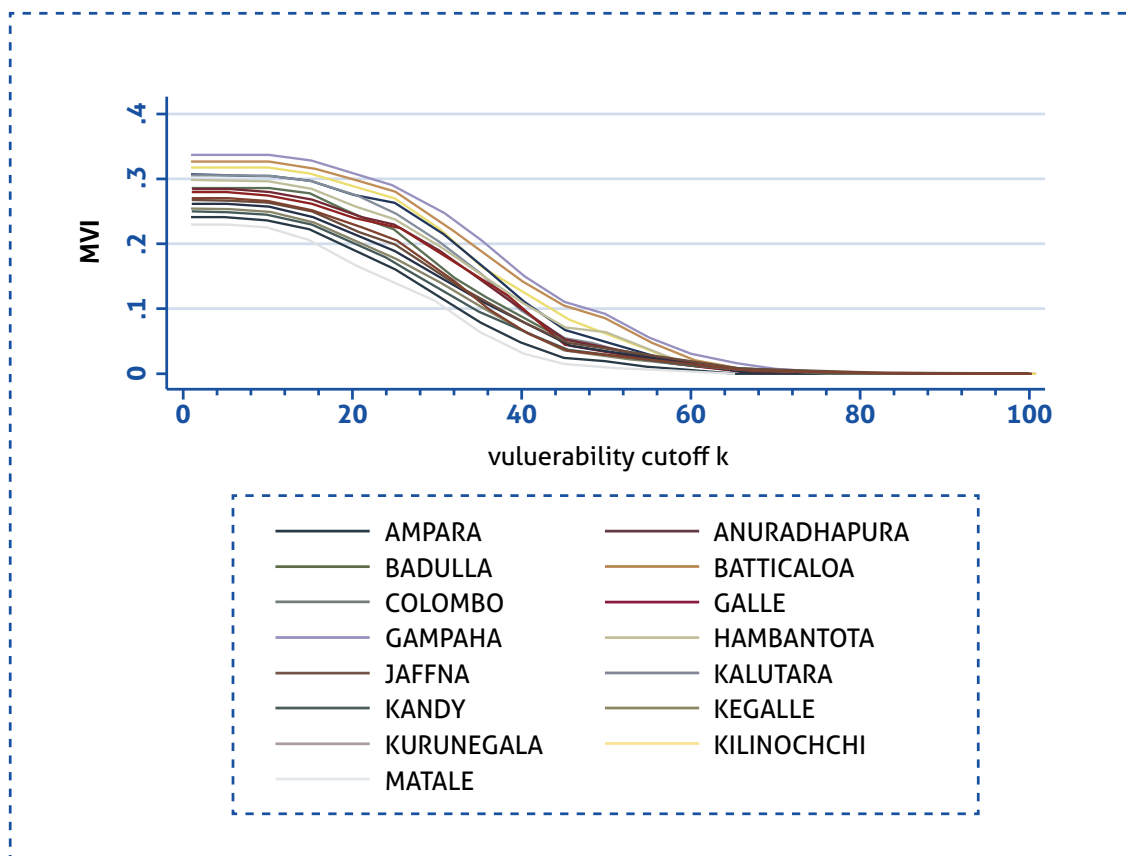
Analyses of the association between the MVI indicators were carried out. The measure of redundancy RO summarizes the association of deprivations for all MVI indicators - for two indicators at a time. The RO number expresses the percentage of people who are deprived in one indicator (the one in which fewer people are identified as deprived) who are also deprived in the second indicator (the one in which more people are identified as deprived). Table 11 below displays the RO results for all pairs of MVI indicators.

**Table 11: Redundancy test results of MVI indicators**

	School attendance	Male years of schooling	Female years of schooling	Physical health condition	Water source	Food stock	Experienced disaster	Adaptive capacity to disaster	Asset ownership	Unemployment	Precarious and informal employment	Debt status
School attendance												
Male years of schooling	35.7%											
Female years of schooling	31.1%	51.7%										
Physical health condition	31.9%	46.9%	49.0%									
Water source	56.6%	60.2%	59.0%	53.7%								
Food stock	26.0%	37.2%	37.7%	46.5%	47.9%							
Experienced disaster	11.9%	33.2%	35.3%	42.7%	60.6%	22.7%						
Adaptive capacity to disaster	80.6%	85.8%	86.0%	81.1%	81.9%	86.1%	75.1%					
Asset ownership	23.9%	35.5%	39.3%	36.9%	59.9%	35.1%	33.2%	87.6%				
Unemployment	15.9%	28.0%	26.8%	49.0%	55.9%	27.0%	12.4%	81.3%	23.9%			
Precarious and informal employment	28.7%	45.9%	41.6%	45.8%	59.4%	31.6%	29.4%	85.4%	31.0%	22.7%		
Debt status	53.7%	46.9%	45.1%	47.6%	55.0%	46.8%	50.4%	81.0%	38.4%	52.9%	47.6%	
Unscored headcount ratios	6.1%	28.8%	28.9%	41.8%	56.5%	23.1%	11.7%	81.2%	25.2%	12.1%	23.1%	44.0%

Source: Calculations based on data using the National Citizen Survey 2022-23.

**Figure 14a: MVI for different values of the vulnerability cutoff**



Source: Calculations based on data using the National Citizen Survey 2022-23.

Figure 14a illustrates some robustness tests for the MVI. The MVI value is plotted over all *k*-values. With increasing *k*, the MVI decreases. The graph suggests that there are no sharp discontinuities or jumps in the MVI value around the chosen *k*-value of 25%.

**Figure 14b: Percentage contribution to MVI using different vulnerability cutoffs**

		Weight													
		1/6	1/12	1/12	1/18	1/18	1/18	1/9	1/18	1/18	1/9	1/18	1/18	1/9	
		Percentage contribution to MVI													
Vulnerability cutoff	H	A	MVI	School attendance	Male years of schooling	Female years of schooling	Physical health condition	Water source	Food stock	Experienced disaster	Adaptive capacity	Asset ownership	Unemployment	Precarious employment/informal work	Debt status
16	81.7	31.4	0.257	3.92	9.17	9.17	8.27	10.76	4.74	5.13	15.03	5.30	5.27	4.87	18.56
17	70.4	33.8	0.238	4.17	9.88	9.87	8.03	10.18	4.64	5.29	14.18	5.06	5.49	4.92	18.44
25	55.7	37.0	0.206	4.58	10.53	10.50	7.84	9.58	4.65	5.49	13.16	5.06	5.74	5.13	17.85
26	50.6	38.3	0.193	4.88	10.20	10.02	7.73	9.39	4.68	5.79	12.80	4.96	6.03	5.17	18.47
33	35.5	42.3	0.150	5.61	10.79	10.62	7.29	8.60	4.76	6.23	11.66	4.91	6.46	5.36	17.80
34	28.0	44.7	0.125	5.85	11.35	11.14	7.00	8.32	4.76	6.34	11.14	5.07	6.16	5.45	17.48
40	16.9	49.3	0.083	7.09	11.29	10.98	6.77	7.78	4.65	7.09	10.18	4.97	6.41	5.60	17.22

Source: Calculations based on data using the National Citizen Survey 2022-23.

## Appendix 3: National Citizen Survey 2022-2023 (sampling and demographics)

### Questionnaire

The final survey link was also comprised of several logical checks, skip patterns, quality control conditions and auto coding to minimize unavoidable human errors which may occurred during the interview. To further eliminate errors and ensure quality control, 23 percent of the interviews were overseen by a supervisor or Field Executive while back checks were conducted on 22 percent of interviews using audio checks (10 percent) and telephone back checks (12 percent). The survey was conducted using the Computer-Assisted Personal Interviewing (CAPI) method to collect data directly on tablets, enabling real-time data entry and automated error-checking. With CAPI, the enumerators were able to administer the survey electronically, reducing the need for manual data entry and potential transcription errors.

### Sample distribution

The sample size was 25,042 households (HH). Table 12 shows the distribution of the sample of 25,042 throughout the 25 districts based on the number of HHs.

**Table 12: Sample distribution**

Demographics	n (sample size)	Proportion (%)
<b>Age category (respondent)</b>		
18-35	7,457	29.8
36-64	13,008	51.9
65-75	3,591	14.3
76+	986	3.9
<b>Household headship</b>		
Female-headed households	8,505	34.0
Male-headed households	16,537	66.0
<b>Area</b>		
Rural	20,757	82.9
Urban	4,285	17.1
<b>Province</b>		
Central	3,082	12.3
Eastern	1,881	7.5
North Central	1,657	6.6
North Western	3,002	12.0



Northern	2,187	8.7
Sabaragamuwa	2,344	9.4
Southern	2,982	11.9
Uva	1,602	6.4
Western	6,305	25.2
<b>District</b>		
Ampara	780	3.1
Anuradhapura	1,114	4.5
Badulla	1,022	4.1
Batticaloa	640	2.6
Colombo	2,382	9.5
Galle	1,241	5.0
Gampaha	2,523	10.1
Hambantota	761	3.0
Jaffna	665	2.7
Kalutara	1,400	5.6
Kandy	1,602	6.4
Kegalle	1,041	4.2
Kilinochchi	2,042	8.2
Kurunegala	380	1.5
Mannar	620	2.5
Matale	980	3.9
Matara	580	2.3
Monaragala	380	1.5
Mullaitivu	380	1.5
Nuwara Eliya	860	3.4
Polonnaruwa	543	2.2
Puttalam	960	3.8
Ratnapura	1,303	5.2
Trincomalee	461	1.8
Vavuniya	382	1.5

Source: Calculations based on data using the National Citizen Survey 2022-23.

The unit of analysis for the National Citizen Survey was the HH, with the sample being distributed across districts as per the household distribution instead of the population distribution. The district-wide sample was then divided into clusters of 20 with the *Grama Niladari* (GN) division being taken as the Primary Sample Unit (PSU). Therefore, 20 interviews were conducted in each PSU. This sampling calculation allowed for an error margin of less than 5 percent for all districts except Mannar, Vavuniya, Mullaitivu and Kilinochchi. For these districts, the sample size was increased or adjusted to reduce the error margin. Additionally, efforts were made to ensure both urban and rural populations are proportionately represented in the sample.

Household selection was done using random walking following the right-hand rule. It was agreed that two households would be skipped in rural GNs, while four households would be skipped in urban GNs. In the event that a household declined to participate, then that household would be replaced at the end of the sequence.

The survey questionnaire was designed to collect information at both the household and individual level. Accordingly, the head of the household or a member of the household who was aware of household management was selected to respond to the household level questions. A Kish grid was employed to identify a respondent for the individual questions. If the selected respondent was unavailable on that day, the team would move to the next household for a new respondent in order to avoid bias.

## **Fielding**

A pilot study was conducted in November 2022, with 50 households across the Colombo, Kurunegala, Jaffna, Kandy, and Batticaloa districts. A total of 50 interviews were conducted, with 33 interviews taking place in Sinhala and 17 interviews in Tamil. Results from the pilot were positive and required minor adjustments to be made to certain questions.

Further to this, data collection for the National Citizen Survey began at the end November 2022. 149 enumerators were trained in the questionnaire and deployed with one supervisor in each of the 25 districts. Data collection was conducted simultaneously in all districts within two weeks of the first field briefing. Interviews were carried out in Tamil or Sinhala. Data collection from the first 6,500 households was completed in December 2022 as requested, allowing the team to determine some very preliminary insights. Data collection for the full sample was completed in March 2023, with the cleaned dataset being made available to UNDP in April 2023.

For quality control, 23 percent of interviews were conducted with a supervisor or field executive who sat in. Additionally, 22 percent of interviews were back checked on a few sample points using audio checks (10 percent) and telephone back checks (12 percent). Physical back checks were also conducted where the supervisor or other designated personnel went back to the interviewed household to verify that the interview had been conducted and administered correctly. In total, approximately 46 percent of interviews were checked using a range of the abovementioned quality control measures.

## Missing variables

At the outset, it would be important to recognize that the motivation and the process followed has evolved since the inception of this initiative in April 2022. The survey was initially intended to simply capture a snapshot of the socioeconomic and governance impacts of the socio-economic crisis in Sri Lanka, but further explorations revealed that the survey could have potential to support the development of a MVI for Sri Lanka, for the very first time. In this regard, it is worth noting that the survey was not explicitly designed with the MVI in mind (although provisions for an asset index were made by the survey team, in the event a MVI could be a possibility), and so, this initiative must be considered a pilot, which could provide vital baseline data, but will require adjustments and further development should a further round of data collection be pursued. It is also worth noting that the MVI will be developed as a measure that should be considered in complementarity to, and not instead of, the Multidimensional Poverty Index (MPI), which was introduced to Sri Lanka in 2019.

## Sample weights

In survey sampling, weighting is one of the critical steps. The basic objective of weighting sample data is to try and maximize the representativeness of the sample in terms of size, distribution and characteristics of the study population. When sample units have been selected with differing probabilities, it is common to weight the results inversely proportion to the unit selection probabilities, i.e. the design weight, so as to reflect the actual situation in the population.

In the current study, the required sample for a particular district is proportionately allocated as per the total number of households in the census/universe and within each district, the total number of households were distributed between rural and urban areas according to the proportion of urban-rural. While selection of PSU and finally sample household from each selected PSU, there were non-equal probabilities and differential non-response rates involved, hence PSU level weights are developed. As an example, the computation of weights for the study population in Colombo Rural is discussed below:

Let,

$$f_1^i = \text{Probability of selection of } i^{\text{th}} \text{ PSU in a district} \\ = h_i / H_i$$

Where,

$h_i$  = is the total number of households of selected PSUs of the District  
 $H_i$  = is the total number of households in the District

$$f_2^i = \text{Probability of selection of } j^{\text{th}} \text{ household from the total households of } i^{\text{th}} \text{ PSU} \\ = h_j / H_j$$

Where,

$h_j$  = is the total number of households selected in the selected in  $i^{\text{th}}$  PSU  
 $H_j$  = is the total number of households in the selected  $i^{\text{th}}$  PSU

$f_3^i$  = Probability of selection of  $k^{\text{th}}$  household for participation in the survey  
 =  $h_k / H_k$

Where,

$h_k$ =is the total number of households targeted (selected) for the survey

$H_k$ =is the total number of selected(interviewed) households

The probability of selecting a household from  $i^{\text{th}}$  District works out thus,  $f^i = f_1^i * f_2^i * f_3^i$

The non-normalized household weight for the  $i^{\text{th}}$  PSU is,  $W_i'' = W_i' * HR_i$

$$= 1/f * HR_i$$

Where,  $HR_i$  is the response rate in the  $i^{\text{th}}$  PSU.

The normalized weight ( $w'$ ) (Column V) used in the generation of weight for  $i^{\text{th}}$  PSU is:

$$w' = W_i'' * \left( \frac{n_i}{\sum X_i * n_i} \right)$$

Where  $n_i$  is the total number of Households interviewed in the  $i^{\text{th}}$  PSU.

[Column V = {Column T- non-normalized weight} \* {Sum of Column P-Total number of HHS interviewed in the PSU/Sum of Column U-Total number of non-normalized households in a district}, where Column U is Column P \* Column T ( $W_i''$ )]

\*\*\*\*\*

## Appendix 4: Additional results from the MVI

Table 13: Censored headcount ratios by districts

	MVI	School attendance	Male years of schooling	Female years of schooling	Physical health condition	Water source	Food stock	Experienced disaster	Adaptive capacity to disaster	Asset ownership	Unemployment	Precarious and informal employment	Debt status
Ampara	0.263	6.4	38.0	43.5	39.2	15.7	20.0	17.5	54.9	21.4	9.9	16.8	54.8
Anuradhapura	0.226	5.7	36.0	39.0	30.9	47.0	30.2	3.2	57.4	12.3	7.3	24.3	27.1
Badulla	0.205	6.2	29.4	29.6	29.8	46.1	14.3	10.0	52.4	19.3	14.1	11.1	20.5
Batticaloa	0.279	7.4	31.8	37.3	34.6	49.7	6.9	29.5	61.9	23.5	10.4	10.3	55.0
Colombo	0.189	4.9	22.0	22.1	30.4	5.3	30.0	10.3	42.8	18.4	10.9	21.5	33.7
Galle	0.162	3.9	16.6	14.6	23.9	30.6	16.7	9.8	41.3	14.3	10.3	17.0	24.3
Gampaha	0.205	5.3	23.0	21.1	33.1	31.5	27.8	10.2	51.1	16.3	10.8	17.1	34.1
Hambantota	0.212	8.1	35.8	30.5	29.1	25.0	28.3	3.5	51.7	14.3	12.3	22.2	28.3
Jaffna	0.209	5.1	18.7	24.2	24.4	57.9	3.1	24.6	52.7	16.1	5.1	33.6	24.9
Katutura	0.171	4.8	18.3	16.3	28.5	27.1	17.6	5.1	41.0	12.2	12.2	13.3	33.8
Kandy	0.176	5.0	21.8	21.1	25.7	21.1	17.1	2.9	41.4	18.6	12.0	17.0	33.5
Kegalle	0.178	5.4	21.5	18.0	25.8	42.4	12.1	8.4	43.8	18.9	9.2	19.4	23.4
Kilinochchi	0.167	6.6	22.8	20.0	22.9	43.4	11.5	3.0	40.9	10.3	8.9	14.2	24.8
Kurunegala	0.270	3.8	26.1	23.5	27.9	69.8	1.9	34.3	50.4	29.3	11.1	32.8	48.9
Mannar	0.142	5.2	20.0	12.3	24.2	33.3	5.2	2.0	39.9	14.8	4.0	11.1	25.9
Matale	0.189	6.8	25.1	23.5	26.2	40.5	13.6	8.1	47.9	16.5	6.1	22.8	25.6
Matara	0.207	3.9	30.7	32.5	33.2	35.8	15.9	4.1	50.6	15.7	11.8	15.3	33.4
Monaragala	0.221	7.9	23.8	18.9	16.6	47.2	0.1	18.4	53.7	38.0	18.0	9.3	36.3
Mullaitivu	0.279	4.4	29.8	32.0	29.2	71.7	5.9	34.9	36.2	25.1	17.4	29.3	47.4
Nuwara Eliya	0.246	6.4	25.4	30.3	29.6	58.5	9.0	8.3	58.9	23.2	17.2	16.3	47.2
Polonnaruwa	0.230	8.6	36.1	36.5	40.3	30.8	14.0	2.7	53.7	13.5	12.8	17.6	39.1
Puttalam	0.288	5.3	37.8	43.4	30.2	58.6	22.1	28.6	63.7	30.5	6.4	25.5	40.2
Ratnapura	0.237	6.7	34.3	33.5	30.0	40.1	14.8	6.9	53.0	24.5	13.4	27.4	37.3
Trincomalee	0.198	4.3	20.9	31.4	27.2	9.8	11.0	9.8	52.2	30.8	6.3	18.8	41.4
Vavuniya	0.248	5.3	21.0	26.7	36.5	66.8	27.8	9.1	64.3	30.9	10.3	16.2	38.7

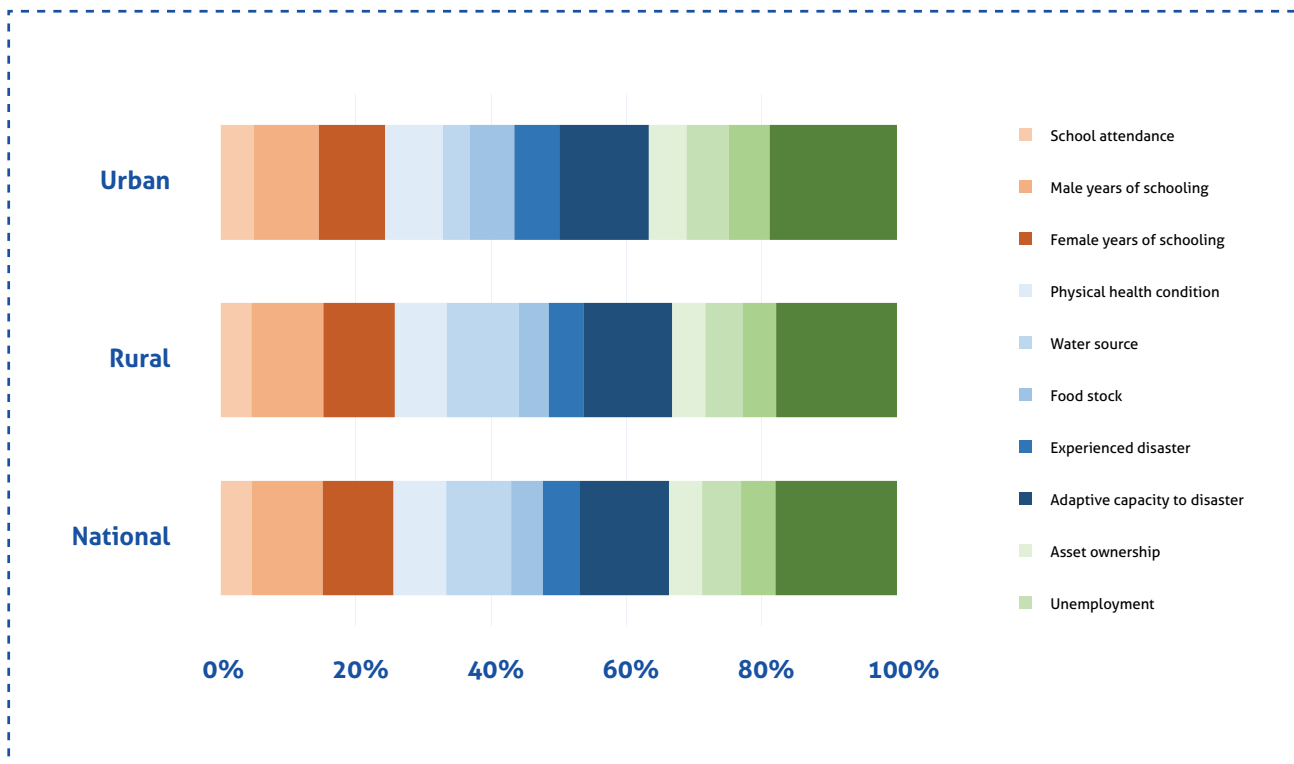
Source: Calculations based on data using the National Citizen Survey 2022-23.

**Table 14: Absolute contributions by indicator to MVI by districts**

	School attendance	Male years of schooling	Female years of schooling	Physical health condition	Water source	Food stock	Experienced disaster	Adaptive capacity to disaster	Asset ownership	Unemployment	Precarious and informal employment	Debt status
Ampara	0.011	0.032	0.036	0.022	0.009	0.011	0.019	0.031	0.012	0.011	0.009	0.061
Anuradhapura	0.009	0.030	0.032	0.017	0.026	0.017	0.004	0.032	0.007	0.008	0.013	0.030
Badulla	0.010	0.025	0.025	0.017	0.026	0.008	0.011	0.029	0.011	0.016	0.006	0.023
Batticaloa	0.012	0.026	0.031	0.019	0.028	0.004	0.033	0.034	0.013	0.012	0.006	0.061
Colombo	0.008	0.018	0.018	0.017	0.003	0.017	0.011	0.024	0.010	0.012	0.012	0.037
Galle	0.006	0.014	0.012	0.013	0.017	0.009	0.011	0.023	0.008	0.011	0.009	0.027
Gampaha	0.009	0.019	0.018	0.018	0.018	0.015	0.011	0.028	0.009	0.012	0.010	0.038
Hambantota	0.013	0.030	0.025	0.016	0.014	0.016	0.004	0.029	0.008	0.014	0.012	0.031
Jaffna	0.009	0.016	0.020	0.014	0.032	0.002	0.027	0.029	0.009	0.006	0.019	0.028
Kalutara	0.008	0.015	0.014	0.016	0.015	0.010	0.006	0.023	0.007	0.014	0.007	0.038
Kandy	0.008	0.018	0.018	0.014	0.012	0.010	0.003	0.023	0.010	0.013	0.009	0.037
Kegalle	0.009	0.018	0.015	0.014	0.024	0.007	0.009	0.024	0.011	0.010	0.011	0.026
Kilinochchi	0.011	0.019	0.017	0.013	0.024	0.006	0.003	0.023	0.006	0.010	0.008	0.028
Kurunegala	0.006	0.022	0.020	0.016	0.039	0.001	0.038	0.028	0.016	0.012	0.018	0.054
Mannar	0.009	0.017	0.010	0.013	0.018	0.003	0.002	0.022	0.008	0.004	0.006	0.029
Matale	0.011	0.021	0.020	0.015	0.023	0.008	0.009	0.027	0.009	0.007	0.013	0.028
Matara	0.007	0.026	0.027	0.018	0.020	0.009	0.005	0.028	0.009	0.013	0.009	0.037
Monaragala	0.013	0.020	0.016	0.009	0.026	0.000	0.020	0.030	0.021	0.020	0.005	0.040
Mullaitivu	0.007	0.025	0.027	0.016	0.040	0.003	0.039	0.020	0.014	0.019	0.016	0.053
Nuwara Eliya	0.011	0.021	0.025	0.016	0.032	0.005	0.009	0.033	0.013	0.019	0.009	0.052
Polonnaruwa	0.014	0.030	0.030	0.022	0.017	0.008	0.003	0.030	0.008	0.014	0.010	0.043
Puttalam	0.009	0.031	0.036	0.017	0.033	0.012	0.032	0.035	0.017	0.007	0.014	0.045
Ratnapura	0.011	0.029	0.028	0.017	0.022	0.008	0.008	0.029	0.014	0.015	0.015	0.041
Trincmalee	0.007	0.017	0.026	0.015	0.005	0.006	0.011	0.029	0.017	0.007	0.010	0.046
Vavuniya	0.009	0.017	0.022	0.020	0.037	0.015	0.010	0.036	0.017	0.011	0.009	0.043

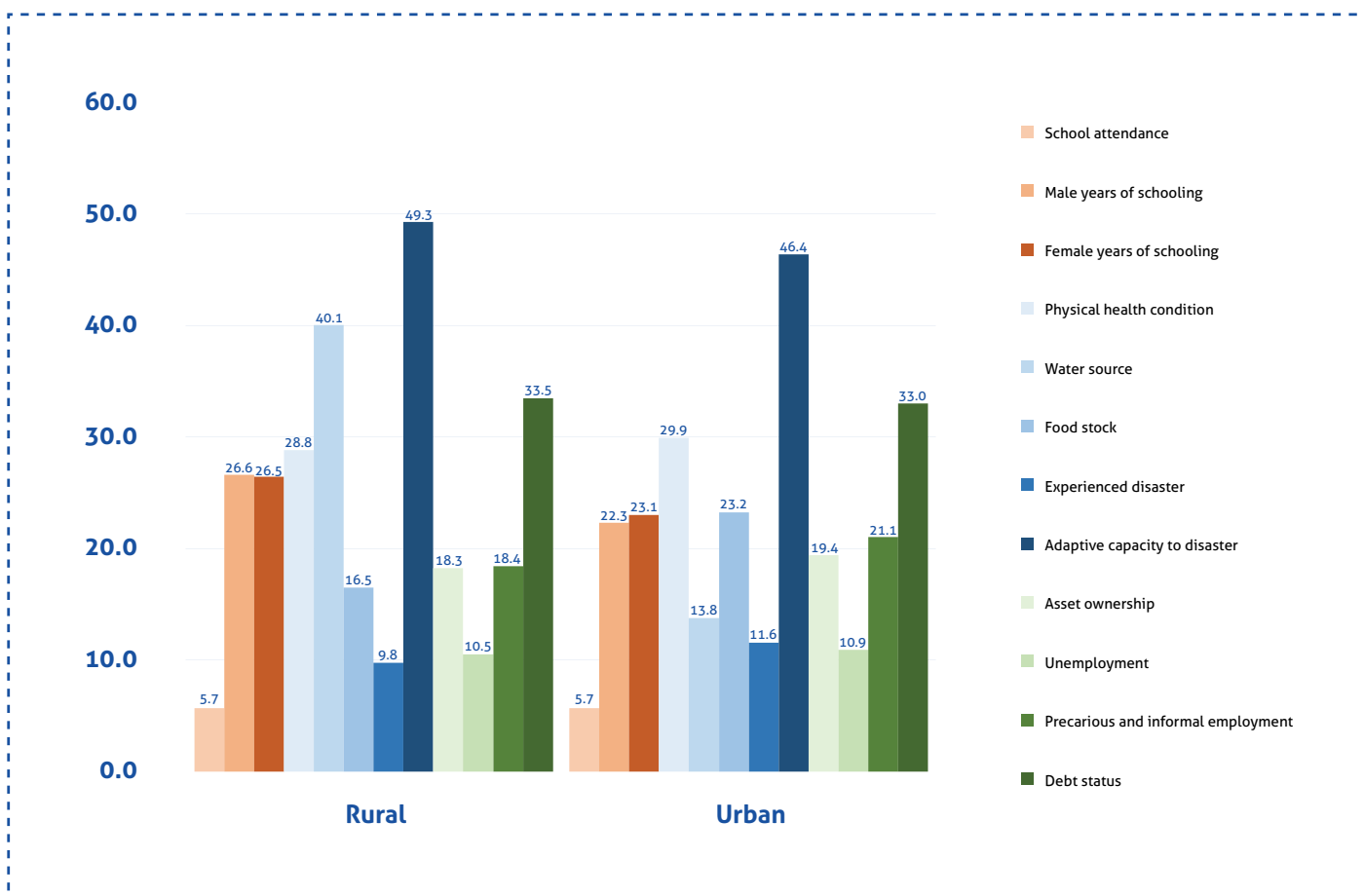
Source: Calculations based on data using the National Citizen Survey 2022-23.

**Figure 15: Absolute contributions of indicator to MVI by area**



Source: Calculations based on data using the National Citizen Survey 2022-23.

**Figure 16: Censored headcount ratios by area**



Source: Calculations based on data using the National Citizen Survey 2022-23.

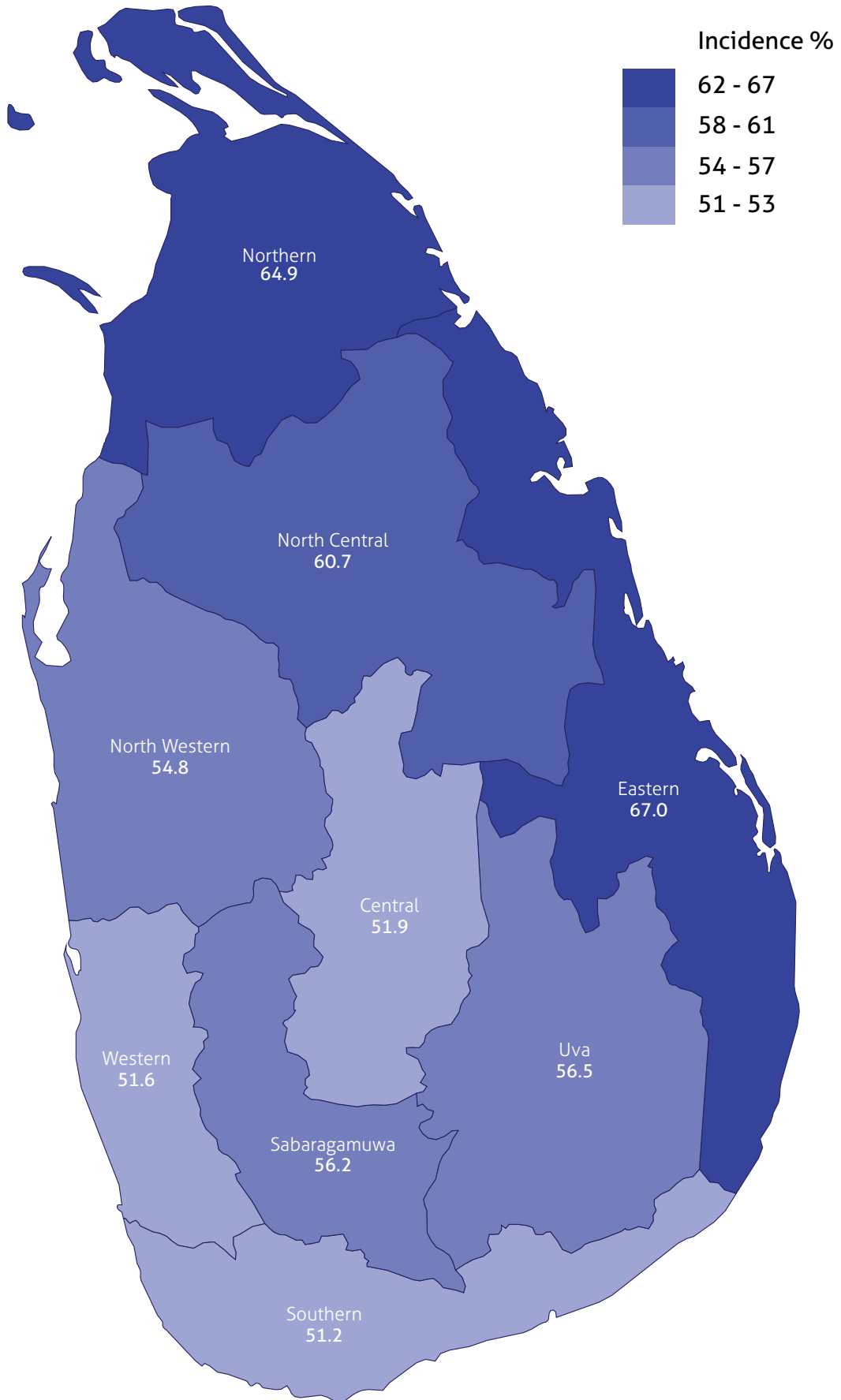
**Table 15: Censored headcount ratios by provinces**

	School attendance	Male years of schooling	Female years of schooling	Physical health condition	Water source	Food stock	Experienced disaster	Adaptive capacity to disaster	Asset ownership	Unemployment	Precarious and informal employment	Debt status
<b>Central</b>	5.4	22.4	21.9	26.5	33.9	12.5	4.2	45.9	19.1	11.8	15.6	35.7
<b>Eastern</b>	6.2	31.7	38.5	34.7	25.5	13.4	19.6	56.6	24.4	9.2	15.1	51.6
<b>North Central</b>	6.7	36.0	38.2	34.0	41.6	24.8	3.0	56.2	12.7	9.1	22.0	31.1
<b>North Western</b>	6.2	27.5	27.3	25.2	48.2	14.8	11.1	48.1	16.7	8.1	17.8	29.6
<b>Northern</b>	5.3	23.3	24.9	26.6	62.1	7.1	24.4	51.5	26.5	11.5	25.4	37.6
<b>Sabaragamuwa</b>	6.1	28.7	26.8	28.2	41.1	13.6	7.6	49.0	22.1	11.6	23.9	31.3
<b>Southern</b>	6.1	24.9	22.1	26.1	32.5	18.9	7.4	46.4	15.1	9.4	20.4	25.8
<b>Uva</b>	5.4	29.9	30.7	31.1	42.2	14.9	7.7	51.7	17.9	13.2	12.7	25.5
<b>Western</b>	5.0	21.6	20.5	31.0	20.4	26.4	9.1	45.7	16.2	11.1	18.0	33.9

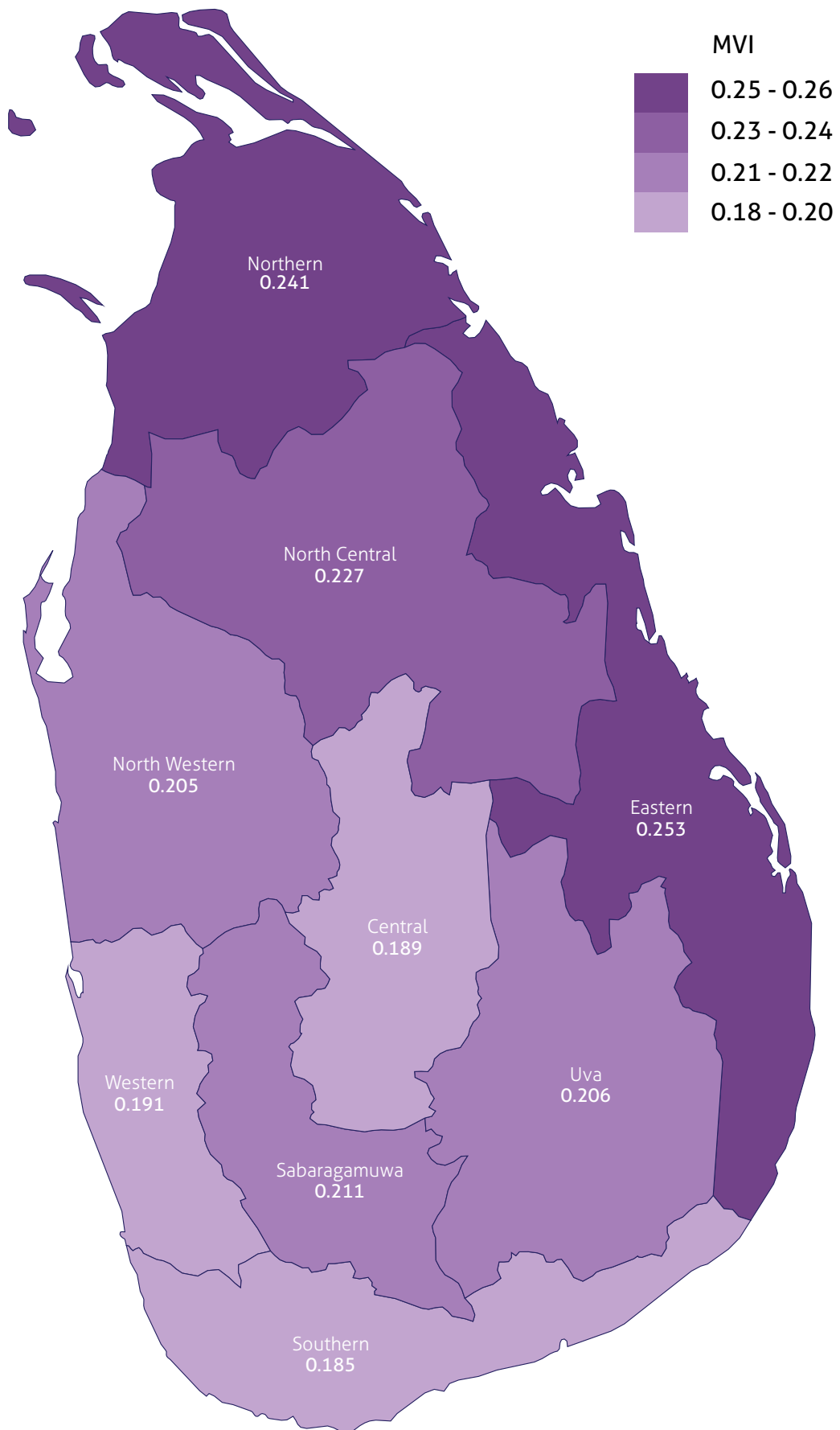
Source: Calculations based on data using the National Citizen Survey 2022-23.



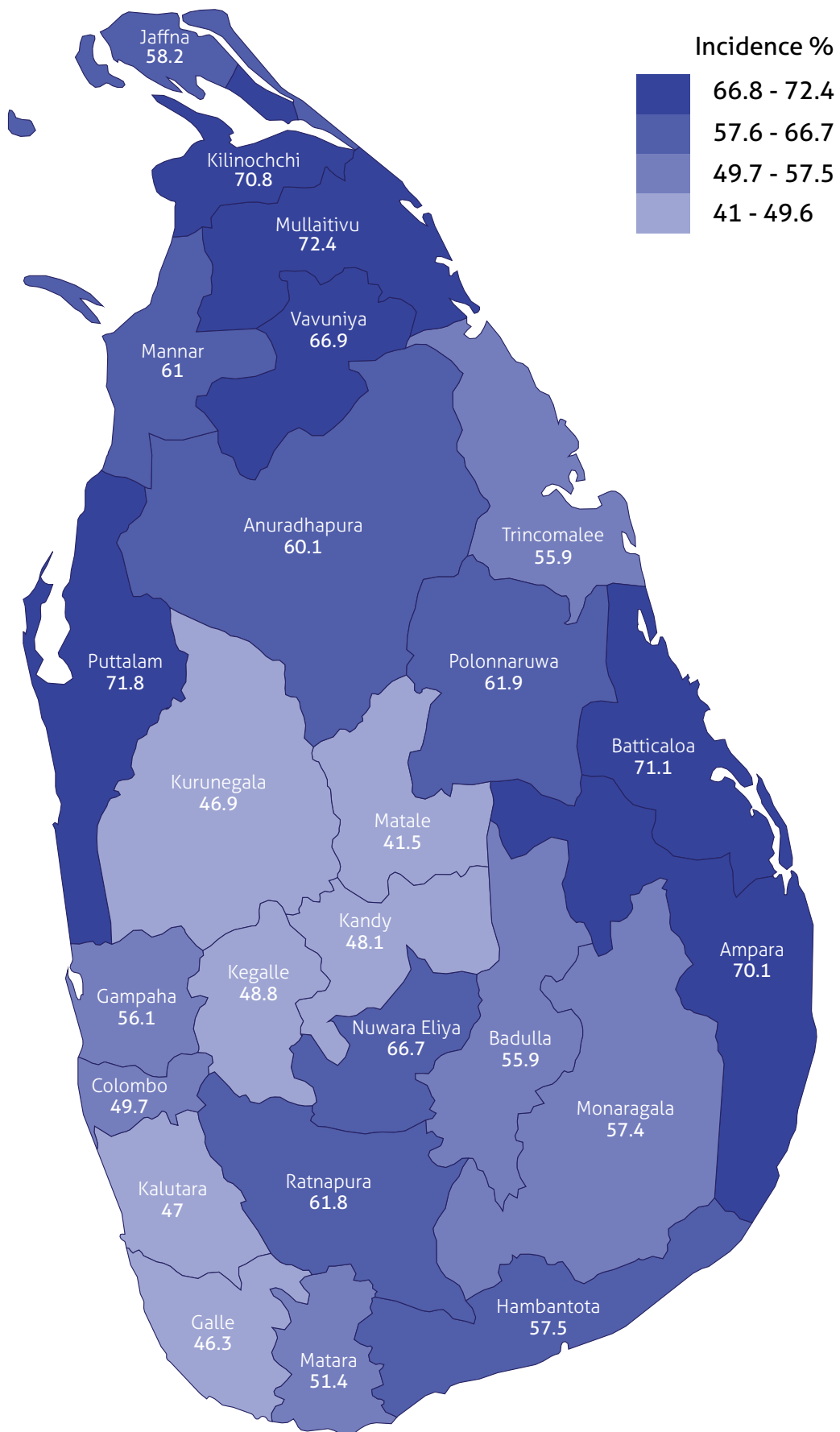
**Map 1: Incidence of multidimensionally vulnerability by province**



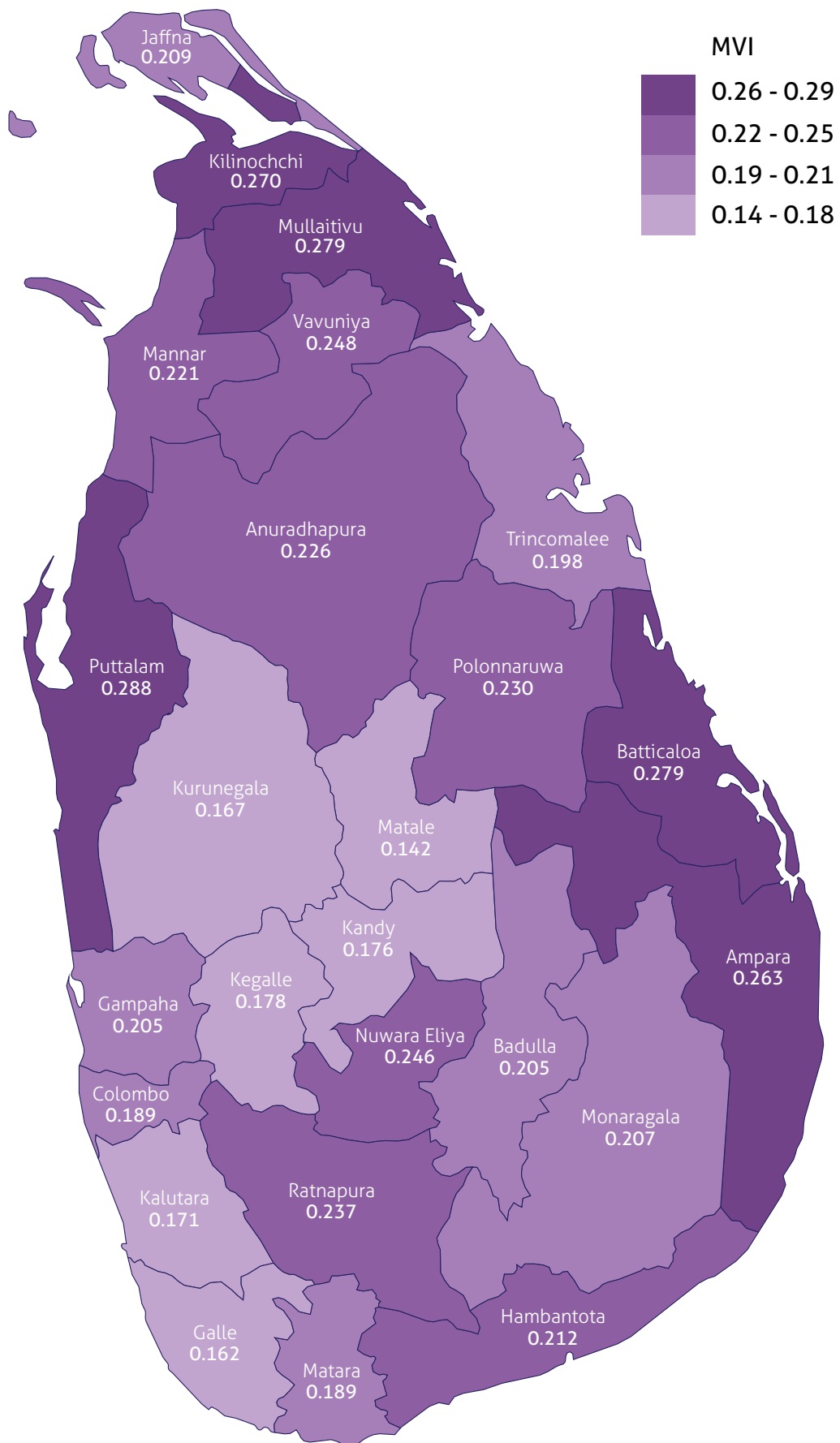
Map 2: MVI by province



**Map 3: Incidence of multidimensionally vulnerability by district**



Map 4: MVI by district



## Appendix 5: Justifications for the deprivation cutoffs

Table 16: Justifications for the deprivations cutoffs

Indicator	Deprivation cutoff	Justification
<b>School attendance</b>	Deprived if at least one person of school-going age is not attending school OR if at least one person who is 17-18 years old is neither attending school nor employed	Education in Sri Lanka starts from 5 to 6 years. In January 1998, Sri Lanka legislated compulsory education for children ages 5–14 years, with the hope of improving education participation. In 2015, the age of compulsory school attendance has been raised from 4 to 16 years and parents who fail to send their children to school will be guilty of an offence. To incorporate those "Not in Education, Employment, or Training," a term used to describe a specific group of young people who are not currently engaged in formal education, employment, or vocational training. A household is deprived if there is at least one child in NEET. This is done to highlight the need for interventions and support for youth who are at risk of becoming disengaged from productive activities.
<b>Male years of schooling</b>	Deprived if no male aged 18-65 years has passed at least Ordinary Level	Successfully passing the GCE Ordinary Level examination signifies the completion of a standardized secondary education curriculum and is a requirement for pursuing further education at the Advanced Level (GCE A Level) and subsequently entering universities or higher education institutions in Sri Lanka.
<b>Female years of schooling</b>	Deprived if no female aged 18-65 years has passed at least Ordinary Level	GCE Ordinary Level is a recognized qualification in Sri Lanka and is often required for certain jobs and higher education opportunities. Grade 8 completion, while an important milestone, may not carry the same weight in terms of qualifications.
<b>Physical health condition</b>	Deprived if at least one member aged 18-65 has a health condition (have included others)	Diabetes, Cardiovascular disease, Cancer, Chronic Respiratory Disease, Chronic Kidney Disease, High blood pressure and others (nerve disease) are significant public health concerns in Sri Lanka. These health issues can impact vulnerable populations and contribute to a range of health challenges. For example, diabetes is a growing concern in Sri Lanka, particularly type 2 diabetes. Lifestyle factors, such as unhealthy diets and sedentary behavior, contribute to the rising prevalence of diabetes.
<b>Water source</b>	Deprived if the household does not have a direct water line	The other responses including well/tube well/spring water pump/community water project do not point out if they are well covered. Having access to a direct water line ensures a consistent supply of clean and safe drinking water. Having a direct water line can contribute to community resilience during emergencies or natural disasters. Access to clean water becomes even more critical during times of crisis, such as droughts or floods.
<b>Food stock</b>	Deprived if the household does not have sufficient stocks of dry food (rice, dhal, sugar, coconut, onion, potatoes, etc.) at home to last the household for a week for at least one meal a day for all household members	When households lack access to an adequate and stable supply of nutritious food, it can lead to food insecurity and negatively impact the overall well-being and health of the household members. This measure reflects a household's ability to meet their basic dietary needs over a given period. Assessing food deprivation based on the availability of essential dry food items like rice, dhal (lentils), sugar, coconut, onions, and potatoes helps to identify households that may be at risk of facing hunger or malnutrition. It's important to consider not only the quantity of food but also its nutritional value and diversity.

<p><b>Food stock</b></p>	<p>Deprived if the household does not have sufficient stocks of dry food (rice, dhal, sugar, coconut, onion, potatoes, etc.) at home to last the household for a week for at least one meal a day for all household members</p>	<p>When households lack access to an adequate and stable supply of nutritious food, it can lead to food insecurity and negatively impact the overall well-being and health of the household members. This measure reflects a household's ability to meet their basic dietary needs over a given period. Assessing food deprivation based on the availability of essential dry food items like rice, dhal (lentils), sugar, coconut, onions, and potatoes helps to identify households that may be at risk of facing hunger or malnutrition. It's important to consider not only the quantity of food but also its nutritional value and diversity.</p>
<p><b>Experienced disaster</b></p>	<p>Deprived if household has been impacted by a natural disaster in the last year</p>	<p>The criteria you've outlined for considering households as deprived based on their capacities to deal with future disasters are highly relevant and comprehensive. This holistic evaluation ensures a more accurate understanding of a household's readiness to respond to emergencies.</p>
<p><b>Adaptive capacity to disaster</b></p>	<p>Deprived if the household does not even have one of the following capacities to deal with future disasters (sufficient financial resources/medical supplies/emergency equipment/sufficient information on who to inform and approach)</p>	<p>Having adequate financial resources, medical supplies, and emergency equipment can facilitate an immediate response in the aftermath of a disaster, potentially saving lives and reducing the impact of the disaster on the household. It promotes equity in disaster preparedness and response. Knowing who to inform and approach during a disaster is essential for seeking assistance and support. Lack of information can hinder a household's ability to access help and resources.</p>
<p><b>Asset ownership</b></p>	<p>Deprived if the household does not own more than two of the following items: radio, mobile, TV, laptop, bicycle, motorbike, washing machine, fridge, motorbike, three wheeler, boat, and does not own a car or truck.</p>	<p>Selling valuable items can provide a quick infusion of cash, which might help address urgent financial needs, cover expenses, or pay off debts. Selling valuable assets to address immediate financial needs might leave the household more vulnerable to future shocks or emergencies. Certain items like radios, mobile phones, and TVs can play a role in disaster preparedness by providing information and communication during emergencies.</p>
<p><b>Unemployment</b></p>	<p>Deprived if any of the members aged 18-65 years are unemployed and looking for job</p>	<p>Unemployment is a key risk factor for poverty. Households with unemployed members are at a higher risk of falling below the poverty line. Households with unemployed members may become more dependent on social assistance or support from other family members, potentially increasing their vulnerability. The impact of unemployment can extend to future generations, as children in households with unemployed parents may face disadvantages in terms of education and opportunities.</p>
<p><b>Precarious and informal employment</b></p>	<p>Deprived if any of the members 18-65 years are working as a casual/domestic/unpaid worker</p>	<p>Casual, domestic, and unpaid work often entail lower job security, limited benefits, and unpredictable income, leading to financial instability and vulnerability for households. Workers in casual, domestic, or unpaid roles typically earn lower wages and may not have access to regular or sufficient income, making it challenging to meet basic needs. These types of employment often come with limited or no social protection benefits, leaving workers and their households exposed to economic shocks and health risks. Indebtedness to cover essential needs like consumption, education, and medical treatments indicates that a household is struggling to meet basic requirements, which can lead to economic hardship and vulnerability. Selling valuable assets or pawning jewelry can deplete a household's assets, reducing their capacity to cope with future financial shocks. Indebtedness and asset depletion can lead to a cycle of poverty, as households struggle to break free from their financial challenges.</p>
<p><b>Debt status</b></p>	<p>Deprived if the household is indebted to cover basic consumption/education/medical treatments or have pawned jewellery or sold belongings to meet income needs</p>	<p>Indebtedness to cover essential needs like consumption, education, and medical treatments indicates that a household is struggling to meet basic requirements, which can lead to economic hardship and vulnerability. Selling valuable assets or pawning jewelry can deplete a household's assets, reducing their capacity to cope with future financial shocks. Indebtedness and asset depletion can lead to a cycle of poverty, as households struggle to break free from their financial challenges.</p>









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