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SDG Profile
Chiang Rai

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Summary

Chiang Rai, Thailand's northernmost province, is rich in natural resources, diverse cultural heritage, and the infamous Golden Triangle. The province needs to balance its development to support 3 aspects - Economy, Social and Well-being, and Environment.

- Economy: It needs to focus on cross-border trade growth, tourism development, and the challenge of combating drug trafficking, human trafficking, and illicit trade along its borders.
- Social and Well-being: The province needs to promote public health, address informal labour issues, and develop vocational skills for all age groups to prepare for an aging society.
- Environment: Chiang Rai needs to improve waste management, air pollution, forest resource management, and flood mitigation.

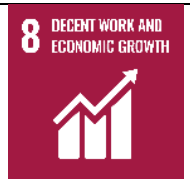
From an analysis, 160 Sustainable Development Goals (SDGs) is relevant to Chiang Rai. The 54 relevant indicators with available data during 2013 - 2023 were evaluated by comparing Chiang Rai performance to the country's average. Data was gathered from open government databases providing information at national and provincial levels.The finding could be summarised as follows:

- Sustainable Development Goals 2 (Zero Hunger), 8 (Decent Work and Economic Growth), 13 (Climate Action), 15 (Life on Land) and 17 (Partnerships for the Goals), the indicators show that Chiang Rai's performance exceeded the national average.
- Chiang Rai's performance on Sustainable Development Goals 4 (Quality Education), 11 (Sustainable Cities and Communities), and 16 (Peace, Justice, and Strong Institutions) was slightly below national average.
- Regarding Sustainable Development Goals 3 (Good Health and Wellbeing) and 12 (Responsible Consumption and Production), Chiang Rai was moderately below national average.
- Chiang Rai's performance on Sustainable Development Goals 1 (No Poverty), 7 (Affordable and Clean Energy) and 9 (Industry, Innovation and Infrastructure) was significantly below the national average
- It was not possible to monitor and evaluate Sustainable Development Goals 5 (Gender Equality), 6 (Clean Water and Sanitation), and 10 (Reduced Inequalities) due to a lack of data collection, data accessibility challenge and limited expert analysis. For Sustainable Development Goals 14 (Life Below Water), there is no indicator applicable for Chiang Rai.

A survey about opinion towards SDGs was also conducted in Chiang Rai. The results show that Chiang Rai's performance in achieving urgent SDGs lagged behind national levels, except for 8 (Decent Work and Economic Growth) and 13 (Climate Action). The top five priority SDGs identified by respondents were SDG 1: No Poverty, SDG 8: Economic Growth and Decent Work, SDG 12: Responsible Consumption and Production), SDG 13: Climate Action, SDG 4: Quality Education, respectively.

For efficient monitoring and evaluation of Chiang Rai's Sustainable Development Goals (SDGs), open government data, the analysis of data at a disaggregated level, and comparison against available targets are important. Additional key challenges and development priorities for Chiang Rai includes (1) addressing data gaps on ethnic minorities and stateless persons to inform policy decisions (SDGs 1, 3, 4, 10), (2) promoting creative economy and high-value manufacturing (SDGs 8, 9, 17)., (3) balancing forest conservation and agricultural land allocation (SDGs 1, 2, 3, 11, 15), and (4) improving water resource management for agriculture and local fisheries (SDGs 2, 6).

Development priorities according to the indicator performance and survey results

Performance	Top-Five SDGs as per the Survey	Key Achievement	Room for Improvement
Higher than the national value		• Annual growth rate of real GPP per employed person • Unemployment rate • Proportion of youth not in education, employment, or training • Fatal and non-fatal occupational injuries	• Annual growth rate of real GPP per capita • Proportion of informal employment in total employment • Tourism revenue growth rate
		• Number of affected persons attributed to disasters	
Lower than the national value, not more than 10 percent		• O-NET score of grade-12 students	• Proportion of children aged 0-5 years months who are developmentally on track • Participation rate of youth and adults in formal and non-formal education
Lower than the national value, between 10 and 20 percent		• Community hazardous waste generated per capita • Proportion of community hazardous waste treated • Solid waste recycling rate	• Installed renewable energy-generating capacity
Lower than the national value, more than 20 percent		• Number of affected persons attributed to disasters	• Proportion of population living below the national poverty line • Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions • Proportion of population covered by social protection floors/systems • Proportion of total adult population with secure tenure rights to land

Abbreviations

GDP	Gross Domestic Product
GPP	Gross Provincial Product
ITA	Integrity and Transparency Assessment
LGBTQIA+ others	Lesbian, Gay, Bisexual, Queer, Intersex, Asexual, and
MICE	Meetings, Incentives, Conferences, and Exhibitions
NIDA	National Institute of Development Administration
PM 2.5	Particulate matter 2.5
SDG	Sustainable Development Goal
TDRI	Thailand Development Research Institute
TPMAP	Thai People Map and Analytics Platform
UNDP	United Nations Development Programme

Introduction

The SDG Profiles are collaborative efforts by the Ministry of Interior, the United Nations Development Programme (UNDP), the National Institute of Development Administration (NIDA), and the Thailand Development Research Institute (TDRI) aims to create provincial Sustainable Development Goal (SDG) profiles for 15 target provinces in Thailand. These provinces include Bangkok, Chiang Mai, Chiang Rai, Mae Hong Son, Nakhon Ratchasima, Narathiwat, Pattani, Phetchaburi, Phuket, Songkhla, Surat Thani, Tak, Ubon Ratchathani, Udon Thani, Yala

The project aims to raise awareness among provincial agencies about the importance of Sustainable Development Goals. The SDG profiles (hereafter, the report), are not just documents, but powerful tools that enhance understanding of the alignment between sustainable development goals and provincial development strategies, empowering the stakeholders with knowledge and insights.

Specifically, Chiang Rai's SDG Profile Report provides an overview of the province's sustainable development context using the UN's SDG indicators. It further analyses the alignment among the SDGs, the Chiang Rai Development Plan (2022 - 2027), and public perspectives on critical sustainability issues. This report aims to provide the local government with a clear picture of Chiang Rai's state of play in sustainable development, helping the province identify its sustainable development gaps and develop a strategy that leads to a more sustainable future.

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Chiang Rai: Context and Development Priorities

Chiang Rai, the northernmost province of Thailand, is a region of forests and water resources for a strategic gateway.

It shares borders with the Republic of the Union of Myanmar and the Lao People's Democratic Republic, forming the renowned Golden Triangle. The area can also be connected to the southern provinces of China via two Asian highways, making Chiang Rai a crucial border trade zone for Thailand. This geographical coupled with rich cultural diversity and various ethnic groups. These factors form the fundamental and key challenges for Chiang Rai.

Chiang Rai: Key Statistics and Socioeconomic Context

Chiang Rai covers 11,678.369 square kilometres in size.

It has 18 districts, 124 sub district, 1 city municipality, 72 sub district municipalities, and 70 subdistrict administrative organisations.[1]

Bordering the Republic of the Union of Myanmar and the Lao People's Democratic Republic, Chiang Rai's geography is characterised by the North Continental Highland, with 51% of its area consisting of scattered plateaus utilised for agriculture. However, forest area has been steadily decreasing.

In 2022, Chiang Rai's population was at 1,299,636, with a slight increase (0.09%) in growth rate compared to 2021. The city has more female population (of 669,017) than male population (630,619) Chiang Rai is considered an aged society with 1,180,095 elder population (representing 21.47% of its total population)

The province's ageing society advances rapidly. Chiang Rai is considered an aged society with 21.43% of the total population being elderly.

In 2021, Chiang Rai's estimated GPP is at 54,106 billion baht; around 0.51% of the country's total GDP.

The services sector is the largest economic activity in the city; it contributes to 80.44 percents of Chiang Rai's GPP, while agricultural and industrial sectors only worth 16.93 and 9.71 percent respectively.[2]

Focus on Sustainable Development

The Chiang Rai Development Plan (2022-2027) outlines the province's commitment to sustainable development. It covers economic, social, and environmental aspects, reflected in various development strategies and the provincial vision: "Chiang Rai: A Creative, Clean, Safe, and Attractive Province".

Economic Context

Chiang Rai Province's economic development emphasised on promoting sustainable tourism alongside infrastructure development that support trade, investment, and high-value agriculture. This balanced approach to economic growth aligns with the goal of fostering a creative economy while maintaining a balance between natural resources, environmental protection, and the preservation of Lanna culture, which may be impacted by tourism development, logistics systems, and high-value agriculture.

Highlights

Cross-border Trade: As highlighted in Province's Development Issue 3, Chiang Rai is committed to developing a creative economy in the areas of trade, investment, services, and logistics. This includes promoting border trade, international trade, and special economic zones, which have contributed to the province's consistent trade surplus (SDG8.1.1, SDG8.2.1, SDG 9.1.2(a)). A key success factor has been the development of rail and road infrastructure to support logistics and trade connectivity. Ongoing infrastructure development projects include the double-track railway (SDG 11.2.1).

Tourism-Driven Economic Development: The service sector accounts for approximately 80% of Chiang Rai's GPP, reflecting the province's focus on tourism development. This aligns with Province's Development Issue 1, which emphasises value creation in cultural, ecological, and wellness tourism. The province is committed to preserving its Lanna cultural heritage by promoting innovative community-based tourism (SDG2.3.2), enhancing the quality and standards of tourism services and supporting creative tourism marketing (SDG 8.9.1, SDG 11.4.1).

Illegal cross-border trade: Illegal cross-border trade, including drug trafficking and human trafficking (SDG 16.2.2), poses significant social and economic challenges. Additionally, the province faces the issue of informal labour, with over 70% of the workforce in Chiang Rai falling under this category (SDG 8.3.1).

Social Context

Chiang Rai Province is committed to fostering a creative society by promoting lifelong learning, enhancing public safety, safeguarding citizens from existing and emerging diseases, and improving the quality of life through empowering all population groups, promoting employment, and developing workforce skills.

Highlights

Public Safety and Healthcare: As reflected in Province's Development Issue 5, Work plan 2, Chiang Rai prioritises public safety and comprehensive healthcare systems to promote security, safety, and preparedness for existing and emerging health threats (SDG 3.3). However, the province faces a rising trend of non-communicable diseases (NCDs) such as stroke, heart disease, and hypertension (SDG 3.4.1), with increasing rates exceeding national averages.

Empowering All Population Groups: The province actively develops the vocational skills of all citizens (SDG 4.3.1) through partnerships that target youths, women and families, elderlies, persons with disabilities, and disadvantaged groups (SDG 1.3.1 and SDG 4.5.1). This aligns with Province's Development Issue 5, on promoting quality of life and well-being (SDG 16.1 and SDG 16.2) and fostering a creative society.

Addressing the Aging Population: Chiang Rai is rapidly transitioning into an aging society, with an elderly population of 21.43% in 2022 and a declining birth rate (SDG 3.1 and SDG 3.2). Elderly worker were also the highest proportion of workers in the informal sector, accounting for 15.07% in 2023 (SDG 1.3.1).

Informal Employment: Chiang Rai's informal labor force, including migrant workers, reached 73.91% of total workers in 2023 (SDG 1.3.1 and 1.4.1). These labors lacks social protection during economic and social crises, as evident during the COVID-19 pandemic.

Environmental context

Chiang Rai's environmental context is shaped by its mountainous terrain and river basins, which are rich in forest resources, soil resources, and freshwater sources. Consequently, a key issue is managing these natural resources to maintain their quality and ensuring adequate water supply to meet the needs of the population. Additionally, air pollution poses a significant challenge for the province, as addressed in the Chiang Rai Provincial Development Plan 2023-2027 under Development Issue 4: Sustainable Management of Natural Resources and the Environment.

Highlights

Surface Water Quality Management (SDG 6.3.2 and 6.4.1): Overall water quality in Chiang Rai, particularly in the Kok River basin, remains very good, reflecting the province's effective wastewater management. However, despite good surface water quality, Chiang Rai still faces a shortage of clean drinking water for consumption, especially in remote areas (SDG 6.1.1 and 6.2.1).

PM2.5 Management (SDG 11.6.2): PM2.5 air pollution, caused by forest fires and agricultural activities, presents a structural challenge involving multifaceted management and impacting the economy and public health (SDG 3.9.1).

Forest Resource Management (SDG 15.1.1): Forest area in Chiang Rai is declining, while poor communities continue to lack access to agricultural land (SDG 1.4.2). Therefore, community participation in forest protection and land allocation for community remain crucial challenges. These two approaches requires a balance in implementation.

Flood Disaster Risk Management (SDG 1.5.1/11.5.1/13.1.1): Data from the National Economic and Social Development Council (NESDC) indicates an annual increase in the proportion of population affected by flooding events in Chiang Rai. This is attributed to the destruction of upstream areas and the inability of local waterways to accommodate rainfall volumes. More effective water management in flood-prone areas is essential.

Performance of Sustainable Development Goal Indicators

Indicator Summary

Speaking of the selection of the indicators of the 17 Sustainable Development Goals, which include 248 indicators combined, the 160 sustainable development indicators can be applied to the context of Chiang Rai. They cover a myriad of sustainable development and development strategy goals of the capital but only 54 indicators are ready to be monitored and evaluated.

The Guidelines for Monitoring and Evaluation

To evaluate the 54 indicators, the performance of the province was compared with the national values by using the average of data between 2013 and 2023. However, the results could not point out whether or not the province's performance was higher or lower than the target or the standard scores of the United Nations/related agencies. The indicators fell into 4 levels as follows:

- Level 4: Higher than the national value
- Level 3: Lower than the national value, not more than 10 percent
- Level 2: Lower than the national value, between 10 and 20 percent
- Level 1: Lower than the national value, more than 20 percent

In this regard, more information of indicator details, the names of data set, analysis, and recommendations for all indicators can be found in the appendix of the report.

For indicators that cannot be monitored and evaluated, there are four main reasons

(1) No data to the indicators for Chiang Rai is collected. Relevant agencies should have gathered data.

(2) Data for the indicators was collected but could not be accessed publicly. Chiang Rai Province should coordinate with other agencies to request data or the data owners should disclose data for public purpose.

(3) No data collection for the indicators has been carried out. Definitions, methods, and guidelines for collecting data should be studied;

(4) The supporting data of the indicators is being collected, but it is essential to rely on experts to gather additional information. A thorough study should be conducted to present future data analysis.

SDG 1 End poverty in all its forms everywhere

Sustainable Development Goal 1 concerns the end of poverty. 10 indicators apply to the Chiang Rai context by considering poverty in terms of expenditures, access to basic services and social protection, land rights, disaster impacts and other dimensions of poverty in line with the definition of survey-based and registered-based poverty, or Thai People Map and Analytics Platform (TPMAP), which arises from basic needs data (BND) by the Community Development Department and state welfare registrant data by the Ministry of Finance.

A review of the Chiang Rai Provincial Development Plan 2023-2027 reveals that the plan does not directly address Sustainable Development Goal (SDG) 1. While the plan touches upon economic development, which indirectly contributes to poverty reduction, a more focused approach is needed.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
1.2.1	Proportion of population living below the national poverty line (percent)	13.67	1
1.2.2	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	14.70	1
1.3.1	Proportion of population covered by social protection floors/systems (percent)	22.59	1
1.4.2	Proportion of total adult population with secure tenure rights to land	82.34	3
1.5.1	Number of affected persons attributed to disasters (person per 100,000 population) P	2,255.40	4
1.5.2 (a)	Direct economic loss attributed to disasters in relation to global gross domestic product (GDP) (a) damage to infrastructure	11.64	

Despite outperforming national averages in disaster preparedness, Chiang Rai still faces challenges in poverty reduction, as evidenced by its low performance in the proportion of the proportion of poor population, social security coverage, and land ownership. The province must mobilise resources to address poverty in its various dimensions, particularly among marginalised groups such as ethnic minorities and stateless persons, especially those residing in remote areas.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 1.4.1, 1.4.3, 1.5.2 (b), 1.5.4 and 1.b.1.

SDG 2 End hunger, achieve food security, and improved nutrition and promote sustainable agriculture

Sustainable Development Goal 2 aims to end hunger. 11 indicators apply to the Chiang Rai context. They involve hunger in the dimensions of malnutrition, food security, nutritional status, food production in the agricultural sector, the numbers of plant and animal genes for food, agricultural preparation, and food prices

It is in line with Chiang Rai Provincial Development Strategy 2023-2027, Development Issue 2: Promoting production and innovation to elevate creative agricultural products under sustainable development guidelines. The province prioritises sustainable and environmentally friendly agriculture. However, the issue of food security, hunger, and nutrition is not directly addressed.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
2.2.3	Prevalence of anaemia in pregnant women (percentage) [P]	9.97	4
2.3.1	Value of production per labour unit (Baht/person/year) [P]	92,186.36	2

Chiang Rai outperformed national averages in addressing anaemia among pregnant women but fell short in agricultural productivity per labour unit. As agriculture, including freshwater fisheries, is a crucial driver of economic development, Chiang Rai must prioritise high-value agricultural policies and equitable land allocation.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2, 2.4.1, 2.5.1, 2.a.1 and 2.c,1.

SDG 3 Ensure healthy lives and promote well-being for all at all ages

For Sustainable Development Goal 3, 26 indicators were proper to be used in Chiang Rai. These indicators covered health and well-being issues for everyone at all ages, such as diseases, mortality, and access to healthcare systems.

It aligns with Chiang Rai Provincial Development Strategy 2023-2027, Development Issue 5: Quality of life, human resources, and security to promote a creative society. The province prioritises enhancing its citizens' quality of life and basic social elements. While the Development Issue 5 focuses on health-related well-being and safety, including road safety and drug prevention, other aspects are not adequately addressed in the provincial development plan.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
3.1.1	Maternal mortality ratio (person per 100,000 live births)	14.64	4
3.2.1	Under-5 mortality rate (person per 100,000 live births)	6.65	4
3.3.1	Number of new HIV infections (person per 1,000 uninfected population)	0.17	2
3.3.3	Malaria incidence (person per 1,000 population)	0.07	4
3.3.4	Hepatitis B incidence (person per 100,000 population)	18.73	1
3.4.2	Suicide mortality rate (person per 100,000 population)	12.12	1
3.5.1	Retention rate of substance use disorders [P]	40.13	2
3.6.1	Death rate due to road traffic injuries (person per 100,000 population)	37.18	1
3.8.1	Coverage of Universal Coverage Scheme (percent) [P]	99.44	3
3.9.1	The incidence rate of respiratory system diseases attributed to ambient air pollution [P]	15.63	1
3.c.1	Health worker density and distribution	27.88	2

Chiang Rai's performance on some indicators surpassed national averages but fell short in most areas, particularly in addressing Hepatitis B virus infection, suicide rates, road accident fatalities, and respiratory illnesses caused by air pollution. These indicators show significantly lower performance compared to national averages. Promoting Chiang Rai's Wellness City policy will be a crucial driver in addressing these public health challenges. The province can adopt the Ministry of Public Health's development targets for each indicator to monitor its progress in public health indicators.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 3.1.2, 3.2.2, 3.3.2, 3.3.5, 3.4.1, 3.5.2, 3.7.1, 3.7.2, 3.8.2, 3.9.2, 3.9.3, 3.a.1, 3.b.1, 3.b.3 and 3.d.2.

SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Sustainable Development Goal 4 contains 10 indicators that apply to the Chiang Rai context. These educational indicators, especially educational equality and a fight against educational inequality in various factors whether it's sexual status, financial status, or social status, are important for every province in the country.

It aligns with Chiang Rai Provincial Development Strategy 2023-2027, Development Issue 5: Quality of life, human resources, and security to promote a creative society. The province prioritises enhancing its citizens' quality of life and basic social factors. While the development framework under Development Issue 5 focuses on creating learning opportunities for all age groups, the issue of educational equity is not adequately addressed.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
4.1.1	O-NET score of grade-12 students [P]	33.64	4
4.1.2 (a)	Completion rate (primary education)	97.09	
4.1.2 (b)	Completion rate (lower secondary education)	86.61	
4.1.2 (c)	Completion rate (upper secondary education)	89.87	
4.1.2 (d)	Completion rate (vocational education)	54.22	
4.2.1	Proportion of children aged 0-5 years months who are developmentally on track (percent) [P]	88.32	3
4.2.2	Participation rate in organised learning	79.24	
4.3.1	Participation rate of youth and adults in formal and non-formal education (percent)	79.74	3
4.5.1 (a)	Parity indices (female/male) (upper secondary education)	1.28	
4.5.1 (b)	Parity indices (female/male) (vocational education)	0.55	
4.a.1 (a)	Proportion of schools offering basic services (preschool education)	68.87	
4.a.1 (b)	Proportion of schools offering basic services (primary education)	100.00	
4.a.1 (c)	Proportion of schools offering basic services (lower secondary education)	100.00	
4.a.1 (d)	Proportion of schools offering basic services (upper secondary education)	100.00	

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
4.a.1 (e)	Proportion of schools offering basic services (vocational secondary education)	0.00	

Chiang Rai's performance on the O-NET exam surpassed national averages but fell short in early childhood development and youth and adult participation rates. The COVID-19 pandemic in 2020-2021, which led to school and daycare closures, and the increased demand for adult skills development due to underemployment, are key factors affecting Chiang Rai's performance in these areas.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 4.4.1, 4.6.1 and 4.c.1.

SDG 5 Achieve gender equality and empower all women and girls

For Sustainable Development Goal 5, nine indicators can be applied to the context of Chiang Rai, covering eliminating discrimination and all forms of violence against women and girls across various dimensions such as economic, social, and policy implementation.

A review of the Chiang Rai Provincial Development Plan 2023-2027 reveals that the plan lacks a specific strategy or approach to address gender discrimination and promote gender equality.

Indicator performance

Currently, monitoring and evaluating the indicators under the Sustainable Development Goal is not viable. To address this gap, data should be shared and integrated among relevant agencies, such as the Department of Women's Affairs and Family Development, the Office of the Permanent Secretary, the Ministry of Social Development and Human Security, and the OSCC, the Office of the Permanent Secretary, the Ministry of Public Health, to facilitate the reporting of relevant indicators.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 5.2.1, 5.2.2, 5.3.1, 5.3.2, 5.4.1, 5.5.1, 5.6.1, 5.a.1 and 5.c.1.

SDG 6 Ensure availability and sustainable management of water and sanitation for all

Sustainable Development Goal 6 seeks to manage water and sanitation for all. Eight indicators apply to the Chiang Rai context, including access to safe drinking water and safely managed sanitation services, water quality of water resources, efficient changes in water use, water tension level, ecosystem changes related to water, and participation of local communities in water and sanitation management.

Sustainable Development Goal 6 (SDG 6) aligns with the Chiang Rai Provincial Development Plan 2023-2027, particularly with Development Issue 4: Sustainable management of natural resources and the environment. This development issue focuses on integrated water management.

Indicator performance

Currently, monitoring and evaluating the indicators under the Sustainable Development Goal is not viable. Data collection on access to safe drinking water is ongoing but not yet continuous. Data on wastewater management requires further coordination with the Department of Natural Resources and Environment. Additional expertise is needed for data collection and calculations for water quality indicators.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 6.1.1, 6.2.1, 6.3.1, 6.3.2, 6.4.1, 6.4.2, 6.6.1 and 6.b.1.

SDG 7 Ensure access to affordable, reliable, sustainable and modern energy for all

With regard to Sustainable Development Goal 7, four indicators are applicable to Chiang Rai. They concern electricity access and production, and the use of renewable energy.

A review of the Chiang Rai Provincial Development Plan 2023-2027 reveals no specific strategy directly addressing access to modern energy. However, access to modern energy indirectly impacts several development priorities identified in the plan, including sustainable natural resources and environmental management.

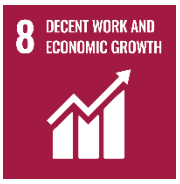
Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
7.2.1	Renewable energy share in the total final energy consumption (kW per 1,000 GW) [P]	10.00	1
7.b.1 (a)	Installed renewable energy-generating capacity (MW)	12.64	
7.b.1 (b)	Installed renewable energy-generating capacity (watts per capita)	9.92	1

Chiang Rai's performance on renewable energy consumption and production indicators fell below national averages. However, there was a positive trend of improvement. Additional data collection specific to Chiang Rai is required for the electricity access indicator. There are particular challenges related to electricity access for populations in remote areas.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 7.1.1 and 7.1.2.

SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



Sustainable Development Goal 8 has 11 indicators that are applicable to the Chiang Rai context, covering issues related to income growth, employment, labour, tourism, and access to financial services.

The goal aligns line with Chiang Rai's development priorities, which include promoting creative tourism rooted in Lanna culture, enhancing agricultural production and innovation, developing the creative economy in trade, investment, services, and logistics, and fostering employment and workforce potential.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
8.1.1	Annual growth rate of real GPP per capita (percent)	1.02	1
8.2.1	Annual growth rate of real GPP per employed person (percent)	4.22	4
8.3.1	Proportion of informal employment in total employment (percent)	76.76	1
8.5.2	Unemployment rate, by sex, age and persons with disabilities (percent)	0.74	4
8.6.1	Proportion of youth not in education, employment or training (percent)	10.40	4
8.8.1	Fatal and non-fatal occupational injuries (person per 100,000 population) P	22.26	4
8.9.1 (a)	Tourism revenue (million baht) P	22,902.29	
8.9.1 (b)	Tourism revenue growth rate (percent) P	28.36	3

Chiang Rai's performance surpassed national averages in terms of per capita income growth, the proportion of youth not in education, employment, or training, unemployment rates, and work-related injuries or illnesses. However, the province fell short of national averages in terms of growth from tourism revenue and the proportion of informal employment, both of which are significantly below national benchmarks. The COVID-19 pandemic has directly impacted income growth and tourist revenue.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 8.5.1, 8.7.1, 8.10.1 and 8.10.2.

SDG 9 Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

For Sustainable Development Goal 9, there are 11 indicators that can be applied to Chiang Rai, covering issues related to transport infrastructure, public access to technology, value-added from manufacturing industries, employment in manufacturing, operations of small-scale industries in terms of value-added and access to financing, carbon dioxide emissions, as well as budgets supporting research and development.

Sustainable Development Goal 9 aligns with Chiang Rai's development priorities in the areas of creative economy, trade, investment, services, and logistics.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
9.1.1	Proportion of village accessed to all-season road (percent) [P]	64.26	4
9.2.1 (a)	Manufacturing value added as a proportion of GDP (percent)	6.13	1
9.2.1 (b)	Manufacturing value added (per capita)	5296.61	1
9.2.2	Manufacturing employment as a proportion of total employment (percent)	7.01	1
9.5.2	Researchers per million inhabitants [P]	1,055.58	1
9.c.1	Proportion of population having cellular phone [P] (percent)	86.34	3

Chiang Rai's performance outperformed national averages regarding road infrastructure and the proportion of researchers per inhabitant. However, the province fell short of national averages regarding manufacturing value added per capita, manufacturing employment, and telecommunications infrastructure. Chiang Rai needs to promote the growth of high-value manufacturing in the province to drive overall economic growth.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 9.1.2, 9.3.1, 9.3.2, 9.4.1, 9.5.1 and 9.b.1.

SDG 10 Reduce inequality within and among countries

For Sustainable Development Goal 10, there are 7 indicators that can be applied to Chiang Rai, covering issues related to income equality, labor wages, expenditures, discrimination, and migration and refugee populations.

The Chiang Rai Provincial Development Plan 2023-2027 does not explicitly include a development focus on reducing inequality. However, there are indirectly related aspects, such as improving of quality of life and security to promote a creative society.

Indicator performance

Currently, it is not possible to monitor and evaluate progress towards achieving Sustainable Development Goal 10 (SDG 10). Data on income and expenditure inequality, including wages across sectors and incomes of self-employed individuals, is not publicly available for Chiang Rai. This data should be made public to facilitate monitoring and evaluation. Additionally, regarding the issue of refugees, Chiang Rai needs to closely collect relevant data to assess the situation along the Republic of the Union of Myanmar border.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 10.1.1, 10.2.1, 10.3.1, 10.4.1, 10.7.1, 10.7.3 and 10.7.4.

SDG 11 Make cities and human settlements inclusive, safe, resilient and sustainable

For Sustainable Development Goal 11, there are 13 indicators aligned with Chiang Rai's development context, covering issues related to developing safe and sustainable cities. These include slum conditions, access to public transportation, land use, public participation in urban planning, disaster impacts, waste and air pollution management, and public safety.

SDG11 aligns with Chiang Rai Provincial Development Plan 2023-2027, particularly with Development Issue 4: Sustainable management of natural resources and the environment . The province has prioritised improving wildfire and air pollution management.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
11.5.1	Number of affected persons attributed to disasters (person per 100,000 population) [P]	2,255.40	4
11.5.2 (a)	Direct economic loss attributed to disasters in relation to global gross domestic product (GDP) (a) damage to infrastructure	11.64	
11.6.1	Proportion of municipal solid waste collected and managed in controlled facilities (percent)	27.99	2
11.6.2	Annual mean levels of fine particulate matter (PM 2.5) (μg/m^3) [P]	31.36	1

Chiang Rai's performance was above national averages regarding population affected by disasters. However, the province fell short of national benchmarks in solid waste management and PM2.5 air pollution. PM2.5 pollution is a significant challenge for Chiang Rai and requires urgent action. The province can utilise hotspot data to monitor the situation effectively.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 11.1.1, 11.2.1, 11.3.1, 11.3.2, 11.4.1, 11.5.2 (b), 11.7.1, 11.7.2, 11.b.1 and 11.b.2.

SDG 12 Ensure sustainable consumption and production patterns

Concerning Sustainable Development Goal 12, five indicators can be adopted by Chiang Rai, ranging from food loss and waste, hazardous waste and its treatment, recycling, to sustainable procurement in the public sector, and the installed renewable energy-generating capacity.

SDG11 also aligns with Chiang Rai Provincial Development Plan 2023-2027, particularly with Development Issue 4: Sustainable management of natural resources and the environment .

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
12.4.2 (a)	Community hazardous waste generated per capita (kilogram) [P]	0.04	4
12.4.2 (b)	Proportion of community hazardous waste treated (percent) [P]	92	4
12.5.1	Solid waste recycling rate (percent) [P]	29.1	4
12.a.1	Installed renewable energy-generating capacity (in watts per capita)	9.92	1

With regards to hazardous waste and solid waste recycling, Chiang Rai's performance on this indicator was higher than the national score. However, the performance on renewable energy generation failed to outperform the national benchmark.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 12.3.1 and 12.7.1.

SDG 13 Take urgent action to combat climate change and its impacts

For Sustainable Development Goal 13, 4 indicators were suitable to be used in Chiang Rai, covering issues regarding disaster impact management and greenhouse gas emissions reduction.

SDG 13 is in line with Chiang Rai Provincial Development Plan 2023-2027, particularly with Development Issue 5: Quality of life and security to promote a creative society. The province has prioritised disaster preparedness and response.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
13.1.1	Number of affected persons attributed to disasters (person per 100,000 population) [P]	2,255.40	4

Chiang Rai's performance on this indicator regarding the number of disaster victims was above the national score. However, regarding disaster preparedness plans, local governments in Chiang Rai need to ensure alignment with the Sendai Framework for Disaster Risk Reduction 2015-2030. In addition, data on greenhouse gas emissions should be formally collected for monitoring and evaluation purposes.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 13.1.2, 13.1.3 and 13.2.2.

SDG 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Sustainable Development Goal (SDG) 14 is not applicable to Chiang Rai due to the province's geographical context without marine resources. Therefore, there are no relevant indicators for Chiang Rai.

SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

For Sustainable Development Goal 15, there are 3 indicators that can be applied to the context of Chiang Rai, covering issues regarding forest area, important sites for terrestrial and freshwater biodiversity that are covered by protected areas, and land degradation.

SDG 15 aligns with Chiang Rai Provincial Development Plan 2023-2027, particularly with Development Issue 4: Sustainable management of natural resources and the environment . The province has prioritised increasing forest and green space area.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
15.1.1	Forest area as a proportion of total land area (percent)	40.35	4

Speaking of proportion of forest area, Chiang Rai's performance on this indicator was above the national score, but a trend of continual decrease in forest areas has been evident. As for soil quality, data collection is not currently available. Further studies regarding important sites for biodiversity are required.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 15.1.2, 15.3.1, 15.4.1 and 15.4.2.

SDG 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

For Sustainable Development Goal 16, 19 indicators can be suitable for use in Chiang Rai, covering issues regarding safety of life and property, conflicts and violence, as well as access to services of public agencies and officials.

SDG 16 aligns with Chiang Rai's Development Strategy, particularly with Development Issue 5: Quality of life, human resources, and security to promote a creative society. The province prioritises enhancing quality of life, reducing social inequality, and promoting the safety and security of life and property for citizens to foster a creative society.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
16.1.1	Number of cases of intentional homicide (case per 100,000 population) P	2.34	4
16.1.3	Number of arrest cases subjected to (a) attempted murder (b) physical violence, (c) sexual violence (case per 100,000 population) P	9.81	4
16.2.2	Number of victims of human trafficking (person per 100,000 population) P	2.74	1
16.3.2	Unsentenced detainees as a proportion of the overall prison population (percent)	19.17	3
16.4.2	Number of firearm and explosive case (case per 100,000 population) P	17.28	4
16.5.1	ITA Score of E4: A bribe by those public officials (point) P	98.72	4
16.6.2	ITA Score of section 6: Quality of public services (point) P	84.58	3
16.b.1	ITA Score of E2: Equitable service (point) P	86.76	4

Chiang Rai's performance surpassed national averages in terms of crime rates, physical, mental, and sexual violence, bribery among officials, and discrimination by government agencies. However, the province fell short of national benchmarks in human trafficking, fairness in court proceedings, and public service quality. Regarding human trafficking, which significantly lags behind national averages, Chiang Rai needs to intensify efforts to address this issue seriously.

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 16.1.4, 16.2.1, 16.2.3, 16.3.1, 16.3.3, 16.5.2, 16.6.1, 16.7.1, 16.7.2, 16.9.1 and 16.10.1.

SDG 17 Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

For Sustainable Development Goal 17, there are 7 indicators that can be applied to the context of Chiang Rai, namely strengthening financial resilience and technology, building multi-stakeholder partnerships, and building statistical capacity.

SDG 17 is in line with Chiang Rai's Development Strategy, which emphasises infrastructure development to enhance competitiveness and promote multi-dimensional problem-solving to improve the quality of life for citizens. The province has prioritised improving transportation infrastructure.

Indicator performance

Indicator	Indicator name or name of dataset (in case of proxy indicator (P))	Average	Level
17.1.1	Total government revenue as a proportion of GPP (percent)	17.85	4
17.1.2	Proportion of domestic budget funded by domestic taxes (percent)	4.96	1
17.8.1	Proportion of individuals using the Internet (percent)	50.08	1
17.17.1	Amount in United States dollars committed to public-private partnerships for infrastructure (million Baht)	3,712	

Chiang Rai's performance surpassed national averages in terms of proportion of government revenue to GPP. However, the province fell significantly short of national benchmarks in local tax collection and internet access for the population. Additionally, Chiang Rai has witnessed an upward trend in the value of investments in public-private partnership (PPPs) projects, particularly in transportation and logistics (Chiang Khong multimodal transportation hub and Mae Fah Luang Airport investment project).

The report's appendix provides more details on other indicators that cannot yet be monitored and evaluated, including 17.6.1, 17.19.1 and 17.19.2.

Voice of the People

Methodology

The Sustainable Development and Sufficiency Economy Studies Center, National Institute of Development Administration (NIDA) surveyed the opinion on sustainable development among the Chiang Rai population. The methodological procedure for selecting a sample group to respond to the questionnaire was listed below:

Population refers to the people residing in the Chiang Rai province area.

Sample group refers to people aged 18 or over, not less than 400 people from each province, with a total sample size of no fewer than 6,000.

Sampling

(1) At the provincial level, purposive sampling was used as specified by the employer. A total of 15 provinces were surveyed.

(2) At the district level, purposive sampling was used for District 1 by selecting only Mueang District. Simple random sampling conducted by computer was used for District 2 and 3. A total of 45 districts were surveyed.

(3) At the sub-district level, simple random sampling was used by selecting 2 sub-districts per 1 district. A total of 90 sub-districts were surveyed. Convenience sampling by collecting data in public gathering places was used to acquire the desired proportion of sample groups according to the characteristics of each sub-district.

List of districts and sub-districts where samples were collected in Chiang Rai

	District	Sub-district
District 1	Mueang Chiang Rai	Rop Wiang
		Mae Yao
District 2	Phan	Mueang Phan
		Sai Khao
District 3	Mae Fah Luang	Thoet Thai
		Mae Salong Nai

Research Instrument

Questionnaire: Divided into 3 parts as follows: part 1 - information regarding general characteristics, part 2 - urgent needs for improving the quality of life for you and your family, and part 3 – guidelines or conditions that would improve your quality of life

Quality inspection of research instruments: Advisers and experts considered and tested the instrument used in the research by administering it to a sample group resembling the actual population, with no less than 30 sets per province.

Data Collection

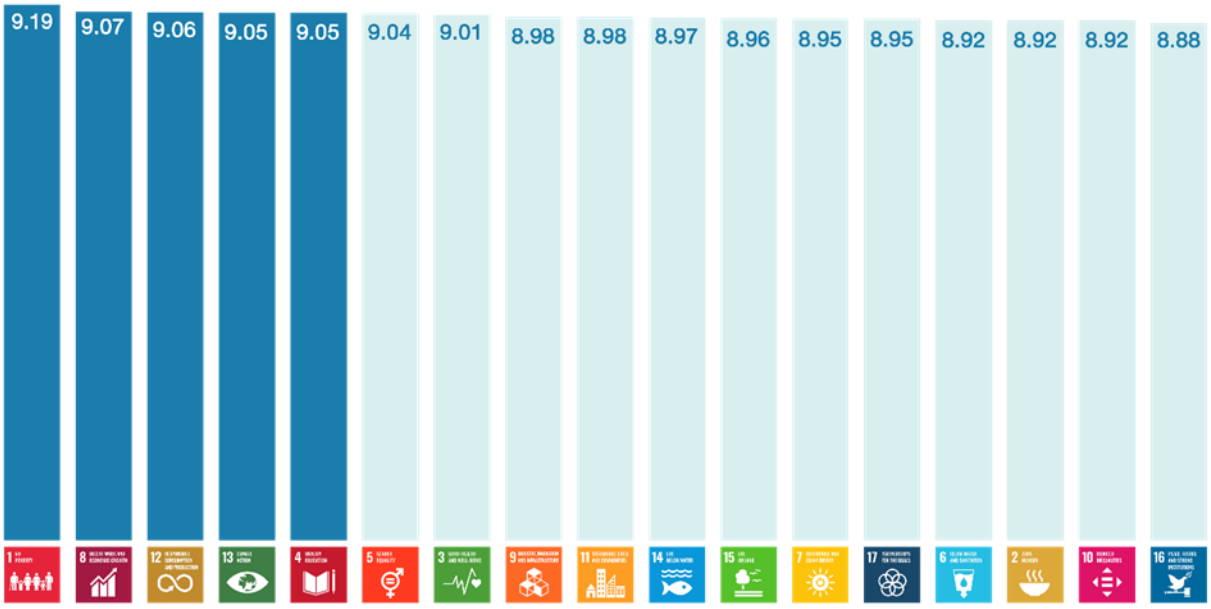
In-person Offline Survey: A sample group of 400 individuals per province[4], totaling 6,000 individuals overall, was collected by the National Institute of Development Administration.

Survey Results

In this survey, respondents were asked to rate urgent sustainable development issues on a scale from 0 to 10 (0 means the least urgent and 10 means the most urgent). It suggested that the top 5 issues perceived by the population as most urgently needing development for quality of life improvement included the following:

1) SDG 1: End poverty in all its forms everywhere (score 9.19)
2) SDG 8 : Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (score 9.07).
3) SDG 12: Ensure sustainable consumption and production patterns (score 9.06)
4) SDG 13: Take urgent action to combat climate change and its impacts (score 9.05)
5) SDG 4 : Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (score 9.05)

Opinions on quality of life development issues in the Chiang Rai area



In addition, considering all 5 preliminary issues and comparing the gaps between public opinion scores on urgent needs and government action to address the problems, which were also rated on a scale of 0-10 (0 means there was the least government action and 10 means there was the most government action). **the issues with the largest gap between the public expectation and government action were:**

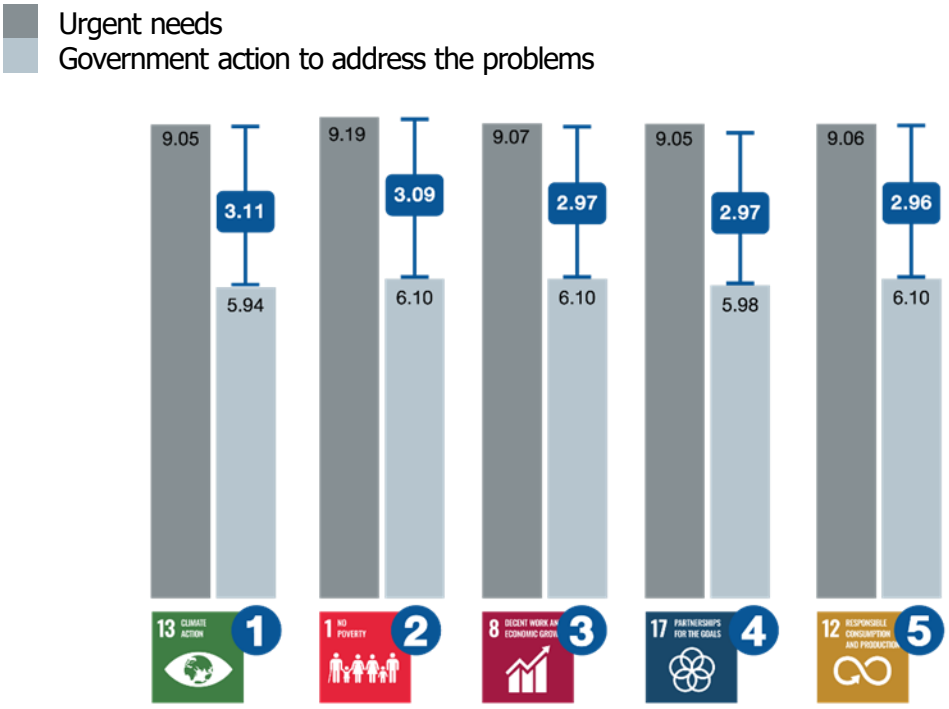
1) SDG 13: Take urgent action to combat climate change and its impacts (score difference is 3.11)
2) SDG 1: End poverty in all its forms everywhere (score difference is 3.09)

3) SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (score difference is 2.97)

4) SDG 17: Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development (score difference is 2.97)

5) SDG 12: Ensure sustainable consumption and production patterns (score difference 2.96)

Gaps between public opinion scores on urgent needs and government action to address the problems



This suggested that **those in the Chiang Rai area considered ending poverty to be the most urgent task.** At the same time, dissatisfaction was found in the government's performance in addressing climate change, which is also one of the top urgent issues. Therefore, it is indispensable for Chiang Rai Province to focus on solving these issues to ensure its performance could be more concrete.

Furthermore, the population in the Chiang Rai area gave opinions on guidelines for improving the quality of life that were suitable for Chiang Rai through top 3 approaches, namely:

1) There is a decentralisation of capital resources and authority in local administration.

2) Appropriate local policies are developed and improved.

3) No corruption and increased efficiency in disclosing information for transparent management.

Recommendations, Gaps and Opportunities for Development

Recommendations regarding SDG performance across all 17 goals.

In evaluating Sustainable Development Goals, the result of indicator assessment was used to determine equal weighted value by assigning the performance level into four groups, similar to the indicator assessment, namely:

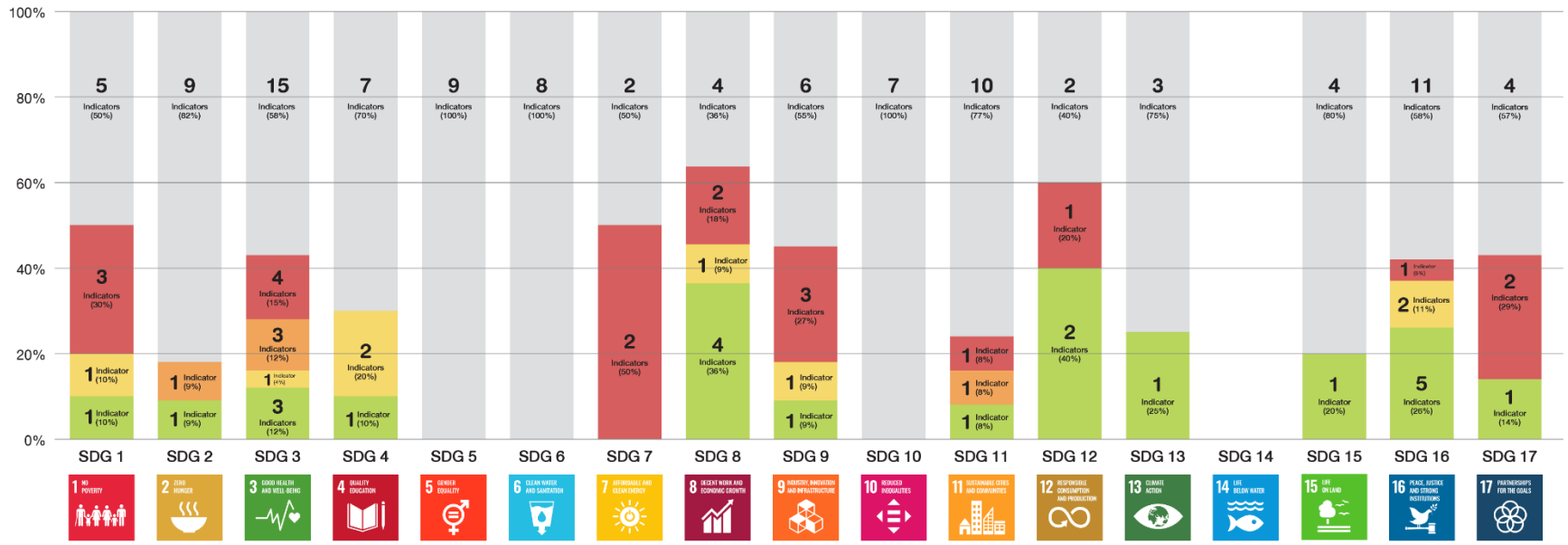
- Level 4: Higher than the national value
- Level 3: Lower than the national value, not more than 10 percent
- Level 2: Lower than the national value, between 10 and 20 percent
- Level 1: Lower than the national value, more than 20 percent

Listed below is the performance of each sustainable development goal of Chiang Rai

Level 4	
Level 3	
Level 2	
Level 1	
Cannot be monitored and evaluated	(No indicator)

Summary of indicators performance

- Level 4: Higher than the national value
- Level 3: Lower than the national value, not more than 10 percent
- Level 2: Lower than the national value, between 10 and 20 percent
- Level 1: Lower than the national value, more than 20 percent
- Cannot be monitored and evaluated



The overall performance of all 17 sustainable development goals of Chiang Rai (according to the assessment of 54 indicators that Chiang Rai Province can be monitored and evaluated) has indicated that:

On Sustainable Development Goals 2, 8, 13, 15 and 17, the performance of Chiang Rai was better than the national average. That is, Chiang Rai performed well in these Sustainable Development Goals compared to the rest of the country. For this reason, knowledge regarding these sustainable developments should be shared with other provinces with lower performance and similar contexts for learning purposes.

On Sustainable Development Goals 4, 11 and 16, Chiang Rai performed below national averages by less than 10%. This indicates that the performance of these SDGs is close to the national level. Chiang Rai Province can implement quick-win strategies by allocating resources to specific projects to improve performance above the national average.

On Sustainable Development Goals 3 and 12, the performance of Chiang Rai is below the national average by 10-20 percent. This can be interpreted that Chiang Rai Province needed to closely monitor progress and should formulate plans or mobilise resources to contribute to development for years to come.

On Sustainable Development Goals 1, 7 and 9, the performance of Chiang Rai is lower than the national average by over 20 percent. That is, Chiang Rai performed significantly worse than the national performance on these Sustainable Development Goals. Therefore, an analysis of these underperformed indicators should be executed to identify problems and challenges that may require mobilisation of resources to assist in improvement in the future.

Sustainable Development Goals 5 and 6 could not be monitored and evaluated during the preparation of a sustainable development progress report. Thus, it is essential for Chiang Rai Province to coordinate with relevant agencies to request data on the indicators. Alternatively, respective agencies should collect and publicly disclose the data, to allow for monitoring and evaluation purposes.

Indicator performance and survey results

An analysis of Chiang Rai's performance on key indicators and public concerns regarding urgent Sustainable Development Goals (SDGs) reveals a concerning gap. While the province excels in achieving 8 (Decent Work and Economic Growth) and 13 (Climate Action), exceeding national averages, its performance lags behind national levels for other priority - SDGs: 1 (No Poverty), 4 (Quality Education) and 12 (Sustainable Consumption and Production). Chiang Rai Province needs to prioritise improvements in SDGs 1. Specific emphasis should be placed on addressing the proportion of the population living below the poverty line (SDG 1) which currently shows significantly lower performance compared to the national average.

Recommendations regarding the process of monitoring and evaluating indicators for sustainable development in the future

1. Open data is important.

This report shows the significant gaps in the limitations of open government data. For this reason, government agencies should coordinate and exchange data that are critical in monitoring and evaluating indicators. Furthermore, locally-collected data (for example: the data collected for Doi Tung Project Development Master Plan, 3S indicators and the open database https://chiangrai.gdcatalog.go.th in the case of Chiang Rai) can play a role in a contribution of a better understanding on sustainable development situations.

2. Data disaggregation can improve an in-depth analysis of situations.

Disaggregation in the data collection process is essential for understanding the sustainable development situation of a subpopulation, particularly vulnerable populations. Therefore, relevant agencies, including Chiang Rai Province, should disaggregate important data for indicators that require in-depth situation analysis, namely by gender (male, female, and LGBTQIA+), age, ethnicity and nationality, as well as disability status. Disaggregation by ethnicity and nationality, in particular, will help understand issues related to marginalised populations, which has become a pressing issue of Chiang Rai.

3. Evaluating outcomes against target values will reveal the actual fact of the development.

Some indicators of Sustainable Development Goals have national / provincial target values and the timeframe for achieving those targets. Therefore, in addition to evaluating the performance of provincial indicators against the national average, comparing them to the target values or standard values will help the city recognise their level of sustainable development and lead to planning resource allocation for further development.

Chiang Rai's Development Gaps and Opportunities

The analysis of indicator performance and survey data reveals that Chiang Rai's development priorities are mainly about socio-economic issues (poverty reduction and economic development based on Lanna cultural capital). The promotion of sustainable consumption, addressing climate change, and ensuring quality education are also main elements that need to be promoted for all ethnic groups, both in urban and remote areas.

Chiang Rai needs to strengthen collaboration with regional government agencies to promote sustainable development. This includes aligning resource allocation with provincial development strategies and empowering local governments with the capacity to implement sustainable development projects at the local level.

Chiang Rai's unique characteristics, such as the expanding service sector, tourism, rich forest resources, and diverse ethnic groups, may impact performance on certain indicators. Therefore, it is necessary to consider the definitions of the indicators to interpret the reasons why performance is higher or lower than the national average. Key points about Chiang Rai can be described below:

- Addressing data gaps by collecting data on ethnic groups and stateless persons will create better understanding on disparities in economic well-being and access to basic services (SDGs 1, 3, 4, 10).
- Promoting creative economy in the service sector and finding a balance between manufacturing development and value addition (SDGs 8, 9, 17).
- Balancing forest conservation and agricultural land allocation. This requires sustainable approaches to reduce deforestation and improve agricultural practices (SDGs 1, 2, 3, 11, 15).
- Managing water resources to improve water quality for agriculture and local fisheries (SDGs 2, 6).

To enhance Chiang Rai's existing development projects, the province can adopt Sustainable Development Goals (SDGs) indicators to effectively assess project outcomes. This process would truly ensure that the development direction aligns with the UN's sustainability agenda.

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Endnotes

1. Comparison of Chiang Rai Population between December 2021 and December 2022. Based on the monthly civil registration population statistics from the Department of Provincial Administration.
2. National Economic and Social Development Board (NESDB) (2022). GPP calculation uses Chain Volume Series (CVMs) method (base year 2002). Chain volume series are not additive. The sum of the components will thus not be equal to the shown totals.
3. Chiang Rai Province (2024). Chiang Rai Provincial Development Plan (2023-2027) https://www.nperf.com/en/map/TH/1153669.Chiang-Rai/-/signal/.
4. Sample size is calculated by applying the formulas of Yamane, Krejcie and Morgan. The error value was set at ± 5% or 0.05.

The views expressed in this publication are those of the authors and do not necessarily represent those of the European Union, United Nations, including UNDP, or the UN Member States.

Appendix 1
SDG Profile
Research Methodology

Research Methodology for Developing Provincial SDG Profiles Report

SDG Profile Report is a crucial tool for raising awareness among government agencies, private sector entities, organisations, and the public sector at the provincial level about the United Nations' sustainable development goals. Therefore, the methodology for developing this report will help provincial agencies see a systematic approach to reporting their province's development. The content is comprised of three main parts:

(1) Selection of SDG indicators at the Provincial Level

(2) Choosing databases for SDG indicators

(3) Monitoring and evaluating SDG indicators

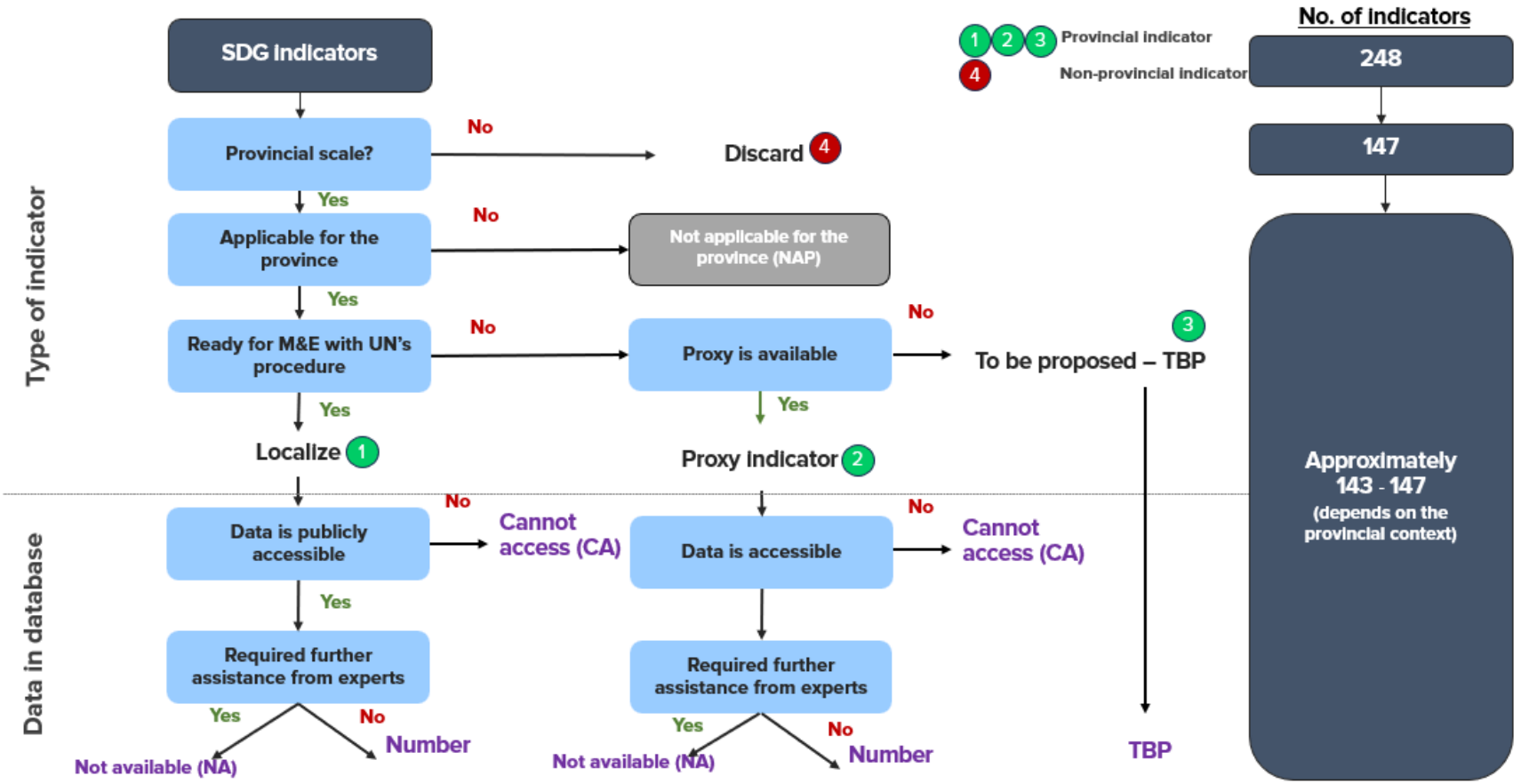
1. Selection of SDG Indicators at the Provincial Level

The United Nations has developed the Sustainable Development Goals (SDGs), which consist of 17 goals covering various dimensions of development. These goals also encompass 169 sub-goals and 248 indicators[1]. The definitions, methodologies, and applicability of these sub-goals need to be considered to select the most appropriate ones for monitoring and evaluating at the provincial level.

In this study, the researchers selected SDG indicators using a tree diagram (Table A-1), which was from synthesising literature reviews related to the application of SDG at the local level (SDG Localisation). Literature reviews revealed that selecting indicators requires consideration of two critical factors: (1) the indicators' appropriateness to the local context and (2) the availability of databases to monitor the performance of the indicators.

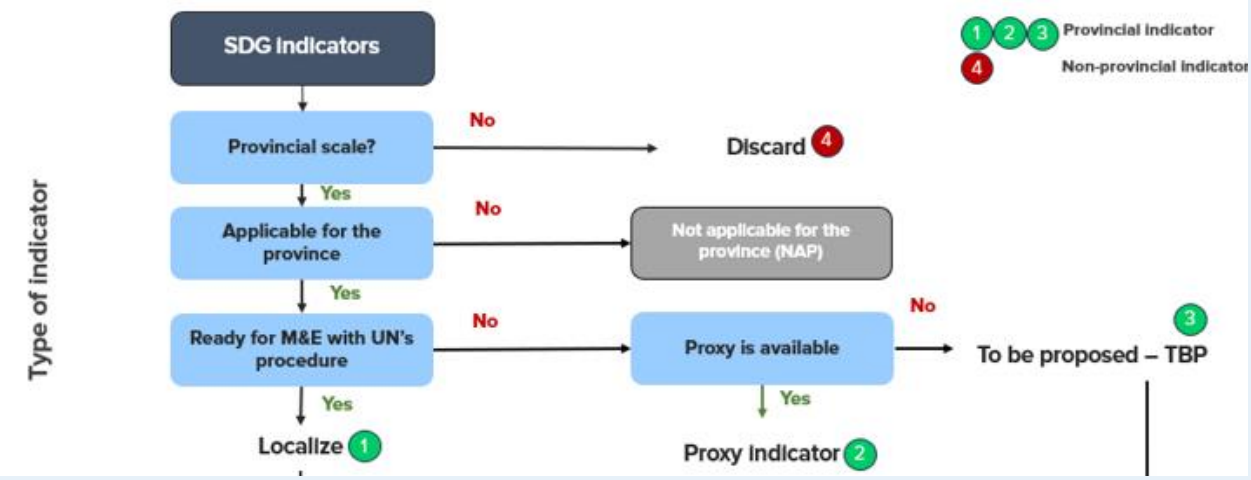
[1] Find more details about the SDG indicators at https://unstats.un.org/sdgs/metadata/

Figure A-1: Tree diagram in selecting SDG Indicators at the provincial level



1.1 Indicators' Appropriateness to the Local Context

Considering the appropriateness of indicators to the local context involves reviewing the definitions and methodologies for monitoring and evaluating these indicators to assess their potential for use at the provincial level. The researchers use the following questions for consideration:



- **Is this SDG indicator suitable for measurement at the provincial level?:** This question considers the United Nations methodology's section 5 regarding data availability and disaggregation. Researchers define indicators that are suitable for monitoring and evaluating at the provincial level as those with methods supporting the disaggregation of data by geographic location (such as urban/rural classification, national, provincial, or local) and demographic (such as gender, age, disability, education level, and nationality). If an indicator is primarily aimed at monitoring and evaluating performance at the international or national level and does not have the potential for disaggregating data to smaller scales, it will not be considered for use at the provincial level, which is referred to as a discarded indicator.
- **Is this SDG indicator related to the geographical context of the province?:** After selecting indicators that are suitable for monitoring and evaluation at the provincial level, the next question to consider is the alignment of indicators with the geographical characteristics or other specific contexts of the province, which include coastal and marine resources (related to SDG 14), forest and mountain resources (related to SDG 15), and areas under the Internal Security Act 2008 (related to SDG 16.1.2). If the province does not have geographical characteristics that align with the indicators, those indicators should not be applied to the province, referring to such indicators as "Not applicable indicators."
- **Does this SDG indicator have methodologies for measuring performance according to the frameworks provided by the United Nations?:** After selecting indicators that are related to the context of the province, the next question to consider is whether the current monitoring and evaluation approaches align with the definitions set by the United Nations. This question will categorise the indicators into 3 groups:

- Localised indicator refers to indicators with monitoring and evaluating methodologies at the provincial level consistent with the frameworks of the United Nations. Therefore, existing works of relevant agencies can be used.
- Proxy indicator refers to indicators with monitoring and evaluating methodologies at the provincial level closely aligned with the frameworks of the United Nations. They could be used as substitutes temporarily until monitoring and evaluation processes at the provincial level that align with the United Nations definitions are established.
- To-be proposed indicator refers to indicators that currently do not exist or still lack monitoring and evaluation methodologies at the provincial level that align with the frameworks of the United Nations. As a result, monitoring and evaluating these indicators is still impossible. These indicators will require further study to develop monitoring and evaluation methodologies that align with Thailand's context for the future.

The selection of indicators through the process mentioned above aligns with the details provided in (Tabel A-1).

Table A-1: Results of indicator selection at the provincial level

Indicator No.	Indicators	Indicator type	Reason of discard
1.1.1	Proportion of the population living below the international poverty line by sex, age, employment status, and geographic location (urban/rural)	Discard	Evaluation at international level
1.2.1	Proportion of the population living below the national poverty line, by sex and age	Localised	-
1.2.2	Proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions	Localised	-
1.3.1	Proportion of the population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims, and the poor and the vulnerable	Proxy	-
1.4.1	Proportion of the population living in households with access to basic services	Localised	-
1.4.2	Proportion of the total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure	Proxy	-
1.5.1	Number of deaths, missing persons, and directly affected persons attributed to disasters per 100,000 population	Proxy	-
1.5.2	Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)	Proxy	-
1.5.3	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	TBP	-
1.5.4	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	TBP	-
1.a.1	Total official development assistance grants from all donors that focus on poverty reduction as a share of the recipient country's gross national income	Discard	Evaluation at international level
1.a.2	Proportion of total government spending on essential services (education, health, and social protection)	Discard	Evaluation at national level

A.6 SDG Profile Research Methodology

Indicator No.	Indicators	Indicator type	Reason of discard
1.b.1	Pro-poor public social spending	TBP	-
2.1.1	Prevalence of undernourishment	Proxy	-
2.1.2	Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	Localised	-
2.2.1	Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	Localised	-
2.2.2	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)	Localised	-
2.2.3	Prevalence of anaemia in women aged 15 to 49 years, by pregnancy status (percentage)	Proxy	-
2.3.1	Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size	Proxy	-
2.3.2	Average income of small-scale food producers, by sex and indigenous status	Proxy	-
2.4.1	Proportion of agricultural area under productive and sustainable agriculture	Proxy	-
2.5.	Number of (a) plant and (b) animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities	TBP	-
2.5.2	Proportion of local breeds classified as being at risk of extinction	Discard	Evaluation at national level
2.a.1	The agriculture orientation index for government expenditures	TBP	
2.a.2	Total official flows (official development assistance plus other official flows) to the agriculture sector	Discard	Evaluation at international level
2.b.1	Agricultural export subsidies	Discard	Evaluation at national level
2.c.1	Indicator of food price anomalies	Localised	-

Indicator No.	Indicators	Indicator type	Reason of discard
3.1.1	Maternal mortality ratio	Localised	-
3.1.2	Proportion of births attended by skilled health personnel	Localised	-
3.2.1	Under-5 mortality rate	Localised	-
3.2.2	Neonatal mortality rate	Localised	-
3.3.1	Number of new HIV infections per 1,000 uninfected population, by sex, age, and key populations	Localised	-
3.3.2	Tuberculosis incidence per 100,000 population	Localised	-
3.3.3	Malaria incidence per 1,000 population	Localised	-
3.3.4	Hepatitis B incidence per 100,000 population	Localised	-
3.3.5	Number of people requiring interventions against neglected tropical diseases	Localised	-
3.4.1	Mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease	Localised	-
3.4.2	Suicide mortality rate	Localised	-
3.5.1	Coverage of treatment interventions (pharmacological, psychosocial, and rehabilitation and aftercare services) for substance use disorders	Proxy	-
3.5.2	Alcohol per capita consumption (aged 15 years and older) within a calendar year in liters of pure alcohol	TBP	-
3.6.1	Death rate due to road traffic injuries	Localised	-
3.7.1	Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods	TBP	-
3.7.2	Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group	Localised	-
3.8.1	Coverage of essential health services	Proxy	-

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Indicator No.	Indicators	Indicator type	Reason of discard
3.8.2	Proportion of the population with large household expenditures on health as a share of total household expenditure or income	TBP	-
3.9.1	Mortality rate attributed to household and ambient air pollution	Proxy	-
3.9.2	Mortality rate attributed to unsafe water, unsafe sanitation, and lack of hygiene (exposure to unsafe Water, Sanitation, and Hygiene for All (WASH) services)	Localised	-
3.9.3	Mortality rate attributed to unintentional poisoning	Localised	-
3.a.1	Age-standardized prevalence of current tobacco use among persons aged 15 years and older	TBP	-
3.b.1	Proportion of the target population covered by all vaccines included in their national program	Localised	-
3.b.2	Total net official development assistance to medical research and basic health sectors	Discard	Evaluation at national level
3.b.3	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis	Localised	-
3.c.1	Health worker density and distribution	Localised	-
3.d.1	International Health Regulations (IHR) capacity and health emergency preparedness	Discard	Evaluation at national level
3.d.2	Percentage of bloodstream infections due to selected antimicrobial-resistant organisms	TBP	-
4.1.1	Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	Localised	-
4.1.2	Completion rate (primary education, lower secondary education, upper secondary education)	Localised	-
4.2.1	Proportion of children aged 24–59 months who are developmentally on track in health, learning, and psychosocial well-being, by sex	Proxy	-

Indicator No.	Indicators	Indicator type	Reason of discard
4.2.2	Participation rate in organized learning (one year before the official primary entry age), by sex	Localised	-
4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	Proxy	-
4.4.1	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	Proxy	-
4.5.1	Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples, and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated	Localised	-
4.6.1	Proportion of the population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex	Localised	-
4.7.1	Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	Discard	Evaluation at national level
4.a.1	Proportion of schools offering basic services, by type of service	Proxy	-
4.b.1	Volume of official development assistance flows for scholarships by sector and type of study	Discard	Evaluation at national level
4.c.1	Proportion of teachers with the minimum required qualifications, by education level	Localised	-
5.1.1	Whether or not legal frameworks are in place to promote, enforce, and monitor equality and non-discrimination on the basis of sex.	Discard	Evaluation at national level
5.2.1	Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual, or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age.	Proxy	-
5.2.2	Proportion of women and girls aged 15-49 years who have undergone female genital mutilation/cutting, by age.	Proxy	-

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Indicator No.	Indicators	Indicator type	Reason of discard
5.3.1	Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18.	Localised	-
5.3.2	Proportion of girls and women aged 15–49 years who have undergone female genital mutilation/cutting, b	TBP	-
5.4.1	Proportion of time spent on unpaid domestic and care work, by sex, age, and location.	TBP	-
5.5.1	Proportion of seats held by women in (a) national parliaments and (b) local governments.	Localised	-
5.5.2	Proportion of women in managerial positions.	Discard	Evaluation at national level
5.6.1	Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use, and reproductive health care.	TBP	-
5.6.2	Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education	Discard	Evaluation at international level
5.a.1	(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure.	Localised	-
5.a.2	Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control	Discard	Evaluation at international level
5.b.1	Proportion of individuals who own a mobile telephone, by sex.	Localised	-
5.c.1	Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment.	Discard	Evaluation at international level
6.1.1	Proportion of the population using safely managed drinking water services	Localised	-
6.2.1	Proportion of the population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	Proxy	-
6.3.1	Proportion of domestic and industrial wastewater flows safely treated	Localised	-

Indicator No.	Indicators	Indicator type	Reason of discard
6.3.2	Proportion of bodies of water with good ambient water quality	Localised	-
6.4.1	Change in water-use efficiency over time	TBP	-
6.4.2	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	Proxy	-
6.5.1	Degree of integrated water resources management	Discard	Evaluation at national level
6.5.2	Proportion of transboundary basin area with an operational arrangement for water cooperation	Discard	Evaluation at national level
6.6.1	Change in the extent of water-related ecosystems over time	TBP	-
6.a.1	Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan	Discard	Evaluation at international level
6.b.1	Proportion of local administrative units with established and operational policies and procedures for the participation of local communities in water and sanitation management	TBP	-
7.1.1	Proportion of the population with access to electricity	Proxy	-
7.1.2	Proportion of the population with primary reliance on clean fuels and technology	Localised	-
7.2.1	Renewable energy share in the total final energy consumption	Proxy	-
7.3.1	Energy intensity measured in terms of primary energy and GDP	Discard	Evaluation at national level
7.a.1	International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems	Discard	Evaluation at international level
7.b.1	Installed renewable energy-generating capacity in developing countries (in watts per capita)	Proxy	-
8.1.1	Annual growth rate of real GDP per capita	Localised	-
8.2.1	Annual growth rate of real GDP per employed person	Localised	-

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Indicator No.	Indicators	Indicator type	Reason of discard
8.3.1	Proportion of informal employment in total employment, by sector and sex	Localised	-
8.4.1	Material footprint, material footprint per capita, and material footprint per GDP	Discard	ไม่สามารถปรับใช้กับระดับจังหวัดได้
8.4.2	Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	Discard	Evaluation at national level
8.5.1	Average hourly earnings of employees, by sex, age, occupation, and persons with disabilities	Localised	-
8.5.2	Unemployment rate, by sex, age, and persons with disabilities	Localised	-
8.6.1	Proportion of youth (aged 15–24 years) not in education, employment, or training	Localised	-
8.7.1	Proportion and number of children aged 5–17 years engaged in child labour, by sex and age	Localised	-
8.8.1	Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status	Proxy	-
8.8.2	Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status	Discard	Evaluation at international level
8.9.1	Tourism direct GDP as a proportion of total GDP and in growth rate	Proxy	-
8.10.1	(a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults	Localised	-
8.10.2	Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider	Proxy	-
8.a.1	Aid for Trade commitments and disbursements	Discard	Evaluation at international level
8.b.1	Existence of a developed and operationalized national strategy for youth employment, as a distinct strategy or as part of a national employment strategy	Discard	Evaluation at national level
9.1.1	Proportion of the rural population who live within 2 km of an all-season road	Proxy	-

Indicator No.	Indicators	Indicator type	Reason of discard
9.1.2	Passenger and freight volumes, by mode of transport	Localised	-
9.2.1	Manufacturing value added as a proportion of GDP and per capita	Localised	-
9.2.2	Manufacturing employment as a proportion of total employment	Localised	-
9.3.1	Proportion of small-scale industries in total industry value added	Localised	-
9.3.2	Proportion of small-scale industries with a loan or line of credit	Localised	-
9.4.1	CO_2 emission per unit of value added	Localised	-
9.5.1	Research and development expenditure as a proportion of GDP	Localised	-
9.5.2	Researchers (in full-time equivalent) per million inhabitants	Localised	-
9.a.1	Total official international support (official development assistance plus other official flows) to infrastructure	Discard	Evaluation at international level
9.b.1	Proportion of medium and high-tech industry value added in total value added	TBP	-
9.c.1	Proportion of the population covered by a mobile network, by technology	Proxy	-
10.1.1	Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population	Localised	-
10.2.1	Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities	Localised	-
10.3.1	Proportion of the population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law	Proxy	-
10.4.1	Labour share of GDP	Localised	-
10.4.2	Redistributive impact of fiscal policy	Discard	Evaluation at national level
10.5.1	Financial Soundness Indicators	Discard	Evaluation at national level

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Indicator No.	Indicators	Indicator type	Reason of discard
10.6.1	Proportion of members and voting rights of developing countries in international organizations	Discard	Evaluation at international level
10.7.1	Recruitment cost borne by employee as a proportion of monthly income earned in the country of destination	TBP	-
10.7.2	Proportion of countries with migration policies that facilitate orderly, safe, regular and responsible migration and mobility of people	Discard	Evaluation at international level
10.7.3	Number of people who died or disappeared in the process of migration towards an international destination	TBP	-
10.7.4	Proportion of the population who are refugees, by country of origin	Proxy	-
10.a.1	Proportion of tariff lines applied to imports from least developed countries and developing countries with zero-tariff	Discard	Evaluation at international level
10.b.1	Total resource flows for development, by recipient and donor countries and type of flow (e.g., official development assistance, foreign direct investment, and other flows)	Discard	Evaluation at national level
10.c.1	Remittance costs as a proportion of the amount remitted	Discard	Evaluation at national level
11.1.1	Proportion of urban population living in slums, informal settlements, or inadequate housing	Localised	-
11.2.1	Proportion of the population that has convenient access to public transport, by sex, age, and persons with disabilities	TBP	-
11.3.1	Ratio of land consumption rate to population growth rate	TBP	-
11.3.2	Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically	TBP	-
11.4.1	Total per capita expenditure on the preservation, protection, and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural), and level of government (national, regional, and local/municipal)	TBP	-

Indicator No.	Indicators	Indicator type	Reason of discard
11.5.1	Number of deaths, missing persons, and directly affected persons attributed to disasters per 100,000 population	Proxy	-
11.5.2	irect economic loss attributed to disasters in relation to global gross domestic product (GDP) a) Damage to critical infrastructure and (b) number of disruptions to basic services, attributed to disasters	Proxy	-
11.6.1	Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities	Localised	-
11.6.2	Annual mean levels of fine particulate matter (e.g., PM2.5 and PM10) in cities (population weighted)	Proxy	-
11.7.1	Average share of the built-up area of cities that is open space for public use for all, by sex, age, and persons with disabilities	Proxy	-
11.7.2	Proportion of persons victim of physical or sexual harassment, by sex, age, disability status, and place of occurrence, in the previous 12 months	Proxy	-
11.a.1	Number of countries that have national urban policies or regional development plans that (a) respond to population dynamics; (b) ensure balanced territorial development; and (c) increase local fiscal space	Discard	Evaluation at international level
11.b.1	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	TBP	-
11.b.2	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	TBP	-
11.c.1	No indicator is currently listed under 11.c. See E/CN.3/2020/2, paragraph 23	Discard	In progress of development
12.1.1	Number of countries developing, adopting, or implementing policy instruments aimed at supporting the shift to sustainable consumption and production	Discard	Evaluation at international level

Indicator No.	Indicators	Indicator type	Reason of discard
12.2.1	Material footprint, material footprint per capita, and material footprint per GDP	Discard	Evaluation at national level
12.2.2	Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	Discard	Evaluation at national level
12.3.1	(a) Food loss index and (b) food waste index	Proxy	-
12.4.1	Number of parties to international multilateral environmental agreements on hazardous waste and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement	Discard	Evaluation at international level
12.4.2	(a) Hazardous waste generated per capita and (b) proportion of hazardous waste treated, by type of treatment	Proxy	-
12.5.1	National recycling rate, tons of material recycled	Proxy	-
12.6.1	Number of companies publishing sustainability reports	Discard	Evaluation at national level
12.7.1	Number of countries implementing sustainable public procurement policies and action plans	TBP	-
12.8.1	Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	Discard	Evaluation at national level
12.a.1	Installed renewable energy-generating capacity in developing countries (in watts per capita)	Localised	-
12.b.1	Implementation of standard accounting tools to monitor the economic and environmental aspects of tourism sustainability	Discard	Evaluation at national level
12.c.1	Amount of fossil-fuel subsidies (production and consumption) per unit of GDP	Discard	Evaluation at national level

Indicator No.	Indicators	Indicator type	Reason of discard
13.1.1	Number of deaths, missing persons, and directly affected persons attributed to disasters per 100,000 population	Proxy	-
13.1.2	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	TBP	-
13.1.3	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	TBP	-
13.2.1	Number of countries with nationally determined contributions, long-term strategies, national adaptation plans, and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change	Discard	Evaluation at international level
13.2.2	Total greenhouse gas emissions per year	Localised	-
13.3.1	Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	Discard	Evaluation at national level
13.a.1	Amounts provided and mobilized in United States dollars per year in relation to the continued existing collective mobilization goal of the $100 billion commitment through to 2025	Discard	Evaluation at international level
13.b.1	Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans, and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change	Discard	Evaluation at international level
14.1.1	(a) Index of coastal eutrophication; and (b) plastic debris density	Proxy	-
14.2.1	Number of countries using ecosystem-based approaches to managing marine areas	Discard	Evaluation at international level
14.3.1	Average marine acidity (pH) measured at agreed suite of representative sampling stations	Localised	-

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Indicator No.	Indicators	Indicator type	Reason of discard
14.4.1	Proportion of fish stocks within biologically sustainable levels	Discard	Evaluation at national level
14.5.1	Coverage of protected areas in relation to marine areas	Proxy	-
14.6.1	Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	Discard	Evaluation at national level
14.7.1	Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries, and all countries	Discard	Evaluation at international level
14.a.1	Proportion of total research budget allocated to research in the field of marine technology	Discard	Evaluation at national level
14.b.1	Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries	Discard	Evaluation at national level
14.c.1	Number of countries making progress in ratifying, accepting and implementing through legal, policy, and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources	Discard	Evaluation at international level
15.1.1	Forest area as a proportion of total land area	Localised	-
15.1.2	Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	Proxy	-
15.2.1	Progress towards sustainable forest management	Discard	Evaluation at national level
15.3.1	Proportion of land that is degraded over total land area	TBP	-
15.4.1	Coverage by protected areas of important sites for mountain biodiversity	Proxy	-
15.4.2	(a) Mountain Green Cover Index and (b) proportion of degraded mountain land	TBP	-
15.5.1	Red List Index	Discard	Evaluation at national level

Indicator No.	Indicators	Indicator type	Reason of discard
15.6.1	Number of countries that have adopted legislative, administrative, and policy frameworks to ensure fair and equitable sharing of benefits	Discard	Evaluation at international level
15.7.1	Proportion of traded wildlife that was poached or illicitly trafficked	Discard	Evaluation at national level
15.8.1	Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species	Discard	Evaluation at international level
15.9.1	(a) Number of countries that have established national targets in accordance with or similar to Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 in their national biodiversity strategy and action plans and the progress reported towards these targets; and (b) integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting	Discard	Evaluation at international level
15.a.1	(a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments	Discard	Evaluation at international level
15.b.1	(a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments	Discard	Evaluation at international level
15.c.1	Proportion of traded wildlife that was poached or illicitly trafficked	Discard	Evaluation at national level
16.1.1	Number of victims of intentional homicide per 100,000 population, by sex and age	Proxy	-
16.1.2	Conflict-related deaths per 100,000 population, by sex, age, and cause	Localised	-
16.1.3	Proportion of the population subjected to (a) physical violence, (b) psychological violence, and (c) sexual violence in the previous 12 months	Proxy	-

Indicator No.	Indicators	Indicator type	Reason of discard
16.1.4	Proportion of the population that feel safe walking alone around the area they live after dark	Proxy	-
16.2.1	Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month	Proxy	-
16.2.2	Number of victims of human trafficking per 100,000 population, by sex, age, and form of exploitation	Localised	-
16.2.3	Proportion of young women and men aged 18–29 years who experienced sexual violence by age 18	TBP	-
16.3.1	Proportion of victims of violence in the previous 12 months who reported their victimization to competent authorities or other officially recognized conflict resolution mechanisms	Proxy	-
16.3.2	Unsentenced detainees as a proportion of the overall prison population	Localised	-
16.3.3	Proportion of the population who have experienced a dispute in the past two years and who accessed a formal or informal dispute resolution mechanism, by type of mechanism	TBP	-
16.4.1	Total value of inward and outward illicit financial flows (in current United States dollars)	Discard	Evaluation at national level
16.4.2	Proportion of seized, found, or surrendered arms whose illicit origin or context has been traced or established by a competent authority in line with international instruments	Proxy	-
16.5.1	Proportion of persons who had at least one contact with a public official and who paid a bribe to a public official or were asked for a bribe by those public officials during the previous 12 months	Proxy	-
16.5.2	Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official or were asked for a bribe by those public officials during the previous 12 months	TBP	-

Indicator No.	Indicators	Indicator type	Reason of discard
16.6.1	Primary government expenditures as a proportion of the original approved budget, by sector (or by budget codes or similar)	Localised	-
16.6.2	Proportion of the population satisfied with their last experience of public services	Proxy	-
16.7.1	Proportions of positions in national and local institutions, including (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities, and population groups	TBP	-
16.7.2	Proportion of the population who believe decision-making is inclusive and responsive, by sex, age, disability, and population group	TBP	-
16.8.1	Proportion of members and voting rights of developing countries in international organizations	Discard	Evaluation at international level
16.9.1	Proportion of children under 5 years of age whose births have been registered with a civil authority, by age	Localised	-
16.10.1	Number of verified cases of killing, kidnapping, enforced disappearance, arbitrary detention, and torture of journalists, associated media personnel, trade unionists, and human rights advocates in the previous 12 months	TBP	-
16.10.2	Number of countries that adopt and implement constitutional, statutory, and/or policy guarantees for public access to information	Discard	Evaluation at international level
16.a.1	Existence of independent national human rights institutions in compliance with the Paris Principles	Discard	Evaluation at national level
16.b.1	Proportion of the population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law	Proxy	-
17.1.1	Total government revenue as a proportion of GDP, by source	Localised	-

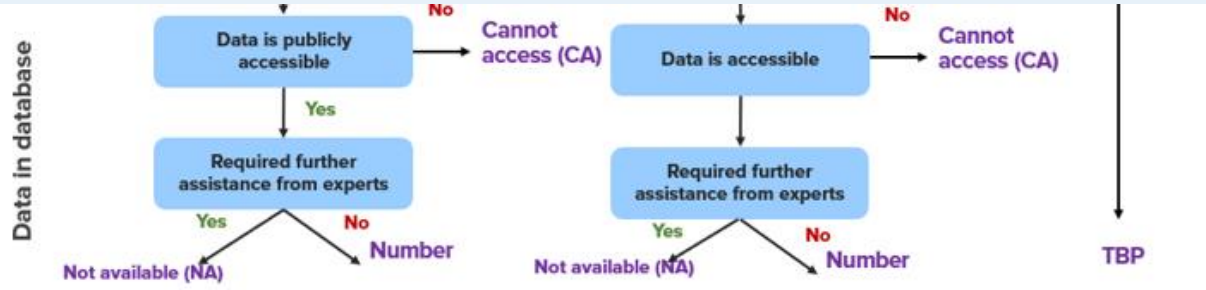
Indicator No.	Indicators	Indicator type	Reason of discard
17.1.2	Proportion of domestic budget funded by domestic taxes	Localised	-
17.2.1	Net official development assistance, total and to least developed countries, as a proportion of the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee donors' gross national income (GNI)	Discard	Evaluation at international level
17.3.1	Additional financial resources mobilized for developing countries from multiple sources	Discard	Evaluation at international level
17.3.2	Volume of remittances (in United States dollars) as a proportion of total GDP	Discard	Evaluation at international level
17.4.1	Debt service as a proportion of exports of goods and services	Discard	Evaluation at national level
17.5.1	Number of countries that adopt and implement investment promotion regimes for developing countries, including the least developed countries	Discard	Evaluation at international level
17.6.1	Fixed Internet broadband subscriptions per 100 inhabitants, by speed	Localised	-
17.7.1	Total amount of funding for developing countries to promote the development, transfer, dissemination, and diffusion of environmentally sound technologies	Discard	Evaluation at international level
17.8.1	Proportion of individuals using the Internet	Localised	-
17.9.1	Dollar value of financial and technical assistance (including through North-South, South-South, and triangular cooperation) committed to developing countries	Discard	Evaluation at international level
17.10.1	Worldwide weighted tariff-average	Discard	Evaluation at international level
17.11.1	Developing countries' and least developed countries' share of global exports	Discard	Evaluation at international level
17.12.1	Weighted average tariffs faced by developing countries, least developed countries, and small island developing States	Discard	Evaluation at international level

Indicator No.	Indicators	Indicator type	Reason of discard
17.13.1	Macroeconomic Dashboard	Discard	Evaluation at national level
17.14.1	Number of countries with mechanisms in place to enhance policy coherence of sustainable development	Discard	Evaluation at international level
17.15.1	Extent of use of country-owned results frameworks and planning tools by providers of development cooperation	Discard	Evaluation at national level
17.16.1	Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable development goals	Discard	Evaluation at international level
17.17.1	Amount in United States dollars committed to public-private partnerships for infrastructure	Localised	-
17.18.1	Statistical capacity indicator for Sustainable Development Goal monitoring (The IAEG-SDGs is currently reviewing a statistical capacity indicator for 17.18.1)	Discard	Evaluation at national level
17.18.2	Number of countries that have national statistical legislation that complies with the Fundamental Principles of Official Statistics	Discard	Evaluation at international level
17.18.3	Number of countries with a national statistical plan that is fully funded and under implementation, by source of funding	Discard	Evaluation at international level
17.19.1	Dollar value of all resources made available to strengthen statistical capacity in developing countries	TBP	-
17.19.2	Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100 per cent birth registration and 80 per cent death registration	Localised	-

1.2 Databases' Availability to Monitor the Indicators' Performance

After selecting suitable indicators for monitoring and evaluating at the provincial level, the next step is considering databases' availability for monitoring performance. In this step, researchers collected data from meetings with provincial agencies to gather feedback and in-depth interviews with government agencies, providing data sources for various indicators. The researcher will collect data for the past 10 years (between 2013 - 2023). However, researchers have encountered limitations regarding the availability of data for localised and proxy indicators, as follows:

- Data is inaccessible: Because some data collected by government agencies is not publicly accessible on open databases, data collection for certain indicators is impossible. If researchers are aware of methodologies for monitoring and evaluating indicators by relevant agencies that align with the United Nations' frameworks but cannot access the data, they will label the information as "Cannot access—CA."



- Data is not immediately available: Some indicators have complex data collection methodologies, requiring further study to analyse the data according to the United Nations' frameworks. While such data may be accessible to the public, it may not be immediately usable. In such cases, researchers will label the information as "Not applicable—NA."

2. Choosing databases for SDG indicators

Regarding the availability of databases for monitoring indicators' performance, as mentioned in Section 1.2, there may be more than one database suitable for doing so. Therefore, it is essential to consider selecting the most appropriate database. The researcher uses the following three principles to assess databases:

1. **The database uses the same methodology for data collection at both the national and provincial levels.**

Researchers select the database that uses the same methodology at national and provincial levels to ensure that the data can be compared across provinces and with national figures. Therefore, most databases chosen for this report are from government agencies that collect national and provincial data. However, using local databases (such as open data from the Bangkok Metropolitan Administration or the Government Data Catalog from the National Statistical Office, which compiles provincial data) will also be beneficial for future monitoring and evaluation of indicators, especially if data cannot be found from government agencies' databases.

2. **It is an official and formal database.**

Researchers select formal databases from government agencies involved in operations related to sustainable development goals. These databases must disclose their data collection methodologies and continuously collect data to ensure that the monitoring and evaluation processes can be ongoing and referenced internationally.

3. **Database's data collection methodology closely aligns with United Nations frameworks.**

For some indicators, there may be more than one government database that meets the criteria 1 and 2. In such instances, researchers will select the database with a data collection methodology that aligns closest to that of the United Nations, ensuring that the monitoring and evaluation approaches align closely with the Sustainable Development Goals.

3. Monitoring and evaluating SDG indicators

For monitoring and evaluating the SDG indicators in this report, researchers have compared the provincial level performances with the national level performances, using the averages from the past 10 years (from 2013 to 2023) or only the years in which data is available. The performance levels are categorised into four levels as follows:

- Level 4: Performance Higher than the national value
- Level 3: Performance Lower than the National Value, Not More Than 10 Percent
- Level 2: Performance Lower than the National Value, Between 10 and 20 Percent
- Level 1: Performance Lower than the National Value, More Than 20 Percent

The four performance levels mentioned above aligns with the guidelines in the report "Provincial and Group Provincial Development Indicators" by the Office of the National Economic and Social Development Council.

Measuring indicators' performances can be carried out by comparing the province's performance against target values set at the national or provincial level. However, researchers have not conducted such comparisons, as most indicators lack target values. Examples of indicators with target values are detailed in Table A-2.

Therefore, setting target values for each indicator will be crucial in ensuring more comprehensive monitoring and evaluation of performance at the provincial level for the future.

Table A-2: Indicators with Target Values

Indicators	Target Values	Reference
2.4.1 Proportion of agricultural area under productive and sustainable agriculture	7.5 million rai and 10 million rai by 2025 and 2030, respectively	Office of the National Economic and Social Development Council
3.1.1 Maternal mortality ratio	17 deaths per 100,000 births	Ministry of Public Health
3.2.2 Neonatal mortality rate	3.6 per 1,000 births	Ministry of Public Health
3.3.2 Tuberculosis incidence per 100,000 population	88 deaths per 100,000 population in 2021	Ministry of Public Health
3.6.1 Death rate due to road traffic injuries	12 people per 100,000 population in the year 2027	Road Safety Thailand Centre

Indicators	Target Values	Reference
6.3.1 Proportion of domestic and industrial wastewater flows safely treated	A reduction by half	Office of the National Economic and Social Development Council
7.2.1 Renewable energy share in the total final energy consumption	30 percent in the year 2037	Energy Policy and Planning Office
8.2.1 Annual growth rate of real GDP per employed person	2.5 percent per year	Office of the National Economic and Social Development Council
11.6.2 Annual mean levels of fine particulate matter (e.g., $PM_{2.5}$ and PM_{10}) in cities (population weighted)	PM 2.5 not exceeding 50 micrograms per cubic meter	Pollution Control Department, Ministry of Natural Resources and Environment
13.2.2 Total greenhouse gas emissions per year	A reduction of 40 percent by the year 2037	Department of Climate Change and Environment
14.5.1 Coverage of protected areas in relation to marine areas	10 percent in the year 2020	Department of Marine and Coastal Resources

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Appendix 2
SDG Profile Chiang Rai

Appendix: Details of Indicators, Datasets, Analysis, and Recommendations

SDG 1 End poverty in all its forms everywhere

Indicator No.	Indicators	Datasets	Organisations
1.2.1	Proportion of population living below the national poverty line	Proportion of population living in poverty when measuring consumption expenditures classified by province	Office of the National Economic and Social Development Council
1.2.2	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	TPMAP	1) Office of the National Economic and Social Development Council 2) National Electronics and Computer Technology Center
1.3.1	Proportion of population covered by social protection systems classified by sex, children, the unemployed, the elders, disabled people, pregnant women, newborns, work-injury victims, the poor and the vulnerable	Proportion of population covered by social protection systems	Office of the National Economic and Social Development Council
1.4.1	Proportion of population living in households with access to basic services	-	-
1.4.2	Proportion of total adult population with secure tenure rights to land classified by sex and type of tenure, meaning they (a) acquire legal	Proportion of population with secure tenure rights to land	Office of the National Economic and Social Development Council

Indicator No.	Indicators	Datasets	Organisations
	documentations and (b) perceive their rights to land		
1.5.1	Number of deaths, missing person and directly affected person attributed to disasters per 100,000 people	Number of affected persons attributed to disasters (percent)	Office of the National Economic and Social Development Council
1.5.2	Direct economic loss in relation to global gross domestic product (GDP)	(a) Economic loss attributed to disasters (b) -	(a) National Statistical Office (b) -
1.5.3	Number of countries that implement national disaster risk reduction strategies that aligns with the Sendai Framework for Disaster Risk Reduction 2015-2030	-	-
1.5.4	Proportion of local governments that implement local disaster risk reduction strategies that aligns with national disaster risk reduction strategies	-	-
1.b.1	Pro-poor public social spending	-	-

Performance of the indicators under the Sustainable Development Goal 1

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	1.5.1	Chiang Rai saw a fluctuating trend in terms of the number of affected persons attributed to disasters between 2015 and 2022. On average, the number of affected persons attributed to disasters is 2,255.40. However, the number significantly increased in 2019 and 2022.

Performance Lower than the National Value, Not More Than 10 Percent	Indicator No.	Analysis
Level 3	1.4.2	Between 2015 and 2022, the percentage of Chiang Rai's population with secure tenure rights to land continuously rises. In 2015, the percentage was 76.77, which increased to 84.46 by 2022, representing an increase of 7.79 percent.

Performance Lower than the National Value, More Than 20 Percent	Indicator No.	Analysis
Level 1	1.2.1	Between 2015 and 2022, the percentage of Chiang Rai's population living in poverty as measured by consumption expenditures continuously decreases. In 2015, the percentage was 21.91, which decreased to 10.96 by 2022, representing a decrease of 10.95 percent.
	1.2.2	Between 2017 and 2023, the percentage of Chiang Rai's population living in poverty continuously decreases. In 2017, the percentage was 22.93, which decreased to 15.10 by 2022. This number further decline to 3.42 by 2023.
	1.3.1	Between 2015 and 2022, the percentage of Chiang Rai's population covered by social protection systems continuously rises. In 2015, the percentage was 16.72, which increased to 28.14 by 2022.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	1.4.1	Chiang Rai Province should collect data from Chiang Mai Province, which gather information on the "proportion of population with access to basic services." This information is not disclosed to the public.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	1.5.3, 1.5.4	It is compulsory to develop monitoring and evaluation frameworks that assess the alignment of Chiang Rai's existing disaster management plans with the Sendai Framework for Disaster-led Risk Reduction 2015-2030.
	1.b.1	It is essential to establish tracking and assessment methodologies that categorise and consolidate budgets regarding education, public health, and direct financial support for the poor.

Indicator 1.5.2 is an indicator for which national-level comparisons cannot be made since the data only represents the aggregated values of all provinces. The average economic loss in relation to global gross domestic product per province from 2013 to 2023 is 11.64 million baht per year.

SDG 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Indicator No.	Indicators	Datasets	Organisations
2.1.1	Prevalence of undernourishment	-	-
2.1.2	Prevalence of moderate or severe food insecurity in the population based on the Food Insecurity Experience Scale (FIES)	-	-
2.2.1	Prevalence of stunting	-	-
2.2.2	Prevalence of malnutrition	-	-
2.2.3	Prevalence of anaemia in women aged 15 to 49 years by pregnancy status	Percentage of anaemia in pregnant women	Ministry of Public Health
2.3.1	Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size	Value of production per labour unit	1) National Statistical Office 2) Office of the National Economic and Social Development Council
2.3.2	Average income of small-scale food producers by sex and indigenous status	-	-
2.4.1	Proportion of agricultural area under productive and sustainable agriculture	-	-
2.5.1 (a)	Number of plant genetic resources for food and agriculture secured in either medium- or long-term conservation facilities	-	-
2.5.1 (b)	Number of animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities	-	-

Indicator No.	Indicators	Datasets	Organisations
2.a.1	The agriculture orientation index for government expenditures	-	-
2.c.1	Indicator of food price anomalies	-	-

Performance of the indicators under the Sustainable Development Goal 2

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	2.2.3	Between 2018 and 2022, the prevalence of Anaemia in pregnant women in Chiang Rai continuously decreases. In 2018, the percentage of pregnant women with Anaemia was 10.82, which decreased to 1.41 by 2022.

Performance Lower than the National Value, Between 10 and 20 Percent	Indicator No.	Analysis
Level 2	2.3.1	Between 2016 and 2021, Chiang Rai's value of production per labour unit continuously decreases. In 2016, value of production per labour unit was 78,136.68 baht per person per year, which decreased by 2022.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	2.1.1	The Office of the National Economic and Social Development Council collected data only at the national level and for Bangkok. It is necessary for relevant agencies to collect data for Chiang Rai Province.
	2.2.1 2.2.2 (a) 2.2.2 (b)	The data for these indicators were not collected annually or at the provincial level. Protocols to collect and analyse data at the provincial level must be considered.
	2.2.3	It is necessary for relevant agencies, such as the Department of Health, to collect data for further monitoring and evaluation purposes.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	2.3.2	Office of Agricultural Economics collected data on "agricultural cash income" in its data inventory, which was disclosed only at the national level. Chiang Rai Province must coordinate with the agency to request this data.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	2.1.2, 2.4.1, 2.5.1, and 2.a.1	It is essential to develop new monitoring and evaluation approaches that are aligned with the Sustainable Development Goal indicators.
The supporting data of the indicators is being collected, but it is essential to rely on experts to gather additional information. A thorough study should be conducted to present future data analysis.	2.c.1	The abnormal food price indicator was calculated using time series food price data. In the future, it is necessary to calculate this index using Chiang Rai's food price data.

SDG 3 Ensure healthy lives and promote well-being for all at all ages

Indicator No.	Indicators	Datasets	Organisations
3.1.1	Maternal mortality ratio	Maternal mortality ratio	Ministry of Public Health
3.1.2	Proportion of births attended by skilled health personnel	-	-
3.2.1	Under-5 mortality rate	Under-5 mortality rate	Ministry of Public Health
3.2.2	Neonatal mortality rate	-	-
3.3.1	Number of new HIV infections per 1,000 uninfected population classified by sex, age, and key populations	Estimated number HIV patients and people at risk for HIV	Ministry of Public Health
3.3.2	Tuberculosis incidence per 100,000 population	-	-
3.3.3	Malaria incidence per 1,000 population	Malaria incidence	Ministry of Public Health
3.3.4	Hepatitis B incidence per 100,000 population	Hepatitis B incidence	Ministry of Public Health
3.3.5	Number of people requiring interventions against neglected tropical diseases	-	-
3.4.1	Mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease	-	-
3.4.2	Suicide mortality rate	Suicide mortality rate by location	Ministry of Public Health
3.5.1	Coverage of treatment interventions (pharmacological, psychosocial, and rehabilitation and aftercare services) for substance use disorders	Retention rate of substance use disorders	Ministry of Public Health

Indicator No.	Indicators	Datasets	Organisations
3.5.2	Alcohol per capita consumption (aged 15 years and older) within a calendar year in litters of pure alcohol	-	-
3.6.1	Death rate due to road traffic injuries	Death rate due to road traffic injuries	Ministry of Public Health
3.7.1	Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods	-	-
3.7.2	Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group	-	-
3.8.1	Coverage of essential health services	Coverage of Universal Coverage Scheme	National Statistical Office
3.8.2	Proportion of the population with large household expenditures on health as a share of total household expenditure or income	-	-
3.9.1	Mortality rate attributed to household and ambient air pollution	The incidence rate of respiratory system diseases attributed to ambient air pollution	Ministry of Public Health
3.9.2	Mortality rate attributed to unsafe water, unsafe sanitation, and lack of hygiene	-	-

Indicator No.	Indicators	Datasets	Organisations
	(exposure to unsafe Water, Sanitation, and Hygiene for All (WASH) services)		
3.9.3	Mortality rate attributed to unintentional poisoning	-	-
3.a.1	Age-standardised prevalence of current tobacco use among persons aged 15 years and older	-	-
3.b.1	Proportion of the target population covered by all vaccines included in their national programme	-	-
3.b.3	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis	-	-
3.c.1	Health worker density and distribution	Ratio of health workers to people	Ministry of Public Health
3.d.2	Percentage of bloodstream infections due to selected antimicrobial-resistant organisms	-	-

Performance of the indicators under the Sustainable Development Goal 3

A.12 Appendix 2: SDG Profile Chiang Rai

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	3.1.1	Between 2013 and 2022, the maternal mortality ratio rate in Chiang Rai Province has continuously increased. In 2013, the maternal mortality ratio rate was 8.90 person per 100,000 people, which increased by 3.6 person per 100,000 people in 2022to become 12.5 person per 100,000 people.
	3.2.1	Between 2013 and 2022, Chiang Rai's under-5 mortality rate has fluctuated. However, on average, Chiang Rai's under-5 mortality rate is 6.65 person per 1,000 people.
	3.3.3	Between 2013 and 2021, the Malaria incidence in Chiang Rai Province has continuously decreased. In 2013, the Malaria incidence rate was 0.178 person per 1,000 people, which decreased by 0.18 person per 1,000 people in 2021 to become only 0.0009 person per 1,000 people.

Performance Lower than the National Value, Not More Than 10 Percent	Indicator No.	Analysis
Level 3	3.8.1	Between 2018 and 2023, Chiang Rai's coverage rate of Universal Coverage Scheme continuously decreases. In 2018, the rate was 99.87 percent, which slightly decreased to 99.29 percent by 2023, representing a decrease of 0.58 percent.

Performance Lower than the National Value, Between 10 and 20 Percent	Indicator No.	Analysis
Level 2	3.3.1	Between 2013 and 2023, Chiang Rai's rate of new HIV patients continuously decreases. In 2013, the rate of new HIV patients was 0.32 person per 1,000 population, which slightly decreased to 0.09 person per 1,000 population by 2023, representing a decrease of 0.23 person per 1,000 population.
	3.5.1	Between 2015 and 2022, the retention rate of substance use disorders in Chiang Rai Province has continuously increased. In 2015, the percentage of people with substance use disorders was 2 percent, which increased by 50 percent to become 52 percent in 2022.
	3.c.1	Between 2015 and 2022, the ratio of health workers to people in Chiang Rai Province has continuously increased. In 2015, the ratio was 18.09 health workers per 10,000 people, which increased to 33.20 health workers per 10,000 people in 2022, representing an increase of 15.11 health workers per 10,000 people.

Performance Lower than the National Value, More Than 20 Percent	Indicator No.	Analysis
Level 1	3.3.4	Between 2013 and 2021, Chiang Rai's Hepatitis B incidence rate continuously decreases. In 2013, the rate was 23.03 person per 100,000 population, which slightly decreased to 10.35 person per 100,000 population by 2021, representing a decrease of 12.68 person per 100,000 population.
	3.4.2	Between 2013 and 2022, the suicide mortality rate in Chiang Rai has fluctuated. Between 2013 and 2019, the rate decreased continuously by 1.63 person per 100,000 people. However, between 2019 and 2022, the rate increased continuously by 5.39 person per 100,000 people.
	3.6.1	Between 2013 and 2022, Chiang Rai's death rate due to road traffic injuries continuously decreases. In 2013, the rate was 43.25 person per 100,000 population, which decreased to 32.62 person per 100,000 population by 2022, representing a decrease of 10.63 person per 100,000 population.
	3.9.1	Between 2014 and 2022, the incidence rate of respiratory system diseases attributed to ambient air pollution in Chiang Rai has fluctuated. Between 2014 and 2021, the rate increased by 70.23 person per 100,000 people. However, after 2021, the rate decreased to 2 person per 100,000 people.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	3.1.2	It is necessary to encourage relevant agencies to collect data for further performance evaluation.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	3.2.2 3.3.5 3.4.1 3.9.2 and 3.9.3	Chiang Rai Province is required to request data from the Ministry of Public Health, which collects data by segregating ICD-10 codes that match the definition of each respective indicator in the Public Health Statistics Database, which is a closed database.
	3.3.2	It is ideal that Chiang Rai Province requests data from the Ministry of Public Health, which collects data on the "tuberculosis incidence rate" in the National Tuberculosis Information Programme (NTIP), which is a closed database.
	3.7.2	Chiang Rai Province needs to request data from the Department of Provincial Administration, Ministry of Interior, which collects data on the "number of birth registrations among women aged 10-14 and 15-19 years" in the civil registration closed database.
	3.b.1	Chiang Rai Province needs to request data from the Ministry of Public Health, which collects data related to "coverage of intake of essential vaccines" based on a survey on vaccination coverage, which is a closed database.
	3.b.3	It is recommended that the Chiang Rai Province request data from the Ministry of Public Health, which collects data on the

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
		"percentage of drug items prescribed from the National List of Essential Drugs" in the National Drug Account, a closed database.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	3.5.2, 3.7.1, 3.8.2, 3.a.1 and 3.d.2	Relevant agencies, such as the Ministry of Public Health, could collect information through surveys to ensure coverage of all provinces and alignment with the definition of each indicator.

For most of the indicators under Sustainable Development Goal 3, the Ministry of Public Health formulated developmental target criteria through indicators for operations across areas. These criteria can be applied as the operation was compared with the overall national picture. However, Chiang Rai Province needs to contact the Ministry of Public Health to request additional information.

SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Indicator No.	Indicators	Datasets	Organisations
4.1.1	Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics classified by sex	O-NET score of grade-12 students	Office of the National Economic and Social Development Council
4.1.2	Completion rate (primary education, lower secondary education, upper secondary education, and vocational education)	Completion rate (primary education, lower secondary education, upper secondary education, and vocational education)	Equitable Education Fund
4.2.1	Proportion of children aged 24–59 months who are developmentally on track in health, learning, and psychosocial well-being classified by sex	Proportion of children aged 0-5 years who are developmentally on track	Office of the National Economic and Social Development Council
4.2.2	Participation rate in organised learning (one year before the official primary entry age) classified by sex	Participation rate of children in organised learning one year before the primary entry age	Equitable Education Fund
4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	Participation rate of youth and adults in formal and non-formal education	Office of the National Economic and Social Development Council
4.4.1	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill (a) computer (b) internet classified by age groups	-	-

Indicator No.	Indicators	Datasets	Organisations
4.5.1	Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples, and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated	Parity indices of female/male student (upper secondary education and vocational education)	Equitable Education Fund
4.6.1	Proportion of the population in a given age group achieving at least a fixed level of proficiency in (a) literacy and (b) numeracy skills classified by sex	-	-
4.a.1	Proportion of schools offering basic services, by type of service	Proportion of schools that have met the standards for good quality or above (primary education, lower secondary education, upper secondary education, and vocational education)	Equitable Education Fund
4.c.1	Proportion of teachers with the minimum required qualifications, by education level	-	-

Performance of the indicators under the Sustainable Development Goal 4

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	4.1.1	Between 2015 and 2022, the average O-NET score of grade-12 students in Chiang Rai continuously decrease. In 2015, the average O-NET score was 35.03, which decreased to 31.22 by 2022, representing a decrease of 3.81.

Performance Lower than the National Value by Less than 10 percent	Indicator No.	Analysis
Level 3	4.2.1	Between 2015 and 2022, the percentage of children aged 0-5 years who are developmentally on track in Chiang Rai has fluctuated. Between 2015 and 2019, the rate increased continuously by 2.96 percent. However, between 2019 and 2022, the rate decreased continuously by 19.95 percent.
	4.3.1	Between 2015 and 2022, the participation rate of youth and adults in formal and non-formal education in Chiang Rai has fluctuated. Between 2015 and 2019, the rate decreased continuously by 6.44 percent. However, between 2019 and 2022, the rate increased continuously by 15.94 percent.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	4.6.1 (a)	It is necessary to encourage the Office of the National Economic and Social Development Council to collect data for further performance evaluation.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai coordinate with other agencies or the data owners to disclose it for public purposes.	4.4.1	Chiang Rai Province should seek data from the Office of the National Economic and Social Development Council. This agency does collect data, but some are not publicly disclosed.
	4.c.1	Chiang Rai Province must request data from the Ministry of Education's Data Management Centre (DMC) database, which is a closed and unpublicised inventory
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	4.6.1 (b)	Relevant agencies, such as the Ministry of Education and the Office of the National Economic and Social Development Council, are encouraged to conduct surveys to ensure data collection for all provinces and alignment with the definition of the indicator.

Indicators 4.2.1 and 4.3.1: Chiang Rai has been affected by the COVID-19 outbreak since 2020, which has impacted education as follows:

- Indicator 4.2.1: The proportion of children between 0 and 5 years of age with age-appropriate development has shown a declining trend. This can be regarded as learning loss in children caused by the necessary closure of educational institutes and childcare centres during the initial stages of the COVID-19 outbreak, which disrupted their learning routines. Additionally, after the outbreak became less severe, the measures focused primarily on online education, which may not be as effective for young children.
- Indicator 4.3.1: The participation of youth and adults in both formal and non-formal education has shown an increasing trend after the COVID-19 outbreak. This may partly be a result of the increased demand for workforce skills among adults; during the COVID-19 outbreak, a significant number of people were seemingly unemployed or working less than 4 hours per day. In addition, workforce skill requirements have changed.

Indicators 4.1.2, 4.2.2, 4.5.1, and 4.a.1 are provincial-level indicators for which national-level comparisons cannot be made due to the lack of access to national data.

- Indicators 4.1.2: Completion rates for primary education, lower secondary education, upper secondary education, and vocational education in 2020 were as follows: 97.09 percent, 86.61 percent, 89.97 percent, and 54.22 percent.
- Indicators 4.2.2: The participation rate of children in organized learning one year before the primary entry age in 2020 was 79.24 percent.
- Indicators 4.5.1 (a): The parity indices of female/male students in upper secondary education and vocational education is 1.28
- Indicators 4.5.1 (b): The parity indices of female/male students in vocational education is 0.55.
- Indicators 4.a.1: Proportions of schools that have met the standards for good quality or above for pre-primary education, primary education, lower secondary education, upper secondary education, and vocational education are as follows: 68.87 percent, 100.00 percent, 100.00 percent, 100.00 percent, and 00.00 percent.

For most of the indicators under Sustainable Development Goal 4, the Ministry of Education formulated developmental target criteria through indicators for operations across areas. These criteria can be applied as the operation was compared with the overall national picture. However, Chiang Rai Province needs to contact the Ministry of Education to request additional information about these criteria to ensure the alignment of its educational operations with national goals.

SDG 5 Achieve gender equality and empower all women and girls

Indicator No.	Indicators	Datasets	Organisations
5.2.1	Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual, or psychological violence by a current or former intimate partner in the previous 12 months classified by form of violence and age.	-	-
5.2.2	Proportion of women and girls aged 15 years and older subjected to physical, sexual, or psychological violence by persons other than an intimate partner in the previous 12 months classified by location and age.	-	-
5.3.1	Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18.	-	-
5.3.2	Proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting classified by age.	-	-
5.4.1	Proportion of time spent on unpaid domestic and care work classified by sex, age, and location.	-	-
5.5.1	Proportion of seats held by women in (a) national parliaments and (b) local governments.	-	-
5.6.1	Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use, and reproductive health care.	-	-
5.a.1	(a) Proportion of total agricultural population with ownership or secure rights over agricultural land classified by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure.	-	-
5.b.1	Proportion of individuals who own a mobile telephone classified by sex.	-	-

Performance of the indicators under the Sustainable Development Goal 5

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	5.2.1	Data collection was carried out by the Ministry of Social Development and Human Security. However, it was not collected from all provinces, including Chiang Rai Province. Therefore, relevant agencies are encouraged to collect additional data on this indicator for Chiang Rai Province.
	5.3.1	Data collection was carried out by the National Statistical Office. However, it was not collected from all provinces, including Chiang Rai Province. Therefore, relevant agencies are encouraged to collect additional data on this indicator for Chiang Rai Province.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai coordinate with other agencies or the data owners to disclose it for public purposes.	5.2.2	Chiang Rai Province is required to request data from the Ministry of Social Development and Human Security, which collects data on the number of complaints filed by individuals who have experienced violence committed by partners and non-partners.
	5.5.1	Chiang Rai Province can use its workforce-related data by gender to follow up on performance.
	5.a.1	Chiang Rai Province should ask for data from (1) Agricultural Land Reform Office, Ministry of Agriculture and Cooperatives; (2) Department of Social Development and Welfare, Ministry of Social Development and Human Security.
	5.b.1	Chiang Rai Province needs to request data from the National Statistical Office, which collects data on the percentage of the population by gender aged 6 years and over who own mobile phones.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	5.3.2 5.4.1 5.6.1	Relevant agencies are encouraged to collect information through surveys conduct surveys to ensure data collection for all provinces and alignment with the definition of each indicator.

SDG 6 Ensure availability and sustainable management of water and sanitation for all

Indicator No.	Indicators	Datasets	Organisations
6.1.1	Proportion of the population using safely managed drinking water services	-	-
6.2.1	Proportion of the population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	-	-
6.3.1	Proportion of domestic and industrial wastewater flows safely treated	-	-
6.3.2	Proportion of bodies of water with good ambient water quality	-	-
6.4.1	Change in water-use efficiency over time	-	-
6.4.2	Level of water stress	-	-
6.6.1	Change in the extent of water-related ecosystems over time	-	-
6.b.1	Proportion of local administrative units with established and operational policies and procedures for the participation of local communities in water and sanitation management	-	-

Performance of the indicators under the Sustainable Development Goal 6

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	6.1.1, 6.2.1	Data collection has been conducted every ten years. Data for the years 1990, 2000, and 2010 are available. However, no data for 2020 can be found. For this reason, the National Statistical Office should continuously collect data to enable the evaluation of Chiang Rai Province's performance in the future.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai coordinate with other agencies or the data owners to disclose it for public purposes.	6.3.1	Chiang Rai Province is encouraged to request data from the Provincial Office of Natural Resources and Environment to devise this indicator.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	6.6.1, 6.b.1	It is essential to develop new monitoring and evaluation approaches that are aligned with the Sustainable Development Goal indicators.
The supporting data of the indicators is being collected, but it is essential to rely on experts to gather additional information. A thorough study should be conducted to present future data analysis.	6.3.2	Experts are needed to collect data and calculate indicator data (using existing data from the Water Quality Management Division, Pollution Control Department).
	6.4.1, 6.4.2	Experts are needed to collect data and calculate indicator data (the Office of National Water Resources is currently studying this).

SDG 7 Ensure access to affordable, reliable, sustainable and modern energy for all

Indicator No.	Indicators	Datasets	Organisations
7.1.1	Proportion of the population with access to electricity	-	-
7.1.2	Proportion of the population with primary reliance on clean fuels and technology	-	-
7.2.1	Renewable energy share in the total final energy consumption	Renewable energy share in the total final energy consumption (kW per 1,000 GW)	Office of the National Economic and Social Development Council
7.b.1	Installed renewable energy-generating capacity in developing countries (in watts per capita)	(a) Installed renewable energy-generating capacity, categorised by province (MW) (b) Installed renewable energy-generating capacity, categorised by province (watts per capita)	Department of Alternative Energy Development and Efficiency, Ministry of Energy

Performance of the indicators under the Sustainable Development Goal 7

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
Level 1	7.2.1	Between 2015 and 2022, Chiang Rai's share of renewable energy consumption versus the final electricity consumption has fluctuated. Between 2015 and 2018, the share of renewable energy consumption continuously increased by 0.38 kilowatts per 1,000 gigawatts. However, between 2018 and 2022, the number continuously decreased by 1.13 watts per capita.
	7.b.1 (b)	Between 2013 and 2021, Chiang Rai's installed renewable energy-generating capacity has continuously increased. In 2013, Chiang Rai's installed renewable energy-generating capacity was 8.18 watts per capita, which increased to 9.71 watts per capita in 2021, representing an increase of 1.53 watts per capita.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	7.1.1	The Office of the National Economic and Social Development Council (NESDC) collects data on the "proportion of population with access to electricity" nationally. However, the agency still needs to collect data at the provincial level. Currently, only the population with the right to request electricity is considered, meaning they have legal documents and household registration. This data collection excludes the disadvantaged population who have no access to electricity. For this reason, relevant agencies need to improve data collection methods to enable accurate evaluation of this indicator.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	7.1.2	Chiang Rai Province needs to request additional data from the Ministry of Energy, which currently collects data at the national level but does not disclose data at the provincial level.

Indicator 7.b.1 (a): This indicator cannot be compared with the national mean. Between 2015 and 2022, Chiang Rai's installed renewable energy-generating capacity continuously increases by more than 2.75 kilowatts per 1,000 gigawatts.

SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Indicator No.	Indicators	Datasets	Organisations
8.1.1	Annual growth rate of real GDP per capita	Gross Provincial Product (Chain Volume Measures: CVM)	Office of the National Economic and Social Development Council
8.2.1	Annual growth rate of real GDP per employed person	Gross Provincial Product (Chain Volume Measures: CVM) and number of formal and informal labours	Office of the National Economic and Social Development Council
8.3.1	Proportion of informal employment in total employment, by sector and sex	number of informal labours	National Statistical Office
8.5.1	Average hourly earnings of employees, by sex, age, occupation, and persons with disabilities	-	-
8.5.2	Unemployment rate, by sex, age, and persons with disabilities	Unemployment rate	National Statistical Office
8.6.1	Proportion of youth (aged 15–24 years) not in education, employment, or training	Proportion of youth (aged 15–24 years) not in education, employment, or training	National Statistical Office
8.7.1	Proportion and number of children aged 5–17 years engaged in child labour, by sex and age	-	-
8.8.1	Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status	Fatal and non-fatal occupational injuries, categorised by severity (within Workmen's Compensation Fund)	Social Security Office, Ministry of Labour
8.9.1	Tourism direct GDP as a proportion of total GDP and in growth rate	(a) Tourism revenue (a) Growth rate of tourism revenue	Ministry of Tourism and Sports

Indicator No.	Indicators	Datasets	Organisations
8.10.1	(a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults	-	-
8.10.2	Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider	-	-

Performance of the indicators under the Sustainable Development Goal 8

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	8.2.1	Between 2013 and 2021, Chiang Rai's annual growth rate of real GDP per employed person has continuously decreased. In 2013, the growth rate was 11.51 percent, decreasing to 6.02 in 2021. The significant changes to the growth rate occurred in 2018 and 2020.
	8.5.2	Between 2013 and 2022, Chiang Rai's unemployment rate has continuously increased. In 2013, the unemployment rate was 0.13 percent, increasing to 0.84 in 2022. The increasing unemployment rate can be attributed to the onset of COVID-19, as the rate began to decline after 2022.
	8.6.1	Between 2016 and 2020, the percentage of youth in Chiang Rai who are not in education, employment, or training (NEET) has decreased. In 2016, the NEET percentage was 13.6, decreasing to 7.2 in 2020.

Performance Higher than the National Value	Indicator No.	Analysis
	8.8.1	Between 2013 and 2022, the proportion of fatal and non-fatal occupational injuries in Chiang Rai has continuously increased due to the onset of COVID-19 and air pollution. In 2013, the proportion of fatal and non-fatal occupational injuries was 8.89 person per 100,000 people, increasing to 19.29 person per 100,000 people in 2022.

Performance Lower than the National Value by Less than 10 percent	Indicator No.	Analysis
Level 3	8.9.1 (b)	Between 2013 and 2022, Chiang Rai's growth rate of income from visitors has been fluctuating. Between 2013 and 2019, the growth rate of income from visitors decreased by 7.79 percent. Since then, the growth rate continued to significantly decrease due to the onset of COVID-19. However, the growth rate began to rise after 2022 by 332.97 percent.

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
	8.1.1	Between 2013 and 2021, Chiang Rai's annual growth rate of real GDP per capita has been fluctuating. On average, Chiang Rai's annual growth rate of real GDP per capita is 1.4 percent. However, in

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
Level 1		2020, the growth rate decreased due to the onset of COVID-19. However, the rate began to rise after 2021.
	8.3.1	Between 2013 and 2022, Chiang Rai's percentage of informal labours has been fluctuating. Between 2013 and 2015, the percentage continuously increased by 4.32 percent. However, between 2019 and 2022, the percentage continuously decreased by 8.19 percent.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	8.7.1 8.10.1 8.10.2	This is an indicator that underwent a survey, but on a non-yearly basis. The details at the provincial level of the data were absent. It is recommended to formulate survey approaches and research regulations to allow collection and analysis of data at the provincial level.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	8.5.1	Relevant agencies surveyed this indicator, but the results remained disclosed. It is recommended to compile and disseminate such data to the public.

Indicator 8.9.1 (a): This indicator cannot be compared with the national figure. Between 2013 and 2022, the trend of income from visitors in Chiang Rai has been fluctuating. Between 2013 and 2019, the trend of income from visitors in

Chiang Rai continuously rise by 8,563.02 million Baht. However, between 2020 and 2021, income decreased when the COVID-19 crisis broke out by approximately 21,343.54 million Baht. In 2022, income rose again to the number prior to the pandemic.

SDG 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Indicator No.	Indicators	Datasets	Organisations
9.1.1	Proportion of the rural population who live within 2 km of an all-season road	Proportion of village accessed to all-season road	Community Development Department, Ministry of Interior
9.1.2 (a)	Passenger volumes, by mode of transport	-	-
9.1.2 (b)	Freight volumes, by mode of transport	-	-
9.2.1	Manufacturing value added as a proportion of GDP and per capita	Manufacturing value added as a proportion of GDP and per capita	Office of the National Economic and Social Development Council
9.2.2	Manufacturing employment as a proportion of total employment	Manufacturing employment as a proportion of total employment	National Statistical Office
9.3.1	Proportion of small-scale industries in total industry value added	-	-
9.3.2	Proportion of small-scale industries with a loan or line of credit	-	-
9.4.1	CO_2 emission per unit of value added	-	-
9.5.1	Research and development expenditure as a proportion of GDP	-	-
9.5.2	Researchers (in full-time equivalent) per million inhabitants	Researchers per million inhabitants	National Research Council of Thailand
9.b.1	Proportion of medium and high-tech industry value added in total value added	-	-

Indicator No.	Indicators	Datasets	Organisations
9.c.1	Proportion of the population covered by a mobile network, by technology	Proportion of population having cellular phone	National Statistical Office

Performance of the indicators under the Sustainable Development Goal 9

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	9.1.1	Between 2013 and 2022, Chiang Rai's proportion of villages with year-round access to main roads has continuously increased. In 2013, the percentage of villages with year-round access to main roads was 61.98, which increased to 71.5 by 2022. This represents an increase of 9.52 percent.

Performance Lower than the National Value by Less than 10 percent	Indicator No.	Analysis
Level 3	9.c.1	Between 2013 and 2022, Chiang Rai's population having cellular phone has continuously increased. In 2015, the percentage of people with cellular phone was 76.36, which increased to 93.87 by 2022. This represents an increase of 17.51 percent.

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
Level 1	9.2.1 (a)	Between 2014 and 2021, Chiang Rai's ratio of manufacturing value added to the gross product has continuously increased. In 2014, the percentage of manufacturing value added to the gross product was 4.84, which increased to 8.53 by 2021. This represents an increase of 3.69 percent.
	9.2.1 (b)	Between 2014 and 2021, Chiang Rai's proportion of value added by the manufacturing industry compared to the gross products of the province has continuously increased. In 2014, the proportion of value added by the manufacturing industry was 3,860.39 Baht per person, which increased to 7,697.07 Baht per person by 2021. This represents an increase of 3,836.68 Baht per person.
	9.2.2	Between 2014 and 2022, Chiang Rai's proportion of employment in the manufacturing industry has fluctuated. On average, Chiang Rai's percentage of employment in the manufacturing industry product is 7.01. However, in 2021, the percentage decreased due to the pandemic, but has been on the rise after the pandemic ended.
	9.5.2	Chiang Rai's proportion of researchers per million population is 1055.58 researchers per 1 million people, falling below the national average by 33.63 percent.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	9.1.2	Relevant data have been collected by different agencies. Thus, experts are needed to collect and calculate data regarding the number of commuters and goods transported in Chiang Rai Province.
	9.3.1	Part of relevant data were collected, but the data on the ratio of value added of small industries to total industries needed to be directly published. Additional compilation and calculation by experts are also critical.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	9.3.2	The Bank of Thailand collected data on the "proportion of small industries borrowing from Thai commercial banks and specialised financial institutions", but it was not accessible to the public.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	9.4.1, 9.5.1, and 9.b.1	It is indispensable to develop new indicators consistent with the sustainable development goal indicators.

SDG 10 Reduce inequality within and among countries

Indicator No.	Indicators	Datasets	Organisations
10.1.1	Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population	-	-
10.2.1	Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities	-	-
10.3.1	Proportion of the population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law	-	-
10.4.1	Labour share of GDP	-	-
10.7.1	Recruitment cost borne by employee as a proportion of monthly income earned in the country of destination	-	-
10.7.3	Number of people who died or disappeared in the process of migration towards an international destination	-	-
10.7.4	Proportion of the population who are refugees, by country of origin	-	-

Performance of the indicators under the Sustainable Development Goal 10

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	10.3.1 and 10.7.4	This is an indicator that underwent a survey, but on a non-yearly basis. The details at the provincial level of the data was absent. It is recommended to formulate survey approaches and research regulations to allow collection and analysis of data at the provincial level.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai coordinate with other agencies or the data owners to disclose it for public purposes.	10.1.1 10.2.1 10.4.1	It is an indicator for which relevant agencies collected data, but public data that corresponded to the indicators in the sustainable development goals has yet to be found. For this reason, these agencies are encouraged to gather and disseminate necessary data and coordinate with local agencies to monitor the indicators at the provincial level.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	10.7.1 10.7.3	No data collection has been found for these indicators. The development of data collection should be formulated to be consistent with the sustainable development goals, ranging from defining indicators in the provincial context to the stage of collecting data to investigate the feasibility of monitoring the indicators.

SDG 11 Make cities and human settlements inclusive, safe, resilient and sustainable

Indicator No.	Indicators	Datasets	Organisations
11.1.1	Proportion of urban population living in slums, informal settlements, or inadequate housing	-	-
11.2.1	Proportion of the population that has convenient access to public transport, by sex, age, and persons with disabilities	-	-
11.3.1	Ratio of land consumption rate to population growth rate	-	-
11.3.2	Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically	-	-
11.4.1	Total per capita expenditure on the preservation, protection, and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural), and level of government (national, regional, and local/municipal)	-	-
11.5.1	Number of deaths, missing persons, and directly affected persons attributed to disasters per 100,000 population	Number of affected persons attributed to disasters	Office of the National Economic and Social Development Council
11.5.2	Direct economic loss attributed to disasters in relation to global gross domestic product (GDP) a) Damage to critical infrastructure and (b) number of disruptions to basic services, attributed to disasters	(a) Economic loss attributed to disasters (b) -	(a) National Statistical Office (b) -

Indicator No.	Indicators	Datasets	Organisations
11.6.1	Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities	Municipal solid waste properly treated (ton/day)	1) Office of the National Economics and Social Development Council 2) Pollution Control Department, Ministry of Natural Resources and Environment
11.6.2	Annual mean levels of fine particulate matter (e.g., PM2.5 and PM10) in cities (population weighted)	Annual mean levels of fine particulate matter (PM 2.5)	Pollution Control Department, Ministry of Natural Resources and Environment
11.7.1	Average share of the built-up area of cities that is open space for public use for all, by sex, age, and persons with disabilities	-	-
11.7.2	Proportion of persons victim of physical or sexual harassment, by sex, age, disability status, and place of occurrence, in the previous 12 months	-	-
11.b.1	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	-	-
11.b.2	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	-	-

Performance of the indicators under the Sustainable Development Goal 11

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	11.5.1	Chiang Rai saw a fluctuating trend in terms of the number of affected persons attributed to disasters between 2015 and 2022. On average, the number of affected persons attributed to disasters is 2,255.40. However, the number significantly increased in 2019 and 2022.

Performance Lower than the National Value by 10-20 percent	Indicator No.	Analysis
Level 2	11.6.1	Chiang Rai's percentage of municipal solid waste that were regularly collected revealed a continuous downward trend between 2013 and 2022. The proportion dropped from 24.93 percent in 2013 to 17.20 percent in 2022, a decrease by 7.73 percent.

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
Level 1	11.6.2	Between 2018 and 2022, the annual average levels of fine particulate matter, particularly PM 2.5, in Chiang Rai Province was continually rising. The record increased from 18.42 µg/m3 in 2018 to 33.59 µg/m3 in 2022, a 15.17 µg/m3 increase.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	11.7.1	The data for this indicator was not collected at the national and provincial level besides for Bangkok. Protocols to collect and analyse data at the provincial level must be considered.
	11.7.2	The indicator could be based on data collected in the Multiple Indicator Cluster Surveys (MICS), which assess the situation of children and women in Thailand. However, this survey was not sent out annually. Thus, relevant agencies are encouraged to develop a survey to monitor this indicator regularly.
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	11.1.1	Chiang Rai Province should request data on the number of households in slums from the National Housing Authority.
	11.5.2	Chiang Rai Province should ask for additional data from the Department of Disaster Prevention and Mitigation because the agency collects data corresponding to this indicator.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	11.2.1 11.3.1 11.3.2 and 11.4.1	Relevant agencies are encouraged to collect information through surveys conduct surveys to ensure data collection for all provinces and alignment with the definition of each indicator.
	11.b.1 11.b.2	It is compulsory to develop monitoring and evaluation frameworks that assess the alignment of Chiang Rai's existing disaster management plans with the Sendai Framework for Disaster-led Risk Reduction 2015-2030.

Indicator 11.5.2 is an indicator for which national-level comparisons cannot be made since the data only represents the aggregated values of all provinces. The average economic loss in relation to global gross domestic product per province from 2013 to 2023 is 11.64 million baht per year.

SDG 12 Ensure sustainable consumption and production patterns

Indicator No.	Indicators	Datasets	Organisations
12.3.1	(a) Food loss index and (b) food waste index	-	-
12.4.2	(a) Hazardous waste generated per capita and (b) proportion of hazardous waste treated, by type of treatment	(a) Community hazardous waste generated per capita (kilogramme) (b) Proportion of community hazardous waste treated (percent)	Pollution Control Department, Ministry of Natural Resources and Environment
12.5.1	National recycling rate, tons of material recycled	Solid waste recycling rate (percent)	Pollution Control Department, Ministry of Natural Resources and Environment
12.7.1	Number of countries implementing sustainable public procurement policies and action plans	-	-
12.a.1	Installed renewable energy-generating capacity in developing countries (in watts per capita)	Installed renewable energy-generating capacity, categorized by province	Department of Alternative Energy Development and Efficiency, Ministry of Energy

Performance of the indicators under the Sustainable Development Goal 12

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	12.4.2 (a)	Chiang Rai's amount of hazardous waste generated per capita has continuously has been better the national average, with the amount decreasing by 40 percent between 2020 and 2022.
	12.4.2 (b)	Chiang Rai's performance in treating hazardous waste has continuously outperformed the national results by 3 percent on average.
	12.5.1	Chiang Rai's recycling rate has continuously outperformed the national rate by 3 percent on average.

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
Level 1	12.a.1	Although the province's performance has continuously risen, Chiang Rai's installed capacity for renewable energy production has consistently been lower than the country's bar. This trend aligns with the ongoing transition to clean energy.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	12.3.1	(a) Food Loss Index: Data has yet to be collected. The Department of Agricultural Science is encouraged to embark on the studies at both the national and provincial levels. On the other hand, a study in Thailand was carried out by the Highland Research and Development Institute (Public Organisation). The study was implemented at the local level. (b) Food Waste Index: The Pollution Control Department has previously studied the elements of solid waste at the local administration level. For this reason, studies at the provincial level and dissemination of the data to the public should also be carried out.
	12.7.1	Chiang Rai Province and concerned agencies are encouraged to determine the definition of sustainable procurement and categorisation of procurement projects that fall under these definitions to allow for monitoring and evaluating this indicator.

SDG 13 Take urgent action to combat climate change and its impacts

Indicator No.	Indicators	Datasets	Organisations
13.1.1	Number of deaths, missing persons, and directly affected persons attributed to disasters per 100,000 population	Number of deaths, missing persons, and directly affected persons attributed to disasters per 100,000 population	Office of the National Economic and Social Development Council
13.1.2	Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	-	-
13.1.3	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	-	-
13.2.2	Total greenhouse gas emissions per year	-	-

Performance of the indicators under the Sustainable Development Goal 13

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
Level 4	13.1.1	Chiang Rai saw a fluctuating trend in terms of the number of affected persons attributed to disasters between 2015 and 2022. On average, the number of affected persons attributed to disasters is 2,255.40. However, the number significantly increased in 2019 and 2022.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for Chiang Rai's indicators have yet to be collected. This highlights the necessity for relevant agencies to gather data.	13.2.2	This indicator underwent a survey but on non-yearly basis. Additionally, the data at the provincial level was absent. Currently, relevant agencies are formulating survey approaches to allow collection or analysis of data at the provincial level.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	13.1.2, 13.1.3	It is compulsory to develop monitoring and evaluation frameworks that assess the alignment of Chiang Rai Province's existing disaster management plans with the Sendai Framework for Disaster-led Risk Reduction 2015-2030.

SDG 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Sustainable Development Goal 14 does not align with the geographical context of Chiang Rai Province, which lacks oceans, seas, and marine resources. Therefore, there are no indicators that can be applied to the province.

SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Indicator No.	Indicators	Datasets	Organisations
15.1.1	Forest area as a proportion of total land area	Forest area as a proportion of province's total land area	Royal Forest Department, Ministry of Natural Resources and Environment
15.1.2	Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	-	-
15.3.1	Proportion of land that is degraded over total land area	-	-
15.4.1	Mountainous areas for preserving biodiversity	-	-
15.4.2	(a) Mountain Green Cover Index and (b) proportion of mountain areas that are degraded or experiencing erosion	-	-

Performance of the indicators under the Sustainable Development Goal 15

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	15.1.1	Chiang Rai Province has consistently ranked higher than the country's average regarding the ratio of forest areas to total land areas. Despite this, the proportion of forest area to land area in Chiang Rai has been decreasing from 41.29 percent of Chiang Rai's total land area in 2013 to 39.48 percent in 2022.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	15.3.1	Our proposal is that new monitoring and evaluation processes be formulated, and they should conform with the indicators of the sustainable development goals. Currently, the Land Development Department is developing a Land Degradation Neutrality indicator according to indicator 15.3.1 of the sustainable development goals.
	15.4.2	Our proposal is that new monitoring and evaluation processes be formulated, and they should conform with the indicators of the sustainable development goals.
The supporting data of the indicators is being collected, but it is essential to rely on experts to gather additional information. A thorough study should be conducted to present future data analysis.	15.1.2, 15.4.1	Data have been collected sporadically, requiring experts' assistance in gathering and calculating the details of the indicators. Furthermore, it is recommended that GIS data be prepared to help calculate the size of covered areas and the data of the key biodiversity areas.

SDG 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Indicator No.	Indicators	Datasets	Organisations
16.1.1	Number of victims of intentional homicide per 100,000 population, by sex and age	Number of cases of intentional homicide	National Statistical Office
16.1.3	Proportion of the population subjected to (a) physical violence, (b) psychological violence, and (c) sexual violence in the previous 12 months	Number of arrest cases subjected to (a) attempted murder (b) physical violence, (c) sexual violence	National Statistical Office
16.1.4	Proportion of the population that feel safe walking alone around the area they live after dark	-	-
16.2.1	Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month	-	-
16.2.2	Number of victims of human trafficking per 100,000 population, by sex, age, and form of exploitation	Number of victims of human trafficking	Ministry of Social Development and Human Security
16.2.3	Proportion of young women and men aged 18–29 years who experienced sexual violence by age 18	-	-
16.3.1	Proportion of victims of violence in the previous 12 months who reported their victimisation to competent authorities or other officially recognised conflict resolution mechanisms	-	-

Indicator No.	Indicators	Datasets	Organisations
16.3.2	Unsentenced detainees as a proportion of the overall prison population	National Prisoner Statistics Report	Department of Corrections, Ministry of Justice
16.3.3	Proportion of the population who have experienced a dispute in the past two years and who accessed a formal or informal dispute resolution mechanism, by type of mechanism	-	-
16.4.2	Proportion of seized, found, or surrendered arms whose illicit origin or context has been traced or established by a competent authority in line with international instruments	Statistics of cases in which the state is the injured party (firearm and explosive)	National Statistical Office
16.5.1	Proportion of persons who had at least one contact with a public official and who paid a bribe to a public official or were asked for a bribe by those public officials during the previous 12 months	ITA Score of E4: A bribe by those public officials	Office of the National Anti-Corruption Commission
16.5.2	Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official or were asked for a bribe by those public officials during the previous 12 months	-	-
16.6.1	Primary government expenditures as a proportion of the original approved budget, by sector (or by budget codes or similar)	-	-

Indicator No.	Indicators	Datasets	Organisations
16.6.2	Proportion of the population satisfied with their last experience of public services	ITA Score of section 6: Quality of public services	Office of the National Anti-Corruption Commission
16.7.1	Proportions of positions in national and local institutions, including (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities, and population groups	-	-
16.7.2	Proportion of the population who believe decision-making is inclusive and responsive, by sex, age, disability, and population group	-	-
16.9.1	Proportion of children under 5 years of age whose births have been registered with a civil authority, by age	-	-
16.10.1	Number of verified cases of killing, kidnapping, enforced disappearance, arbitrary detention, and torture of journalists, associated media personnel, trade unionists, and human rights advocates in the previous 12 months	-	-
16.b.1	Proportion of the population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law	ITA Score of E2: Equitable service	Office of the National Anti-Corruption Commission

Performance of the indicators under the Sustainable Development Goal 16

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	16.1.1	The number of victims of intentional homicide was lower than the national average. The overall trend suggested a decreased intentional homicide cases, especially after 2018. This was consistent with the national trend. However, in 2020, the number of victims of intentional homicide exceeded the national average.
	16.1.3	The number of attempted murder, physical assault, and rape cases per hundred thousand population has been below the national average since 2020.
	16.4.2	The statistics of firearm case arrests in Chiang Rai were lower than the national average. The trend of the number of firearm cases has continually shrunk since 2018 in contrast to a surge in arrest-related statistics at the national level.
	16.5.1	Chiang Rai Province's ITA Score of E4: A bribe by those public officials has been continuously lower than the national average. However, the proportion increased in 2022; thus, Chiang Rai Province should closely monitor this situation.

Performance Lower than the National Value by Less than 10 percent	Indicator No.	Analysis
Level 3	16.3.2	The ratio of detainees awaiting trial to the total number of detainees has been steady and higher than the national average. Additionally, the data from Department of Corrections is short-term, making it difficult to clearly analyse the trend for this province.
	16.6.2	The ratio of the population who were satisfied with public services has been similar to the national average. However, the level of satisfaction dropped in 2023.

Performance Lower than the National Value by More than 20 percent	Indicator No.	Analysis
Level 1	16.2.2	The number of victims in human trafficking cases per hundred thousand population in Chiang Rai has shown a downward trend between 2019 and 2020 due to border closures and business slowdowns across all sectors as a result of the COVID-19 pandemic. However, the number of victims in human trafficking cases has recently shown an upward trend, becoming higher than the national average. Therefore, Chiang Rai Province, which share borders with neighbouring countries, must closely monitor this indicator in collaboration with relevant agencies.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai Province coordinate with other agencies or the data owners to disclose it for public purposes.	16.1.4	Data can be requested by coordinating with the Royal Thai Police, which currently collects "Data on people's fear of crime" in the Criminal Record Information Management Enterprise System (CRIME), a closed database.
	16.2.1, 16.2.2 and 16.3.1	A data request can be sent to the Ministry of Social Development and Human Security, which currently collects data regarding the 1300 Hotline database and the Thailand Database on Prosecution and Assistance to Victims of Human Trafficking (e-Anti Human Trafficking of Thailand, or E-AHT), which is a closed database.
	16.6.1	Data can be requested from the Ministry of Finance through the Government Fiscal Management Information System (GFMIS).
	16.9.1	A request for data can be made by contacting the Department of Provincial Administration, Ministry of Interior, which collects data on "the number of birth registrations by age" in the civil registration database, which is a closed platform.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	16.2.3, 16.3.3, 16.5.2, 16.7.1, 16.7.2 and 16.10.1	Data have yet to be collected according to the definition of the indicators, and data that can be appropriately used as a substitute for the indicators have been absent. Therefore, it is crucial to enforce new indicators in parallel to the indicators of the sustainable development goals.

SDG 17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Indicator No.	Indicators	Datasets	Organisations
17.1.1	Total government revenue as a proportion of GDP, by source	Thailand Government Spending	Digital Government Development Agency (Public Organisation) (DGA)
17.1.2	Proportion of domestic budget funded by domestic taxes	Thailand Government Spending	Digital Government Development Agency (Public Organisation) (DGA)
17.6.1	Fixed Internet broadband subscriptions per 100 inhabitants, by speed	-	-
17.8.1	Proportion of individuals using the Internet	The population aged 6 years and older, categorised by the use of information technology and communication, by region, province, and administrative area, 2010 - 2020.	National Statistical Office
17.17.1	Amount in United States dollars committed to public-private partnerships for infrastructure	The Public-Private Partnerships investment plan 2020 - 2027	State Enterprise Policy Office
17.19.1	Dollar value of all resources made available to strengthen statistical capacity in developing countries	-	-
17.19.2	Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100 percent birth	-	-

Indicator No.	Indicators	Datasets	Organisations
	registration and 80 percent death registration		

Performance of the indicators under the Sustainable Development Goal 17

Performance Higher than the National Value	Indicator No.	Analysis
Level 4	17.1.1	The proportion of revenue collected compared to the Gross Provincial Product surpassed the country's mean, reflecting the province's high capacity in revenue collection.

Performance Lower than the National Value, More Than 20 Percent	Indicator No.	Analysis
Level 1	17.1.2	Chiang Rai Province continuously underperformed the national average in the ratio of the budget funded from local taxes by a significant amount, highlighting the necessity for the province to better collect local taxes.
	17.8.1	The proportion of individuals using internet has been below the country's average, highlighting the necessity for the province to increase internet usage among the population to support access to knowledge and innovation in promoting Chiang Rai Province as the centre of creative economy in the region.

Not Sufficient for Monitoring and Evaluation	Indicator No.	Suggestion
Data for the indicators was collected but could not be accessed publicly. It is recommended that Chiang Rai coordinate with other agencies or the data owners to disclose it for public purposes.	17.6.1	Coordination can be undertaken to request data from the data owner, the Office of the National Broadcasting and Telecommunications Commission (NBTC).
	17.19.2	Coordination can be undertaken to request data from the data owner, the Department of Provincial Administration.
Data collection for the indicators has yet to be carried out. Definitions, methods, and guidelines for collecting data should be studied.	17.9.1	It is essential to establish tracking and assessment methodologies to ensure budget into resources that promote statistical competency for Chiang Rai Province.

Indicator 17.17.1: A comparison of this indicator with the country's figure is not feasible. Chiang Rai Province sees a growth in the value of investments in Public-Private Partnership (PPP) projects, especially regarding transportation projects, and construction projects of Chiang Rai International Airport. In addition, Chiang Rai's PPP projects accounted for 1 percent of the value of PPP projects nationwide in 2023.

Complete Research

Survey on the Overview Status of Thailand's Sustainable Development Goals

By
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This research project received a research grant from
The United Nations Development Programme (UNDP).

Abstract

The objective of this research was to survey public opinions on the conditions of the Sustainable Development Goals (SDGs) in the target provinces using survey research methods. The sample group used in the study was the general public aged 18 years and over and residing in the target provinces, totaling 6,000 people. Analysis of data was conducted from questionnaires using frequency distribution statistics, percentages, and averages.

Research results

1. Information on general characteristics reveals that the majority of the sample are female, 54.78 percent. Aged between 36-45 years, 25.55 percent. 36.2 percent has secondary school education or equivalent. Most of them are Buddhists, 76.43 percent. Marital status of married is 59.95 percent. Their main occupation is the business owner/self-employment, 23.12 percent. Their average monthly income is 10,001-20,000 baht, 31.97 percent. Most of the sample group do not have vulnerable condition, 50.03 percent. However, when considering the sample group with vulnerable condition, it is found that the majority were temporary/daily employees, 34.99 percent.

2. On the issue of quality of life development, it is found that the majority of the sample group has opinions on the issue of quality of life development (It is rated on a scale of 0-10 with level 10 being the most urgent/resolved/addressed and level 0 the least.) as follows. (1) The top three urgent needs for improving quality of life are: No Poverty (SDG 1) with the average of 8.94, followed by Quality Education (SDG 4) with the average of 8.50, and Decent Work and Economic Growth (SDG 8) with the average of 8.35, and (2) Government action consists of the top three government problem solving issues which are Responsible Consumption and Production (SDG 12) with the average of 5.84, followed by Quality Education (SDG 4) with the average of 5.71, and Clean Water and Sanitation (SDG 6) with the average of 5.70, and the top three issues resulting from corrective action/management by the government sector are: Responsible Consumption and Production (SDG 12) with the highest average of 5.15, followed by Life on Land (SDG 15) with the average of 5.00, and Clean Water and Sanitation (SDG 6) with the average of 4.99.

3. As for the gap between the needs of the people and actions the government is taking to solve, when considering the urgent need to develop people's quality of life and the government's problem solving efforts, it is found that the gap between the needs of the people and actions that the government is taking to solve includes: 1) No Poverty (SDG 1) with gap scores of 3.52, 2) Zero Hunger (SDG 2) with gap scores of 2.87, 3) Decent

Work and Economic Growth (SDG 8) with gap scores of 2.84, 4) Quality Education (SDG 4) with gap scores of 2.79, and 5) Good Health and Well-being (SDG 3) with gap scores of 2.73.

4. For guidelines or conditions that will improve the quality of life, it is found that most of the sample group has opinions on ways or conditions that would improve their quality of life. The top three were: Developing and improving appropriate local policies, 47.23 percent, followed by no corruption and increases the efficiency of information disclosure for transparent management, 44.50 percent, and creating social and economic projects for comprehensive local development, 43.93 percent.

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Chapter 1
Introduction

1.1 Background and significance of problems

Sustainable Development is a development guideline that responds to the needs of the current generation without disregarding the ability to respond to the needs of older generations (Brundtland Report, 1987). There are three factors to achieve Sustainable Development Goals. They include economic growth, social inclusion and environmental protection.

At the 70th Session of United Nations General Assembly on 25 September 2015 at its headquaters, all of the 193 member states including Thailand signed the 2023 Agenda for Sustainable Development. It served as a global development framework for mutual outcomes on sustainable social, economic and environment development without leaving anyone behind by 2023. Sustainable Development Goals (SDGs) were set in order to provide essential guidelines for each nation to implement together.

The 17 SDGs include 169 SDG targets. They are international, linked and supportive of one another. Additionally, 247 indicators have been set to follow up and assess the development progress. SDGs have been divided into groups based on five linking dimensional factors (5P) including; 1) People – focusing on elimination of poverty and starvation, and reducton of social inequality, 2) Planet – focusing on protection and conservation of natural resources and climate for upcoming global generations, 3) Prosperity – supporting people to live well and in harmony with nature, 4) Peace – adhering to peaceful co-existence in a harmonous society without division, and 5) Partnership – collaboration of all sectors to propel development agenda (Office of the National Economic and Social Development Council [NESDC], n.d.).

The United Nations Development Programme (UNDP) plays an important role in SDGs. It has supported and been a credible ally of the Thai Government and its people for more than 50 years. Implementation of the UNDP in Thailand is a support and drive to sustainably bring about postive change to the society in all dimensions according to the approach whereby humans are the core of collaborative programmes. Examples include human rights protection, increase of competency and equality to people as well as marginalised groups and so on. Additionally, the UNDP has collaborated with government agencies, private companies, educational institutions and the civil society to provide advice at the policy and expert levels in order to exchange knowledge and implementation development in various ways. For example, sustainable management of natural resources

and environment, biodiversity conservation, climate change adjustment, anti-corruption, building livable and sustainable communities, and social innovation development.

The SDGs push in Thailand is linked to the collaboration with the United Nations including; 1) upsacaling awareness and competency of agencies at provincial and local levels to implement activities that support sustainable development goals and push them at the regional and local levels, 2) facilitating collaborations between agencies at the provincial and local levels with the Thailand United Nations team including other relevant allies, 3) creating supportive environment in every province as well as allocating appropriate resources to develop the economy and society sustainably and 4) periodically conferring with one another to revise plans, implementation and progress towards sustainable development goals. The Foreign Affairs Division, Office of the Permanent Secretary for Interior has set an SDGs framework and an action plan to propel SDGs under responsibility of the Ministry of Interior for 2023. These included; 1) propelling SDGs with member organizations at the global level, 2) propelling SDGs at the regional level and 3) propelling SDGs spatially (Foreign Affaris Division, Office of Permanent Secretary for Interior, 2023).

The action plan to push SDGs by the Ministry of Interior has essential phases including; 1) stimulating SDGs awareness, 2) adjusting work processing, 3) implementing development and 4) following up, evaluating and aiming for completed implementation according to the collaboration framework with the United Nations. The UNDP has then chosen pilot provinces to propel SDGs accross every region in Thailand (North/Sourth/East/West). These are diverse in their social geography such as those bordering seas, inland, containing mountains and forests, large in size with a large population, small in size with a small population, highly urbanized, highly rural and so on. These SDGs localizations include 15 provinces; Chiangrai, Chiangmai, Maehongson, Tak, Udon Thani, Nakhon Ratchasrima, Ubon Ratchathani, Bangkok, Petchaburi, Phuket, Surat Thani, Songkhla, Pattani, Yala and Narathiwas. These are for the purpose of reporting the plan to propel SDGs in Thailand.

The Sustainable Development and Sufficiency Economy Studies Center (SuDSESC) at the National Institute of Development Administration (NIDA) undertook the survey on overview status of Thailand's Sustainable Development Goals to study and report the plan to propel SDGs in Thailand according to the collaboration framework with the United Nations. The SDGs localization included 15 provinces. This allowed findings in relation to Thailand's overview and its aspects of SDGs, the SDGs aspects that have not yet been developed, and their urgency levels. All of which have been used as data for future SDGs.

1.2 Research objectives

To survey opinions of people towards sustainable development goals in areas of targeted provinces.

1.3 Scope of research

1.3.1 Areas

This research was conducted in 15 targeted provinces including Chiang Rai, Chiang Mai, Mae Hong Son, Tak, Udon Thani, Nakhon Ratchasrima, Ubon Ratcharthani, Bangkok, Phetchaburi, Phuket, Surat Thani, Songkhla, Pattani, Yala and Narathiwat.

1.3.2 Time

The research was conducted between July to December 2023.

1.3.3 Content

This research was conducted based on Sustainable Development Goals.

1.3.4 Population

The population included people aged 18 and above living in 15 targeted provinces.

1.3.5 Survey methods

For this research, the surveying units included:

1.3.5.1 Sustainable Development and Sufficiency Economy Studies Center herein referred to as “Reserach Team” or “SuDSESC”. The survey involved data collection done via in-person offiline survey covering all of the 6,000 samples (400 people per province).

1.3.5.2 The UNDP and its networks used the online questionnaire covering all of the 150,000 samples (10,000 people per province). This online questionnaire was not under the SuDSESC’s responsibility. This means SuDSESC was only involved in the design of the research instrument (Online Questionnaire) using the QuestionPro program and the data analysis stage. This phase did not interfere with the submissions and payments.

1.4 Expected outcomes

1.4.1 To know data relating to problems and situtations around Sustainable Development Goals in the targeted provinces.

1.4.2 The findings may be used as information for planning relevant strategies and policies for resolutions.

1.4.3 Relevant agencies and others may us the findings to consder or create guidelines for Sustainable Development Goals.

1.5 Research framework

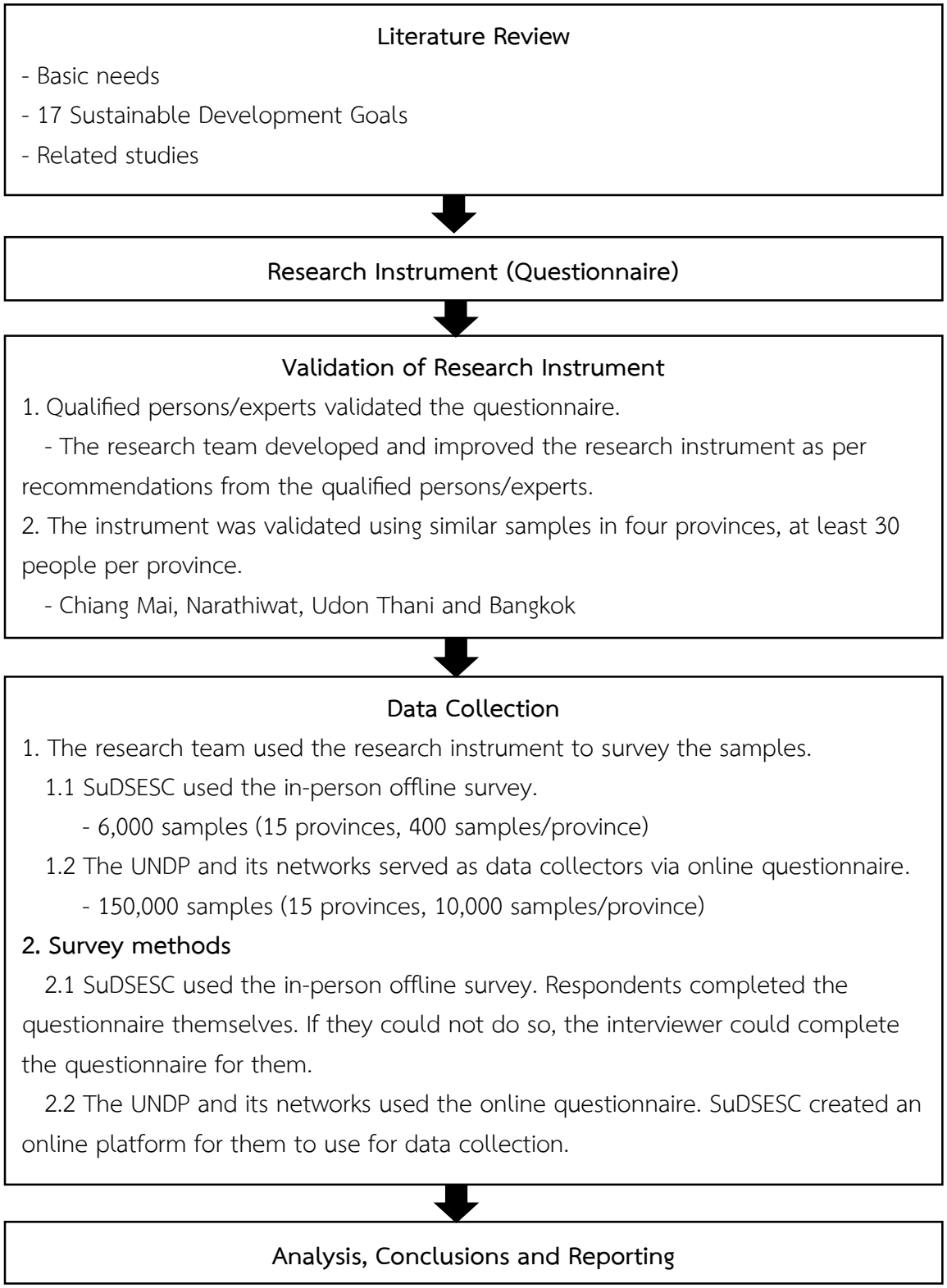


Illustration 1.1: Research framework

1.6 Research plan

Table 1.1 Research plan (2023)

Activities	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1. Research proposal The research team studied background and significance of problems, objectives, expected outcomes, scope of research and designed research phases.						
2. Design of research instrument (Questionnaire) The research team studied and reviewed related literature to design the research instrument (Questionnaire).						
3. Research instrument validation (Questionnaire) The research team requestion research instrument validation (Questionnaire) from qualified persons/representatives from targeted provinces to validate the research instrument (Questionnaire).						
4. Research instrument design (Online Questionnaire) The research team designed the online questionnaire using QuestionPro for the UNDP and its networks to collect data.						
5. Trial of research instrument (Questionnaire) The research team tried the online questionnaire with similar samples from four provinces, at least 30 people per province including Bangkok, Chiang Mai, Udon Thani and Narathiwat.						
6. Data collection The research team used the questionnaire on the samples in 15 provinces, at least 400 people per province and not less than 6,000 people in total.						

Activities	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
7. Data analysis and conclusion The research team used findings from No. 5 to analyze as per objectives and concluded the research.						
8. Reporting Complete the full report (Thai and English versions)						

Chapter 2
Literature and Related Studies

The documentary research, concepts, theories and related studies on the survey on the overview status of Thailand's Sustainable Development Goals conducted by the research team contained three stages as follows:

1. Concepts and theories on basic needs
2. Concepts on sustainable development
3. Related studies.

2.1 Concepts and Theories on Basic Needs

Maslow's Hierarchy of Needs

An English psychologist studied motivation and believed that humans had needs and that human behaviors were displayed to respond to those needs. His hypotheses relating to human needs are as follows (Abraham H. Maslow, 1973: 122-144):

1) Every human has needs and those needs are never ending.

2) Needs that have been met will no longer motivate behaviors.

3) Needs that influence behaviors are ones that have not been met.

4) Human needs are hierarchical in their characteristics. They range from low to high levels according to importance. When a low level need has been met, a higher level need will ensue. Maslow explains that there are five hierarchies of human needs as follows (Abraham H. Maslow, 1973, Priyaporn Wonganutrot, 2001):

1) Physiological Needs. These include needs for food, water appropriate temperature and so on. If humans lack all other things and these needs have been met, to pursue physiological needs, humans are subject to struggles to survive in the society.

2) Safety Security Needs. These include desires to be protected from bodily harm such as accidents, crimes and have security in pension.

3) Love or Social Needs. After having met the two hierarchies of needs above, love or social needs are a higher level. They play a role in the need to be accepted by colleagues and co-workers for being team-members. This means the needs for love, help and friendliness from other members in the organization. The social needs tend to be in a form of feeling important in that society including the need to have a higher social status, which is a psychological need.

4) Esteem Needs. These are self-respect. The feeling that ones succeed and are accepted from others. These include the need for status and prestige, which ia an

essential element of praise needs for competency and feeling that ones are useful and important in the society. For example, being entrusted by a boss to perform important works, having autonomy to work or praising to the public, giving advice for important matters or being promoted to an important role. Maslow states that only a group of people may have the needs at this level met.

5) Self – actualization Needs. This is the highest need level. It means ones utlize their compentencies in all aspects and can be everything they want. Each individual is different depending on their competencies and needs. Humans do not need only economic goods and physiological needs, but they also desire to reach their expectations. Maslow explains that needs provide for satisfaction. People often do what makes them satisfied. They tend to do what suits them such as a singer wanting to play music and a poet wanting to write poems. These things make them happy. That says ones should do what they are good at. The needs for all these are called success and happiness in life.

Maslow explains characteristics of people who know themselves and their desires to succeed as follows:

1) Those who care about the future, not the past. They try to gain as much as possible current experiences in order to reach a goal in the future. They decide to chose a risky path, but a worthy one. They know themselves, try to discover their talents, self-values and being themselves,. They also put effort in being honest with others by not being decietful but rather truthful to acquaintances. They express opinions despite disagreement from others.

2) Those who aim to their goals and try their best. They participate in activities that are useful and positively experienceable. They are poised to gain new experience, opportunities and accept change and disparate opinions.

Maslow classifies physiology, safety and security as lower level needs while society, love, acceptance and life success are higher level needs. The lower level needs are external satisfaction such as dressing up, eating delicious food, high wages, fully-equipped offices and so on. The higher level needs, on the other hand, are internal satisfaction such as honor, fame, gratification, being praised from the public and so on. According to these notions by Maslow, humans have sequential and systematic steps towards their needs. These are the weakness of Maslow's theory of motivation as the sequences may not be as per his suggestion. To consider it according to Maslow, if human needs in each level are met based on expected behaviors, the difficulty arises in terms of how do we know which need level of that working individual is at in a given time? This is because each type of need may have common or related characteristics that are not separable. This means a need at a higher level may occur without fully meeting the one at a lower level. Considering motives are created to influence what we need in an

appropriate time, human behaviors are under the influence of several movties at a time. These movties are sometimes conflicting and causing people to prioritize them to meet their needs accordingly.

The core of Maslow's concept, which is in line with SDGs is that human needs are similar. This means the needs that are met lead to self-satisfaction. Such needs then become a motivation to aim continually for a higher level. These needs then become a drive or motivation, which makes people behave in a way that meets their needs and it can radiate to other people around them. The sequences can be drawn from the importance of SDGs as a starting point.

2.2 Concepts on Sustainable Development Goals

2.2.1 Definitions and background of Sustainable Development Goals

Sustainable development is a new concept. It is different from economic and social development in its traditional form, which focuses on the scientific growth and progress leading to impacts and problems aplenty. The principle of sustainable development was developed to solve such problems. There have been efforts to find a solution to conflicts relating to development in the future. Factors around economic needs and limitations of resources and enviromental problems are the cause.

The sustainable development concept has played a role since 1972, during the development trend of the global society. Environmental crises have also triggered awareness around the world for collaborations to combat the problems. The United Nations Conference on Human and Environment in Stockholm, Sweden in 1972 urged the global society to be aware of utilizing existing and limited resources in the most useful and effective manner. The World Commission on Environment and Development or Brundaland Commission proposed the sustainable development concept in a report to the United Nations in 1987. The report became subsequently known as "Our Common Future" (Office of International Collaboration for Natural Resources and Environment, Office of Permanent Secretary for Natural Resources and Environment, 2013, p.11)

A Non-governmental organization founded the Club of Rome, which was a group of international scholars who conferred and wrote a report on limits to growth. There were five factors that served as limitations for development of global growth at the time. These included industry exansion, rapid increase of population, consumption problems, reduction of non-renewable natural resources and environmental deterioration. They put forward a proposal to the society and business to become aware of problems that had occured and to find a solution so that the economy and ecology could continue on sustainably (Meadows, 1972).

In 1992 in Rio de Janeiro, Brazil, the United Nations Conference on Environment and Development (UNCED) or the "Earth Summit" had an important agenda on sustainable development and ratified an essential documents by member states – the Rio Declaration on Environment and Development and the Agenda 21 which were the master plan for sustainable development implementation. Environmental problems and importance of environmental conservation were also acknowledged. As a result, acitivities relating to sustainable social, economic and environmental development were set. In addition, the Commission on Sustainable Development was established with the primary duties to follow up and report on sustainable development. The Commission meets every five years for assessment.

In 2004 in New York, USA, the United Nations held its Millenum Summit and ratified the Millenium Declaration, which prescribed Millennium Development Goals (MDGs) as the global agenda. They included eight main Goals and the set the timeline for achievement to 15 years (between 2000-2015) (Millennium Declaration cited in Janunya Pathaichant, 2018).

In 2002 in Johannesburg, South Africa, the World Summit on Sustainable Development (WSSD) or Rio+10 reviewed the progress of sustainable development implementation of state members according to Agenda 21. In addition, it ratified the Johannesburg Declaration on Sustainable Development and the Johannesburn Plan of Implementation. They constituted an obligation on member states to Agenda 21 to generate more sustainable development in practice (Johannesburn Declaration on Sustainable Development cited in Janunya Pathaichant, 2018).

In 2012 before the end of the MDGs timeline, the United Nations Conference on Sustainable Development (UNCSD) or Rio+20 in Rio de Janeiro, Brazil prescribed a framework to propel global development after 2015. In September of the same year, the 70th United Nations General Assembly at its headquaters in New York, USA ratified the 2023 Agenda for Sustainable Development Goals (SDGs), which included 17 goals. Its development framework linked three dimensions including economy, society and environment. The environmental issues were the goals that had to be implemented with urgency to combat climate change (The Global Goals for Sustainable Development cited in Janunya Pathaichant, 2018).

The awareness of environmental impacts that have continuously become more serious for several decades has led to the importance of concepts on sustainable development. They have gained more attention at the international level. Sustainable development has become a principle that every section ranging from local to global levels to implement activities that promote and develop their societies sustainably. The definition of sustainable development in Toward Sustainable Development Report is

“Sustainable development is development which meets the need of current generation without compromising the ability of future generations to meet their own needs” (Office of International Collaboration for Natural Resources and Environment, Officer of Permanent Secretary for Mineral Resources, 2013). In reference to the Brundtland Report, which is the inception and definiton of sustainable tourism by the UNWTO, “Sustainable Hospitality” means implementation of resources management that focus on the capital and benfits for the economy, society and environment in order to meet the needs of the current generation while protecting and additing opportunities for future generations” (Legrand, W., Sloan, P. and Chen. J.S. 2017: 26).

Sustainable development is development that leads to balance or supportive interactions among several dimensions such as economy, society, politics, culture, spirit, natural resources and environment. These are elements that together or as a whole allow humans to live happily, both current and future generations (Banchuen Nakkanrian and Pensri Bangbon, 2016).

Sustainable development is development that meets the needs of the current generation without affecting future generations while compromising the ability to meet their own needs (Bangor, 2003).

Sustainable development is characteristically integrative, meaning it is holistic. In other words, relevant components must create a whole rendering another characteristic balance or allowing human activities to align with the law of nature (Payuto, 2003).

Sustainable development is development that aims for humans to realize limits of natural resources on earth. It provides for implementation in tandem with conservation and rehabilitation of natural resources and environment. This is development that responds to the needs of the current generation and future ones equally.

Core principles of sustainable development are:

1) Sustainable development dimensions, which are development of the economy so it can grow with quality and distribute income to facilitate the majority of people in the society especially those with low income.

2) Sustainable development dimensions, which are development of people so they are knowledgeable, competent and more productive. It promotes for a quality society for all to learn.

3) Sustainable development dimensions, which are utilization of natural resources in a quantity that the ecosystem can rebound to its original state, pollutants in the environment are at a level the ecosystem can absorb and eliminate, and that they can be renewed to replace what has been used up.

Sustainable development must provide for better quality of life and a society with good governance and a stable economic development system, one that does not rely on external assistance and has good environment where people use natural resources wisely, especially the natural resources that are used principally in manufacturing for economic growth (Brundtland, 1987 cited in Office of National Collaboration for Natural Resources and Environment, Office of Permanent Secretary for Natural Resources and Environment, 2013).

2.2.2 Sustainable Development Goals (SDGs)

Development over the past four decades have been what has led to significant impacts and damages to global natural resources. In 2000, more than 189 countries around the world including Thailand gathered at the United Nations in New York, USA in order to set development goals at the national and international levels in which every country would implement together by 2015. Those goals were called Millennium Development Goals (MDGs) including; 1) eradicate extreme poverty and hunger, 2) achieve universal primary education, 3) promote gender equality and empower women, 4) reduce child mortality, 5) improve maternal health, 6) combat HIV/AIDS, malaria and other diseases, 7) ensure environmental sustainability and 8) global partnership for development. These goals were achieved in several countries. To ensure continuous development, the United Nations has prescribed new development goals called Sustainable Development Goals (SDGs) with the framework that envisions development through linked dimensions of economy, society and environment. This means no dimension shall be developed to create a negative impact upon the others. They are referred to as the “Three Pillars of Sustainability”. In Thailand, culture is an additional dimension.

Sustainable Development Goals (SDGs) were released in September 2015. They will be used as the framework to propel the world until August 2030 (15 years). SDGs have been the global development level that has been ratified by the member states of the United Nations. The document that member states have ratified is entitled Agenda 2030 or Global Goals. In the SDGs academic and official documents between 2012-2015, they may be referred to as Post-2015 Agenda. The original of SDGs dates back to 2012 when the United Nations Conference on Sustainable Development (UNCSD) in Rio de Janeiro, Brazil evaluated outcomes of Millennium Development Goals 2001-2015. It was found that several outcomes had not been achieved while new and more severe challenges emerged, especially issues and impacts caused by climate change. Growing population led to pressure upon natural resources and food, economic and social inequality, and rising political tensions at national and international levels (Centre for SDG

Research and Support, 2023). There are 169 targets covering 17 SDGs from ending poverty, achieving food security, maintaining life and well-being, accessing quality education, exploring and accessing water and energy, reducing inequality, natural environment conservation, and promoting employment and valuable work for all (United Nations, 2022). Details are as follows:

Goal 1: No Poverty. The first goal of sustainable development in the social dimension is to end poverty in all its forms everywhere by 2030. SDGs have a goal to end all forms of extreme poverty, which are measured from those with less than $1.25 living income per day (approximately 800 million globally). This goal is related to setting up a target group that lives in a situation that risks not having access to natural resources and basic services, lacks clean water, food and adequate sanitation. The goal extends to providing assistance to communities affected by conflicts and climate related disasters.

Goal 2: Zero Hunger. With the goal to end hunger, achieve food security, improve nutrition and promote sustainable agriculture, it has been sufficiently successful. This is because the lack of food has alleviated due to economic growth and increasing agricultural production. SDGs aim to eliminate hunger and starvation in all forms by 2030 to ensure that everyone has access to sufficiently nutritious food. The hope is to end malnutrition in all forms and solve issues relating to nutrition requirements in female teenagers, pregnant women and breastfeeders, and senior citizens. There have been international collaborations to end stunting and wasting in children under 5 years of age by 2025.

Goal 3: Good Health and Well-Being. This is to ensure healthy lives and promote well-being for all at all ages. The aim is to reduce global mortality rates of mothers to be less than 70 per one hundred thousand births by 2030. Others include reducing preventable deaths in newborns and children under 5 years; untimely deaths caused by non-communicable diseases, accidents and dangerous chemicals, contaminants, and other pollutants. Further, it is hoped to end the spread of HIV, tuberculosis, malaria, issues related to drugs, reproductive health and family planning, access to public health services and so on. This goal has also sufficiently progressed. It can be seen from reduction in children mortality rates as well as combatting with HIV, malaria and other communicable diseases. SDGs aim to end the spread of HIV, malaria and other communicable diseases by 2030. Additional aims include achieving comprehensive life insurance and access to medicines as well as safe and effective vaccines for all.

Goal 4: Quality Education. This goal is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030. This will allow all boys and girls to equally finish quality education at the primary and secondary levels without incurring any expenses. It will lead to effective academic outcomes whereby

everyone has access to development, care and quality educational management at the pre-school level. All of which is derived from the determination to develop SDGS. At present, more children around the world have access to education. More girls are able to go to school and receive quality education. This is because education is one effective drive of sustainable development.

Goal 5: Gender Equality. This goal is to achieve gender equality and empower all women and girls. The aim is to end discrimination, all forms of violence against women and girls, but to accept and value care and unpaid housekeeping work, access to sex and reproductive health for all. The focus is on ending all forms of discrimination. However, some regions continue to experience wage inequality and a gap between men and women in the labor market. The aim extends to ending violence against gender, sexual harassment, illegal labor and division of social classes. All of which continue to be major obstacles in this area.

Goal 6: Clean Water and Sanitation. This goal is to ensure availability and sustainable management of water and sanitation for all. The aim is for all to have access to safe and affordable drinking water. There is adequate and just access to sanitation. Excreting in open spaces shall be terminated. Water quality is upgraded by reducing pollution, eliminating littering and reducing releases of chemical substances and dangerous materials. This goal extends to water usage and sustainable water supply by 2030.

Goal 7: Affordable and Clean Energy. This is to ensure access to affordable, reliable, sustainable and modern energy for all. The aim is to increase the rate of renewable energy, integrate it with global energy and double the rate of improvement of global energy efficiency by 2030.

Goal 8: Decent Work and Economic Growth. This is to promote inclusive and sustainable economic growth, full and productive employment and decent work for all by 2030. That is to ensure per capita economic growth to be sustainable as per the context of the country. This is especially in relation to the country' s gross domestic product to be achieved at a higher level of economic productivity. This is done by promoting productive activities, generating appropriate jobs, disconnecting economic growth and activities deteriorating environment and eliminating human trafficking while promoting sustainable tourism, cultures and local products.

Goal 9: Industry Innovation and Infrastructure. This is to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation by 2030. The aim is to build quality basic infrastructures, development of comprehensive and sustainable industries, increase scientific researches, escalate technological capabilities of the the industry sector in every country, especially developing countries.

Goal 10: Reduced Inequalities. This is to reduce inequality within and among countries by 2030. The aim is to maintain the income growth within 40 percent among the poorest population group, empower and promote social, economic and political coverage for all. In addition, it aims to choose policies especially ones that focus on finance, wages and social protection in order to continuously achieve equality.

Goal 11: Sustainable Cities and Communities. This is to make cities and human settlements inclusive, safe, resilient and sustainable. The aim is to create assurances that there shall be access to accommodation and adequate basic, safe and affordable services. It is to upgrade slums and sustainable transportation. Further, it is to protect cultural and natural heritage of the world. Moreover, it is to reduce negative impacts per capita in cities upon the environment. Special attention is paid to air quality and waste management by municipality offices and others along with easy access to safe and comprehensive green spaces for all.

Goal 12: Responsible Consumption and Production. This is to ensure sustainable consumption and production patterns. The aim is to proceed with the 10-year implementation on sustainable production and consumption. This can be done by reducing half of the global waste at the retail and consumer levels in tandem with decreasing loss of food from the production process and supply chain. This includes loss after harvesting. Waste reduction is achievable through protection, processing for reusing and reusing by 2030. Additionally, there is chemical and waste elimination of all forms via an environmentally friendly method and a sustainable public procurement life cycle.

Goal 13: Climate Action. This is to take urgent action to combat climate change and its impacts. The aim is to become more resilient and increase capabilities to being adaptive for dangers and natural disasters caused by climate in every country. There is to be integration of measures for climate change at the national level, educational development, building awareness of reducing climate change problems, adaptation, impact reduction and early warning.

Goal 14: Life Below Water. This is to conserve and utilize oceans, seas and marine resources sustainably for sustainable development. It is to protect and reduce all forms of marine pollution. Additionally, it is to protect the marine ecosystem, coastal areas as well as to solve impacts from acidification in the oceans.

Goal 15: Life on Land. This is to protect, rehabilitate and promote life on land utilization sustainably. It is to sustainably manage forestation, combat desertification, stop deterioration of land so it can revive and end losses of biodiversity. Additionally, there is conservation, rehabilitation and utilization of life on land and in freshwater including ecosystem services sustainably. There is also sustainable forest management of all kinds. Deforestation is halted while deteriorating land and surfaces are being

rehabilitated. Reforestation and forest rehabilitation occur around the world. There is protection from desertification, rehabilitation of deteriorating land and surfaces. Further, there is conservation of the mountain ecology and biodiversity of the ecology system.

Goal 16: Peace, Justice and Strong Institutions. This is to promote peaceful and inclusive societies for sustainable development. It aims for everyone to have access to justice and create effective institutions that are responsible and inclusive at all levels. They reduce all forms of violence and mortality rates in all relevant areas. They put an end to oppression, inappropriate serving of own' s interests, human trafficking, all forms of violence and torment in children as well as reducing trafficking of ammunitions, money and all forms of corruption.

Gaol 17: Partnerships for the Goals. This is to strengthen the mechanism for implementation and reviving partnerships at the global level for sustainability. It is to strengthen resources mobilization in Thailand including support from the international level to reach out to developing countries.

The United Nations has grouped the 17 goals according to relevance. There are five groups or 5Ps including; People, Prosperity, Planet, Peace and Partnership as follows (Centre for SDG Research and Support, 2022).

Table 2.1 Grouping of development dimensions of the Sustainable Development Goals (17 goals)

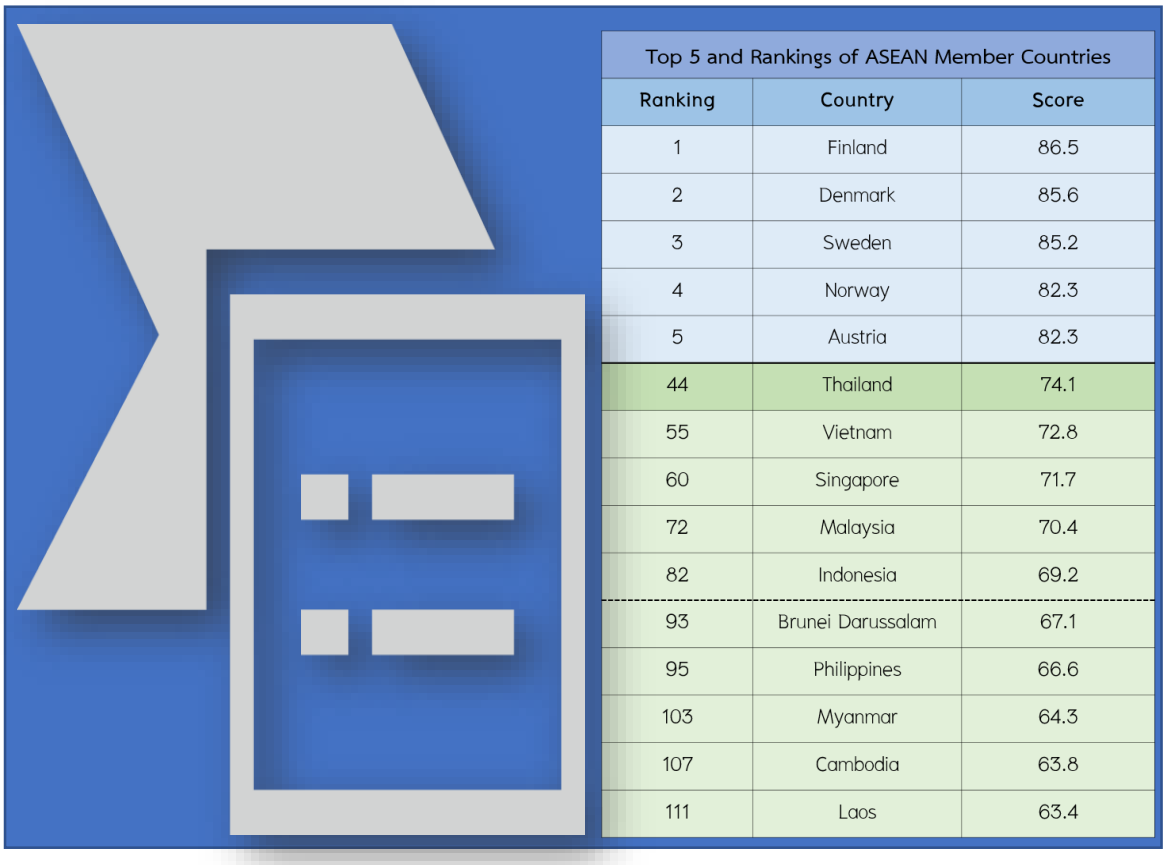
Development dimensions	Development Goals	
People	Goal 1:	No poverty
	Goal 2:	Zero hunger
	Goal 3:	Good health and well-being
	Goal 4:	Quality education
	Goal 5:	Gender equality
Prosperity	Goal 6:	Clean water and sanitation
	Goal 7:	Affordable and clean energy
	Goal 8:	Decent work and economic growth
	Goal 9:	Industry and innovation infrastructure
	Goal 10:	Reduced inequalities
	Goal 11:	Sustainable cities and communities
Planet	Goal 12:	Responsible consumption and production
	Goal 13:	Climate action
	Goal 14:	Life below water
	Goal 15:	Life on land
Peace	Goal 16:	Peace, justice and strong institutions
Partnership	Goal 17:	Partnerships for the goals

Source: Modified by the research team

2.2.3 Concept of Sustainable Development Goals in Thailand

2.2.3.1 Thailand's SDGs situation

Thailand has given importance to driving the Sustainable Development Goals (SDGs) by integrating and working together. For example, driven by the government with action plans related to sustainable development goals at the national level which is linked to the 20-year national strategic plan (2018-2037), National Economic and Social Development Plan No. 12 (2017-2021), and the National Economic and Social Development Plan No. 13 (2023-2027) to integrate with operations. In addition, civil society and the private sector are increasingly paying more attention to this. As a result, Thailand's SDG Index ranking is at the top when compared to countries in East Asia, South Asia, and the ASEAN region, etc.



Top 5 and Rankings of ASEAN Member Countries

Ranking	Country	Score
1	Finland	86.5
2	Denmark	85.6
3	Sweden	85.2
4	Norway	82.3
5	Austria	82.3
44	Thailand	74.1
55	Vietnam	72.8
60	Singapore	71.7
72	Malaysia	70.4
82	Indonesia	69.2
93	Brunei Darussalam	67.1
95	Philippines	66.6
103	Myanmar	64.3
107	Cambodia	63.8
111	Laos	63.4

Illustration 2.1 Global and ASEAN SDG Index rankings for 2022
Source: Jeffrey Sachs et al., (2022)

According to the Sustainable Development Report (SDR) which is a study and assessment of progress in driving the Sustainable Development Goals (SDGs) of each country, including the annual SDG Index ranking, It is found that in 2021, Thailand ranked 43rd on the SDG Index (165 countries), and 2022 ranked 44th (163 countries). The score decreased by 0.1 points. And when comparing the SDG Index rankings at the regional level, it is found that Thailand was ranked number 1 in the ASEAN region and ranked 3rd in Asia, followed by Japan (ranked 19th) and South Korea (ranked 27th).

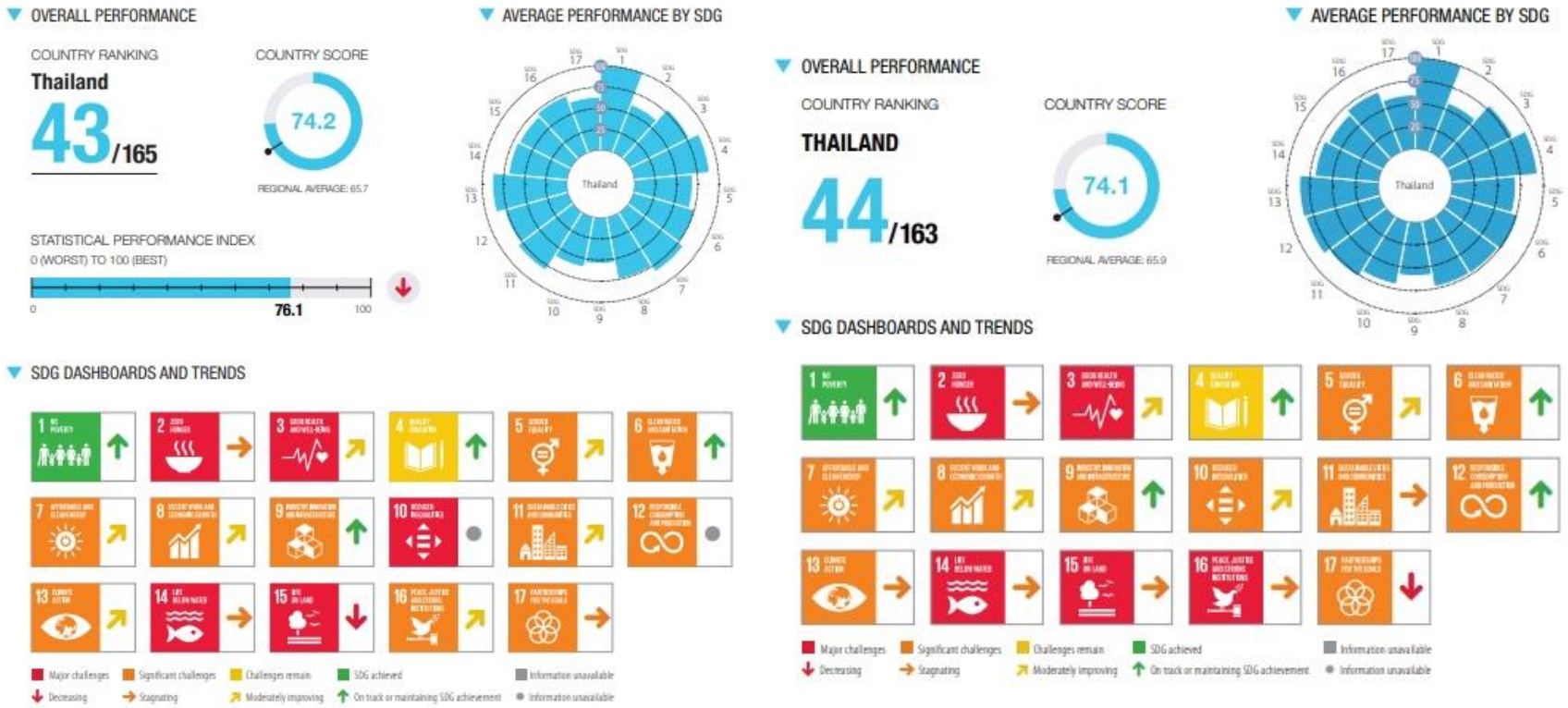


Illustration 2.2 Thailand's SDG Index rankings for 2021 and 2022

Source: Jeffrey Sachs et al., (2021); Jeffrey Sachs et al., (2022)

When considering the Sustainable Development Goals (SDGs) level of Thailand, it is found that there is a total of 1 Sustainable Development Goal (SDGs) that is in the status of being achieved (green) since the 2019 report, which is SDG1 (No Poverty). The main indicators of the global assessment of this goal in calculating the 2022 SDG Index score are as follows: The poverty line is set at US$1.90 per day (65 baht) and US$3.20 per day (110 baht). It is found that no Thai population falls below the poverty line. For the use of poverty line criteria in Thailand, year 2020 set at 2,762 baht per person per month. The Office of the National Economic and Social Development Council (NESDB) has made a report on the situation of poverty and inequality in the year 2020. It is found that 68.4% of the population is considered poor, representing a total of 4.8 million poor people nationwide, which is likely to increase from last year.

As for the Sustainable Development Goals (SDGs), which are in a very challenging state, the number of 5 goals is the same as last year. But there has been a change in goals. That is, from the 2021 reporting data, the SDG2, SDG3, SDG10, SDG14 and SDG15 targets are highly challenging targets. In 2022, the performance of SDG10 targets has improved, resulting in the status being upgraded to a challenging target and SDG16 is a highly challenging goal instead. For Thailand's challenging goals and indicators from the 2022 SDG Index rankings are: **SDG2 Zero Hunger** – There are many challenges in the Sustainable Nitrogen management index indicators and the export of pesticides that are dangerous because they are related to the agricultural sector. **SDG3 Good Health and Well-being** – There are many challenges in measuring tuberculosis incidence and road traffic fatality rates. **SDG14 Life Below Water** – There are many challenges in determining which marine areas are important for protected biodiversity and the Ocean Health Index in seawater cleanliness scores. **SDG15 Life on Land** – There are many challenges in indicators of protected freshwater areas important for biodiversity and Red list index of species survival. **SDG16 Peace, Justice and Strong Institutions** – There are many challenges to the murder rate indicator* and Corruption perception index, etc.

According to the Sustainable Development Report (SDR), it is found that the rating “Government commitment and efforts to drive the SDGs”, a survey by the United Nations Sustainable Development Solutions Network (SDSN) to track the extent to which governments in each country have integrated the SDGs into their work based on indicators as follows: There have been high-level official statements on the SDGs, The SDGs are integrated into national strategies and operational plans, the SDGs are integrated into national budgets, there is monitoring and evaluation of the SDGs at the national level, host agencies are designated to implement the SDGs, the SDGs have been integrated into national COVID-19 recovery plans, and the results of the voluntary national review of the implementation of the 2030 Agenda for Sustainable Development are reported (Voluntary

National Review: VNR). SDSN has compiled survey results from more than 60 countries, assessed and rated commitment on a scale consisting of scores from 0-40 points, equal to a very low level, Scores between 40-50 points equal a low level, Scores between 50-65 points equal a moderate level, Scores between 65-80 points equal a high level, and a score between 80-100 points equals a very high level. The evaluation found that no country received a very high score. However, there are still 15 countries with high scores, including: Argentina, Austria, Benin, Colombia, Denmark, Finland, Germany, Japan, Mexico, Netherlands, Nigeria, Slovenia, Spain, Sweden, and Switzerland. Meanwhile, Thailand scored equal to the average level for the government's commitment and effort in driving the Sustainable Development Goals (SDGs), which is the range of scores that most countries received (23 countries). However, this rating of the government's commitment and efforts is still a pilot version This is because currently available policy information is subject to a number of considerations and limitations.

2.2.3.2 Compatability of National Strategies and SDGs Targets

The 17 Sustainable Development Goals that cover the demensions of people, economy, environment, peace and justice, and development partnerships are compatible with the the national development guidelines under the twenty-year National Strategies. This is a national development goal that is in accordance with good governance. It is a framework for national development planning to be in line and intergrated in order to develop the country to be stable, prosperous and sustainable without leaving anyone behind.

The Committee of Sustainable Development Goal (SDC), approved the principle of Thailand’s SDG Roadmap, which includes implementation in six dimensions inclusive of linking the sustainable development goals with three national plans. The Office of the National Economic and Social Development Council analyzed and compared the linkage between the 169 targets of SDGs with 37 goals at the issue level. This covered 23 master plans under the national strategies (Level 2 plan) and 140 goals at the sub-issue level of the master plans (Y1). The aim was to codify the compatibility and setting directions of development at the national and international level. It was also to increase the effectiveness of follow-ups, examinations, and assessments by government agencies. It was found that 17 SDGs and 169 targets were compatible with the six dimensions of the national strategies. They were in line with the goals at the sub-plan level of the master plans under the national strategies in all of the 23 Issues. Government agencies were able to use this data along with creating projects and level 3 plans, which were achievable for being Sustainable Development Goals, National Strategies Goals and Master Plans at the same time (Office of the National Economic and Social Development Council, 2023) as in the illustration below.

Illustration 2.3 Linkage between SDGs Targets and Sub-Master Plans Targets of National Strategy's Master Plans
Source : Office of the National Economic and Social Development Council, B.E. 2566

Note: This is an analysis of linkage betwen SDG targets and sub-master plans targets under the national strategy's master plans.
The implementation to achieve goals under the master plans is alined with the sub-master plans under national strategy's goals as well as SDGs.

2.2.3.2 Role as a propeller of Thailand's SDGs

Thailand has designated various organizations to be involved in the implementation, propulsion, development of the 17 Sustainable Development Goals. They include:

1) Public sector

Thailand is one of the Member States that has ratified the 2030 Agenda. Prime Minister General Prayut Chan-o-cha went to sign the ratification himself. Upon return, the Prime Minister established a new Sustainable Development Committee (SDC) to replace the old one, which was established in the Yingluck Shinawatra's government (2013). It was effected by the Prime Minister's Regulation issued on 11 April 2016.

The new Committee comprises representatives from the public, the private and the academic sectors. The public sector is represented by the Deputy Prime Minister, Minister for the Prime Minister's Office, Permanet Secretaries from different Ministries, the General-Secretary of the Office of the Council of State, the Director of the Budget Bureau and the Attorney General. The academic sector is represented by Thailand Institute of Justice, Thailand Environment Institute, Good Goverance for Social Development and Environment Institute, Chulabhorn Research Institute and Thailand Development Research Institute. The private sector is represented by The Thai Chamber of Commerce, The Federation of Thai Industries and not more than four qualified persons. The Secretary General of the Office of the National Economic and Social Development Council as chair and secretary, the Secretary General of the Office of the Office of Natural Resources and Environmental Policy and Planning and an assigned Deputy Secretary General of the NESDC as members and secretary assistants.

Under the SDC, there are four sub-committees:

- Sub-committee for Propulsion of Sustainable Development Goals;
- Sub-committee for promotion of understanding and assessment of sustainable development based on the Sufficiency Economy Philosophy;
- Sub-committee on information systems to support for sustainable development;
- (To be established early 2018) Sub-committee for Strategic Environmental Assessment (SEA).

Each sub-committee has NDSEC and the National Statistics Office (NSO) as secretaries.

In addition, SDC has assigned that each primary and secondary organization has a goal to manage and create a roadmap in order to achieve sustainable

development goals. NDSEC has collaborated with SDG Move under Thailand Research Fund to organize a workshop to prioritize Sustainable Development Goals.

Direct propelling of SDGs by the public sector is still limited. This is in terms of approaches and operational terms that lack integration. Most devleopment policies of the government such as Thailand 4.0, Sustainable Thai Popularity, 20 Year National Strategy, National Economic and Social Development Plan No. 12 and so on lack concrete propelling of SDGs. However, these development policies have some relevance to SDGs. Despite having no clear propulsion, development in some SDGS areas may be possible.

In terms of the overall practical propulsion by the public sector, there are at least three important orgainzations including; 1) the Office of the National Economic and Social Development Council (NESDC), 2) the National Statistics Office (NSO) and 3) the Ministry of Foreign Affairs with the Department of International Organization as the key player.

The Office of the National Economic and Social Development Council (NESDC) serves as the secretary of SDC and all other sub-committees. It is responsible for propelling, coordinating and following up the works of all releant public sector organizations. Additionally, it plays a role in propelling SDGs to use in a field site. Currently, it is creating a database at the sub-district level. This is in collaboration with the Geo-Informatics and Space Technology Development Agency (GISTDA).

The National Statistics Office has an important role to liaise and build on indicator data in Thailand. This involves collaborations with organizations in Thailand and overseas allowing collection of DSGs indicator data to be complete, precise and timely. For example, a collaboration with UN Habitat to deal with indicator data relating to SDG 11 and New Urban Agenda, and with the National Metal and Materials Technology Center (MTEC) to calculate indicator data relating to the material footprint.

The Department of International Organization, Ministry of Foreign Affairs is the key play to liaise and prepare the Voluntary National Review (VNR). It is responsible for works related to development partnerships in Thailand and overseas. In the international arena, the Ministry has established the South-South Cooperation project among developing countries. Thailand has shared the new agricultural theory practices under the Sufficiency Economy Pholosophy (SEP) developed by King Rama 9 to other developing countries under the concept of SEP for SDGs. Moreover, the Department has connected with other organizations under the UN such as the UNDP to push the Innovation Hub. Domestically, the Department of International Organization has initiated the Open-ended Working Group (OEWG) as a platform for conferring among the public, the private sectors and civil society. It serves as a supporter and middleperson to liaise

collaborations among relevant sectors to work together for SDGs. There have been continuous activities that encourage participation from youths.

2. Prirvate sector

The private sector in Thailand has become increasingly awakened. The key player in the private sector that plays a role in propelling SDGs is the UN Global Compact Network Thailand (GCNT). It is the network of private companies that are development partners with the United Nations in Thailand. Currently, there are 41 global companies in which most of them are members of GCNT. GCNT has given importance to the issue related to businesses and human rights. It is related to SDGs intimately.

At the company level, the ones that have demonstrated the determination to propel SDGs are plentiful. They include CP, which tries to adjust the supply chain of food production to be more sustainable. It has also conducted a number of social activities in various aspects. Resources companies such as PTT and Bangchak Corporation have also seen the importance of SDGs. They have focused on activities for public interests in the areas of society, environment and product development, which is under the care of their companies. This is so that they correspond better to sustainable development. (i.e. innovations related to plastic from PTT Global Chemicals and so on). Retail companies such as Tesco stand out in terms of their solutions to waste and food waste. They are also an important leader in collecting food waste data. Whereas SCG has proposed manufacturing processes and products that are based on the Circular Economy concept. These companies also have a joint project under the theme Team D. It is another essential collaboration to propel SDGs at the regional level. Team D was initiated by Assoc. Prof. Chirayu Isarangkun Na Ayuthaya, Chair of the Thailand Sustainable Development Foundation in collaboration with other 13 companies such as Charoen Pokphand Group, Tesco, SCG, PTT, Pracharath Rak Sammakkee Co. and so on.

In addition, there are a number of other organizations in Thailand that work with the private sector to propel sustainable development. For instance, the Stock Exchange of Thailand, Thailand Sustainable Development Foundation, Thaipat Institute, Thailand Management Association and Thai Publica. These organizations have often played a role in creating a conversation platform to provide knowledge and create capabilities to the private sector. They also serve as a central media platform to present works related to sustainability from the private sector to the public sphere.

3. Civil society

The civil society in Thailand has equally been excited. It has benefited from SDGs for using them as the action framework and tool to follow up operations of the public and private sectors. They have also been used to negotiate policies. Further, the civil society network still has an important role to reflect upon

problems and challenges of Thailand in several conferences in addition to reports from the public sector.

There are a number of organizations of the civil society related to SDGs. However, these organizations are connected as a network. Should this network be divided according to a core organization, there shall be three networks. The first is the civil society network and the community network that are linked by the Community Organizations Development Institute. The second is the NGO Coordinating Committee on Development (NGO COD). The third is the NGO Protecting Environment and Conserving Natural Resources network. The fourth is the network with the Thai Health Promotion Foundation.

At the topic level, strong networks that play a role in following up and propelling SDGs in their own areas are diverse. For example, women's networks, organizations' networks related to climate change, organizations' networks related to natural resources and environmental quality, networks relating to alternative energy and volunteer networks.

4. Academic sector

In the academic sector, there are many institutes and research centers that have roles or carry out activities that are partially consistent with the Sustainable Development Goals or SDGs. However, the institutes and research centers that work closely with the policy processes driving the SDGs in Thailand are as follows:

- Thailand Sustainable Development Foundation (TSDF) plays an important role in promoting and disseminating the Sufficiency Economy Philosophy (SEP) and connecting Sustainable Development Goals. TSDF also produces publications to serve as fundamental academic data relating to the Sufficiency Economy Philosophy and sustainable development. They are available in Thai and English. Additionally, TSDF, in collaboration with Thai Publica, organized Thailand SDG Forum to be an important platform for exchaning SDGs knowledge.

- SDG Move under Thailand Research Fund (TRF) operates to promote an essential body of knowledge to propel SDGs and set directions for strategic research funds in order to propel SDGs.

- Thaipat Institute, A Public-Interest Organization which is operating under the Rural Restoration Foundation of Thailand under Royal Patronage, it has expertise in the Sufficiency Economy Philosophy and it promotes Corporate Social Responsibility (CSR) in private companies. Further, it closely follows up on the development of tools that are useful for applying SDGs in the private sector.

- The Social Research Institute and the Rotary Peace Center at Chulalongkorn University play an important role in organizing a specific platform among

the civil society, academic and public sectors. It regularly invites international SDGs scholars to exchange knowledge with Thai scholars and the Thai civil society.

- Knowledge Network Institute of Thailand works closely with tertiary institutions to propel SDGs by playing a middleperson role and organizing a platform to exchange knowledge domestically and internationally.

2.3 Related studies

As for related studies, to correspond to this study, the research team reviewed those that are related to Thailand especially the ones that focused on the current status of sustainable development goals in the Thai context across different SDGs during 2017-2019. Details are as follows:

Somporn Gomaratut et al. (2017) conducted a survey on the status of sustainable development goals in the Thai context and alternative economic, social and legal measures for Goal 1: No poverty. The objectives were to; 1) study the current situation in Thailand related to the no poverty goal (Goal 1) including analyses according to targets, adjustment and setting up of new targets to be in line with the Thai context, 2) prioritze targets under sustainable development goals by considering the importance and readiness of Thailand to achieve the goal of no poverty, 3) assess measures that the public sector and other sectors currently operate and investigate suggestions from research findings in Thailand regarding economic, social and legal measures as well as international experiences that could be used as an alternative measure in order to achieve the no poverty goal in Thailand. The findings indicated that; 1) the current situation in Thailand relating to the no poverty goal as judged by the extreme poverty level was at 1.25 USD per day, which was below the international poverty line. As for the criteria for the international poverty line at 1.90 USD per day, there was no clear data with regard to the ratio of poor people. Basic social protection, resources management and policy frameworks to eleminate poverty were in line with the no poverty goal of the United Nations, 2) the important target requiring implementation first for Thailand to acheive sustainable development gaols was Target 1.3 in which Thailand was reqdy to achieve Goal 1 in all targets due to the body of knowledge and other measures relating to the targets and indicators of Goal 1, 3) the government had economic, social and legal policies to tackle poverty and had undertaken them continuously since the National Economic and Social Development Plan No. 5 (1982-1986) up until the National Economic and Social Development Plan No. 12 (2016-2021) and the twenty-year National Strategy (2017-2036) in which a level of achievement had been reached.

Satian Chunta et al. (2019) conducted a survey of the status of sustainable development goals in the Thai context and alternative economic, social and legal

measures for Goal 2. The objectives were to 1) survey the current status of sustainable development in food security and ending hunger in Thailand; 2) assess the economic, social and legal measures that the private sector and the relevant organizations had implemented in relation to sustainable development in food security and ending hunger in Thailand; and 3) use the survey results of the sustainable development status in food security and ending hunger in Thailand to analyze and synthesize for priority and proposing appropriate goals and indicators so that Thailand could achieve goals. The findings indicated that: 1) the defining of targets and indicators relating to hunger, food security, upgrade of nutritional status and promotion of sustainable agriculture showed that Thailand did not have a clear definition for each target and one that was suitable for its context. Having reviewed definitions of each target as per those defined by relevant domestic and international organizations, it was necessary to build an understanding in defined terms that were mutually understood among relevant organizations and sectors. This would build a mutual understanding and effectively propel implementation toward the set goals. 2) The survey of sustainable development situations relating food security and hunger in Thailand found that Thailand's situations were positive toward achievable goals. This was due to implementation in the country by relevant organizations. They operated according to the strategy to solve hunger issues. They created food security, upgraded nutritional status and promoted sustainable agriculture. However, there were some targets and indicators that needed to be adjusted to suit the Thai context. 3) The assess the status of economic, social and legal measures related to sustainable development food security in Thailand whereby the public sector and relevant organizations implemented found that Thailand had implemented economic and social measures that had been embedded in its National Strategy and several development plans such as the twenty-year National Strategy (2017-2036), Social and Economic Development Plan No. 12 (2017-2021) and other strategy plans of various ministries that had applied the framework of the twenty-year National Strategy and Social and Economic Development Plan No. 12. As for the legal measures, there were several legal instruments related to the implementation measures regarding hunger elimination, food security, upgrade of nutritional status and promotion of sustainable agriculture. However, they were scattered around and lacking effective enforcement. This would not lead to support and promotion of sustainable development. Sometimes, the law was itself an obstacle. For example, rights and access to production resources by farmers and poor people. 4) Prioritizing to propose new suitable goals and indicators for Thailand to achieve according to SDGs, the targets and indicators for each topic had important and related. The author was of the view that prioritizing the set goals and indicators were suitable in accordance with "urgency" and "impact" of the objectives in their sequence.

Nittaya Promkanta et al. (2019) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternatives in economic, social and legal measures for Goal 3: Good Health and Well-being for all ages. The objectives were to survey the current status, prioritize, survey and assess economic, social and legal measures; and offer implementation alternatives to achieve SDG 3: Good Health and Well-being for all ages in Thailand. The study was qualitative in nature comprising a review of a body of knowledge and survey and in-depth interviews. It was found that Thailand current had a body of knowledge pertinent to definitions of all targets and indicators in accordance with the Metadata UN SDGs. It had readiness implementation measures capable of achieving targets due to basic element factors. They included responsible organizations and relevant laws as well as being ready to link goals with other goals especially in health and well-being related to dangerous chemicals and toxins. The study recommended that relevant organizations integrate collaborations in terms of linking basic data with implementation goals to correspond to Sustainable Development Goals.

Charnsak Srisawatsakul and Waransanang Boontarig (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures. Its primary objective was to survey the current status of Goal 4 in Thailand. Secondary data was collected comprising discovery of published data from credible Thai government or international media outlets, participating in workshops organized by the Propulsion and Facilitation Committee for Sustainable Development Plans of Education and so on. The findings recommended the suitable translation and definitions of targets for the indicators for Thailand. The examination of the status of different targets indicated that there were five targets that generated data to respond to every indicator. There were four targets that revealed no data whilst the other two targets had only some data. The findings of this indicator status indicated weaknesses and problems of the targets that affected other targets. Most affected were Targets 4.1 and 4.2. The study also proposed several alternative measures to develop the Thai education system to be more effective in order to take Thailand closer to sustainable development of education.

Korakit Choomgrant et al. (2017) conducted a survey on the status of Sustainable Development Goals in the context of Thailand and alternative economic, social and leave measures for Goal 5: Gender Equality. It was a survey research, which studied relevant documents, statistics and literature pertinent to gender equality. The aim was to ascertain a true understanding about the goal status in the context of Thailand, its readiness and priority of targets. The findings demonstrated that almost all of Thailand target status was at the medium level. This was a gap in what the United Nations prescribed when compared with the statistics in Thailand. In its readiness to achieve goals, Thailand had surveyed

undertakings of the public sector and relevant organizations. It was found that the country was ready in its laws, national practices and policies. However, it lacked a mechanism to monitor their effectiveness. If Thailand could develop an effective monitoring mechanism, the research team believed that the country would be able to achieve Goal 5 within the prescribed timeframe. With regard to prioritizing Target 5.5, which is to eradicate all forms of violence against women and girls in public and private places including human trafficking, sexual harassment and exploitation in other forms, these should become an urgent target requiring resolutions. They impact upon the social system, economy and image of the country in eyes of the international community. Target 5.1, which is to end all forms of discrimination against women and girls should be prioritized as this is most affected. If this target was achieved, it would allow an understanding of basic human rights in relation to gender equality and lead to positive effects on other targets.

Satian Chunta at al. (2019) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 6: Clean Water and Sanitation. The objectives were to 1) survey the sustainable development situations relating to ensuring clean water and sanitation for all and sustainable management in Thailand; 2) assess the status of economic, social and legal measures that the public sector and other relevant organizations had implemented on sustainable development relating to ensuring clean water and sanitation for all and sustainable management in Thailand; 3) analyze and synthesize the survey results of sustainable development situations for ensuring clean water and sanitation for all and sustainable management in Thailand to prioritize and propose suitable goals and targets for Thailand to achieve SDGs. It was found that the sustainable development situations in the context of Thailand and alternative economic, social and legal measures according to Goal 6: Clean Water and Sanitation, Thailand had positive situations and target status relating to the management of water and sanitation. Each target and indicator was preliminarily assessed and it was found that:

Target 6.1. to achieve the goal that everyone shall have access to clean and affordable water by 2030. This was the target that Thailand could achieve as per the Sustainable Development Goal indicator. It was because there had been implementation by relevant organizations and collection of data and reporting of the implementation every year. However, the important issue was that despite the percentage of people who used drinking water services being managed safely and adequately according to the criteria, the water quality was still problematic in terms of its safety, which did not meet the standard criteria as set by the Ministry of Public Health and the World Health Organization.

Target 6.2. following review, it was found that Thailand had a good implementation status. There had been reports on systematic implementation by relevant

organizations. The Ministry of Public Health prepared a report every year to use as data to report in accordance with the sustainable development indicator, Target 6.2. Additionally, the Ministry of Public Health had conducted implementation on Thai public toilets up to phase 4 in accordance with the HAS standard. This increased the rate of public toilet use accordingly. However, an area subject to implementation problems was facilitation of hand washing with soap and water in which the data had not been collected systematically. However, the report after the 3rd performance report on National Indicators (Office of National Statistics, 2019) proposed the former criteria of SDGs at the global indicator.

Target 6.3. Thailand had seen implementation of relevant organizations across several sectors. As for the topic around the upgrade of water quality by reducing population, reducing water waste ratios that had not been processed by half, and increasing water recycling, as well as prescribing indicators by using the percentage of population who used toilets hygienically, the 3rd Performance Report on National Indicators (Office of National Statistics, 2019) proposed that indicator criteria be adjusted to suit the context of Thailand and the additional indicator for the percentage of waste water that had been processed be increased.

Target 6.4, Indicator 6.4.1. Thailand had seen implementation by relevant organizations, developed a data system and reported on the positive implementation that was responsive to the indicator capable of being international criteria. The 3rd Performance Report on National Indicators proposed that the global indicator be adhered to. As for the 6.4.2 Indicator, Thailand had seen implementation by relevant organizations, collected data and prepared annual reports that was responsive to the indicator. The 3rd Performance Report on National Indicators proposed that the global indicator be adhered to and the 6.4.2 Indicator for water tension level: water use ratio per total water be added.

Target 6.5. there shall be holistic water management at all levels including through appropriate border collaborations by 2030. Indicator 6.5.1. There was implementation in Thailand at the operation level via the integrated water resources management (IWRM) (0-100). It was used to manage water resources in which the 3rd Performance Report on National Indicators (Office of National Statistics, 2019) recommended that the former global indicator be used. Indicator 6.5.2. Portions of river basin areas that cross borders were managed to bring about water management collaborations. The implementation in Thailand according to Indicator 6.5.2 involved relevant organizations such as the Office of Mekhong Basin Management. The 3rd Performance Report on National Indicators (Office of National Statistics, 2019) recommended using the global indicators criteria. However, the data lacked completeness and management in accordance Indicator 6.5.2 in Thailand.

Target 6.6. protection and relevant rehabilitation for river basins including mountains, forests, wetlands, rivers, perch aquifers and lakes by 2020. There were several relevant organizations that implemented this and their situations were positive. The 3rd Performance Report on National Indicators (Office of National Statistics, 2019) recommended that the global indicators criteria be used and the additional indicators be added for Thailand. These included 1) the portions of wetlands and water resources subject to rehabilitation; 2) the portions of river basins subject to rehabilitation; and 3) the portions of canal areas subject to rehabilitation.

Aumnad Phdungsilp et al. (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 7: Affordable and Clean Energy. The findings demonstrated the discovery and in-depth data derived from literature review specially for Goal 7 in the context of Thailand. Relevant literature was first reviewed to examine the current status of Goal 7 and relevant indicators. Then the analytic hierarchy process (AHP) was applied to assess and prioritize the indicators. It was found that Thailand's implementation was at the level better than the global average under 3 targets. In terms of its readiness, it was found that Indicator 7.1.1 was most ready followed by Indicators 7.1.2, 7.3.1, 7.2.1, 7.a.1, and 7.b.1 consecutively. As for the priority of indicators, it was found that Indicator 7.3.1 was most important followed by 7.2.1, 7.1.2, 7.1.1, 7.b.1, and 7.a.1 consecutively. Further, the study assessed the indicators by an existing energy model to learn how to achieve Goal 7 by 2030. This research also in-depth interviewed experts in energy to find suitable recommendations for policies and research questions relating to Goal 7.

Pairach Piboonrungroj et al. (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 8. The scope of this study were to 1) define meanings and definitions for targets and indicators; 2) to study the compatibility between the targets and indicators in the context of Thailand; 3) to survey the current status of the targets as well as the current status of the indicators; 4) to study plans, projects subject to implementation in Thailand; 5) to assess the readiness to achieve sustainable development goals; 6) prioritize the targets; and 7) to survey the alternative economic, social and legal measures (or institutional) both domestically and internationally. This was done through the review of relevant documents including focus group with experts and stakeholders of the targets. The findings indicated a gap of development in various areas. For instance, Target 8.2, GDP per person employed, was subject to volatile growth while Target 8.3 took into account the portion of those employed informally in the agriculture sector. However, in the Thai context, it was found that the Thai labor force in the informal system, most of them could not be identified whether they were employed within or

outside the agriculture sector. Thus, the use of such indicators may not be popular in the Thai context. Target 8.10 dealt with building capabilities of domestic financial institutions. It was found that although the indicators of access to finance and banking increased continuously, the indicators were not comprehensive. This was due to the lack of taking into account other financial services. Additionally, the priority of problems based on the study considering targets and indicators in two dimensions including urgency and impact, it was found that Targets 8.1 and 8.4 continued to be those that ought to be prioritized. This was due to them being the ones that fell in the high urgency level. If they were delayed to be implemented, serious impact may ensue. The high impact level was the targets and indicators that led to other targets and Sustainable Development Goals.

Duangchan Worakamin et al. (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 9. The objectives were to study the current status of environmentally friendly industries in Thailand, and analyze the gap to achieve SDG 9. The findings indicated that industrial development in Thailand had much success in the last decade. However, since the inception of the sustainable development concept, Thailand had been ready to achieve its standards. The areas requiring priority in the future included long-term planning for innovation, basic infrastructure to support economic growth, economic stability and investor's confidence.

Wijitbutsaba Marome (2018) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 11: Sustainable Cities and Communities. The objectives were to study the status and readiness of Thailand to achieve Goal 11. Under Sustainable Development Goals, this was to make cities and human settlements inclusive, safe and adaptable to changes and sustainability by 2030. This study surveyed data from academic documents and policies. It also conferred with relevant organizations in the public sector, private sector, civil society and academia as they were able to give their opinions relating to the meanings and definitions of existing targets and indicators. Additionally, the research examined the implementation status, performance, current readiness on the part of organizations and different sectors in order to recommend measures and national indicators. The aim was to assist all sectors to work in an integrative manner leading to achieving Gaol 11 in the context of Thailand.

Supot Chunhachoti-anan and Thita Orn-in (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 12. The objectives were to study the definitions of targets and indicators; situations of problems; relevant implementation in Thailand in 2017 including the economic, social and legal measures; and readiness assessment and priority

of each target in Goal 12. The research methodology was primarily documentary research. It collected and synthesized existing data in academia. It surveyed data via interviews with relevant organizations in the public and private sectors as well as civil society in relation to the propelling of these areas. Based on the survey and readiness assessment of different the 11 targets under Goal 12, the research team was of the view that Thailand was ready in terms of its sufficient data. This had largely been collected by the data collection system to report findings according to Goal 12; however, with some improvement required. Minor improvement was required for the data collection system. With regard to the readiness of the current implementation plans against the problems, it fell at the ready level as well. Most targets had clear corresponding plans. Nevertheless, the true assessment was subject to the effective implementation as per the plans. In relation to the gap, most of it was derived from behavioral propulsion and basic infrastructure planning. However, propulsion support required time, budget and collaboration with the private sector, which presented an obstacle for the public sector. Further, there had been detailed information regarding the current situations, implementation, alternative measures including the readiness for each target as well as priority for the 11 targets under SDG 12: Responsible Consumption and Production. Due to the survey under this project being conducted in 2017, problems, measures and United Nations requirements may pivot quickly. It was necessary to follow up on the changing situations as they arose.

Kannika Thampanichvong et al. (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 13. The objectives were to study the current status of Thailand relating to SDG 13; analyze Thailand's readiness to achieve SDG 13; assess the measures implemented by the public sector and organizations in other sectors; and recommend measures to propel SDG 13 and its five targets. However, only three targets were applicable to the Thai context. They included (Target 13.1) promoting resilience and performance to adapt to dangers and natural disasters caused by climate in all countries; (Target 13.2) integration relating to climate change in the strategy polices and planning at the national level; and (Target 13.3) educational development, building awareness and performances of humans and institutions relating to relief from climate change, adaptations, reduction of impacts and early warnings. Under Target 13.1, it was found that Thailand's implementation on the promotion of resilience and performance to combat and mitigate risks from disasters had seen much progress. Currently, Thailand had the Disaster Prevention and Mitigation Plan 2015 in place. It was a primary strategy plan of the country in relation to mitigating risks from disasters at the national and regional levels. Further, the Department of Disaster Prevention and Mitigation and relevant organizations had efficiently and systematically collected data relating to losses and impacts from disasters. An

important gap was the lack of follow-up plans for implementation. Additionally, there should be concrete goals set to alleviate impacts from disasters. As for Target 13.2, Thailand had integrated the implementation according to policies/strategies/plans relating to climate change such as the twenty-year National Strategy Framework Plan (2017-2023), National Economic and Social Plan No. 12 and Climate Change Preparation Action Plan 2015-2050 and so on. However, it lacked a follow-up on compliance. With regard to Target 13.3, the focus was on promoting awareness and performance to adaptation and reduction of impacts from disasters and climate change. Although the Ministry of Education was in the process of improving its central program for basic education, relevant organizations had already commenced teaching about climate change. Nonetheless, Thailand was currently devoid of data management relating to activities or performance development projects on greenhouse effect reduction, adaptation, impact reduction and early warnings including data on systematic climate change studies.

Ampai Harakunarak and Kanjana Yasen (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for Goal 14: (Life below Water). Important issues based on the survey status research in Thailand according to Goal 14 and readiness of Thailand to achieve Goal 14 of sustainable development could be summarized as follows: 1) Thailand had the total coastal area of 323,488 square kilometers comprising territorial waters, contiguous zones, special economic zones and continental shelves; 2) targets and indicators under the Sustainable Development Framework of Goal 14 was important for Thailand's policies, strategies, plans and projects on sustainable development. This demonstrated opportunities and potentials of Thailand to achieve most goals by 2030; 3) the outcome from prioritizing the targets under SDG 14, which Thailand ought to expedite its implementation on fishery included Target 14.4 (sustainable fishery) and Target 14.6 (cancellation of facilitated fishery by preventing collection of aquatic animals beyond capacity while managing problems of illegal fishery and cancelling facilitated fishery that affected natural resources and the ecosystem); 4) As for other issues under Goal 14 that the government should give importance for propelling their sustainable development included setting up frameworks and implementation guidelines in order to achieve — Target 14.1 by preventing and reducing all form of marine pollution especially coastal pollution including waste and water pollution caused by nutrients; Target 14.3 by reducing and solving impacts from saltwater acidification; Target 14.7 by sustainably managing fishery resources; and Target 14.6 by focusing on small local fishers, and 5) the results of this research recommended that there be two important measures including a development and follow-up measure to assess the indicators and economic, social and legal measures for implementation and sustainable development goals.

Nathsuda Pumjumnong and Uthai Charoenwong (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for to Goal 15. Its objectives were to 1) study the current status of Thailand relating to Sustainable Development Goals and the analysis on its compatibility with the set targets in order to adjust and set new targets to suit the Thai context by focusing on Target 15.2; 2) prioritize the targets under Sustainable Development Goals by considering the importance and readiness of Thailand to achieve such targets. This research focused on Target 15; and 3) assess the measures that the public sector and organizations in other sectors were currently implementing by surveying recommendations conducted in Thai studies relating to economic, social and legal measures as well as international experiences deemed as suitable alternative options for achieving Sustainable Development Goals in Thailand. This research focused on Target 15. Details of Target 15 included protecting, restoring and promoting sustainable use of terrestrial ecosystems; sustainably managing forests; combating desertification; reversing land degradation; halting biodiversity loss. These covered 12 targets and 14 indicators. The research method was collection of data relating to Goal 15 from various organizations and websites about sustainable development. The aim was to follow up the movement and perspective of each sector toward this issue. Further, there had been meetings to brainstorm ideas from various relevant organizations in order to double check the data status in Thailand. The ideas about various indicators as proposed by the IUCN had demonstrated that, as for Target 15, Thailand had undertakings about natural resources management including forests, earth, water, wild animals and biodiversity on an ongoing basis. Nevertheless, the initial undertakings in Thailand had no goals toward natural resources management for sustainable development. Thus, it was found that each set of resources data had no unity. The indicators that could be sequenced from high-medium potential included Indicator 15.3.1 on the run-down area portion of the entire area; Indicator 15.1.1 on the forest area portion of the entire area; Indicator 15.1.2 on the important areas for land areas and freshwater areas covering protected ecosystem areas as well as progress of sustainable forest management. The indicators that landed in the medium-low level included Indicator 15.7.1 on the portion of smuggled wild animals or illegally traded, Indicator 15.b.1 on the Official Development Assistance (ODA) and public conservation expenses as well as the utilization of biodiversity and sustainable ecosystem. Indicators 15.4.1, 15.4.2, 15.5.1, and 15.6.1 earned the same score while Indicators 15.8.1, 15.9.1, 15.a.1 and 15.c.1 had the same lowest score. The recommendation for improvement was the body of knowledge in science, technology and society, statistical data, responsible organizations, laws and adequate resources allocation.

Jirawat Suriyachotiyangkul and Nonarit Bisonyabut (2017) conducted a survey on the status of Sustainable Development Goals in the Thai context and alternative economic, social and legal measures for to Goal 16. This was so to promote a peaceful and inclusive society for sustainable development so that all could have access to justice and efficient and inclusive institutions at all levels. The objectives were to study the current status of Goal 16 in Thailand. The peaceful society, access to justice and efficient institutions with responsibility and integration formed essential parts of Goal 16. It included several targets that had to be achieved. While the available data was insufficient for assessing Thailand so that no one was left behind development, it was then necessary to review the country's available resources so that targets under Goal 16 could be prioritized. The ones that Thailand should first prioritize in the initial phase (3-5 years) on the basis of the country's potential. This research was set to study the appropriate guidelines for implementation with the achievement in mind. Economic and social recommendations were made especially the institutional measures for implementation. The results formed an understanding about the definitions and targets under Goal 16, which were in line with the context of Thailand. Additionally, recommendations were made for Thailand in order to achieve the targets and goals via the set indicators.

Kulabutr Komenkul et al. (2019) conducted a survey on the status of Goal 17 and the adaptation of targets and indicators in the context of Thailand. This was to promote global partnerships in terms of finance and commerce. This research was conducted to survey the current status and indicators under Goal 17 in relation to international finance and commerce (Targets 17.1-17.5 and 17.10-17.12). All of the eight targets focused on strengthening the sustainable development mechanisms via partnerships in international finance and commerce. This started from the survey on definitions of the relevant targets and indicators and assessed this compatibility with the context in Thailand. Subsequently, it surveyed the current status and measures related to the targets in the context of Thailand in order to propose improvement for the definitions, targets, indicators, goal scores in the context to be clearer. The research analyzed data from various sources qualitatively and quantitatively such as relevant national and international policies as well as indicator data from the World Bank's database in order to find the relationship between Goal 17 for targets related to finance, commerce and other goals (Goals 1-16 including finding the importance of Target 17.3, the next target that Thailand should pay attention to included Targets 17.1, 17.1.1, 17.2 and 17.4 consecutively. The findings were used to form guidelines for making recommendations and policies to achieve Goal 17 in the relevant targets related to international partnerships for finance and commerce. This research not only contributed to the understanding of this Goal 17 in the Thai context, but also recommended data collection methods and

prioritized indicators to achieve Targets 17,.1-17.5 and 17.10-17.2 and other goals more effectively.

Chapter 3
Research Methodology

The survey on the overview status of Thailand's Sustainable Development Goals was a survey research. It applied a questionnaire as its research instrument to collect data in order to achieve its objectives. The research implementation was as follows:

1. Population and sample
2. Research instrument
3. Data collection
4. Analysis and conclusions

3.1 Population and sample

3.1.1 Population

The United Nations Development Programme (UNDP) set the population of the research to be civilians who lived in the 15 target provinces including Chiang Rai, Chiang Mai, Mae Hong Son, Tak, Udon Thani, Nakhon Ratchasima, Ubon Ratchathani, Bangkok, Phetchaburi, Phuket, Surat Thani, Songkhla, Pattani, Yala and Narathiwat.

Table 3.1 Population of target provinces per region, province and gender

Region	Province	Age 18-25 years		Age 26-35 years		Age 36-45 years		Age 46-59 years		Age 60 years above		Total (Person)	
		Male	Female	Male	Femal	Male	Female	Male	Female	Male	Female	Male	Female
1.North	1.Chiang Rai	58,107	59,043	83,793	81,152	83,587	83,269	114,722	131,696	114,738	134,247	454,947	489,407
	2.Chiang Mai	80,922	80,375	117,954	118,344	119,117	122,886	147,001	176,396	162,189	202,444	627,183	700,445
	3.Mae Hong Son	15,292	15,107	19,793	18,900	17,634	16,498	19,855	20,138	17,376	18,375	89,950	89,018
	4.Tak	35,230	33,761	40,794	38,245	36,978	35,665	46,981	49,529	38,338	44,495	198,321	201,695
2.North East	1.Udon Thani	85,489	83,161	116,536	111,002	123,146	123,372	170,191	179,652	115,705	140,310	611,067	637,497
	2.Nakhon Ratchasima	141,489	133,355	186,873	179,268	204,523	206,871	273,328	297,976	219,804	272,925	1,026,017	1,090,395
	3.Nakhon Ratchasima	106,812	103,922	142,339	135,465	144,854	139,415	194,491	199,670	138,159	162,520	726,655	740,992
3.Central	1.Bangkok	277,356	265,382	368,004	387,071	400,848	461,880	531,554	646,599	471,132	669,975	2,048,894	2,430,907
	2.Phetchaburi	24,165	23,501	33,316	32,842	35,716	36,558	48,586	55,296	41,576	55,992	183,359	204,189
4.South	1.Phuket	20,981	22,607	29,490	34,299	32,201	39,764	36,449	42,945	22,328	28,931	141,449	168,546
	2.Surat Thani	57,662	57,,375	77,077	76,401	81,528	83,264	106,072	111,972	76,307	95,810	398,646	424,822
	3.Songkhla	82,634	78,826	104,252	102,840	104,037	108,557	126,452	144,820	102,578	134,958	519,953	570,001
	4.Pattani	51,697	49,931	58,502	55,945	45,264	45,659	50,587	56,074	38,401	51,746	244,451	259,355
	5.Yala	36,792	34,338	43,456	42,225	33,785	34,625	39,831	43,454	30,132	37,191	183,996	191,833
	6.Narathiwat	54,848	51,390	64,529	6,3429	54,647	55,647	59,789	67,365	42,208	54,207	276,021	292,038

Source: National Statistical Office (NSO). Numbers of citizens from registrations per age, gender, region and province 2021 Retrieved 24 March 2023 from http://statbbi.nso.go.th/staticreport/page/sector/th/01.aspx.

3.1.2 Sample

The samples of this research included civilians aged 18 and above who resided in the 15 targeted provinces. To be in line with the research objectives, the research team applied the formulas to calculate the samples of each province by Yamane as well as Krejcie and Morgan. The error value was set at ±5% or 0.05. Therefore, the sample size used in the study was not less than 400 people per province. The total samples from all target provinces were not less than 6,000 people.

Table 3.2: Yamane's table of sample size at 95% confidence level

Population Size	Sample size based on errors					
	± 1%	± 2%	±3%	±4%	±5%	±10%
500	b	B	b	B	222	83
1,000	b	B	b	385	286	91
1,500	b	B	638	441	316	94
2,000	b	B	714	476	333	95
2,500	b	1,250	769	500	345	96
3,000	b	1,364	811	517	353	97
3,500	b	1,458	843	530	359	87
4,000	b	1,538	870	541	364	98
4,500	b	1,607	891	549	367	98
5,000	b	1,667	909	556	370	98
6,000	b	1,765	938	566	375	98
7,000	b	1,842	959	574	378	99
8,000	b	1,905	676	580	381	99
9,000	b	1,957	989	584	383	99
10,000	5,000	2,000	1,000	588	385	99
15,000	6,000	2,143	1,034	600	390	100
20,000	6,667	2,222	1,034	606	392	100
25,000	7,143	2,273	1,064	610	394	100
50,000	8,333	2,381	1,087	617	397	100
100,000	9,091	2,439	1,099	321	398	100
∞	10,000	2,500	1,111	625	400	100

Source: Yamane, Taro. (1973), Statistics: An Introductory Analysis. London: John Weather Hill, Inc.

Table 3.3 Krejcie and Morgan's table of sample size

Population (N)	Sample size (S)	Population (N)	Sample size (S)	Population (N)	Sample size (S)
10	10	220	140	1,200	291
15	14	230	144	1,300	297
20	19	240	148	1,400	302
25	24	250	152	1,500	306
30	28	260	155	1,600	310
35	32	270	159	1,700	313
40	36	280	162	1,800	317
45	40	290	165	1,900	320
50	44	300	169	2,000	322
55	48	320	175	2,200	327
60	52	340	181	2,400	331
65	56	360	186	2,600	335
70	59	380	191	2,800	338
75	63	400	196	3,000	341
80	65	420	201	3,500	345
85	70	440	205	4,000	351
90	73	460	210	4,500	354
95	76	480	214	5,000	357
100	80	500	217	6,000	361
110	86	550	226	7,000	364
120	92	600	234	8,000	367
130	97	650	242	9,000	368
140	103	700	248	10,000	370
150	108	750	254	15,000	375
160	113	800	260	20,000	377
170	118	850	265	30,000	379
180	123	900	069	40,000	380
190	127	950	274	50,000	381
200	132	1,000	278	75,000	382
210	136	1,100	285	100,000	384

Source: Krejcie, R.V., and Morgan, D.W. (1970) Determining Sample Size for Research Activities. Educational and Psychological Measurement. 30, 607 – 610.

In summary, after considering the tables above for sampling purposes based on Yamane as well as Krejcie and Morgan, the sample size determinations were in the same direction. Thus, the research team used them as the guide for this research. The sample size for the target provinces comprised civilians aged 18 and above who resided in the targeted provinces. Each province had the sample size of not less than 400 people. There were 15 targeted province; therefore, there were not less than 6,000 people in total.

Table 3.4 Sample size per region and province

Region	Province	Sample (person) No less than
1. Northern region	1. Chiang Rai	400
	2. Chiang Mai	400
	3. Mae Hong Son	400
	4. Tak	400
2. North-eastern region	1. Udon Thani	400
	2. Nakhon Ratchasima	400
	3. Ubon Ratchathani	400
3.Central region	1. Bangkok	400
	2. Phetchaburi	400
4. Southern region	1. Phuket	400
	2. Surat Thani	400
	3. Songkhla	400
	4. Pattani	400
	5. Yala	400
	6. Narathiwat	400
Total		**6,000**

3.1.3 Sampling method

The research team applied the multi-stage stratified ramdom sampling technique to ascertain the sample size that was distributed and representative of the population. The samples were collected proportionately with the the civilians who resided in the targeted provinces. The steps were as follows:

Step 1 As for the selection of provinces, the research team applied purposive sampling in accordance with what the employer had set. It included four regions with 15 provinces: the northern region including 1) Chiang Rai, 2) Chiang Mai, 3) Mae Hong Son, 4) Tak; the north-eastern region including 5) Udon Thani, 6) Nakhon Ratchasima, 7) Ubon Ratchathani; the central region including 8) Bangkok, 9) Petchaburi; and the southern

region including 10) Phuket, 11) Surat Thani, 12) Songkhla, 13) Pattani, 14) Yala and 15) Narathiwat. For each province, the research team set the samples to be surveyed equally, which were not less than 400 samples per province. In total, 15 provinces had not less than 6,000 samples.

Step 2 At the district level, the research team surveyed three districts: the 1st districts using Purposive Sampling with only the mueang district; the 2nd and 3rd districts using simple random sampling so that every district had an equal chance to be selected. There were 45 districts in total.

Table 3.5 List of sample districts per region, province and district

Region	Province	Districts randomized in 1st		
		1st District	2nd District	3rd District
1. Northern region	1. Chiang Rai	Mueang Chiang Rai	Phan	Mae Fah Luang
	2. Chiang Mai	Mueang Chiang Mai	Maerim	Jomthong
	3. Mae Hong Son	Mueang Mea Hong Son	Mae La Noi	Pai
	4. Tak	Mueang Tak	Phop Phra	Mae Sot
2. North-eastern region	1. Udon Thani	Mueang Udon Thani	Nong Han	Non Sa-at
	2. Nakhon Ratchasima	Mueang Nakhon Ratchasima	Dan Khun Thot	Non Sung
	3. Ubon Ratchathani	Mueang Ubon Ratchathani	Phibun Mangsahan	Muang Sam Sip
3. Central region	1. Bangkok	Dusit	Phasi Charoen	Lat Krabang
	2. Phetchaburi	Mueang Phetchaburi	Cha-am	Kaeng Krachan
4. Southern region	1. Phuket	Mueang Phuket	Kathu	Thalang
	2. Surat Thani	Mueang Surat Thani	Phunphin	Ban Na Sao
	3. Songkhla	Mueang Songkhla	Hat Yai	Rattaphum
	4. Pattani	Mueang Pattani	Mayo	Thung Yang Daeng
	5. Yala	Mueang Yala	Raman	Yaha
	6. Narathiwat	Mueang Narathiwat	Ra-ngae	Yi-ngo

Source: Research team

Step 3 At the sub-district level, the research team surveyed two sub-districts/district using the Simple Random Sampling in order for each sub-district in any given district to have an equal chance of being selected. There were 90 sub-districts in totoal. Following the determination of the sub-districts, the research team applied the

Convenience Sampling to ascertain the samples in the proportion according to the gender charateristic of each sub-district. The data collection was distributed across community areas such as government buildings, educational institutions, freshmarkets, shopping centers and so on.

Table 3.6 List of sub-districts per region, province, district and sub-district

Region	Province	1st District	Sub-district	2nd District	Sub-district	3rd District	Sub-district
1. Northern region	1. Chiang Rai	Mueang Chiang Rai	Rop Wieng	Phan	Mueang Phan	Mae Fah Luang	Thoet Thai
			Mae Yao		Sai Khao		Mae Salong Nai
	2. Chiang Mai	Mueang Chiang Mai	Suthep	Mae Rim	Don Kaeo	Chom Thong	Ban Luang
			Chang Phueak		Rim Tai		Sop Tia
	3. Mae Hong Son	Mueang Mae Hong Son	Pang Mu	Mae La Noi	Mae La Noi	Pai	Wiang Tai
			Pha Bong		Mae La Luang		Mae Na Toeng
	4. Tak	Mueang Tak	Mai Ngarm	Phop Phra	Khiri Rat	Mae Sot	Mae Sot
			Wang Hin		Ruam Thai Pattana		Tha Sai Luat
2. Northern-eastern region	1. Udon Thani	Mueang Udon Thani	Chiang Yuen	Nong Han	Pon Ngarm	Non Sa-at	Khok Klang
			Sam Phrao		Nong Mek		Pho Si Samram
	2. Nakhon Ratchasima	Mueang Nakhon Ratchasima	Pho Klang	Dan Khun Thot	Takhian	Non Sung	Makha
			Suranaree		Hin Dat		Mueang Prasat
	3. Ubon Ratchathani	Mueang Ubon Ratchathani	Kham Yai	Phibun Mangsahan	Don Chik	Muang Sam Sip	Nong Mueang
			Hua Reau		Khud Chomphu		Nong Lao
3. Central region	1. Bangkok	Dusit	Dusit	Phasi Charoen	Bang Wa	Lat Krabang	Khlong Song Ton Nun
			Nakhon Chai Si		Bang Duan		Thap Yang
	2. Phetchaburi	Mueang Petchaburi	Tha Rap	Cha-am	Khao Yai	Kaeng Krachan	Pa Deng
			Ban Mo		Cha-am		Song Phi Nong
4. Southern region	1. Phuket	Mueang Phuket	Talad Yai	Kathu	Kathu	Talang	Si Sunthon
			Ratsada		Pa Tong		Mai Khao
	2. Surat Thani		Wat Pradu	Phunphin	Tha Kham	Ban Na San	Khuan Si

Region	Province	1st District	Sub-district	2nd District	Sub-district	3rd District	Sub-district
		Mueang Surat Thani	Khlong Noi		Bang Ngon		Phru Phi
	3. Songkhla	Meaugn Songkhla	Bo Yang	Hat Yai	Hat Yai	Rattaphum	Kamphaeng Phet
			Khao Rup Chang		Khuan Lang		Tha Chamuang
	4. Pattani	Mueang Pattani	Sa Ba Rang	Mayo	La Nga	Thung Yang Daeng	Phithen
			Bana		Lubo Yiri		Paku
	5. Yala	Mueang Yala	Sateng	Raman	Kayuboko	Yaha	Yaha
			Lam Phaya		Noen Ngam		Patae
	6. Narathiwat	Mueang Narathiwat	Bang Nak	Ra-gnae	Tanyong Mat	Yi-ngo	Cho Bo
			Bang Po		Bo-ngo		Lahan

Source: Research team

3.2 Research instrument

3.2.1 Questionnaire

The research team developed the research instrument based on the following steps:

3.2.1.1 Study research instrument designs capable of data collection based on relevant academic documents in order to use them as guidelines to set the conceptual framework for developing the questionnaire.

3.2.1.2 Study concepts, theories, and related research papers by considering details that covered the set research objectives.

3.2.1. Develop the questionnaire that covered the research objectives to be the research instrument for data collection from the samples. The data was later used in the analysis.

3.2.1.4 Design the research instrument (Online Questionnaire) using QuestionPro to be used on one platform for the UNDP and its networks to use for data collection.

3.2.2 Validation of research instrument

3.2.2.1 Qualifed persons/experts validated the research instrument.

3.2.2.2 The research team developed and improved the research instrument as per recommendations.

3.2.2.3 The research instrument was tried on another group of samples similar to the samples of the population. Each provice tested not less than 30 questionnaire sets. In total 146 questionnaire sets were tried as follows:

(1) Bangkok	35 sets
(2) Chiang Mai	35 sets
(3) Udon Thani	38 sets
(4) Narathiwat	38 sets

The trial method was as follows:

Step 1: The research team tried the questionnaire on another group of samples similar to those of the population. The focus group technique was used on the respondents. The samples tried the online questionnaire by commencing in three provinces including Bangkok, Chiang Mai and Udon Thani. It was found that the respondents did not understand the language used in it. For example, Part 1, No. 11: issues on innovation areas, smart cities. The samples did not understand these terms. Therefore, the research team improved the questionnaire via face validity.

Step 2: The research team used the improved questionnaire to try with another group of samples in Narathiwat. The focus group technique was also used with the respondents. The samples tried the online questionniare. It was found that the

respondents understood the improved questionnaire and were able to reflect upon what was intended to be studied.

3.2.2.4 Following the validation of the research instrument, the research team designed the research instrument (Online Questionniare) using QuestionPro for one platform in order for the UNDP and its networks to use for data collection.

Table 3.7 Summary of research instrument trial

Content	Questionnaire (Pre-improved)	Questionnaire (Improved)
	Areas for questionnaire trials	
	Bangkok, Udon Thani, Chiang Mai	Narathiwat
Part 1	- No. 3: Vulnerable conditions. The no-vulnerable conditions response should be moved to the bottom as respondents would not notice it.	- Research team improved the questionnaire and found the trial group understood the question and was able to answer it.
Part 2	- Text in the table was small. - Statements had to be repeatedly read. - Time consuming. - No. 11: issues on areas did not make sense. Innovation, smart city.	- Research team improved the questionnaire and found the trial group understood the question and was able to answer it in a more timely manner.
Part 3	- Choices 1 and 2 were unclear and Difficult to understand	- Research team improved the questionnaire by putting the text in bold for better understanding and found the trial group understood the question and was able to answer it.

The research instrument trial (Online Questionnaire) in the four provinces indicated that the majority of the samples understood and were able to answer questions by themselves. However, the research team also found areas requiring improvement as follows:

- When the samples answering questions on each page, they would see the blue text “NEXT” which should be translated into Thai “หน้าถัดไป” for them to understand and be able to answer the questions by themselves without assistance of staff. This would help to greatly shorten the time required to complete the questionnaire.

- When the samples came to answer questions in Part 3, which was the last page, they would see the blue text “DONE” which should be translated into Thai “กดส่ง” for them to understand, complete the questionnaire and submit it.
- After the samples submitted the questionnaire, the next page would generate the text “Thank you for completing this survey.” which should be translated into Thai “ขอบคุณสำหรับการตอบแบบสอบถาม” for them to understand the the questionnaire had been successfully submitted.

3.3 Data collection

Data collection method

The United Nations Development Programme (UNDP) set the timeframe for data collection between June to December 2023. To derive the samples according to the targeted provinces and achieve the goals according to the research objectives, the survey method for data collection was conducted as follow:

5.3.1 In-person Offline Survey

- SuDSESC was responsible for this part. It used the research instrument (Questionnaire) to conduct in-person offline survey in the 15 targeted provinces (400 samples per provice totalling 6,000 samples) to collect data.

5.3.2 Online Survey

- SuDSESC designed the research instrument (Online Questionnaire) using QuestionPro.

- The UNDP and its networks used the research instrument (Online Questionnaire) developed by QuestionPro using the online survey technique in the 15 targeted provinces (100,000 samples totalling 150,000 samples) to collect data.

Note: *After conducting an online survey in 15 target provinces, problems and obstacles were found, including unable to collect data from the sample in the specified amount and within the specified time period, and number of questions had to be adjusted lower which was inconsistent with all 17 Sustainable Development Goals. Therefore, the research team did not use online survey data for analysis*.

3.4 Data analysis and conclusions

The research team analyzed the data based on the questionnaire using statistics including frequency distribution, percentage and mean score. The analysis covered the followings:

3.4.1 Evaluating the questionnaire based the statistics and the using the results to analyze the research framework.

3.4.2 Reporting results by demonstrating the percentage of targeted provinces as well as distributing the frequency of data in the research format.

3.4.3 Analyzing the results to understand the problems and situations relating to Sustainable Development Goals in the targeted provinces; and additional recommendations. These may help with correct priority and planning for implementation in tandem with appropriate resources allocations.

3.4.4 Preparting a summary report on the overall results and for each province including the anazlyzed results in the forms of semi-tables, tables and illustrations as per the appropirate content. This shall be with translation or interpretation of data derived from the analysis and discussion of the survey/research and so on.

3.4.5 Preparing the completed research report in Thai and English.

CHAPTER 4
Results of Data Analysis

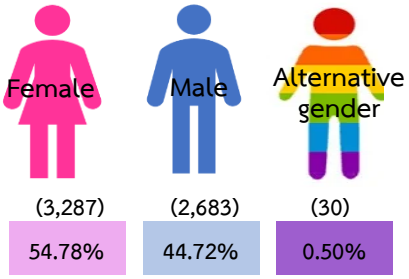
The project to survey data on the status of the Sustainable Development Goals in Thailand overall aims to survey public opinions on the state of the Sustainable Development Goals in the target provinces. This drives Thailand's commitment to achieving the Sustainable Development Goals 2030 through working with government agencies, the private sector, and civil society starting with the target area of 15 provinces and plans to expand to other provinces in the country. This survey is a survey research using a multi-stage sampling method which collects field data (Field Survey) by means of direct interviews with respondents (In-person offline survey). The target group is the general public aged 18 years and over and residing in the 15 target provinces. Data are collected between 20 November and 3 December 2023, totaling 6,000 samples and analyzed the data with a statistical package using descriptive statistics to explain the data. The presentation of the data analysis results is divided into details as follows:

1. Overall survey results (n = 6,000)
2. Survey results classified by province (Target provinces: 15 provinces)
    - 2.1 Survey results of Chiang Rai Province (n = 400)
    - 2.2 Survey results of Chiang Mai Province (n = 400)
    - 2.3 Survey Results of Mae Hong Son Province (n = 400)
    - 2.4 Survey results of Tak province (n = 400)
    - 2.5 Survey results of Bangkok (n = 400)
    - 2.6 Survey results of Phetchaburi province (n = 400)
    - 2.7 Survey results of Udon Thani Province (n = 400)
    - 2.8 Survey results of Nakhon Ratchasima Province (n = 400)
    - 2.9 Survey results of Ubon Ratchathani Province (n = 400)
    - 2.10 Survey results of Surat Thani Province (n = 400)
    - 2.11 Survey results of Phuket province (n = 400)
    - 2.12 Survey results of Songkhla province (n = 400)
    - 2.13 Survey results of Pattani province (n = 400)
    - 2.14 Survey results of Yala Province (n = 400)
    - 2.15 Survey results of Narathiwat province (n = 400)

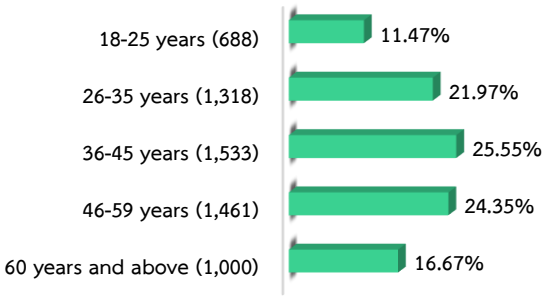
1. Overall survey results

Part 1 Information about general characteristics

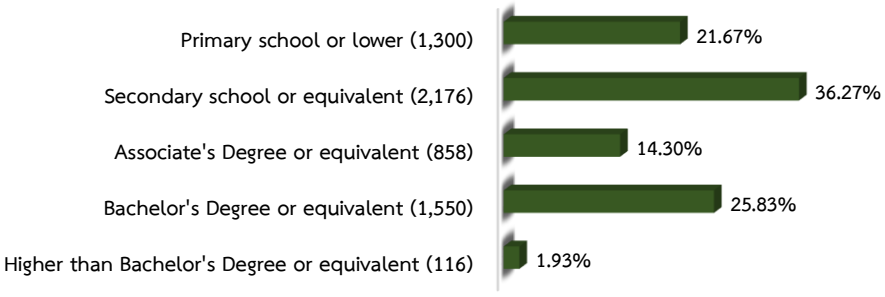
Overall survey of 15 target provinces from a total of 6,000 samples, the majority of the sample is female, 54.78 percent, followed by males at 44.72 percent, and alternative gender (LGBTQ) 0.50 percent. Most are between 36-45 years old, 25.55 percent, followed by age between 46-55 years, 24.35 percent, and between 26-35 years old, 21.97 percent. The highest number of graduates is at the secondary school level or equivalent, at 36.27 percent, followed by bachelor's degree or equivalent, 25.83 percent, and primary school level or lower, 21.67 percent. Most of the sample are Buddhists, 76.43 percent, followed by Muslims at 22.32 percent and Christianity at 1.25 percent. Most have marital status of married, 59.95 percent, followed by single at 28.43 percent and widow at 7.40 percent. Most of their main occupation is the business owner/self-employment, 23.12 percent, followed by general contractors/laborers at 21.02 percent and farmers/fishermen at 14.33 percent. Most have the average monthly income of 10,001-20,000 baht, 31.97 percent, followed by not exceeding 10,000 baht at 30.82 percent and no income at 15.75 percent, respectively.



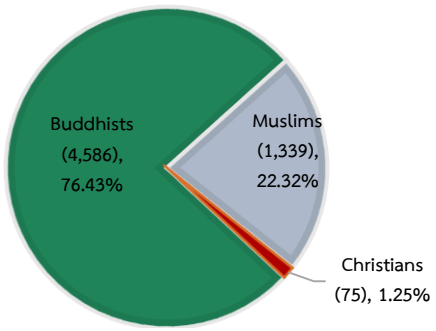
Age



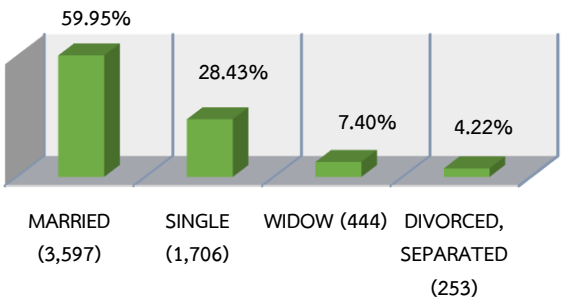
Education



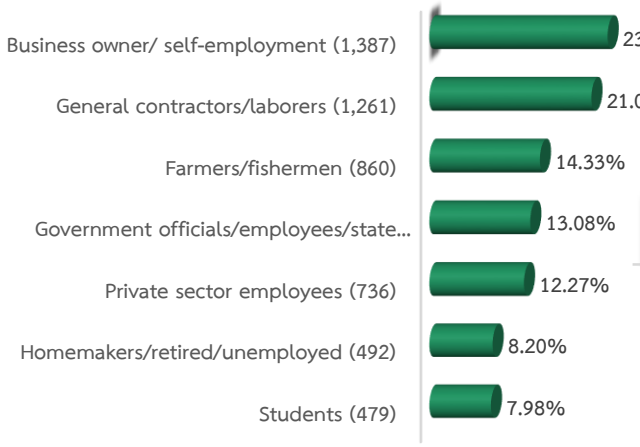
Religion



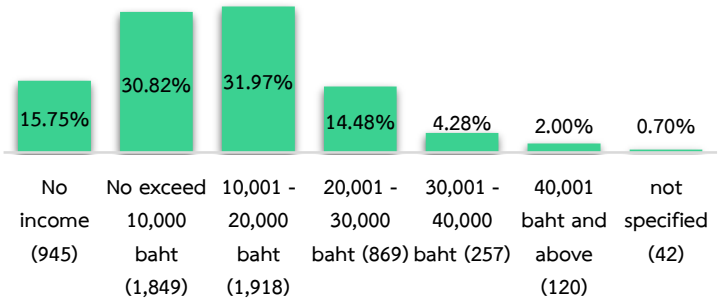
Marital Status



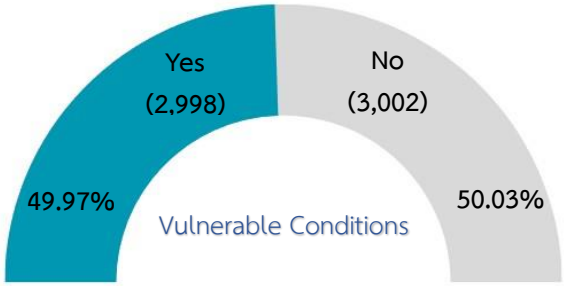
Main Occupation

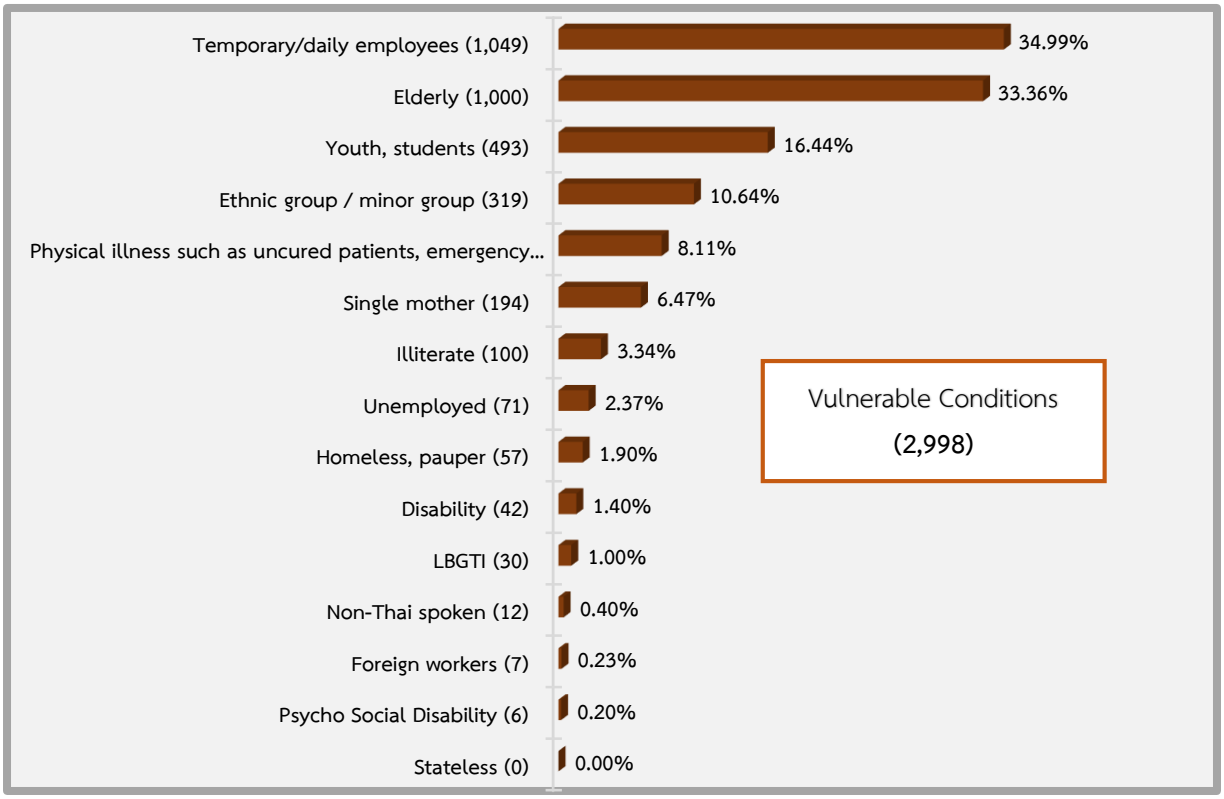


Monthly Income



From this survey, it is found that 50.03 percent of the samples are not in vulnerable conditions and had vulnerable conditions of 49.97 percent. Among the samples with vulnerable conditions, most are temporary/daily employees, 34.99 percent, 33.36% are elderly and 16.44% are youth and students, respectively.

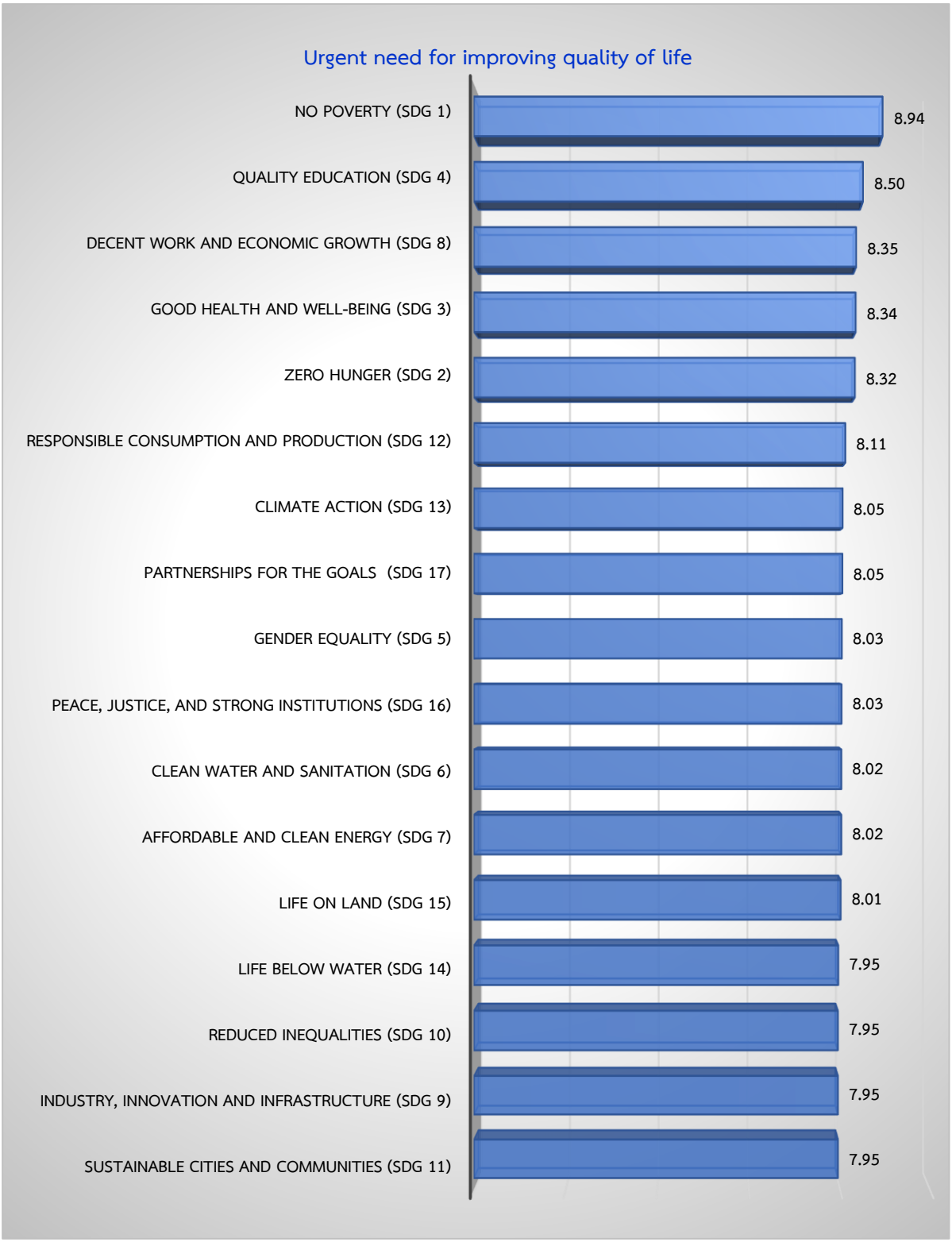




Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are 17 Sustainable Development Goals: SDGs). The results of the survey found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.94, followed by Quality Education (SDG 4) with an average of 8.50 and Good Health and Well-being (SDG 3) with an average of 8.35.



For the government sector's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.84, followed by Quality Education (SDG 4), the average is 5.71, and Clean Water and Sanitation (SDG 6), the average is 5.70.

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) had the highest average value of 5.15, followed by Life on Lands (SDG 15) with an average value of 5.00 and Clean Water and Sanitation (SDG 6) with an average value of 4.99. Details are as shown in Table 4.1.

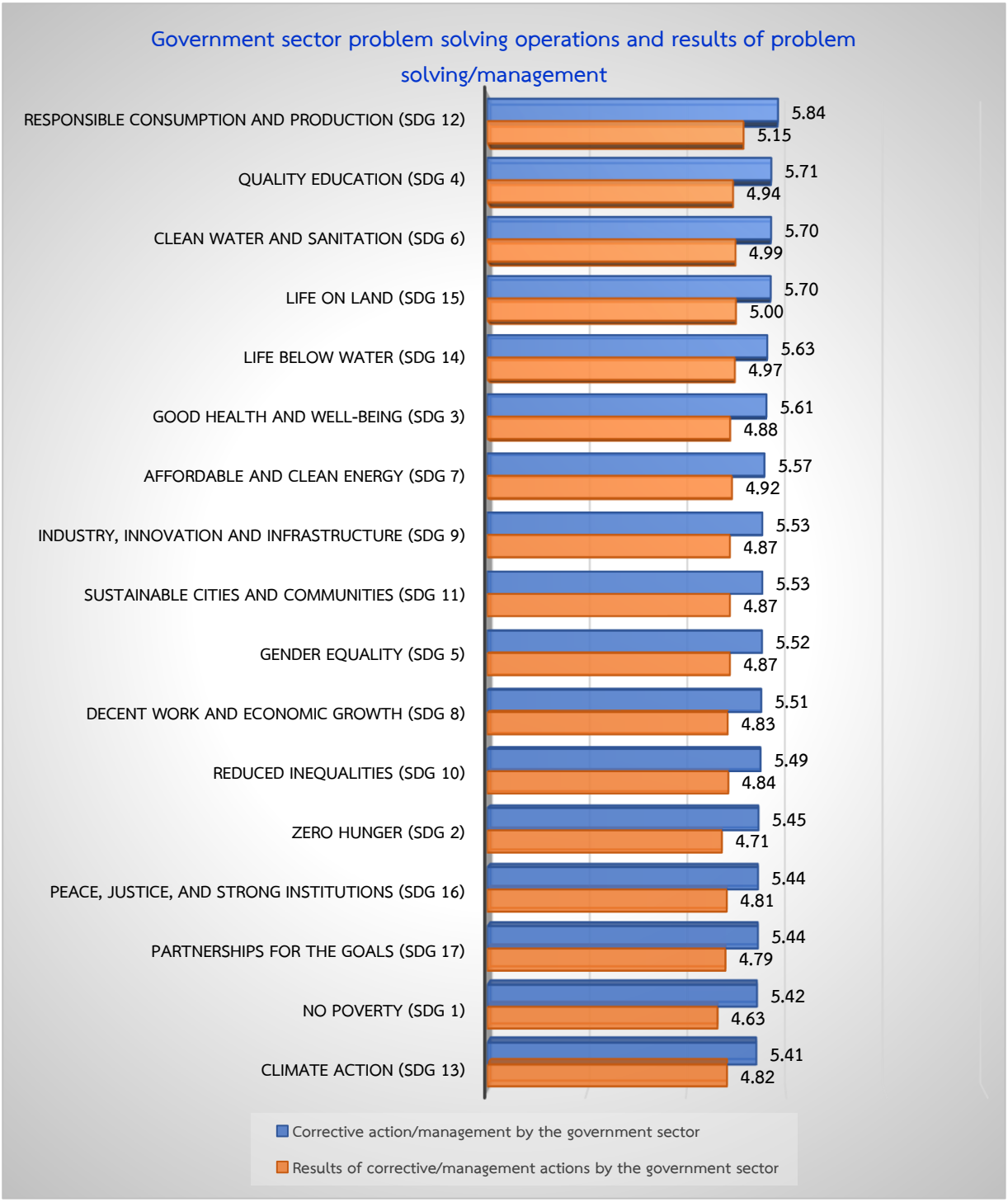


Table 4.1 Mean standard deviation of urgent needs and actions to solve problems of the government sector (overview)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 No Poverty	**8.94**	**1.469**	**5.42**	**1.988**	**4.63**	**1.890**
poverty alleviation	8.94	1.469	5.42	1.988	4.63	1.890
SDG 2 Zero Hunger	**8.32**	**1.462**	**5.45**	**1.777**	**4.71**	**1.723**
Developing smallholder farmers to promote a sustainable food system	8.38	1.618	5.40	1.893	4.65	1.832
Having Good Health and nutrition *	8.27	1.619	5.51	1.871	4.80	1.808
SDG 3 Good Health and Well-being	**8.34**	**1.482**	**5.61**	**1.816**	**4.88**	**1.773**
Having good mental health	8.28	1.680	5.52	1.908	4.81	1.863
Road safety	8.42	1.585	5.72	1.959	4.96	1.886
SDG 4 Quality Education	**8.50**	**1.388**	**5.71**	**1.821**	**4.94**	**1.771**
Quality Education	8.59	1.507	5.71	1.947	4.98	1.891
Having the skills necessary for a career	8.42	1.557	5.72	1.927	4.92	1.861
SDG 5 Gender Equality	**8.03**	**1.803**	**5.52**	**1.931**	**4.87**	**1.831**
Eliminating sexual violence in private and public spaces	8.03	1.803	5.52	1.931	4.87	1.831
SDG 6 Clean Water and Sanitation	**8.02**	**1.631**	**5.70**	**1.801**	**4.99**	**1.738**
Availability and access to clean water for drinking and use	8.10	1.745	5.79	1.999	5.02	1.898
Solving water pollution problems *	7.95	1.865	5.63	1.910	4.97	1.845
SDG 7 Affordable and Clean Energy	**8.02**	**1.778**	**5.57**	**1.859**	**4.92**	**1.795**
Having and having universal access to clean energy	8.02	1.778	5.57	1.859	4.92	1.795
SDG 8 Decent Work and Economic Growth	**8.35**	**1.560**	**5.51**	**1.894**	**4.83**	**1.801**

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Employment and access to good work opportunities	8.35	1.560	5.51	1.894	4.83	1.801
SDG 9 Industry, Innovation and Infrastructure	**7.95**	**1.765**	**5.53**	**1.879**	**4.87**	**1.790**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.95	1.765	5.53	1.879	4.87	1.790
SDG 10 Reduced Inequalities	**7.95**	**1.767**	**5.49**	**1.879**	**4.84**	**1.819**
Participation and equal access to opportunities for women and gender diverse people	7.95	1.767	5.49	1.879	4.84	1.819
SDG 11 Sustainable Cities and Communities	**7.95**	**1.765**	**5.53**	**1.879**	**4.87**	**1.790**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.95	1.765	5.53	1.879	4.87	1.790
SDG 12 Responsible Consumption and Production	**8.11**	**1.785**	**5.84**	**1.969**	**5.15**	**1.923**
Waste management (Reduce Reuse Recycle)	8.11	1.785	5.84	1.969	5.15	1.923
SDG 13 Climate Action	**8.05**	**1.699**	**5.41**	**1.802**	**4.82**	**1.701**
Solving air pollution problems	8.13	1.868	5.33	1.948	4.75	1.837
Raising awareness of the impacts of climate change or global warming. (Climate Change)	7.98	1.818	5.50	1.915	4.91	1.798
SDG 14 Life Below Water	**7.95**	**1.865**	**5.63**	**1.910**	**4.97**	**1.845**

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Solving water pollution problems *	7.95	1.865	5.63	1.910	4.97	1.845
SDG 15 Life on Land	**8.01**	**1.564**	**5.70**	**1.735**	**5.00**	**1.691**
Coping with and reducing the impact of natural disasters	8.08	1.657	5.80	1.860	5.04	1.805
Participatory management of forests and green areas	7.94	1.774	5.61	1.900	4.97	1.813
SDG 16 Peace, Justice and Strong Institutions	**8.03**	**1.748**	**5.44**	**1.903**	**4.81**	**1.830**
Managing quality public services and disseminating public information in a transparent manner	8.03	1.748	5.44	1.903	4.81	1.830
SDG 17 Partnerships for the Goals	**8.05**	**1.685**	**5.44**	**1.880**	**4.79**	**1.808**
Participation in proposing policies for a better quality of life	8.05	1.685	5.44	1.880	4.79	1.808

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

As for guidelines for improving the quality of life, the sample agreed that appropriate local policies should be developed and improved with the highest percentage of 47.23 percent, followed by no corruption and increased efficiency of information disclosure for transparent administration, 44.50 percent, and creating social and economic projects for thorough local development, 43.93 percent, details as shown in Table 4.2

Table 4.2 Number and percentage of approaches to improving quality of life (overview)

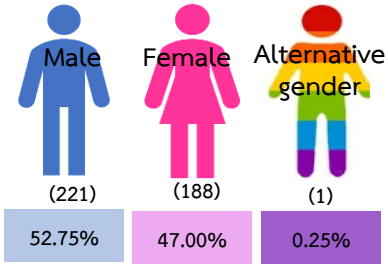
Guidelines for improving quality of life	Samples	Percentage
Appropriate local policies are developed and improved.	2,834	47.23
There is no corruption and increases the efficiency of information disclosure for transparent management.	2,670	44.50
Social and economic projects are created for comprehensive local development.	2,636	43.93
There is a decentralization of capital resources and authority in local administration.	2,489	41.48
Cooperation is created to create effective development policies in the community.	2,119	35.32
There is a space to exchange local knowledge between community members and applied to development.	2,053	34.22
Roles of participation in the community are promoted equally for all genders.	1,591	26.52
Knowledge about environmental conservation and Waste management is provided.	1,524	25.40

Note: Respondents can choose 3 answers, with a sample of 6,000 respondents.

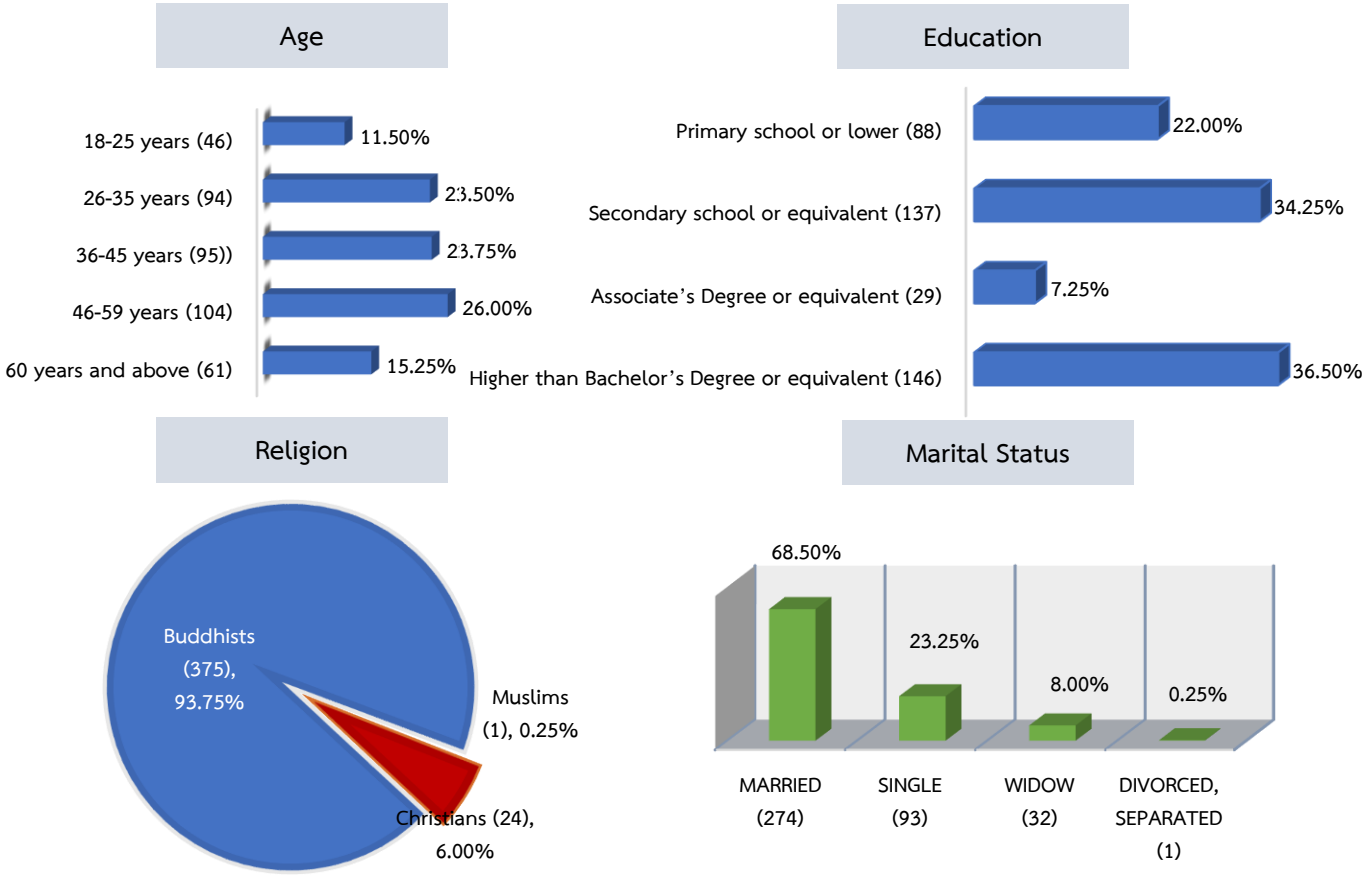
2. Survey results by province

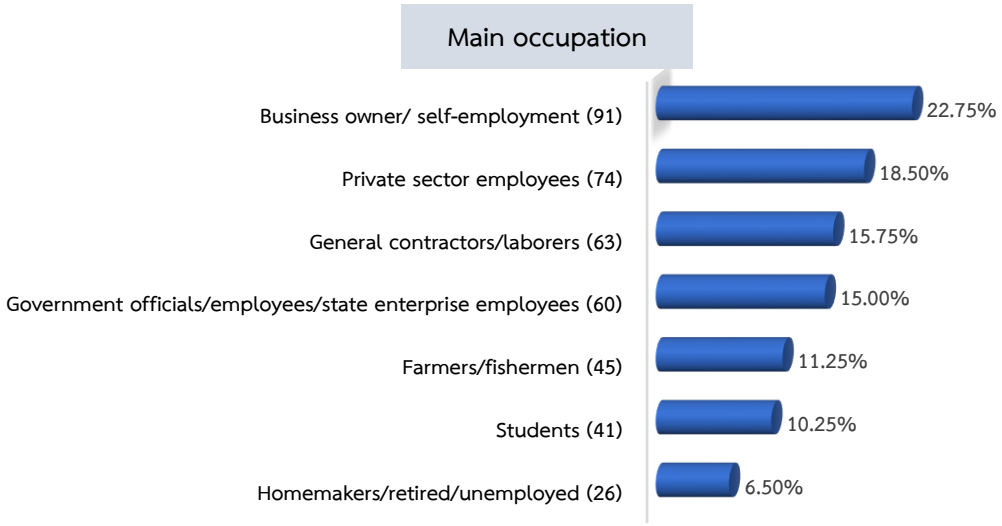
2.1 Chiang Rai Province

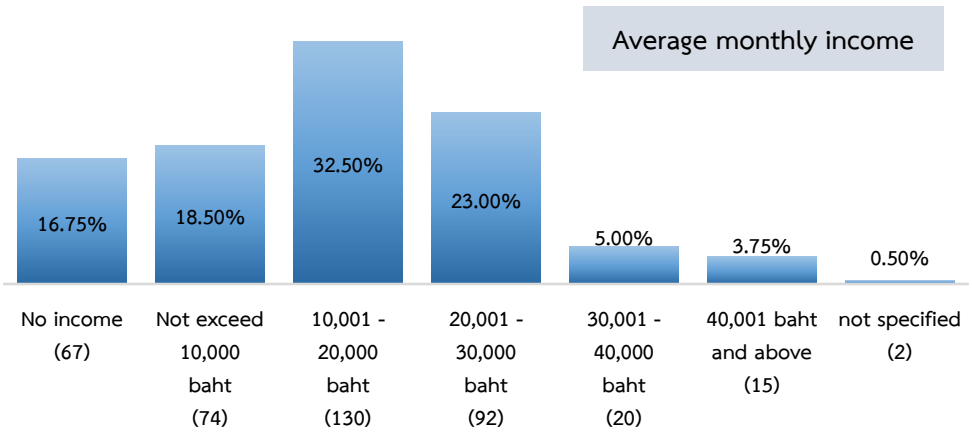
Part 1 Information about general characteristics



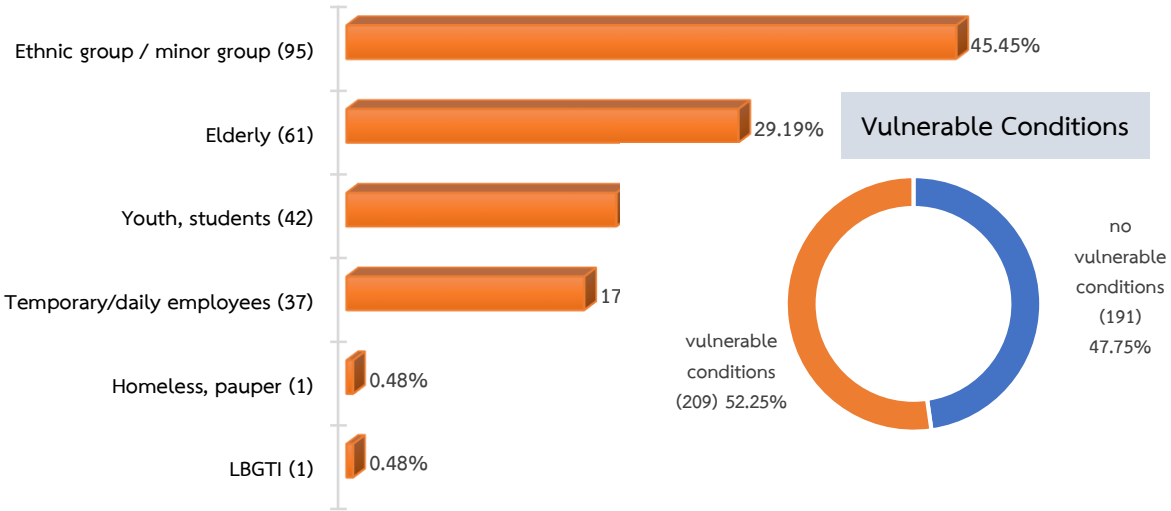
Survey of Chiang Rai Province data from a total of 400 samples, the majority of samples are male, 52.75 percent, followed by female at 47.00 percent and LGBTQ at 0.25 percent. Most are between 46-59 years old, 26.00 percent, followed by ages between 36-45 years, 23.75 percent, and ages between 26-35 years, 23.50 percent. The highest number of graduates is a bachelor's degree or equivalent, 36.50 percent, followed by secondary school level or equivalent, 34.25 percent, and primary school level or lower, 22.00 percent. Most of the sample are Buddhists at 93.75 percent, followed by Christianity at 6.00 percent and Muslims at 0.25 percent. Marital status of married is the highest at 68.50 percent, followed by single at 23.25 percent and widow at 8.00 percent. Most of their main occupation is the business owner/self-employment, 22.75 percent, followed by private sector employees, 18.50 percent, and general contractors/laborers, 15.75 percent. Most of the average monthly income of 10,001-20,000 baht is 32.50 percent, followed by 20,001-30,000 baht, 23.00 percent, and not more than 10,000 baht, 18.50 percent, respectively.







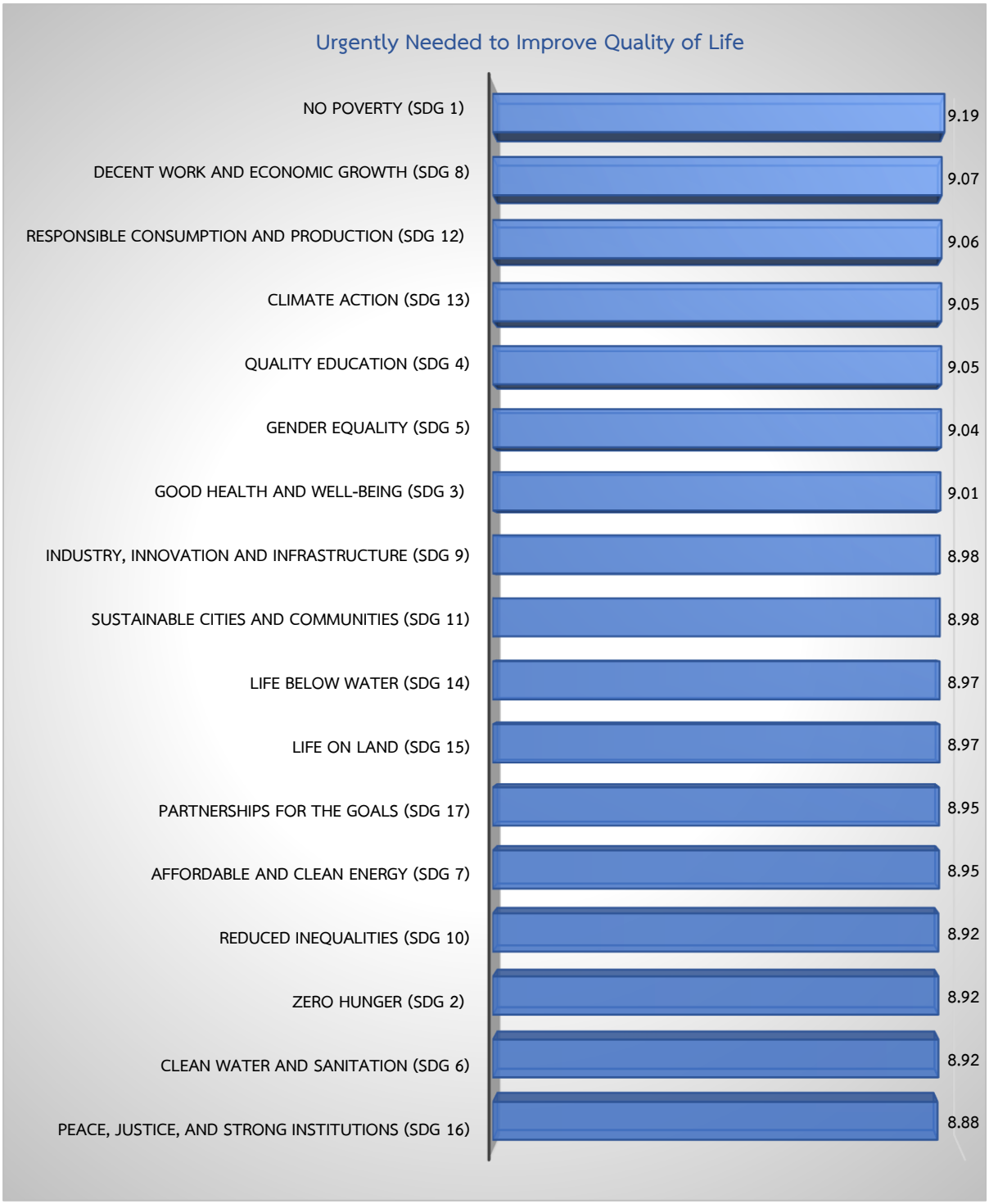
From this survey, it is found that 52.25% of the samples are in vulnerable conditions and 47.75% are not in vulnerable conditions. Among the samples with vulnerable conditions are minorities. The highest ethnicity is 45.45 percent, followed by the elderly at 29.19 percent and youth and students at 20.10 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.19, followed by Decent Work and Economic Growth (SDG 8), the average is 9.07. Responsible Consumption and Production (SDG 12) average is 9.06. Climate Action (SDG 13) and Quality Education (SDG 4) have the same average value of (9.05) and Gender Equality (SDG 5) average is 9.04



For the government sector's implementation of problem solving, it is found that Quality Education (SDG 4) had the highest average. The average is 6.22, followed by Life on Lands (SDG 15), the average is 6.18. Clean Water and Sanitation (SDG 6) average is 6.16 Gender Equality (SDG 5) has an average value of 6.11 and Responsible Consumption and Production (SDG 12) has an average value of 6.10.

As for the results of the government sector's corrective/management actions, it is found that Decent Work and Economic Growth (SDG 8) had the highest averages. The average is 5.20. Next to Quality Education (SDG 4) with the average of 5.15. No Poverty (SDG 1) average is 5.14. Responsible Consumption and Production (SDG 12) and Life on Lands (SDG 15) have the same average value of 5.12. Hunger elimination (SDG 2) and accessible clean energy for everyone (SDG 7) have the same average value of 5.06, details as shown in Table 4.3.

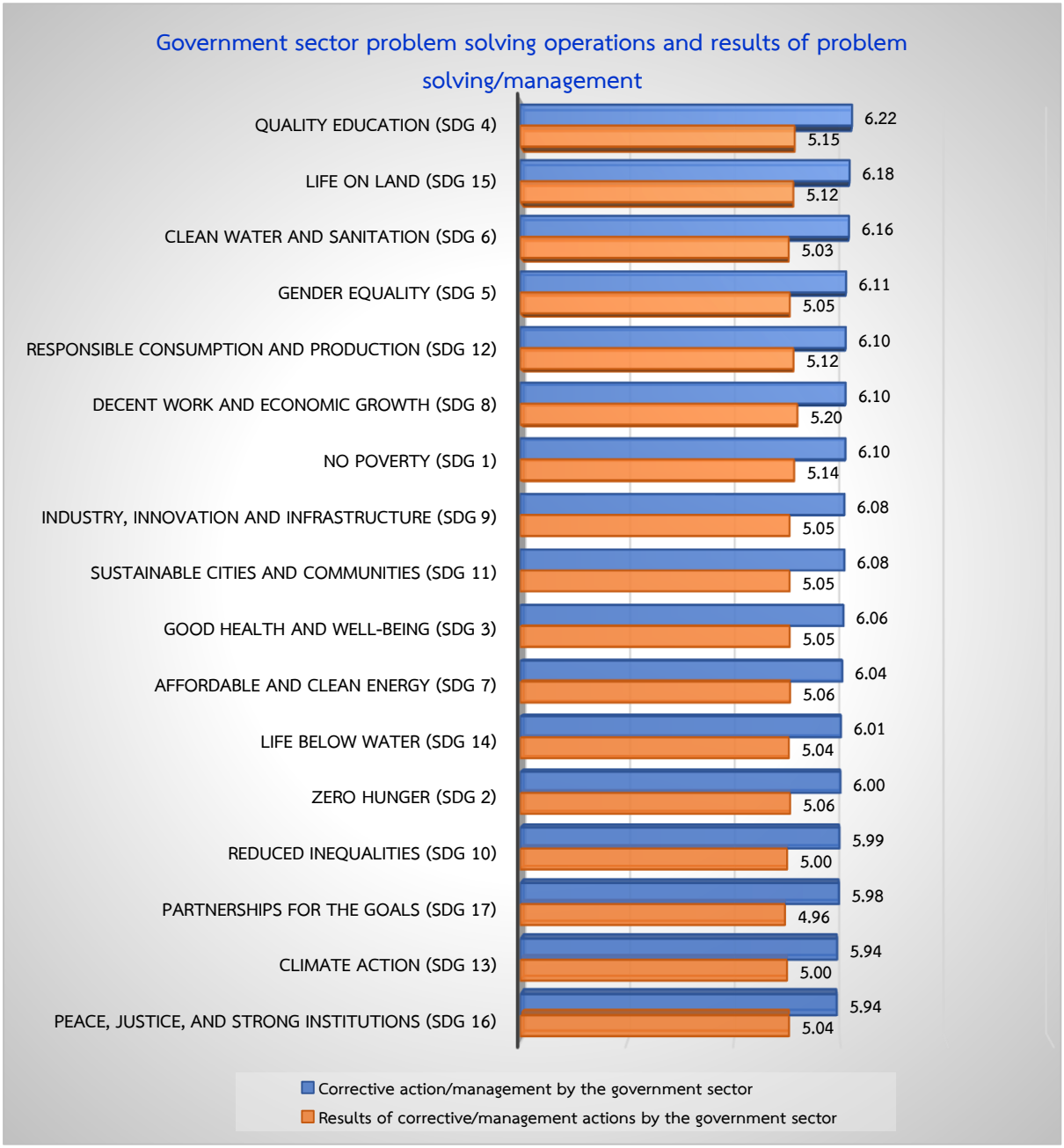


Table 4.3 Mean, standard deviation of urgent needs and actions to solve problems of the government sector. (Chiang Rai Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**9.19**	**0.960**	**6.10**	**1.528**	**5.14**	**1.104**
poverty alleviation	9.19	0.960	6.10	1.528	5.14	1.104
SDG 2 Hunger elimination	**8.92**	**0.875**	**6.00**	**1.446**	**5.06**	**1.214**
Developing smallholder farmers to promote a sustainable food system	8.89	0.980	6.03	1.428	5.02	1.223
Having Good Health and nutrition *	8.95	0.894	6.00	1.588	5.10	1.336
SDG 3 Have Good Health and Well-being	**9.01**	**0.685**	**6.06**	**1.616**	**5.05**	**1.321**
Having good mental health (Mental Health)	8.99	0.928	6.16	1.615	5.11	1.346
Road safety	9.03	0.693	5.97	1.774	5.02	1.397
SDG 4 Quality Education	**9.05**	**0.679**	**6.22**	**1.609**	**5.15**	**1.330**
Quality Education	9.09	0.881	6.16	1.711	5.09	1.419
Having the skills necessary for a career	9.00	0.853	6.28	1.644	5.22	1.350
SDG 5 Gender Equality	**9.04**	**0.849**	**6.11**	**1.676**	**5.05**	**1.367**
Eliminating sexual violence in private and public spaces	9.04	0.849	6.11	1.676	5.05	1.367
SDG 6 Clean Water and Sanitation	**8.92**	**0.651**	**6.16**	**1.608**	**5.03**	**1.277**
Availability and access to clean water for drinking and use	8.88	0.809	6.34	1.774	5.04	1.385
Solving water pollution problems *	8.97	0.752	6.01	1.641	5.04	1.367
SDG 7 Affordable and Clean Energy	**8.95**	**0.799**	**6.04**	**1.636**	**5.06**	**1.419**
Having and having universal access to clean energy	8.95	0.799	6.04	1.636	5.06	1.419

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**9.07**	**0.803**	**6.10**	**1.704**	**5.20**	**1.393**
Employment and access to good work opportunities	9.07	0.803	6.10	1.704	5.20	1.393
SDG 9 Industry, Innovation and Infrastructure	**8.98**	**0.742**	**6.08**	**1.685**	**5.05**	**1.400**
Adapting to a green economy (Design of infrastructure, roads water, electricity, buildings)*	8.98	0.742	6.08	1.685	5.05	1.400
SDG 10 Reduced Inequalities	**8.92**	**0.754**	**5.99**	**1.639**	**5.00**	**1.334**
Participation and equal access to opportunities for women and gender diverse people	8.92	0.754	5.99	1.639	5.00	1.334
SDG 11 Sustainable Cities and Communities	**8.98**	**0.742**	**6.08**	**1.685**	**5.05**	**1.400**
Adapting to a green economy (Design of infrastructure, roads water, electricity, buildings)*	8.98	0.742	6.08	1.685	5.05	1.400
SDG 12 Responsible Consumption and Production	**9.06**	**0.742**	**6.10**	**1.598**	**5.12**	**1.344**
Waste Management (Reduce Reuse Recycle)	9.06	0.742	6.10	1.598	5.12	1.344
SDG 13 Climate Action	**9.05**	**0.689**	**5.94**	**1.607**	**5.00**	**1.331**
Solving air pollution problems	9.13	0.856	5.90	1.733	4.94	1.428
Raising awareness of the impacts of climate change or global warming. (Climate Change)	8.97	0.868	5.99	1.695	5.07	1.445
SDG 14 Life Below Water	**8.97**	**0.752**	**6.01**	**1.641**	**5.04**	**1.367**

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Solving water pollution problems *	8.97	0.752	6.01	1.641	5.04	1.367
SDG 15 Life on Land	**8.97**	**0.660**	**6.18**	**1.561**	**5.12**	**1.297**
Coping with and reducing the impact of natural disasters	8.96	0.877	6.20	1.746	5.08	1.421
Participatory management of forests and green areas	8.97	0.768	6.16	1.596	5.17	1.353
SDG 16 Peace, Justice and Strong Institutions	**8.88**	**0.700**	**5.94**	**1.602**	**5.04**	**1.185**
Managing quality public services and disseminating public information in a transparent manner	8.88	0.700	5.94	1.602	5.04	1.185
SDG 17 Partnerships for the Goals	**8.95**	**0.885**	**5.98**	**1.723**	**4.96**	**1.399**
Participation in proposing policies for a better quality of life	8.95	0.885	5.98	1.723	4.96	1.399

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, the sample agreed that capital resources and local administrative power should be distributed as much as possible, 54.00 percent, followed by appropriate local policies that should be developed and improved, 43.50 percent, and no corruption and increases the efficiency of information disclosure for transparent management, 41.25 percent, details as shown in Table 4.4.

Table 4.4 Number and percentage of approaches to improving quality of life (Chiang Rai Province)

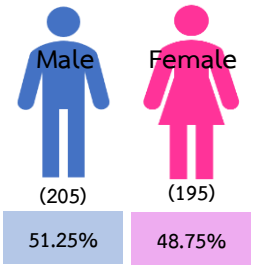
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	216	54.00
Appropriate local policies are developed and improved.	174	43.50
There is no corruption and the efficiency of information disclosure is increased for transparent management.	165	41.25
Knowledge about environmental conservation and Waste management is provided.	160	40.00
There is a space to exchange local knowledge between community members and apply it to development.	158	39.50
Social and economic projects are created for comprehensive local development.	120	30.00
Cooperation is created to create effective development policies in the community.	115	28.75
Roles of participation in the community are promoted equally for all genders.	90	22.50

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

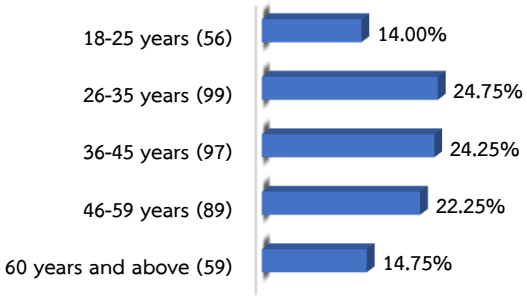
2.2 Chiang Mai Province

Part 1 Information about general characteristics

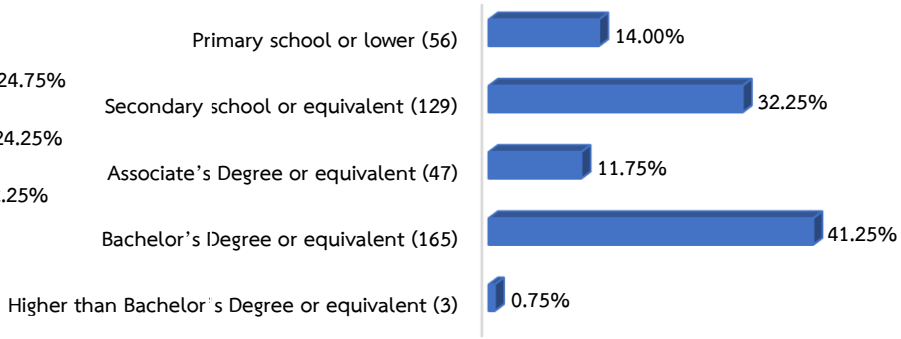
From data survey of Chiang Mai province, out of a total of 400 samples, 51.25 percent are male and 48.75 percent are female. Most are between 26-35 years old, 24.75 percent, followed by ages between 36-45 years, 24.25 percent, and ages between 46-59 years, 22.25 percent. The highest number of graduates is a bachelor's degree or equivalent, 41.25 percent, followed by secondary school level or equivalent, 32.25 percent, and primary school level or lower, 14.00 percent. Most of the sample is Buddhist (99.75%) and Christian (0.25%). Most have marital status of married, 56.75 percent, followed by single at 29.50 percent and widow at 11.25 percent. Most of their main occupation is the business owner/self-employment, 22.50 percent, followed by private sector employees, 20.25 percent, and government officials/employees/state enterprise employees, 17.50 percent. Most of an average monthly income of 10,001 – 20,000 is 31.75 percent, followed by 20,001 - 30,000 baht, 26.25 percent, and no income, 21.00 percent, respectively.



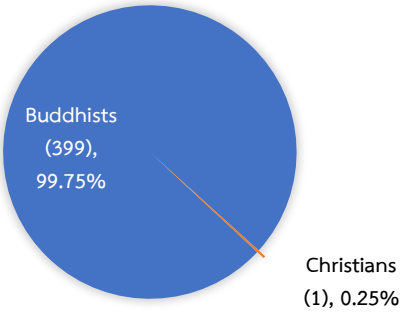
Age



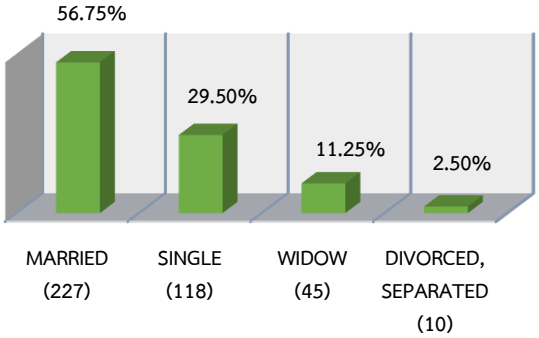
Education

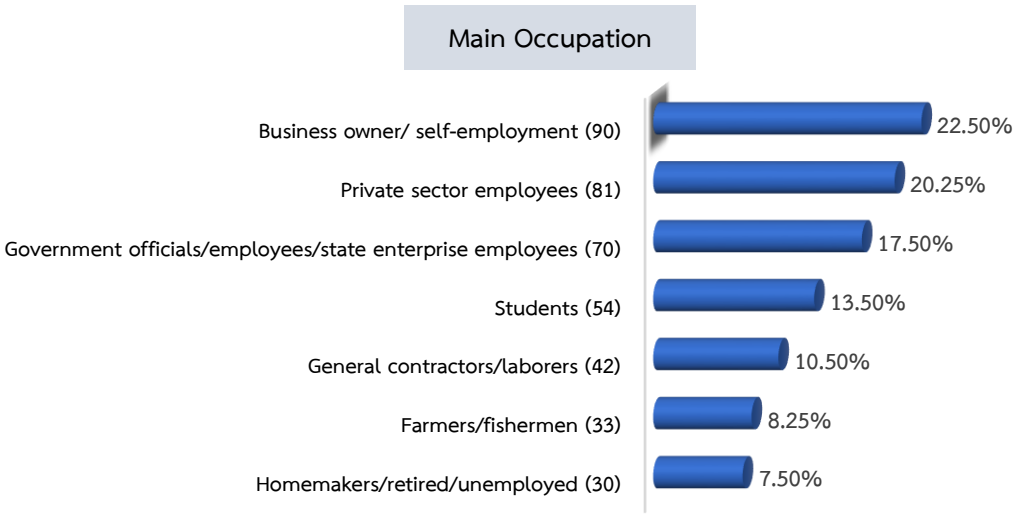


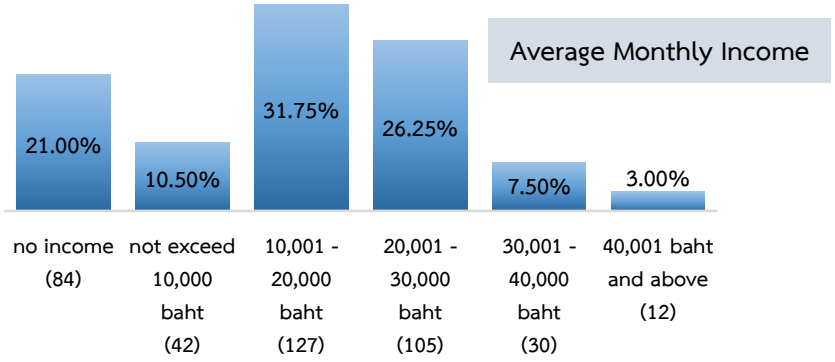
Religion



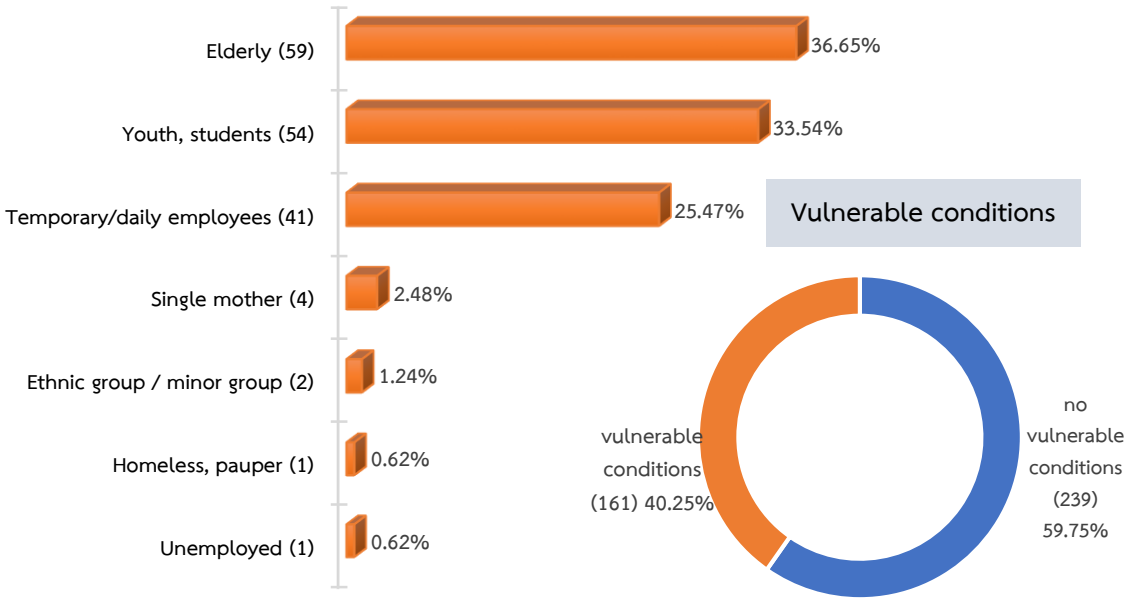
Marital Status







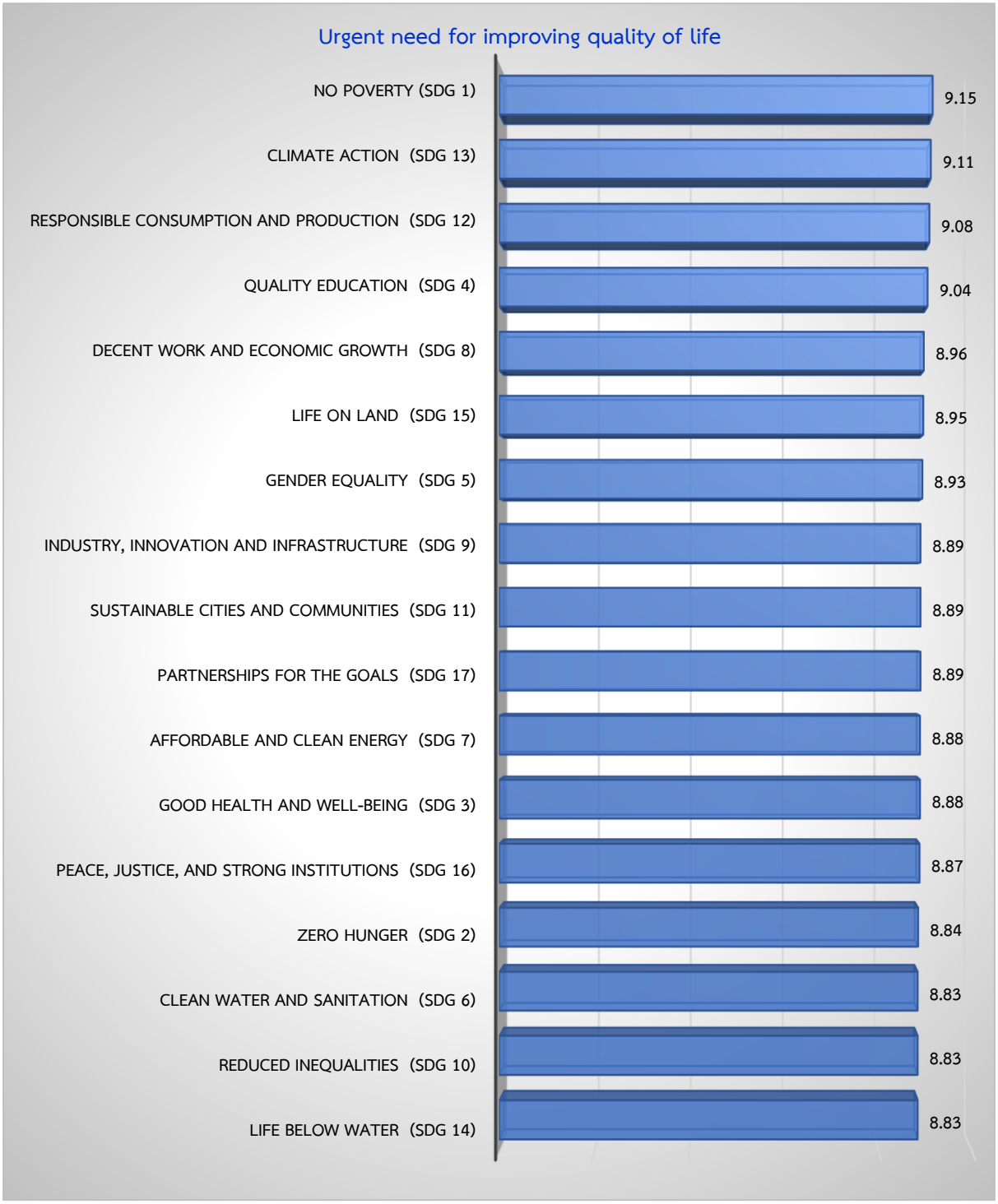
From this survey, it is found that 59.75 percent of the samples are not in vulnerable conditions and 40.25 percent are in vulnerable conditions. Among the samples with vulnerable conditions, most are the elderly, 36.65 percent, followed by youths and students at 33.54 percent and temporary/daily employees at 25.47 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.15, followed by dealing with climate change (SDG 13), the average is 9.11. Responsible Consumption and Production (SDG 12) average is 9.08 Quality Education (SDG 4) has an average of 9.04 and Decent Work and Economic Growth (SDG 8) has an average of 8.96.



For the government sector's implementation of problem solving, it is found that Quality Education (SDG 4) has the highest average. The average is 6.07, followed by Clean Water and Sanitation (SDG 6), the average is 6.05. Life on Lands (SDG 15) average value is 6.03. Decent Work and Economic Growth (SDG 8) average value is 5.99, and hunger elimination (SDG 2) and Good Health and Well-being (SDG 3) have the same average value of 5.97

As for the results of the government sector's corrective/management actions, it is found that Quality Education (SDG 4) has the highest average. The average is 5.57, followed by Life on Lands (SDG 15), the average is 5.56. Decent Work and Economic Growth (SDG 8) average is 5.55. Peace, Justice and Strong Institutions (SDG 16) and No Poverty (SDG 1) have the same average value of 5.49, and Good Health and Well-being (SDG 3) and Clean Water and Sanitation (SDG6) with an average of 5.47, details as shown in Table 4.5

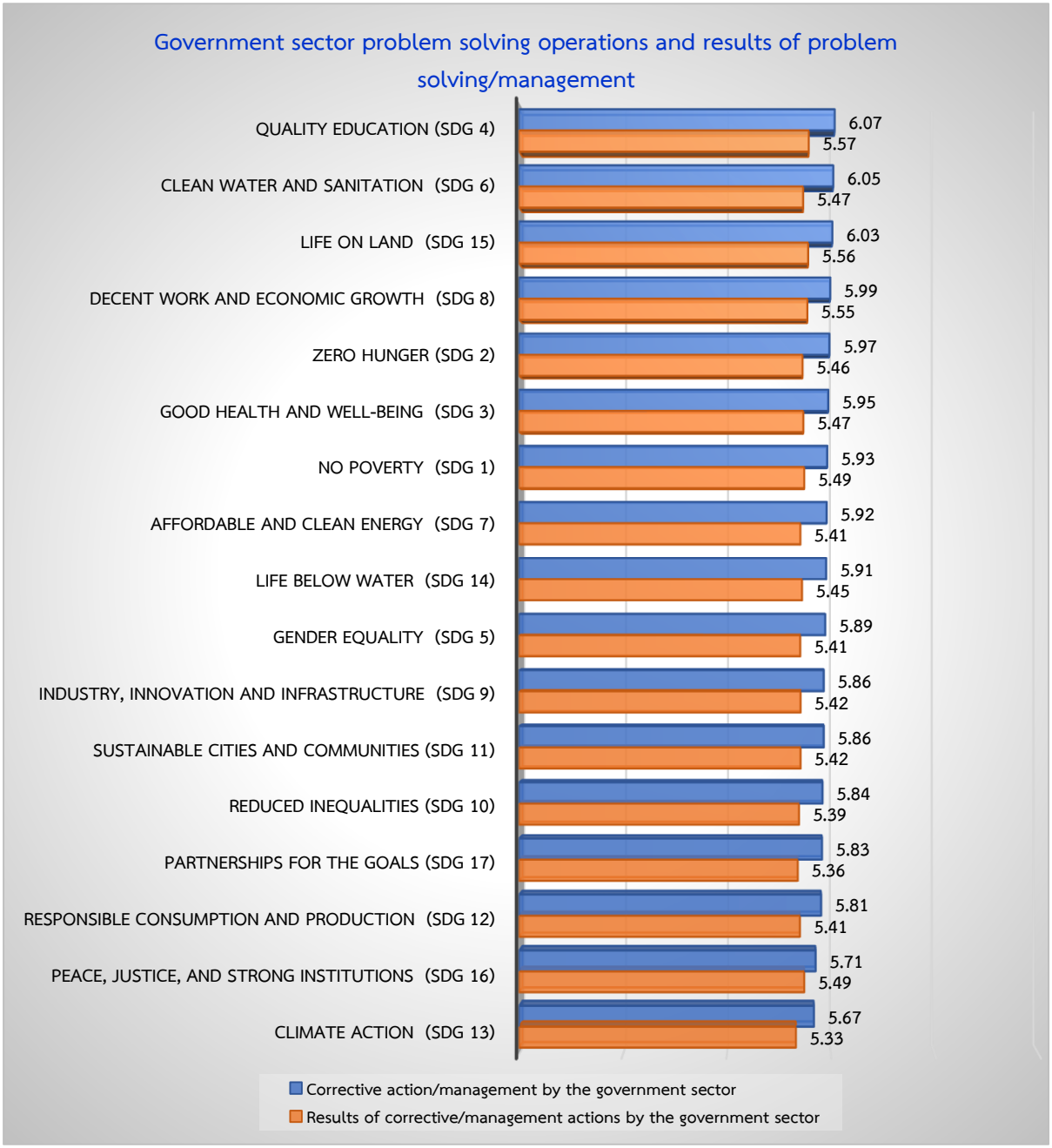


Table 4.5 Mean and standard deviation of urgent needs and actions to solve problems of the government sector (Chiang Mai Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard Deviation	Average	Standard Deviation	Average	Standard Deviation
SDG 1 Poverty eradiation	**9.15**	**0.950**	**5.93**	**1.572**	**5.49**	**1.485**
poverty alleviation	9.15	0.950	5.93	1.572	5.49	1.485
SDG 2 Hunger elimination	**8.84**	**0.812**	**5.97**	**1.511**	**5.46**	**1.537**
Developing smallholder farmers to promote a sustainable food system	8.83	0.875	5.95	1.506	5.42	1.529
Having Good Health and nutrition *	8.85	0.901	6.00	1.620	5.49	1.621
SDG 3 Have Good Health and Well-being	**8.88**	**0.744**	**5.95**	**1.717**	**5.47**	**1.691**
Having good mental health (Mental Health)	8.84	0.865	6.00	1.702	5.51	1.685
Road safety	8.93	0.868	5.92	1.848	5.43	1.795
SDG 4 Quality Education	**9.04**	**0.736**	**6.07**	**1.828**	**5.57**	**1.776**
Quality Education	9.06	0.853	6.02	1.855	5.53	1.813
Having the skills necessary for a career	9.02	0.849	6.12	1.928	5.62	1.841
SDG 5 Gender Equality	**8.93**	**0.854**	**5.89**	**1.885**	**5.41**	**1.792**
Eliminating sexual violence in private and public spaces	8.93	0.854	5.89	1.885	5.41	1.792
SDG 6 Clean Water and Sanitation	**8.83**	**0.670**	**6.05**	**1.709**	**5.47**	**1.642**
Availability and access to clean water for drinking and use	8.83	0.810	6.18	1.785	5.49	1.656
Solving water pollution problems *	8.83	0.825	5.91	1.847	5.45	1.786
SDG 7 Affordable and Clean Energy	**8.88**	**0.834**	**5.92**	**1.817**	**5.41**	**1.751**
Having and having universal access to clean energy	8.88	0.834	5.92	1.817	5.41	1.751

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard Deviation	Average	Standard Deviation	Average	Standard Deviation
SDG 8 Decent Work and Economic Growth	**8.96**	**0.851**	**5.99**	**1.826**	**5.55**	**1.774**
Employment and access to good work opportunities	8.96	0.851	5.99	1.826	5.55	1.774
SDG 9 Industry, Innovation and Infrastructure	**8.89**	**0.829**	**5.86**	**1.893**	**5.42**	**1.778**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.89	0.829	5.86	1.893	5.42	1.778
SDG 10 Reduced Inequalities	**8.83**	**0.813**	**5.84**	**1.815**	**5.39**	**1.715**
Participation and equal access to opportunities for women and gender diverse people	8.83	0.813	5.84	1.815	5.39	1.715
SDG 11 Sustainable Cities and Communities	**8.89**	**0.829**	**5.86**	**1.893**	**5.42**	**1.778**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.89	0.829	5.86	1.893	5.42	1.778
SDG 12 Responsible Consumption and Production	**9.08**	**0.877**	**5.81**	**1.840**	**5.41**	**1.710**
Waste Management (Reduce Reuse Recycle)	9.08	0.877	5.81	1.840	5.41	1.710
SDG 13 Climate Action	**9.11**	**0.688**	**5.67**	**1.787**	**5.33**	**1.679**
Solving air pollution problems	9.17	0.949	5.68	1.948	5.27	1.848
Raising awareness of the impacts of climate change or global warming. (Climate Change)	9.05	0.769	5.67	1.863	5.39	1.688

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard Deviation	Average	Standard Deviation	Average	Standard Deviation
SDG 14 Life Below Water	**8.83**	**0.825**	**5.91**	**1.847**	**5.45**	**1.786**
Solving water pollution problems *	8.83	0.825	5.91	1.847	5.45	1.786
SDG 15 Life on Land	**8.95**	**0.635**	**6.03**	**1.743**	**5.56**	**1.663**
Coping with and reducing the impact of natural disasters	8.87	0.827	6.22	1.847	5.65	1.770
Participatory management of forests and green areas	9.04	0.765	5.83	1.937	5.48	1.763
SDG 16 Peace, Justice and Strong Institutions	**8.87**	**0.831**	**5.71**	**1.844**	**5.49**	**1.715**
Managing quality public services and disseminating public information in a transparent manner	8.87	0.831	5.71	1.844	5.49	1.715
SDG 17 Partnerships for the Goals	**8.89**	**0.791**	**5.83**	**1.851**	**5.36**	**1.808**
Participation in proposing policies for a better quality of life	8.89	0.791	5.83	1.851	5.36	1.808

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, the sample agreed that capital resources and local administrative powers should be distributed as much as possible, 61.00 percent, followed by appropriate local policies that should be developed and improved, 47.50 percent. No corruption and increases of the efficiency of information disclosure for transparent management, 44.25 percent, details as shown in Table 4.6.

Table 4.6 Number and percentage of approaches to improving quality of life (Chiang Mai Province)

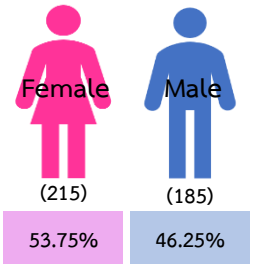
Guidelines for improving quality of life	Sample	Percentage
There is a decentralization of capital resources and authority in local administration.	244	61.00
Appropriate local policies are developed and improved.	190	47.50
There is no corruption and the efficiency of information disclosure is increased for transparent management.	177	44.25
Knowledge about environmental conservation and Waste management is provided.	135	33.75
There is a space to exchange local knowledge between community members and apply it to development.	117	29.25
Social and economic projects are created for comprehensive local development.	116	29.00
Cooperation is created to create effective development policies in the community.	116	29.00
Roles of participation in the community are promoted equally for all genders.	102	25.50

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

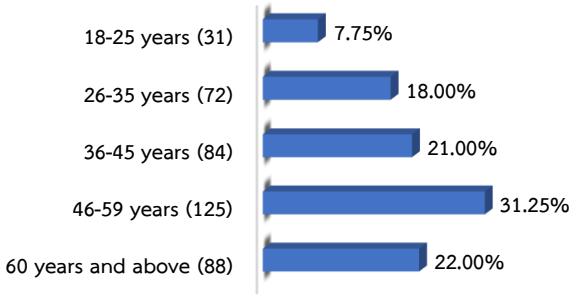
2.3 Mae Hong Son Province

Part 1 Information about general characteristics

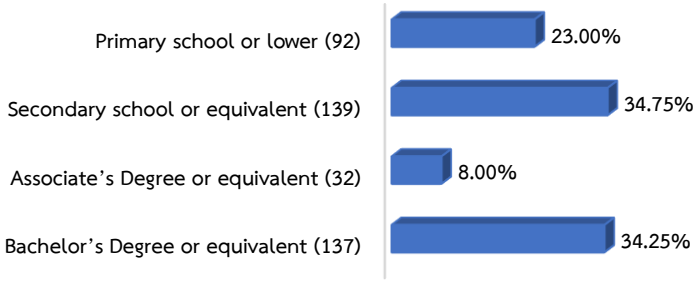
Survey data for Mae Hong Son Province from a total of 400 samples, the sample is 53.75 percent female and 46.25 percent male. Most are between 46-59 years old, 31.25 percent, followed by age 60 years and over, 22.00 percent, and between 36-45 years old, 21.00 percent. The highest number of graduates is at the secondary school level or equivalent, at 34.75 percent, followed by bachelor's degree or equivalent, 34.25 percent, and primary school level or lower 23.00 percent. Most of the sample is Buddhist (99.50%) and Christian (0.50%). Most have marital status of married, 69.75 percent, followed by single at 15.75 percent and widow at 12.00 percent. Most of their main occupation is the business owner/self-employment, 24.25 percent, followed by government officials/employees/state enterprise employees at 17.25 percent and farmers/fishermen at 16.00 percent. Most have the average monthly income of 10,001 – 20,000, 30.00, followed by not more than 10,000 baht, 27.25 percent, and 20,001-30,000 baht, 16.75 percent, respectively.



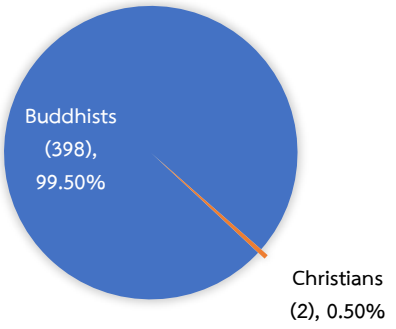
Age



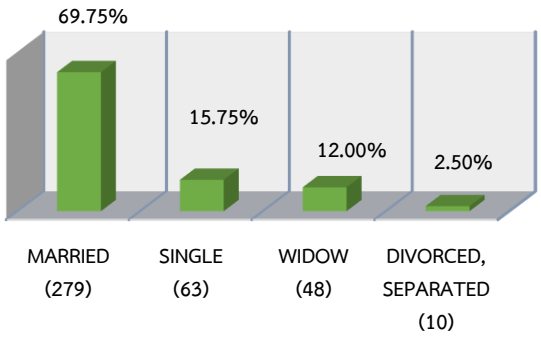
Education

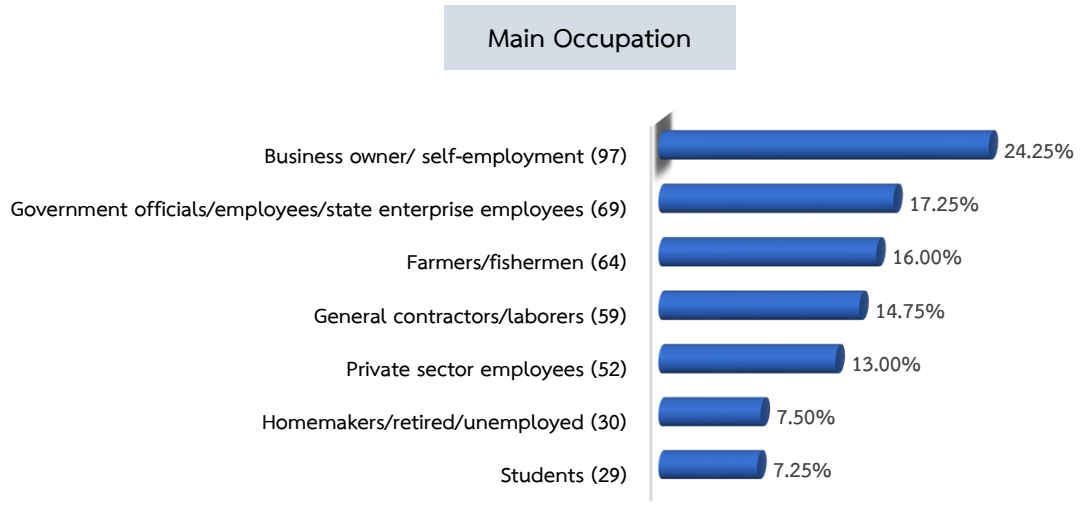


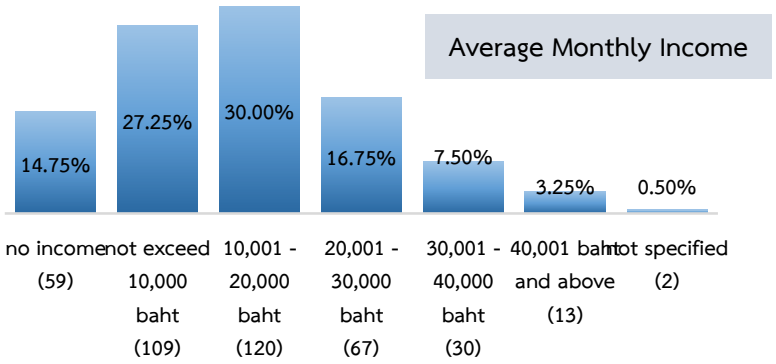
Religion



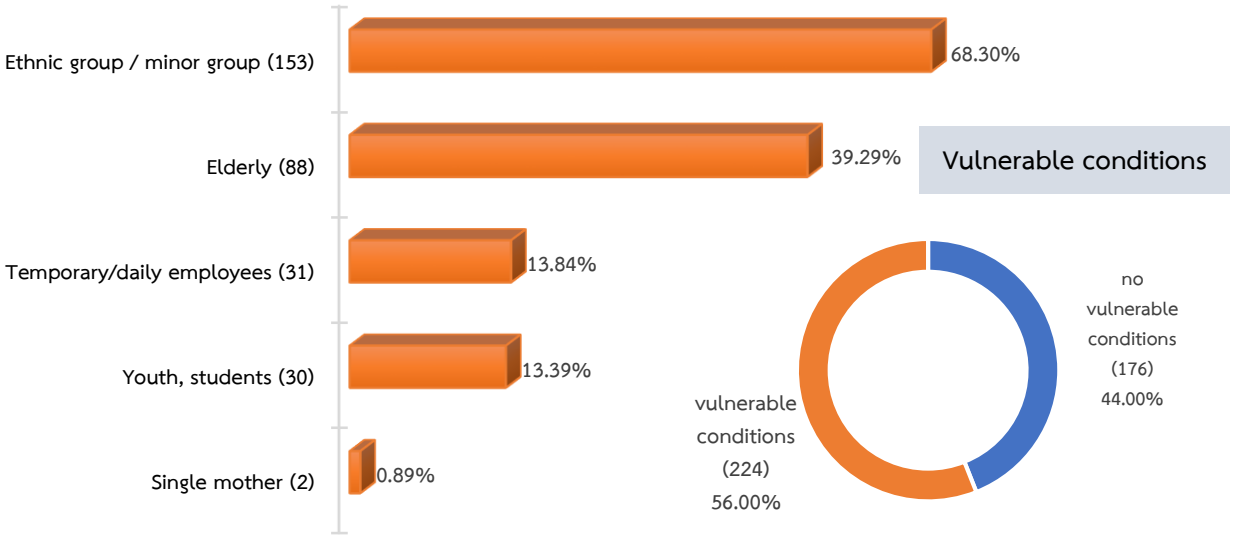
Marital Status







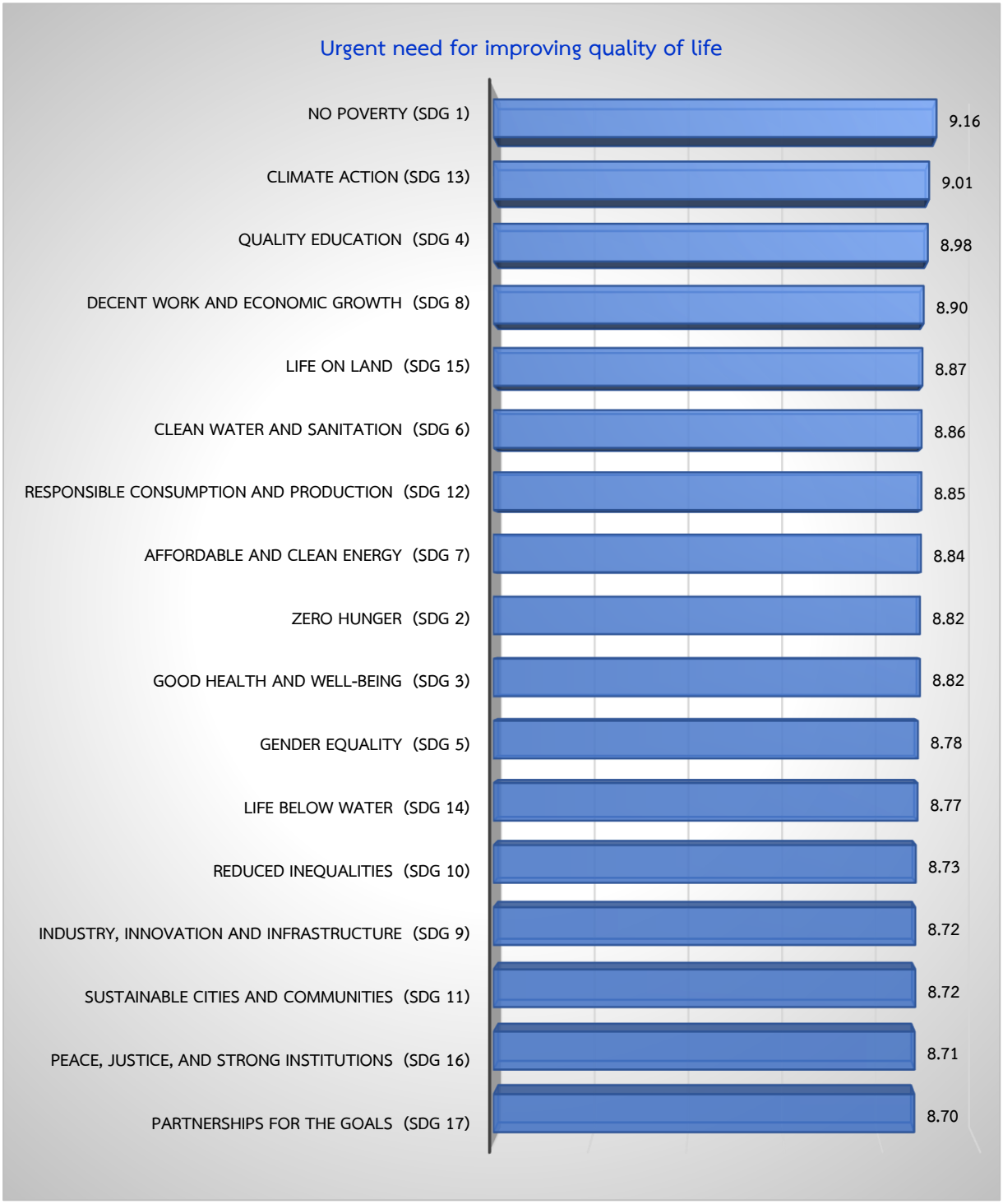
From this survey, it is found that 56.00 percent of the samples are in the most vulnerable conditions and 44.00 percent are not in vulnerable conditions. Among the most vulnerable samples are ethnic minorities, at 68.30 percent, followed by the elderly at 39.29 percent and temporary/daily employees at 13.84 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.16, followed by dealing with climate change (SDG 13), the average is 9.01. Quality Education (SDG 4) average is 8.98. Decent Work and Economic Growth (SDG 8) average is 8.90 and Life on Lands (SDG 15) average is 8.87.



As for the government's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 6.04, followed by Clean Water and Sanitation (SDG 6), the average is 6.01. Quality Education (SDG 4) average is 6.00. Life on Lands (SDG 15) average value is 5.88 and Life Below Water (SDG 14) and Good Health and Well-being (SDG 3) have the same average value of 5.84

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) has the highest average. The average is 5.59, followed by Life on Lands (SDG 15), the average is 5.47. Life Below Water (SDG 14) average is 5.43. Quality Education (SDG 4) average is 5.41 and Decent Work and Economic Growth (SDG 8) and Clean Water and Sanitation (SDG 6) have the same average value of 5.39, details as shown in Table 4.7.

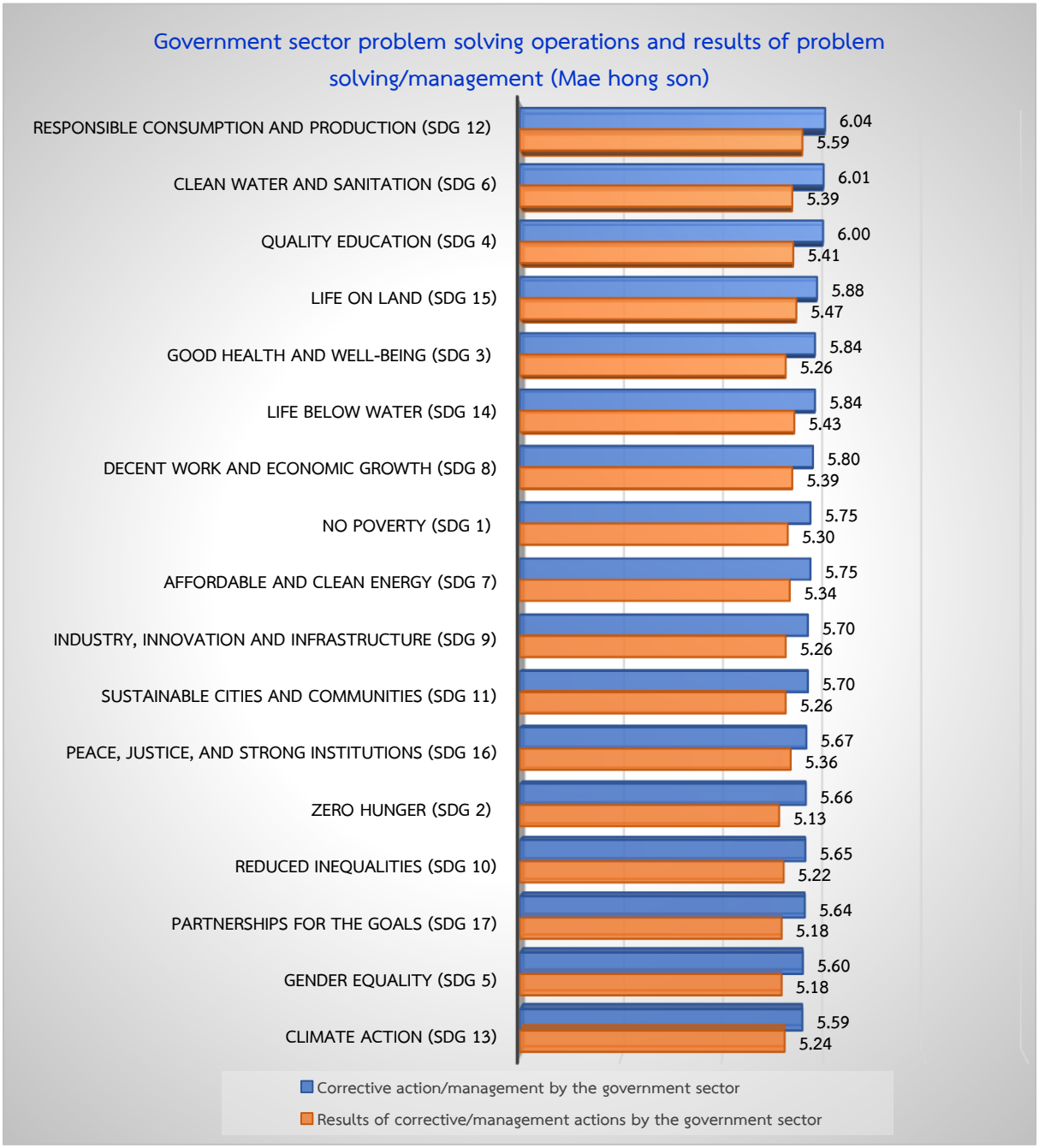


Table 4.7 Mean, standard deviation of urgent needs and actions to solve problems of the government sector (Mae Hong Son Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard Deviation	Average	Standard Deviation	Standard Deviation	Standard deviation
SDG 1 Poverty eradiation	**9.16**	**0.999**	**5.75**	**1.400**	**5.30**	**1.333**
poverty alleviation	9.16	0.999	5.75	1.400	5.30	1.333
SDG 2 Hunger elimination	**8.82**	**0.699**	**5.66**	**1.431**	**5.13**	**1.506**
Developing smallholder farmers to promote a sustainable food system	8.90	0.813	5.60	1.416	5.08	1.479
Having Good Health and nutrition *	8.74	0.800	5.71	1.572	5.19	1.620
SDG 3 Have Good Health and Well-being	**8.82**	**0.735**	**5.84**	**1.591**	**5.26**	**1.600**
Having good mental health (Mental Health)	8.74	0.829	5.62	1.629	5.18	1.625
Road safety	8.89	0.931	6.06	1.742	5.35	1.703
SDG 4 Quality Education	**8.98**	**0.794**	**6.00**	**1.648**	**5.41**	**1.652**
Quality Education	9.04	0.975	5.78	1.792	5.27	1.718
Having the skills necessary for a career	8.93	0.907	6.23	1.696	5.55	1.730
SDG 5 Gender Equality	**8.78**	**0.857**	**5.60**	**1.734**	**5.18**	**1.686**
Eliminating sexual violence in private and public spaces	8.78	0.857	5.60	1.734	5.18	1.686
SDG 6 Clean Water and Sanitation	**8.86**	**0.683**	**6.01**	**1.611**	**5.39**	**1.593**
Availability and access to clean water for drinking and use	8.94	0.902	6.18	1.830	5.35	1.749
Solving water pollution problems *	8.77	0.833	5.84	1.678	5.43	1.610
SDG 7 Affordable and Clean Energy	**8.84**	**0.917**	**5.75**	**1.760**	**5.34**	**1.711**
Having and having universal access to clean energy	8.84	0.917	5.75	1.760	5.34	1.711

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard Deviation	Average	Standard Deviation	Standard Deviation	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.90**	**0.938**	**5.80**	**1.798**	**5.39**	**1.748**
Employment and access to good work opportunities	8.90	0.938	5.80	1.798	5.39	1.748
SDG 9 Industry, Innovation and Infrastructure	**8.72**	**0.912**	**5.70**	**1.764**	**5.26**	**1.756**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.72	0.912	5.70	1.764	5.26	1.756
SDG 10 Reduced Inequalities	**8.73**	**0.841**	**5.65**	**1.640**	**5.22**	**1.642**
Participation and equal access to opportunities for women and gender diverse people	8.73	0.841	5.65	1.640	5.22	1.642
SDG 11 Sustainable Cities and Communities	**8.72**	**0.912**	**5.70**	**1.764**	**5.26**	**1.756**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.72	0.912	5.70	1.764	5.26	1.756
SDG 12 Responsible Consumption and Production	**8.85**	**0.908**	**6.04**	**1.734**	**5.59**	**1.634**
Waste Management (Reduce Reuse Recycle)	8.85	0.908	6.04	1.734	5.59	1.634
SDG 13 Climate Action	**9.01**	**0.685**	**5.59**	**1.732**	**5.24**	**1.686**
Solving air pollution problems	9.13	0.896	5.49	1.843	5.14	1.790
Raising awareness of the impacts of climate change or global warming. (Climate Change)	8.89	0.817	5.69	1.947	5.34	1.816

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard Deviation	Average	Standard Deviation	Standard Deviation	Standard deviation
SDG 14 Life Below Water	**8.77**	**0.833**	**5.84**	**1.678**	**5.43**	**1.610**
Solving water pollution problems *	8.77	0.833	5.84	1.678	5.43	1.610
SDG 15 Life on Land	**8.87**	**0.664**	**5.88**	**1.622**	**5.47**	**1.596**
Coping with and reducing the impact of natural disasters	8.87	0.832	5.88	1.695	5.41	1.691
Participatory management of forests and green areas	8.88	0.842	5.87	1.814	5.53	1.678
SDG 16 Peace, Justice and Strong Institutions	**8.71**	**0.832**	**5.67**	**1.987**	**5.36**	**1.816**
Managing quality public services and disseminating public information in a transparent manner	8.71	0.832	5.67	1.987	5.36	1.816
SDG 17 Partnerships for the Goals	**8.70**	**0.834**	**5.64**	**1.760**	**5.18**	**1.749**
Participation in proposing policies for a better quality of life	8.70	0.834	5.64	1.760	5.18	1.749

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

As for guidelines for improving the quality of life, most of the sample agreed that there should be a decentralization of capital resources and authority in local administration, 64.50 percent. Next, appropriate local policies should be developed and improved, 52.00 percent. No corruption and increases the efficiency of information disclosure for transparent administration at 46.25 percent, details as shown in Table 4.8.

Table 4.8 Number and percentage of approaches to improving quality of life (Mae Hong Son Province)

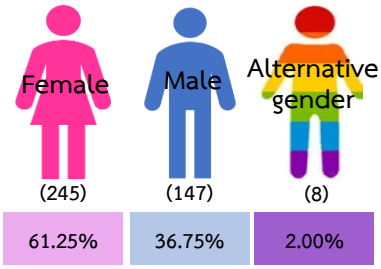
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	258	64.50
Appropriate local policies are developed and improved.	208	52.00
There is no corruption and the efficiency of information disclosure is increased for transparent management.	185	46.25
Knowledge about environmental conservation and Waste management is provided.	127	31.75
There is a space to exchange local knowledge between community members and apply it to development.	124	31.00
Social and economic projects are created for comprehensive local development.	107	26.75
Cooperation is created to create effective development policies in the community.	104	26.00
Roles of participation in the community are promoted equally for all genders.	85	21.25

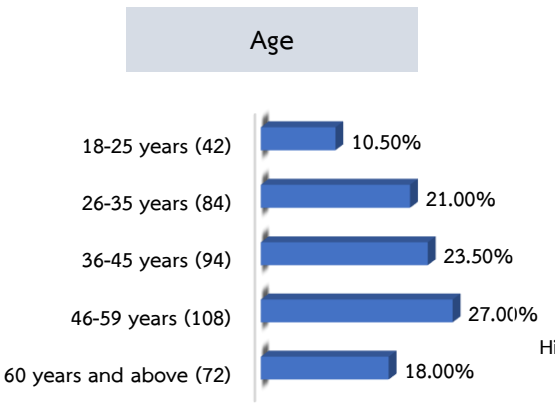
Note: Respondents can choose 3 answers, with a sample of 400 respondents.

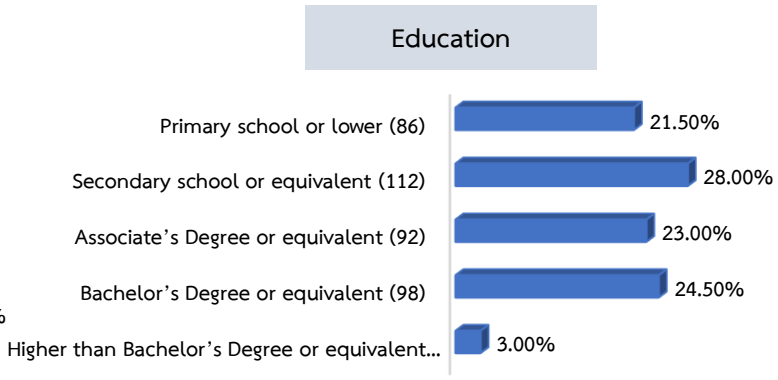
2.4 Tak Province

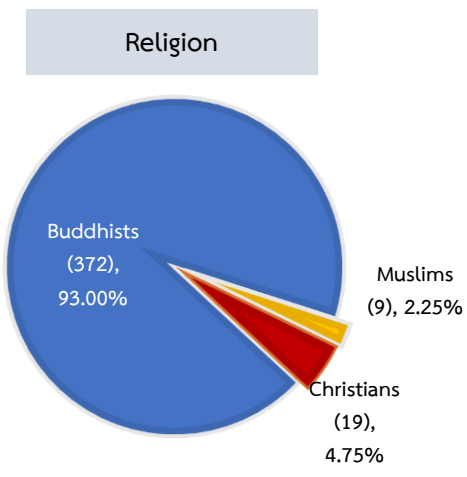
Part 1 Information about general characteristics

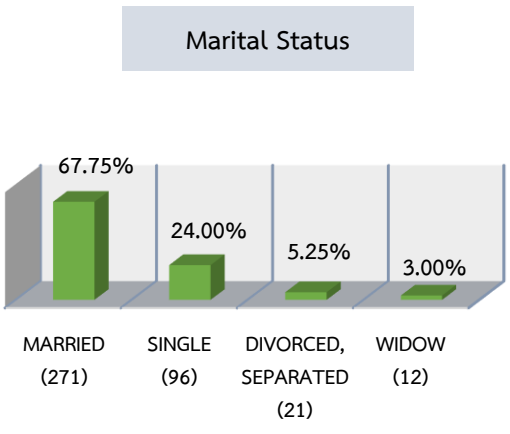
Survey of Tak Province data from a total of 400 samples, the majority samples are female, 61.25 percent, followed by male 36.75 percent, and LGBTQ 2.00 percent. Most are between 46-59 years old, 27.00 percent, followed by age between 36-45 years, 23.50 percent, and between 26-35 years old, 21.00 percent. The highest number of graduates is at the secondary school level or equivalent, 28.00 percent. Next, bachelor's degree or equivalent, 24.50 percent, and associate's degree or equivalent, 23.00 percent. Most of the sample are Buddhists, at 93.00 percent, followed by Christianity at 4.75 percent and Muslims at 2.25 percent. Most have the marital status of married, 67.75 percent, followed by single at 24.00 percent, and have divorced or separated status, 5.25 percent. Most of their main occupation is the business owner/self-employment, 24.75 percent, followed by general contractors/laborers at 17.25 percent, and 16.75 percent are government officials/employees/state enterprise employees. Most have an average monthly income between 10,001-20,000 baht, 35.50 percent, followed by not more than 10,000 baht and 20,001-30,000 baht in the same proportion, 19.75 percent, and no income, 17.75 percent, respectively.

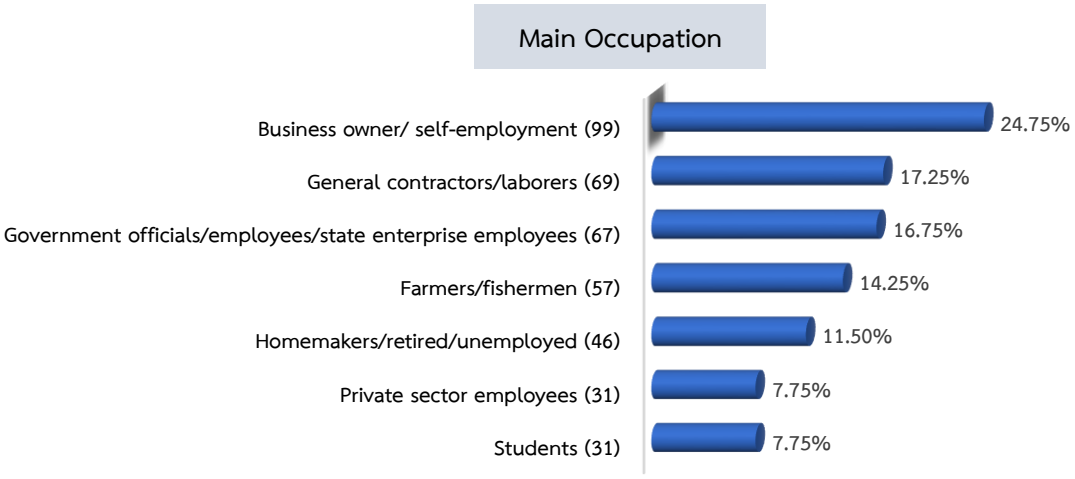


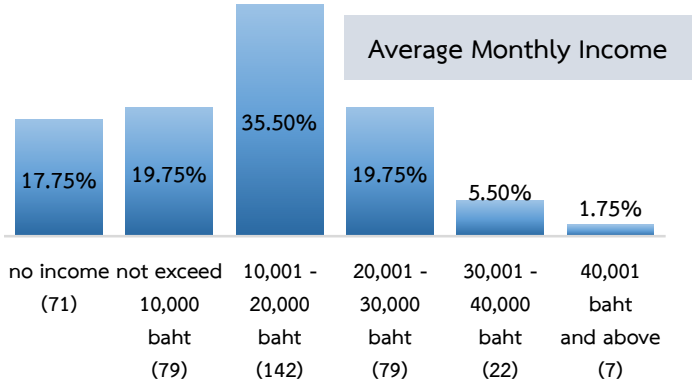




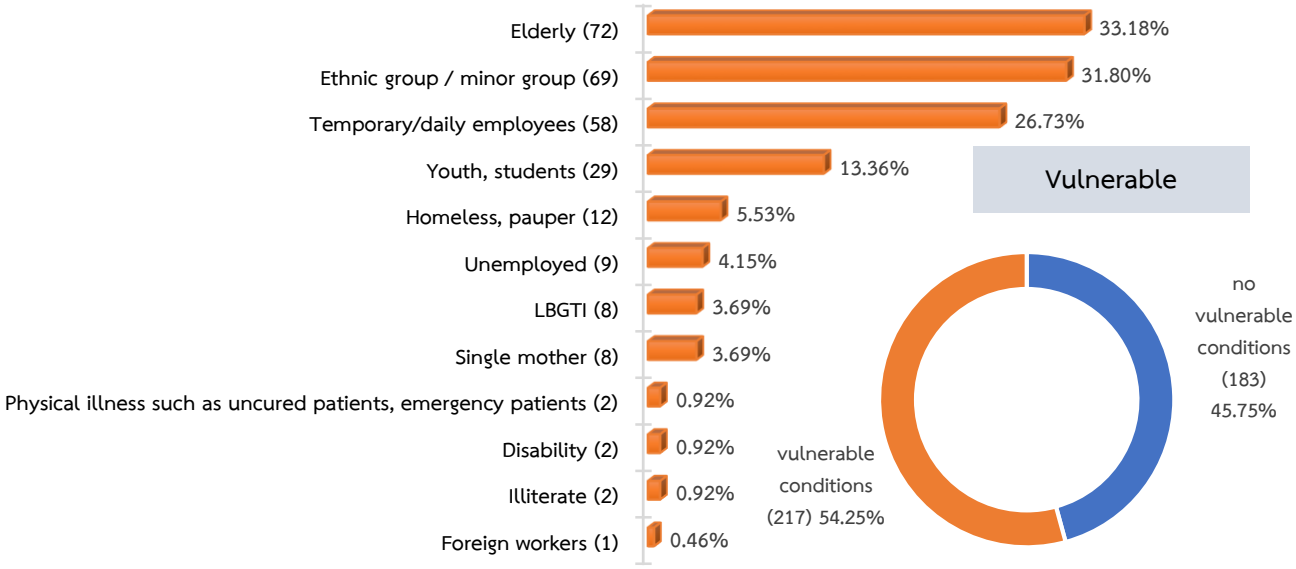








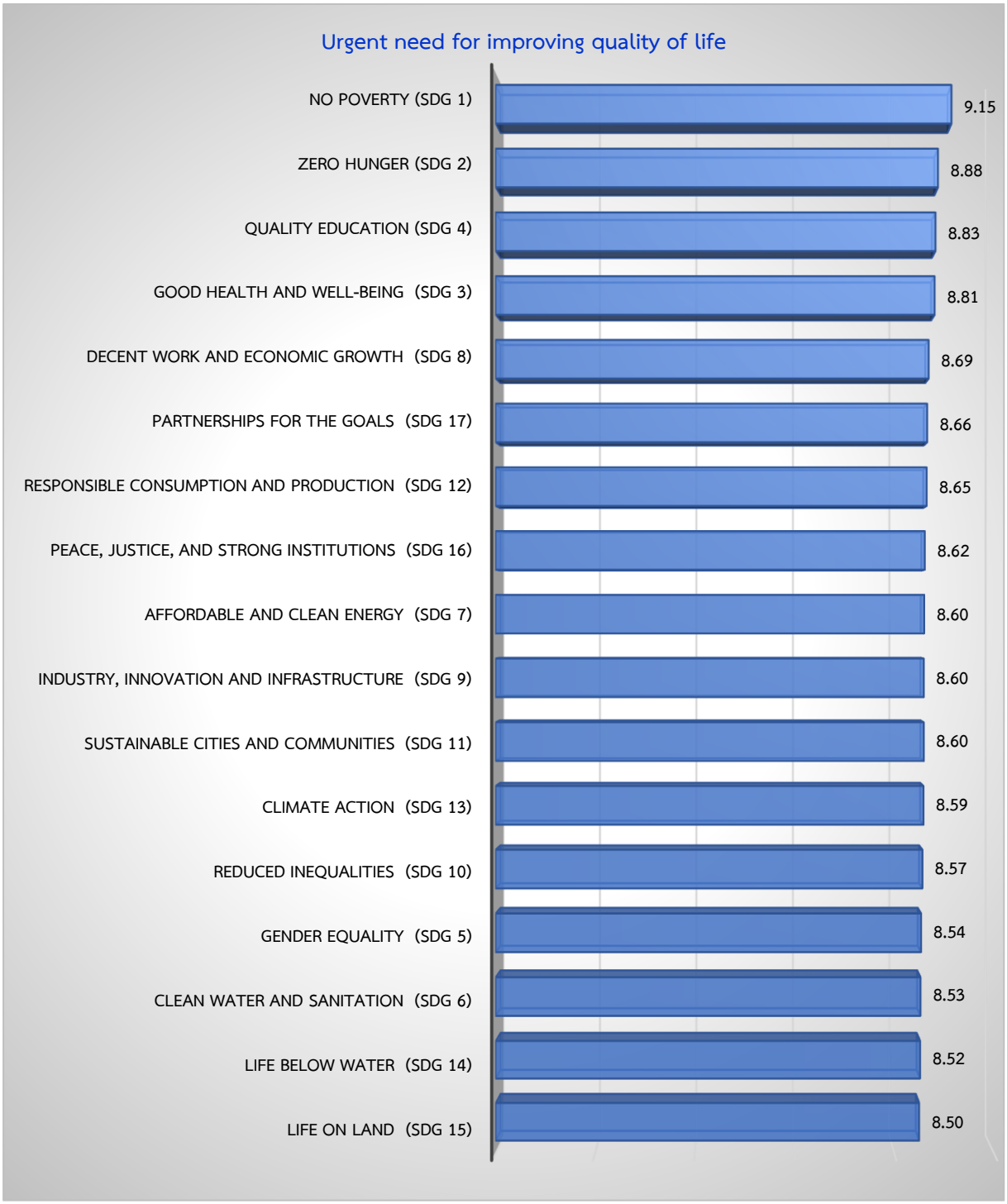
From this survey, it is found that 54.25 percent of the samples are in vulnerable conditions and 45.75 percent are not in vulnerable conditions. Among the sample with the most vulnerable conditions are the elderly, at 33.18 percent. Next are ethnic minorities, 31.80 percent, and temporary/daily employees, 26.73 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.15, followed by hunger elimination (SDG 2), with an average of 8.88. Quality Education (SDG 4) average is 8.83. Good Health and Well-being (SDG 3) is with an average of 8.81 and Decent Work and Economic Growth (SDG 8), the average is 8.69.



For the government sector's implementation of problem solving, it is found that Clean Water and Sanitation (SDG 6) has the highest average. The average is 6.12, followed by Responsible Consumption and Production (SDG 12), the average is 6.09. Life on Lands (SDG 15) average value is 6.07. Quality Education (SDG 4) has an average value of 6.06 and clean energy that is accessible to everyone (SDG 7) has an average value of 6.03.

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.70, followed by Life on Lands (SDG 15), the average is 5.68. Clean energy that is accessible to everyone (SDG 7) average is 5.65. Clean Water and Sanitation (SDG 6) has an average value of 5.64 and Quality Education (SDG 4) has an average value of 5.62, details as shown in Table 4.9.

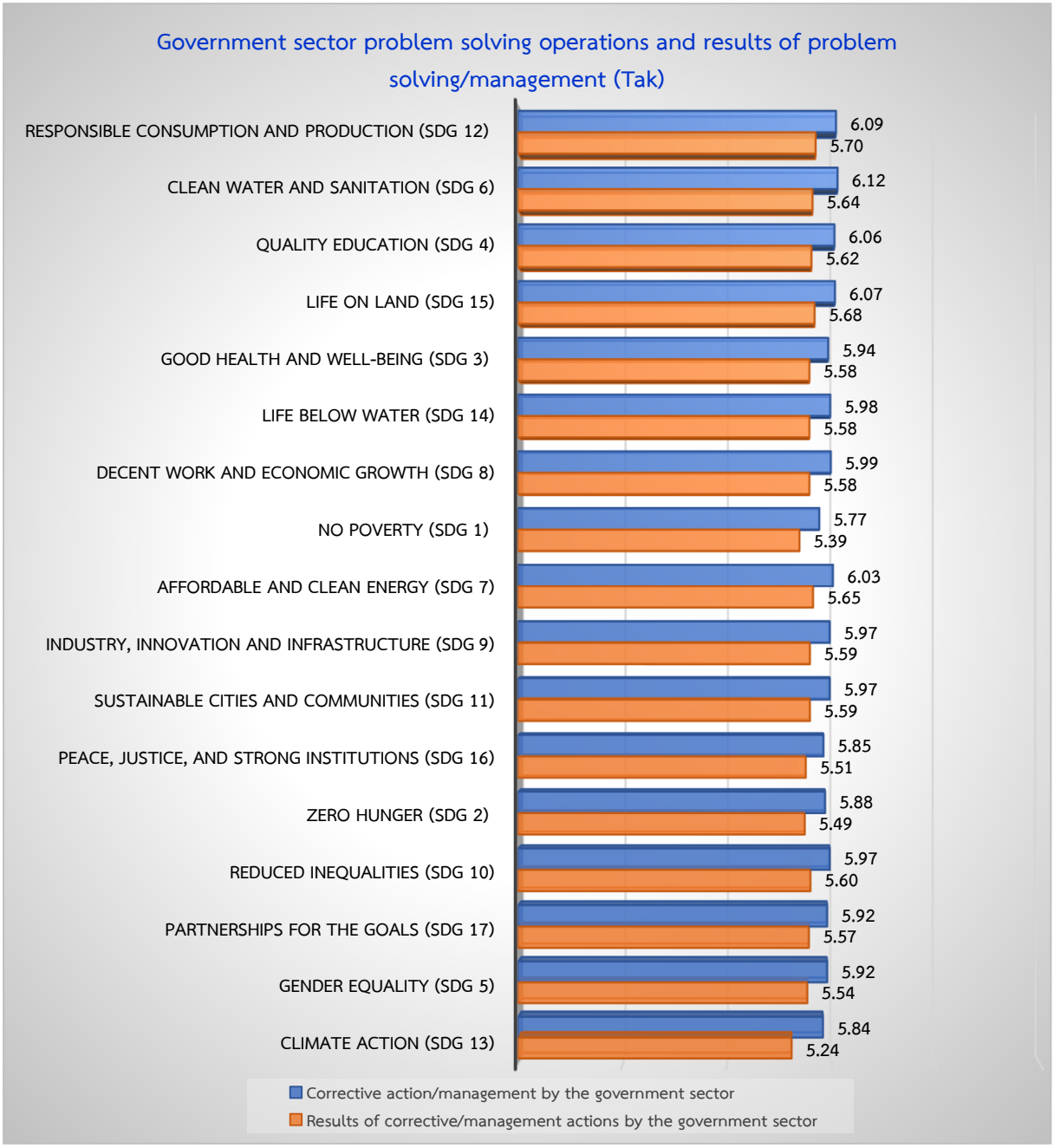


Table 4.9 Mean, standard deviation of urgent needs and actions to solve problems of the government sector. (Tak Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**9.15**	**1.306**	**5.77**	**2.102**	**5.39**	**2.055**
poverty alleviation	9.15	1.306	5.77	2.102	5.39	2.055
SDG 2 Hunger elimination	**8.88**	**1.133**	**5.88**	**1.659**	**5.49**	**1.596**
Developing smallholder farmers to promote a sustainable food system	8.94	1.212	5.82	1.713	5.44	1.655
Having Good Health and nutrition *	8.82	1.222	5.95	1.733	5.53	1.639
SDG 3 Have Good Health and Well-being	**8.81**	**1.037**	**5.94**	**1.652**	**5.58**	**1.566**
Having good mental health (Mental Health)	8.84	1.107	5.92	1.734	5.58	1.655
Road safety	8.78	1.169	5.96	1.740	5.58	1.602
SDG 4 Quality Education	**8.83**	**1.027**	**6.06**	**1.648**	**5.62**	**1.555**
Quality Education	8.85	1.156	5.95	1.690	5.58	1.589
Having the skills necessary for a career	8.81	1.137	6.17	1.773	5.66	1.650
SDG 5 Gender Equality	**8.54**	**1.248**	**5.92**	**1.742**	**5.54**	**1.628**
Eliminating sexual violence in private and public spaces	8.54	1.248	5.92	1.742	5.54	1.628
SDG 6 Clean Water and Sanitation	**8.53**	**1.118**	**6.12**	**1.625**	**5.64**	**1.453**
Availability and access to clean water for drinking and use	8.54	1.250	6.27	1.802	5.70	1.561
Solving water pollution problems *	8.52	1.234	5.98	1.683	5.58	1.544
SDG 7 Affordable and Clean Energy	**8.60**	**1.296**	**6.03**	**1.665**	**5.65**	**1.556**
Having and having universal access to clean energy	8.60	1.296	6.03	1.665	5.65	1.556

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.69**	**1.381**	**5.99**	**1.641**	**5.58**	**1.554**
Employment and access to good work opportunities	8.69	1.381	5.99	1.641	5.58	1.554
SDG 9 Industry, Innovation and Infrastructure	**8.60**	**1.323**	**5.97**	**1.722**	**5.59**	**1.611**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.60	1.323	5.97	1.722	5.59	1.611
SDG 10 Reduced Inequalities	**8.57**	**1.204**	**5.97**	**1.717**	**5.60**	**1.621**
Participation and equal access to opportunities for women and gender diverse people	8.57	1.204	5.97	1.717	5.60	1.621
SDG 11 Sustainable Cities and Communities	**8.60**	**1.323**	**5.97**	**1.722**	**5.59**	**1.611**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.60	1.323	5.97	1.722	5.59	1.611
SDG 12 Responsible Consumption and Production	**8.65**	**1.149**	**6.09**	**1.686**	**5.70**	**1.583**
Waste Management (Reduce Reuse Recycle)	8.65	1.149	6.09	1.686	5.70	1.583
SDG 13 Climate Action	**8.59**	**1.127**	**5.84**	**1.682**	**5.47**	**1.574**
Solving air pollution problems	8.62	1.251	5.82	1.688	5.45	1.614
Raising awareness of the impacts of climate change or global warming. (Climate Change)	8.56	1.247	5.86	1.869	5.50	1.692

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**8.52**	**1.234**	**5.98**	**1.683**	**5.58**	**1.544**
Solving water pollution problems *	8.52	1.234	5.98	1.683	5.58	1.544
SDG 15 Life on Land	**8.50**	**1.116**	**6.07**	**1.640**	**5.68**	**1.537**
Coping with and reducing the impact of natural disasters	8.47	1.244	6.21	1.737	5.76	1.609
Participatory management of forests and green areas	8.54	1.234	5.93	1.726	5.60	1.610
SDG 16 Peace, Justice and Strong Institutions	**8.62**	**1.249**	**5.85**	**1.821**	**5.51**	**1.647**
Managing quality public services and disseminating public information in a transparent manner	8.62	1.249	5.85	1.821	5.51	1.647
SDG 17 Partnerships for the Goals	**8.66**	**1.369**	**5.92**	**1.690**	**5.57**	**1.627**
Participation in proposing policies for a better quality of life	8.66	1.369	5.92	1.690	5.57	1.627

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, the sample agreed that there should be a distribution of capital resources and authority in local administration, with the highest number being 65.75 percent. Next, appropriate local policies should be developed and improved, 53.50 percent, and no corruption and increases the efficiency of information disclosure for transparent administration, 53.25 percent, details as shown in Table 4.10

Table 4.10 Number and percentage of approaches to improving quality of life (Tak Province)

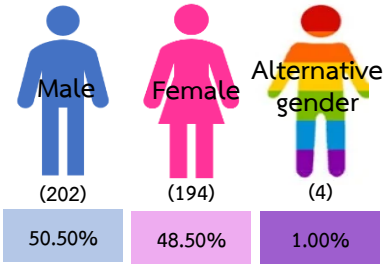
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	263	65.75
Appropriate local policies are developed and improved.	214	53.50
There is no corruption and the efficiency of information disclosure is increased for transparent management.	213	53.25
Knowledge about environmental conservation and Waste management is provided.	178	44.50
There is a space to exchange local knowledge between community members and apply it to development.	125	31.25
Social and economic projects are created for comprehensive local development.	83	20.75
Cooperation is created to create effective development policies in the community.	78	19.50
Roles of participation in the community are promoted equally for all genders.	45	11.25

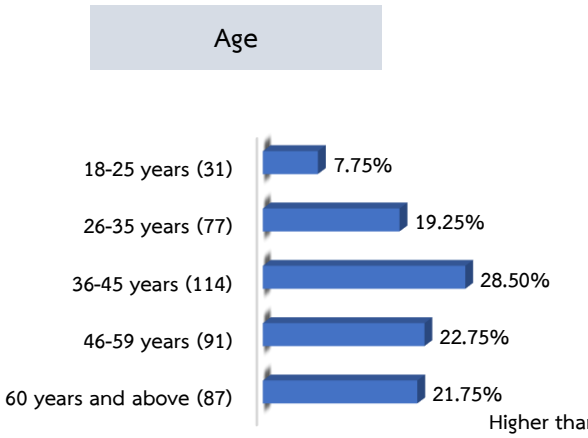
Note: Respondents can choose 3 answers, with a sample of 400 respondents.

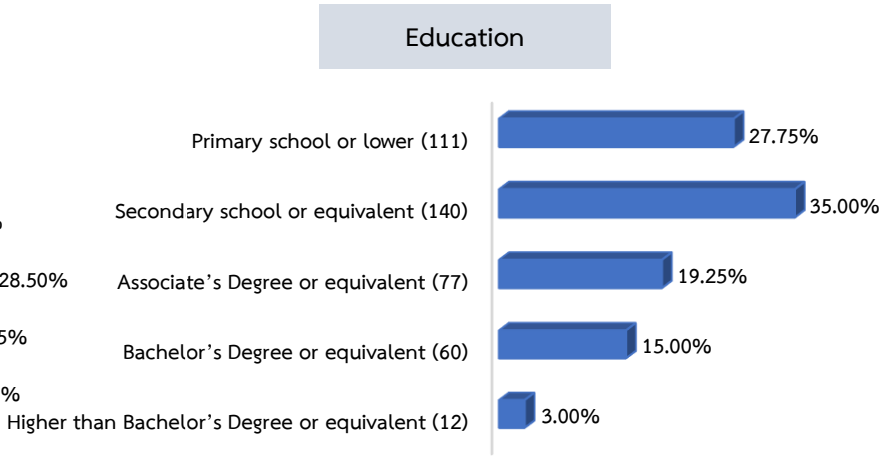
2.5 Bangkok Province

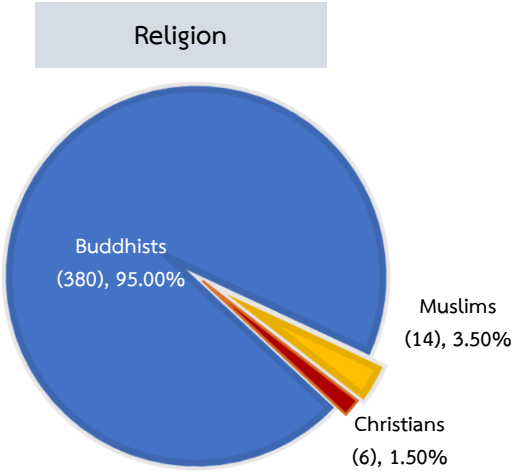
Part 1 Information about general characteristics

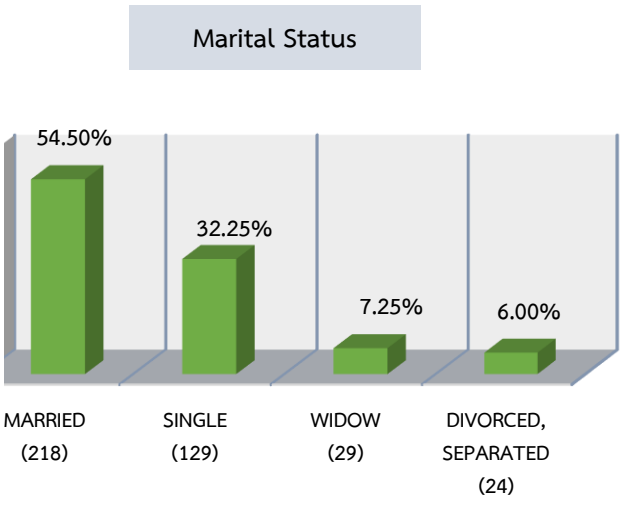
Data survey of Bangkok province From a total of 400 samples. The majority of the samples are males, 50.50 percent, followed by female at 48.50 percent and LGBTQ at 1.00 percent. Most are between 36-45 years old, 28.50 percent, followed by age between 46-59 years, 22.75 percent, and aged 60 years and over, 21.75 percent. Highest education completed at the secondary school level or equivalent, 35.00%. Next, primary school level or lower, 27.75 percent, and associate's degree or equivalent, 19.25 percent. Most of the sample are Buddhists, 95.00 percent, followed by Muslims at 3.50 percent and Christianity at 1.50 percent. Most have the marital status of married, 54.50 percent, followed by single at 32.25 percent and widow at 7.25 percent. Most of their main occupation is the business owner/self-employment, 31.25 percent, followed by private sector employees, 25.75 percent, and general contractors/laborers 24.50 percent. Most have the average monthly income between 10,001-20,000 baht, 44.75 percent, followed by 20,001-30,000 baht, 21.75 percent, and no income, 13.25 percent, respectively.

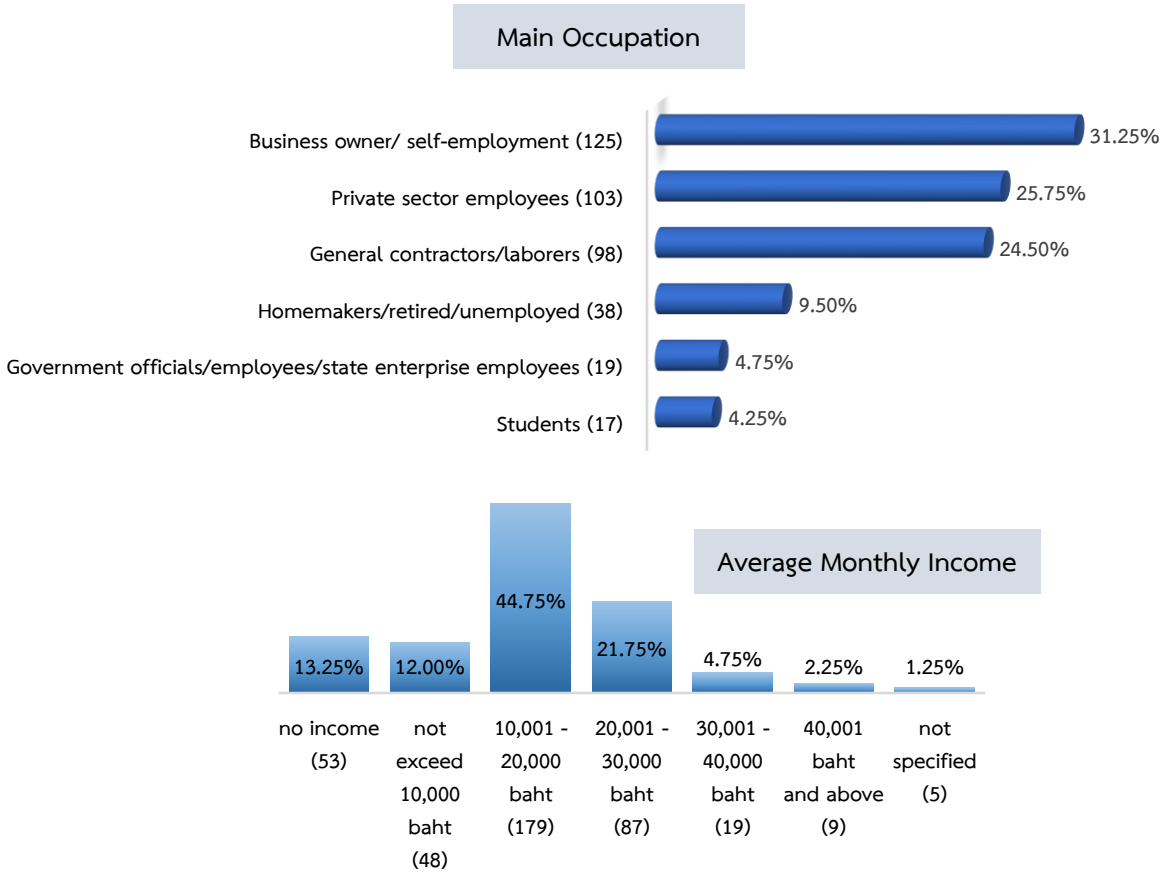




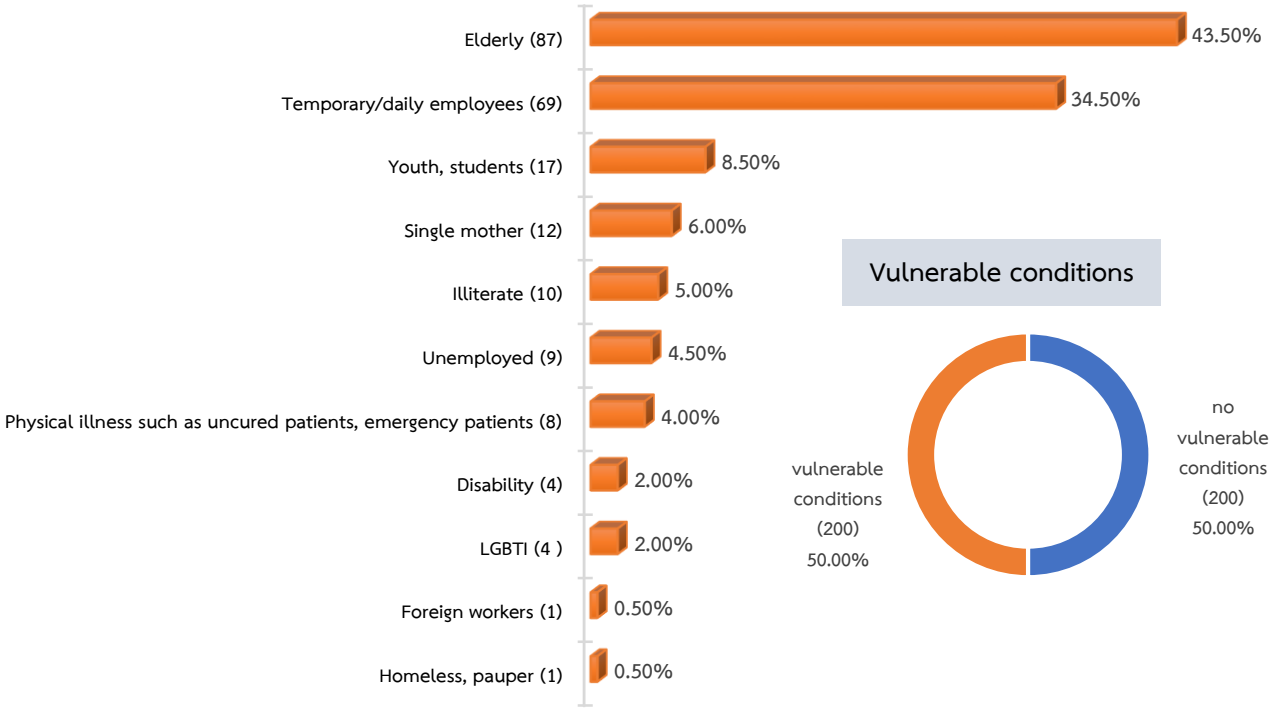








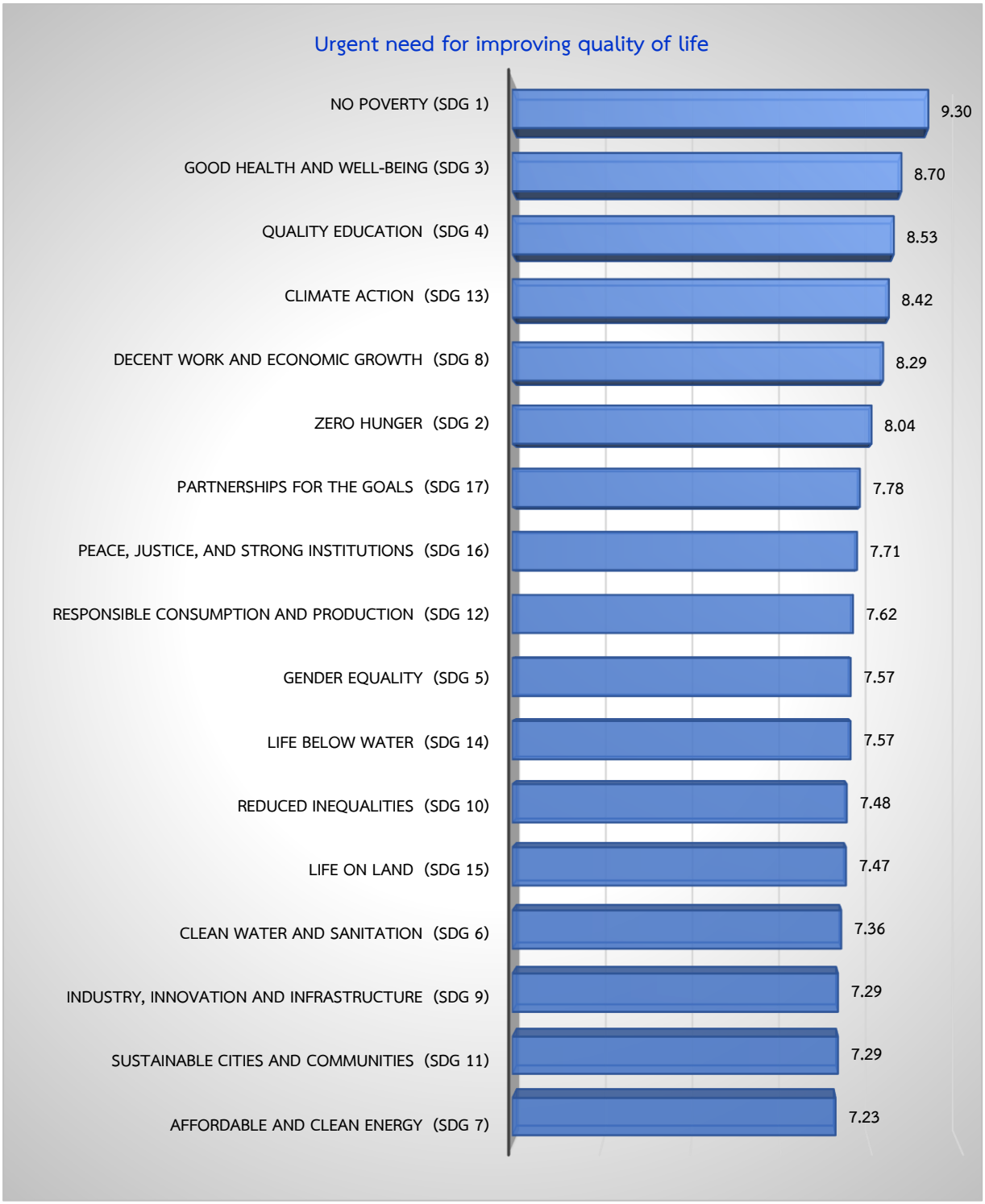
From this survey, it is found that the samples are in fragile and non-vulnerable conditions in equal proportions, 50.00 percent. Among the sample with the most vulnerable conditions are the elderly, at 43.50 percent, followed by temporary/daily employees, 34.50 percent, and youths, students, 8.50 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.30, followed by health and Well-being (SDG 3), with an average of 8.70. Quality Education (SDG 4) average is 8.53, dealing with climate change (SDG 13) average is 8.42 and Decent Work and Economic Growth (SDG 8), the average is 8.29.



As for the government's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 6.40, followed by Life Below Water (SDG 14), the average is 6.18. Clean Water and Sanitation (SDG 6) average is 5.99. Quality Education (SDG 4) average is 5.89, and have Good Health and Well-being (SDG 3) with an average of 5.88.

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.80, followed by Life Below Water (SDG 14), the average is 5.57. Clean Water and Sanitation (SDG 6) average is 5.36, Clean energy that is accessible to everyone (SDG 7) average is 5.13, and Infrastructure, innovation, and industry (SDG 9) and Sustainable Cities and Communities (SDG 11) have the same average value of 5.09, details as shown in Table 4.11.

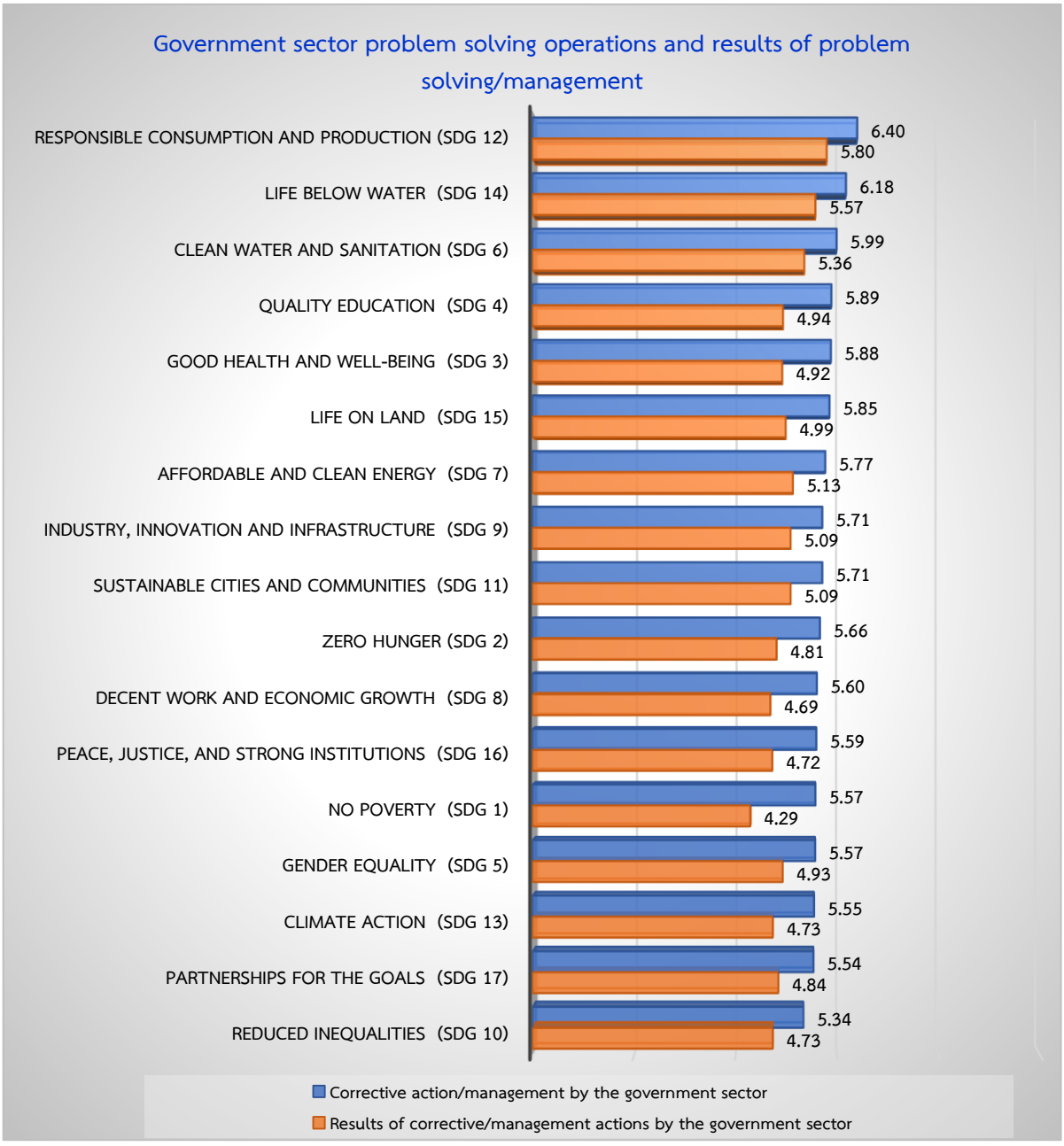


Table 4.11 Mean, standard deviation of urgent needs and actions to solve problems of the government sector. (Bangkok Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**9.30**	**1.058**	**5.57**	**1.723**	**4.29**	**1.437**
poverty alleviation	9.30	1.058	5.57	1.723	4.29	1.437
SDG 2 Hunger elimination	**8.04**	**1.520**	**5.66**	**1.465**	**4.81**	**1.391**
Developing smallholder farmers to promote a sustainable food system	7.82	1.935	5.62	1.596	4.79	1.574
Having Good Health and nutrition *	8.25	1.505	5.70	1.594	4.83	1.481
SDG 3 Have Good Health and Well-being	**8.70**	**1.182**	**5.88**	**1.543**	**4.92**	**1.458**
Having good mental health (Mental Health)	8.51	1.432	5.67	1.576	4.77	1.469
Road safety	8.89	1.372	6.10	1.812	5.08	1.739
SDG 4 Quality Education	**8.53**	**1.256**	**5.89**	**1.506**	**4.94**	**1.369**
Quality Education	8.57	1.504	5.94	1.668	5.03	1.538
Having the skills necessary for a career	8.50	1.372	5.84	1.602	4.84	1.496
SDG 5 Gender Equality	**7.57**	**1.785**	**5.57**	**1.648**	**4.93**	**1.601**
Eliminating sexual violence in private and public spaces	7.57	1.785	5.57	1.648	4.93	1.601
SDG 6 Clean Water and Sanitation	**7.36**	**2.073**	**5.99**	**1.718**	**5.36**	**1.861**
Availability and access to clean water for drinking and use	7.16	2.276	5.82	1.859	5.14	1.996
Solving water pollution problems *	7.57	2.254	6.18	1.964	5.57	2.076
SDG 7 Affordable and Clean Energy	**7.23**	**2.197**	**5.77**	**1.921**	**5.13**	**1.986**
Having and having universal access to clean energy	7.23	2.197	5.77	1.921	5.13	1.986

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.29**	**1.488**	**5.60**	**1.610**	**4.69**	**1.451**
Employment and access to good work opportunities	8.29	1.488	5.60	1.610	4.69	1.451
SDG 9 Industry, Innovation and Infrastructure	**7.29**	**1.780**	**5.71**	**1.639**	**5.09**	**1.637**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.29	1.780	5.71	1.639	5.09	1.637
SDG 10 Reduced Inequalities	**7.48**	**1.847**	**5.34**	**1.557**	**4.73**	**1.566**
Participation and equal access to opportunities for women and gender diverse people	7.48	1.847	5.34	1.557	4.73	1.566
SDG 11 Sustainable Cities and Communities	**7.29**	**1.780**	**5.71**	**1.639**	**5.09**	**1.637**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.29	1.780	5.71	1.639	5.09	1.637
SDG 12 Responsible Consumption and Production	**7.62**	**2.246**	**6.40**	**1.977**	**5.80**	**2.140**
Waste Management (Reduce Reuse Recycle)	7.62	2.246	6.40	1.977	5.80	2.140
SDG 13 Climate Action	**8.42**	**1.240**	**5.55**	**1.518**	**4.73**	**1.368**
Solving air pollution problems	9.02	1.546	5.39	1.751	4.41	1.611
Raising awareness of the impacts of climate change or global warming. (Climate Change)	7.83	1.517	5.71	1.667	5.07	1.619

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**7.57**	**2.254**	**6.18**	**1.964**	**5.57**	**2.076**
Solving water pollution problems *	7.57	2.254	6.18	1.964	5.57	2.076
SDG 15 Life on Land	**7.47**	**1.557**	**5.85**	**1.446**	**4.99**	**1.449**
Coping with and reducing the impact of natural disasters	7.60	1.769	6.18	1.637	5.05	1.575
Participatory management of forests and green areas	7.34	1.654	5.52	1.627	4.94	1.628
SDG 16 Peace, Justice and Strong Institutions	**7.71**	**1.616**	**5.59**	**1.527**	**4.72**	**1.522**
Managing quality public services and disseminating public information in a transparent manner	7.71	1.616	5.59	1.527	4.72	1.522
SDG 17 Partnerships for the Goals	**7.78**	**1.577**	**5.54**	**1.552**	**4.84**	**1.564**
Participation in proposing policies for a better quality of life	7.78	1.577	5.54	1.552	4.84	1.564

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

As for guidelines for improving the quality of life, the examples suggest that policies should be developed and improved. The most appropriate local products are 49.75 percent. Second, social and economic projects should be created for comprehensive local development. 43.00 percent, There is no corruption and increases efficiency of information disclosure for transparent management, 41.00 percent, details as shown in Table 4.12

Table 4.12 Number and percentage of approaches to improving quality of life (Bangkok Province)

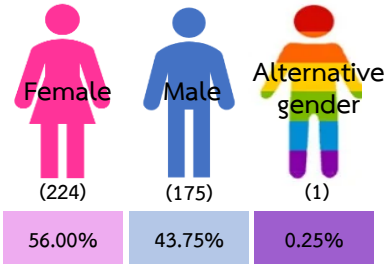
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	199	49.75
Appropriate local policies are developed and improved.	172	43.00
There is no corruption and the efficiency of information disclosure is increased for transparent management.	164	41.00
Knowledge about environmental conservation and Waste management is provided.	144	36.00
There is a space to exchange local knowledge between community members and apply it to development.	140	35.00
Social and economic projects are created for comprehensive local development.	136	34.00
Cooperation is created to create effective development policies in the community.	126	31.50
Roles of participation in the community are promoted equally for all genders.	119	29.75

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

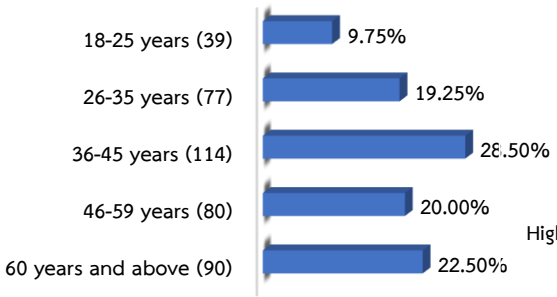
2.6 Phetchaburi Province

Part 1 Information about general characteristics

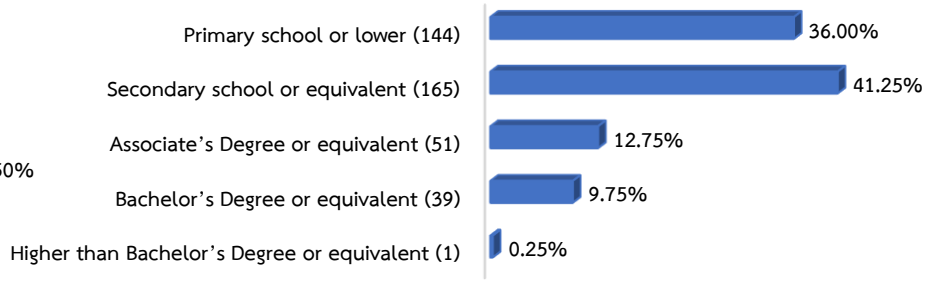
Survey data of Phetchaburi Province from a total of 400 samples, the majority of the sample is female, 56.00 percent, followed by males at 43.75 percent and LGBTQ at 0.25 percent. Most are between 36-45 years old, 28.50 percent, followed by those aged 60 years and over, 22.50 percent, and those aged between 46-59 years, 20.00 percent. The highest number of graduates is at the secondary school level or equivalent, at 41.25 percent. Next, primary school level or lower, 36.00 percent, and associate's degree or equivalent, 12.75 percent. Most of the sample are Buddhists, at 97.75 percent, followed by Christian at 1.25 percent and Muslims at 1.00 percent. Marital status of married is the highest at 64.25, followed by single at 23.75 percent and divorced and separated at 6.75 percent. Their main occupation is general contractor/laborer, the most at 25.25 percent. Next is the owner of a private business/self-employed, 24.25 percent, and are farmers/fishermen, 22.25 percent. Most have an average monthly income of 10,001-20,000 baht, 38.25 percent, followed by not more than 10,000 baht, 26.75 percent, and 20,001-30,000 baht, 16.25 percent, respectively.



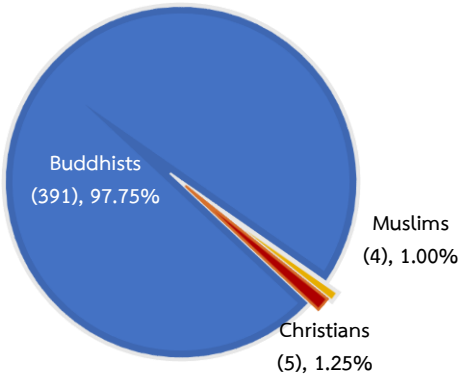
Age



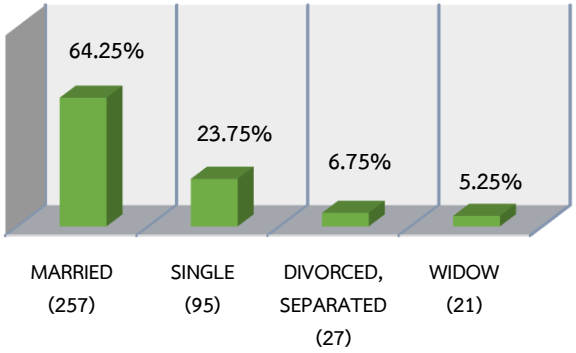
Education

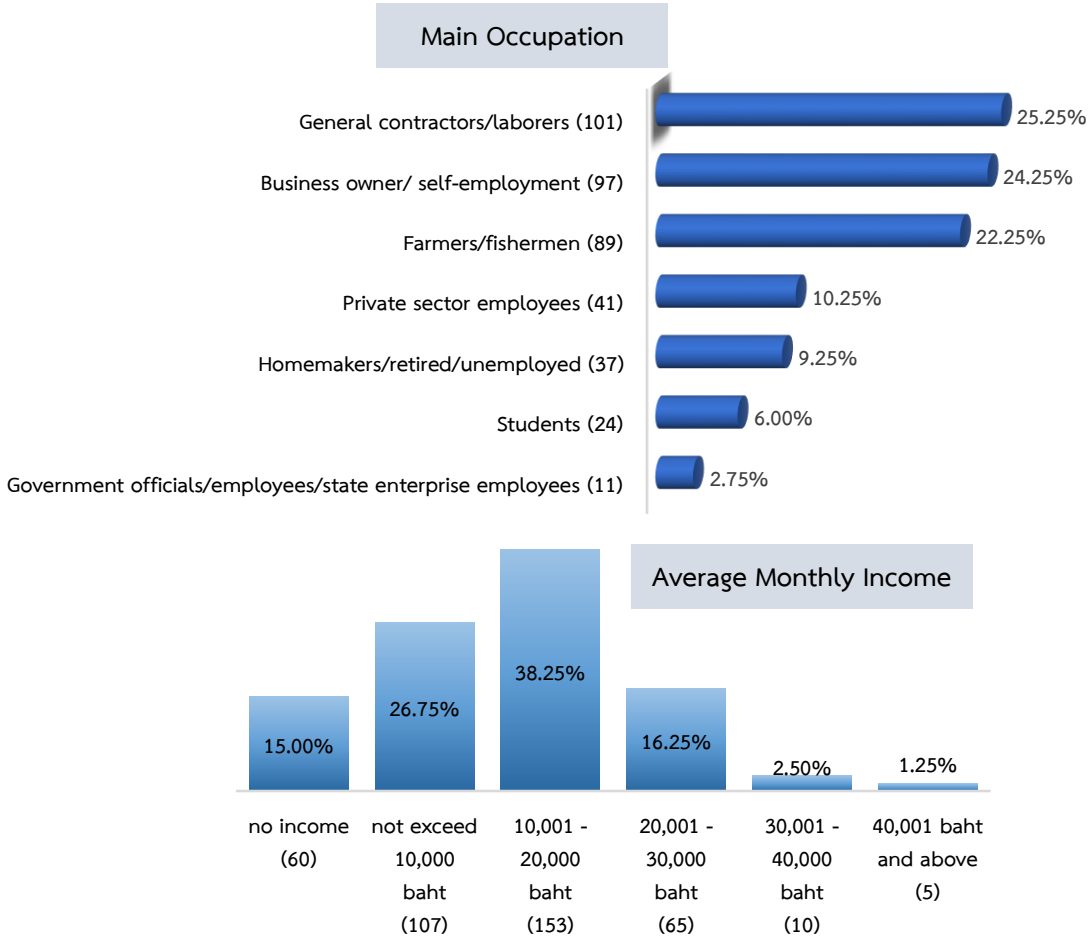


Religion

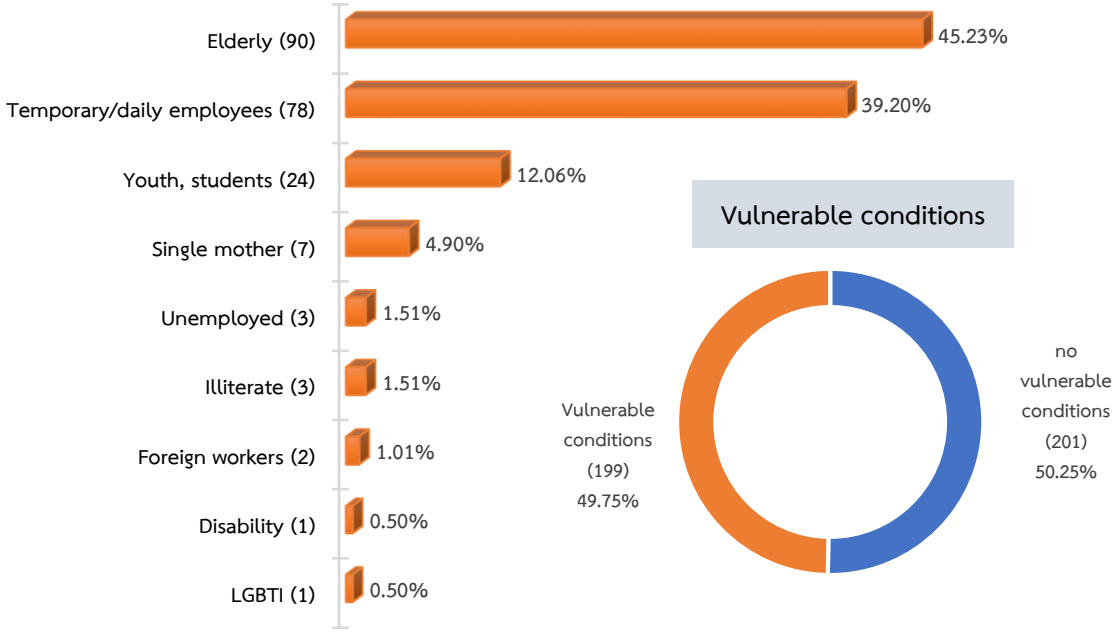


Marital Status





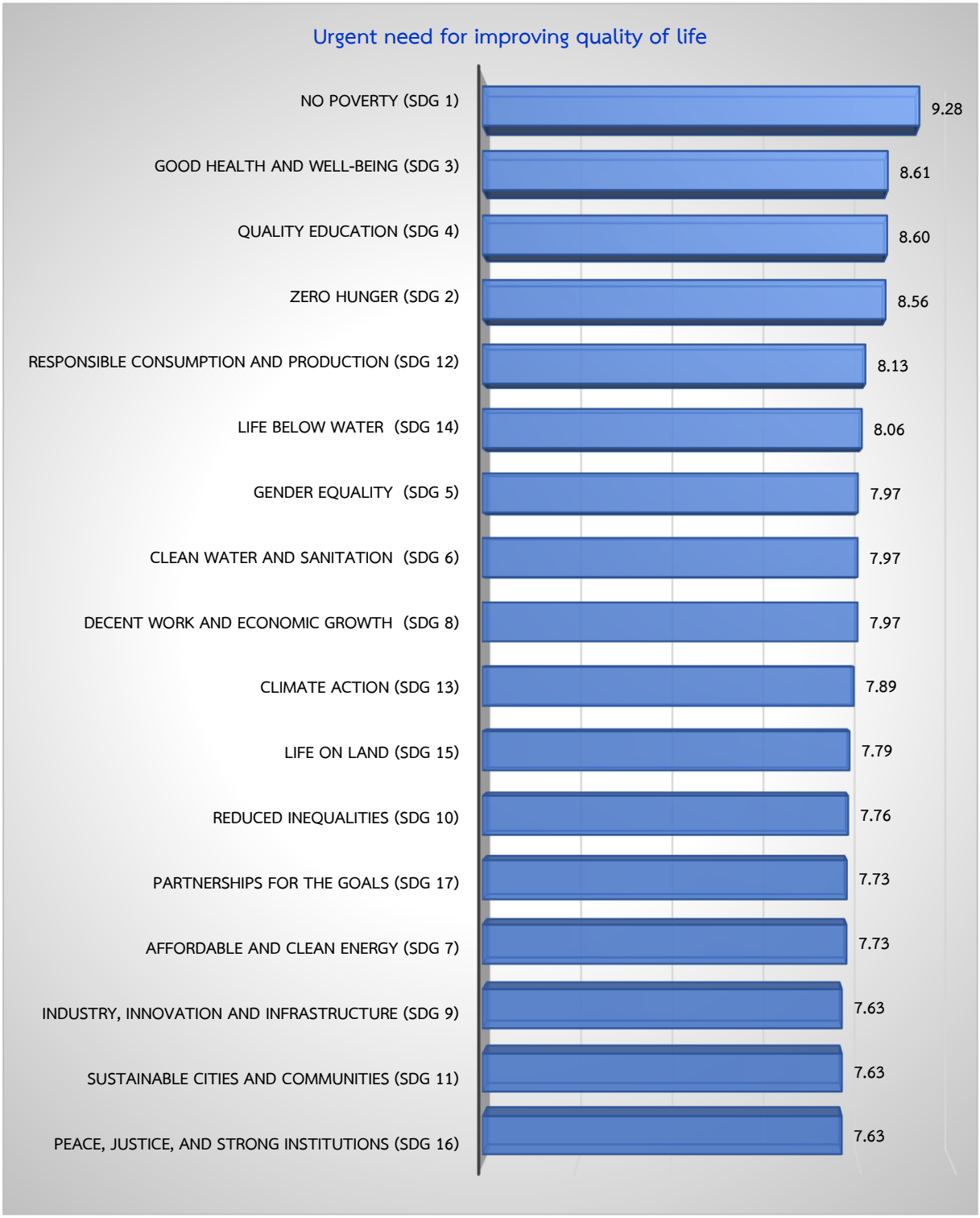
From this survey, it is found that 50.25 percent of the samples are not in vulnerable conditions and 49.75 percent are in vulnerable conditions. Among the samples with vulnerable conditions, they are the elderly, the most at 45.23 percent, followed by temporary/daily employees, 39.20 percent and are youth, students, 12.06 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.28, followed by health and Well-being (SDG 3), with an average of 8.61, and Quality Education (SDG 4), the average is 8.60.



As for the government's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.21. Next is Quality Education (SDG 4), the average is 5.16. Health and Well-being (SDG 3) average is 4.93. Life Below Water (SDG 14) average value is 4.89 and Life on Lands (SDG 15) average value is 4.87.

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) had the highest average value. The average is 4.34, followed by Quality Education (SDG 4), the average is 4.18. Life Below Water (SDG 14) average is 4.14. Life on Lands (SDG 15) average value is 4.13, and Decent Work and Economic Growth (SDG 8), the average is 4.12, details as shown in Table 4.13.

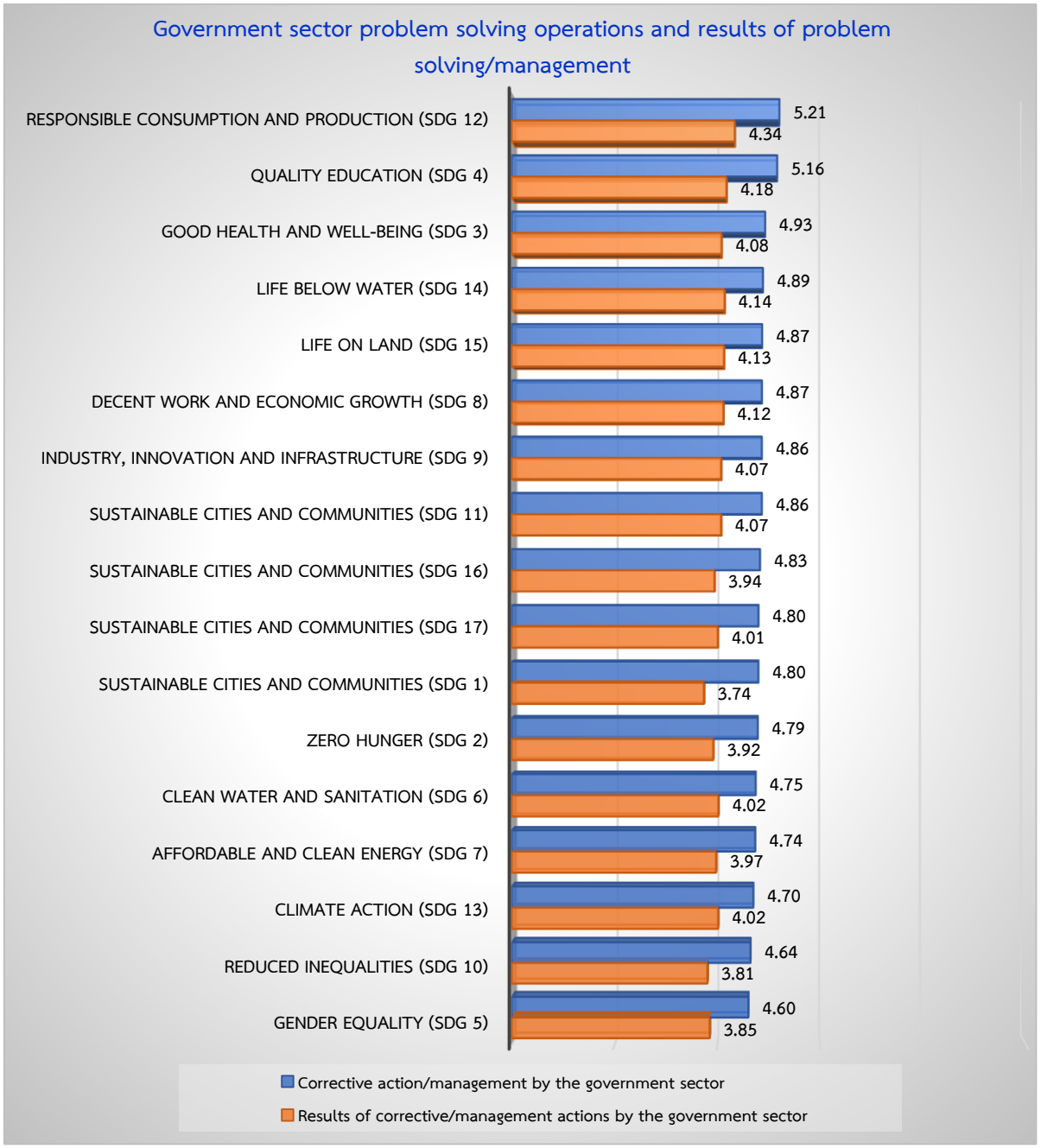


Table 4.13 Mean, standard deviation of urgent needs and actions to solve problems of the government sector (Petchaburi Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**9.28**	**1.389**	**4.80**	**1.706**	**3.74**	**1.498**
poverty alleviation	9.28	1.389	4.80	1.706	3.74	1.498
SDG 2 Hunger elimination	**8.56**	**1.342**	**4.79**	**1.335**	**3.92**	**1.194**
Developing smallholder farmers to promote a sustainable food system	8.54	1.570	4.72	1.540	3.84	1.392
Having Good Health and nutrition *	8.59	1.445	4.86	1.486	4.01	1.292
SDG 3 Have Good Health and Well-being	**8.61**	**1.291**	**4.93**	**1.431**	**4.08**	**1.239**
Having good mental health (Mental Health)	8.51	1.453	4.86	1.475	4.00	1.287
Road safety	8.70	1.478	5.02	1.661	4.17	1.470
SDG 4 Quality Education	**8.60**	**1.418**	**5.16**	**1.394**	**4.18**	**1.183**
Quality Education	8.75	1.511	5.15	1.583	4.28	1.367
Having the skills necessary for a career	8.44	1.588	5.18	1.543	4.08	1.270
SDG 5 Gender Equality	**7.97**	**1.716**	**4.60**	**1.491**	**3.85**	**1.269**
Eliminating sexual violence in private and public spaces	7.97	1.716	4.60	1.491	3.85	1.269
SDG 6 Clean Water and Sanitation	**7.97**	**1.449**	**4.75**	**1.299**	**4.02**	**1.212**
Availability and access to clean water for drinking and use	7.88	1.637	4.60	1.543	3.89	1.348
Solving water pollution problems *	8.06	1.745	4.89	1.507	4.14	1.465
SDG 7 Affordable and Clean Energy	**7.73**	**1.629**	**4.74**	**1.497**	**3.97**	**1.296**
Having and having universal access to clean energy	7.73	1.629	4.74	1.497	3.97	1.296

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**7.97**	**1.486**	**4.87**	**1.553**	**4.12**	**1.319**
Employment and access to good work opportunities	7.97	1.486	4.87	1.553	4.12	1.319
SDG 9 Industry, Innovation and Infrastructure	**7.63**	**1.571**	**4.86**	**1.534**	**4.07**	**1.353**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.63	1.571	4.86	1.534	4.07	1.353
SDG 10 Reduced Inequalities	**7.76**	**1.655**	**4.64**	**1.502**	**3.81**	**1.289**
Participation and equal access to opportunities for women and gender diverse people	7.76	1.655	4.64	1.502	3.81	1.289
SDG 11 Sustainable Cities and Communities	**7.63**	**1.571**	**4.86**	**1.534**	**4.07**	**1.353**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.63	1.571	4.86	1.534	4.07	1.353
SDG 12 Responsible Consumption and Production	**8.13**	**1.677**	**5.21**	**1.627**	**4.34**	**1.587**
Waste Management (Reduce Reuse Recycle)	8.13	1.677	5.21	1.627	4.34	1.587
SDG 13 Climate Action	**7.89**	**1.416**	**4.70**	**1.437**	**4.02**	**1.239**
Solving air pollution problems	8.06	1.731	4.52	1.575	3.86	1.348
Raising awareness of the impacts of climate change or global warming. (Climate Change)	7.72	1.577	4.87	1.626	4.16	1.409

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**8.06**	**1.745**	**4.89**	**1.507**	**4.14**	**1.465**
Solving water pollution problems *	8.06	1.745	4.89	1.507	4.14	1.465
SDG 15 Life on Land	**7.79**	**1.389**	**4.87**	**1.358**	**4.13**	**1.235**
Coping with and reducing the impact of natural disasters	7.99	1.695	4.89	1.500	4.13	1.415
Participatory management of forests and green areas	7.60	1.515	4.86	1.524	4.13	1.356
SDG 16 Peace, Justice and Strong Institutions	**7.63**	**1.544**	**4.83**	**1.344**	**3.94**	**1.276**
Managing quality public services and disseminating public information in a transparent manner	7.63	1.544	4.83	1.344	3.94	1.276
SDG 17 Partnerships for the Goals	**7.73**	**1.580**	**4.80**	**1.463**	**4.01**	**1.310**
Participation in proposing policies for a better quality of life	7.73	1.580	4.80	1.463	4.01	1.310

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, most of the sample agreed with no corruption and increased efficiency of information disclosure for transparent administration, 50.25 percent. Next, there should be knowledge about environmental conservation and Waste management, 48.25 percent. There should be no corruption and there should be a space to exchange local knowledge between community members and apply it to development, 40.50%, details as shown in Table 4.14.

Table 4.14 Number and percentage of approaches to improving quality of life (Petchaburi Province)

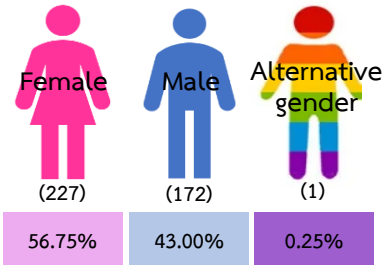
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	201	50.25
Appropriate local policies are developed and improved.	193	48.25
There is no corruption and the efficiency of information disclosure is increased for transparent management.	162	40.50
Knowledge about environmental conservation and Waste management is provided.	157	39.25
There is a space to exchange local knowledge between community members and apply it to development.	153	38.25
Social and economic projects are created for comprehensive local development.	125	31.25
Cooperation is created to create effective development policies in the community.	111	27.75
Roles of participation in the community are promoted equally for all genders.	96	24.00

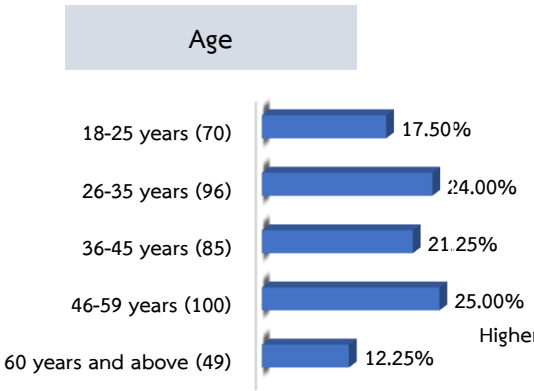
Note: Respondents can choose 3 answers, with a sample of 400 respondents.

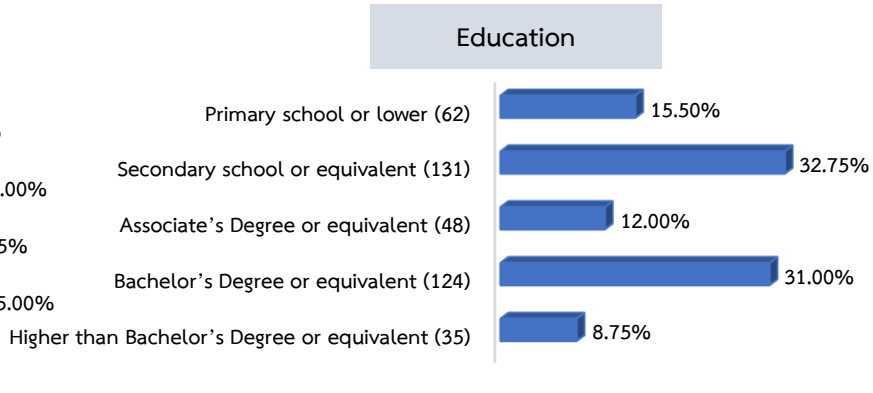
2.7 Udon Thani Province

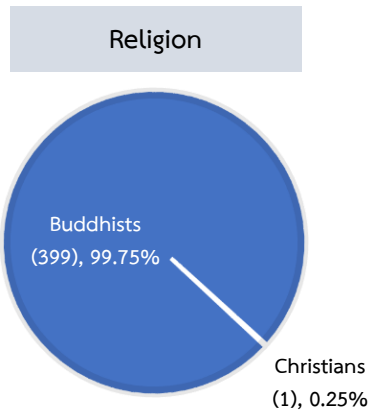
Part 1 Information about general characteristics

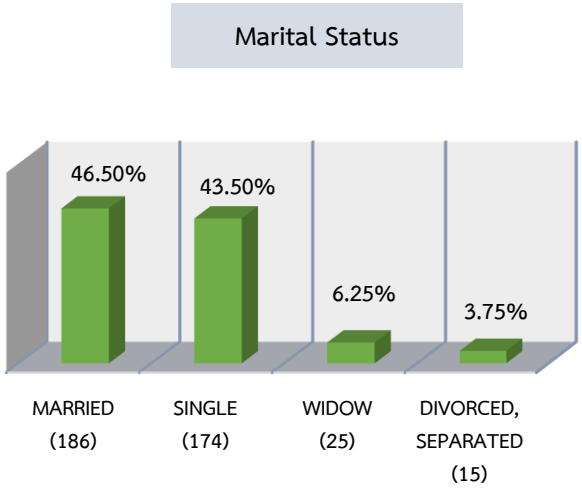
Data survey of Udon Thani province From a total of 400 samples, the majority of the sample is female, 56.75 percent, followed by males at 43.00 percent and LGBTQ at 0.25 percent. Most are between 46-59 years old, 25.00 percent, followed by ages between 26-35 years, 24.00 percent, and ages between 36-45 years, 21.25 percent. The highest number of graduates is at the secondary school level or equivalent, 32.75 percent. Next, bachelor's degree or equivalent, 31.00 percent. and primary school level or lower 15.50 percent. Most of the sample is Buddhist (99.75%) and Christian (0.25%). Marital status of married is the highest at 46.50 percent, followed by single at 43.50 percent and widow at 6.25 percent. Their main occupation is as a civil servant/employee/state enterprise employee, the most at 40.25 percent. Next are private sector employees, 12.25 percent, and being the business owner/self-employment, 11.75 percent. Most have an average monthly income 10,001-20,000 baht, 29.00 percent, followed by not more than 10,000 baht, 27.50 percent, and 20,001-30,000 baht, 14.75 percent, respectively.

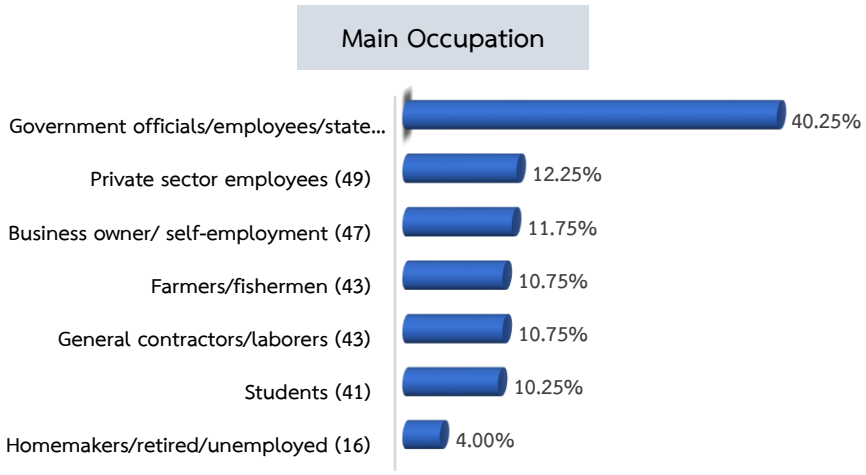


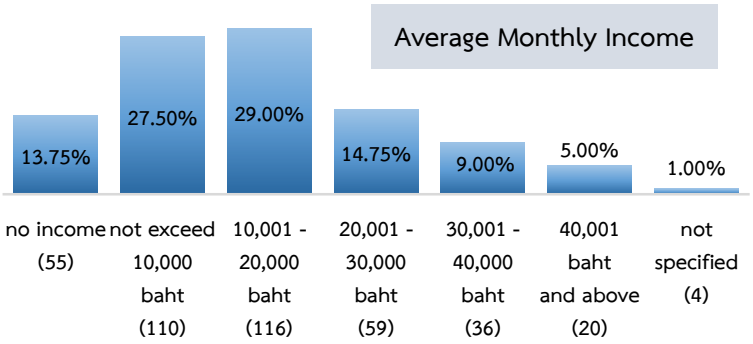




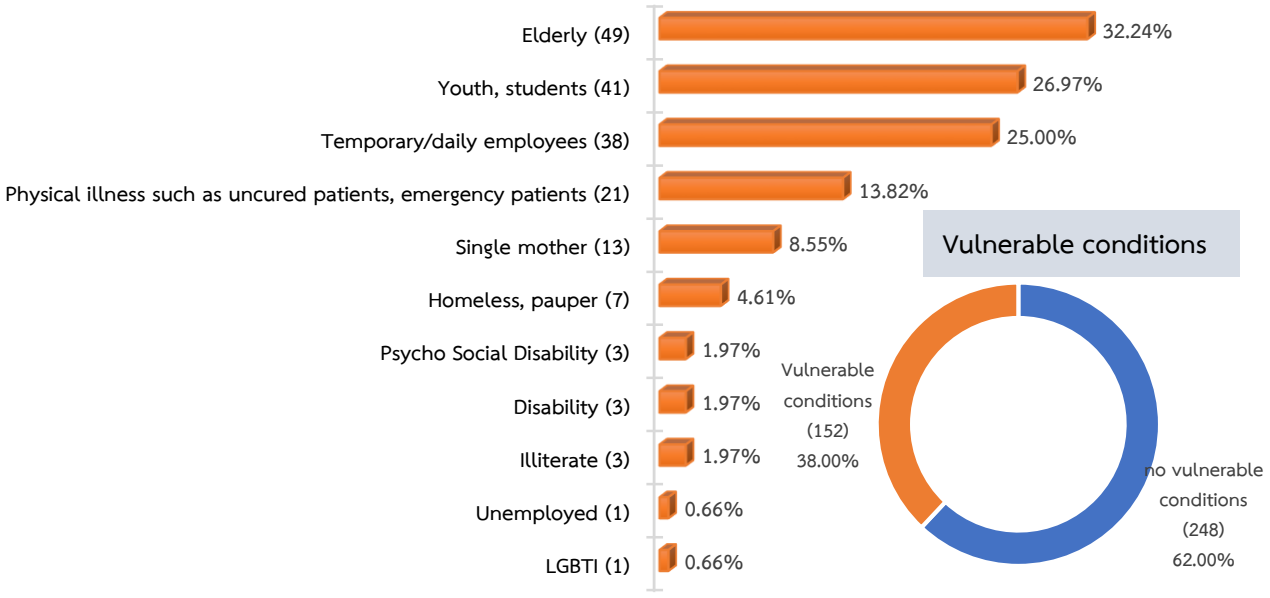








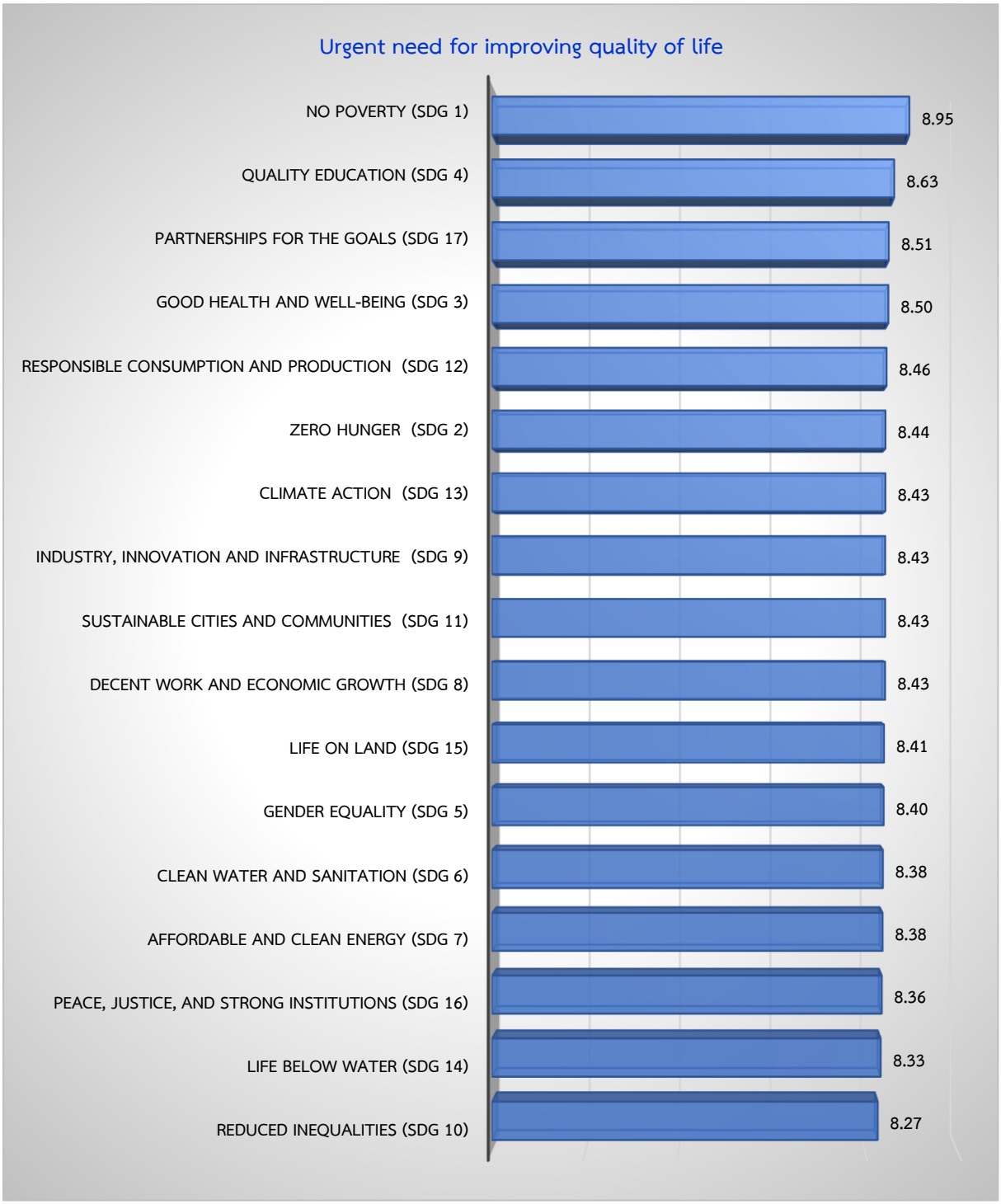
From this survey, it is found that 62.00% of the samples are not in vulnerable conditions and 38.00% are in vulnerable conditions. Among the samples with vulnerable conditions, most are the elderly, 32.24 percent, followed by youth, students at 26.97 percent, and are temporary/daily employees, 25.00 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.95, followed by Quality Education (SDG 4), the average is 8.63. Partnerships for the Goals (SDG 17) average is 8.51. Good Health and Well-being (SDG 3) has an average of 8.50, and Responsible Consumption and Production (SDG 12), the average is 8.45.



As for the government's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) has the highest average. The average is 7.29. Next is Quality Education (SDG 4), the average is 7.15. Clean Water and Sanitation (SDG 6) average is 7.10. Gender Equality (SDG 5) and Good Health and Well-being (SDG 3) have the same average value of 7.09, and hunger elimination (SDG 2) and poverty elimination (SDG 1) have the same average value of 7.08.

As for the results of the government sector's corrective/management actions, it is found that Quality Education (SDG 4) had the highest average. The average is 6.48. Next is Gender Equality (SDG 5), the average is 6.42. Health and Well-being (SDG 3) average is 6.40. Reduce inequality (SDG 10) average is 6.38, and hunger elimination (SDG 2) with an average value of 6.36, details as shown in Table 4.15.

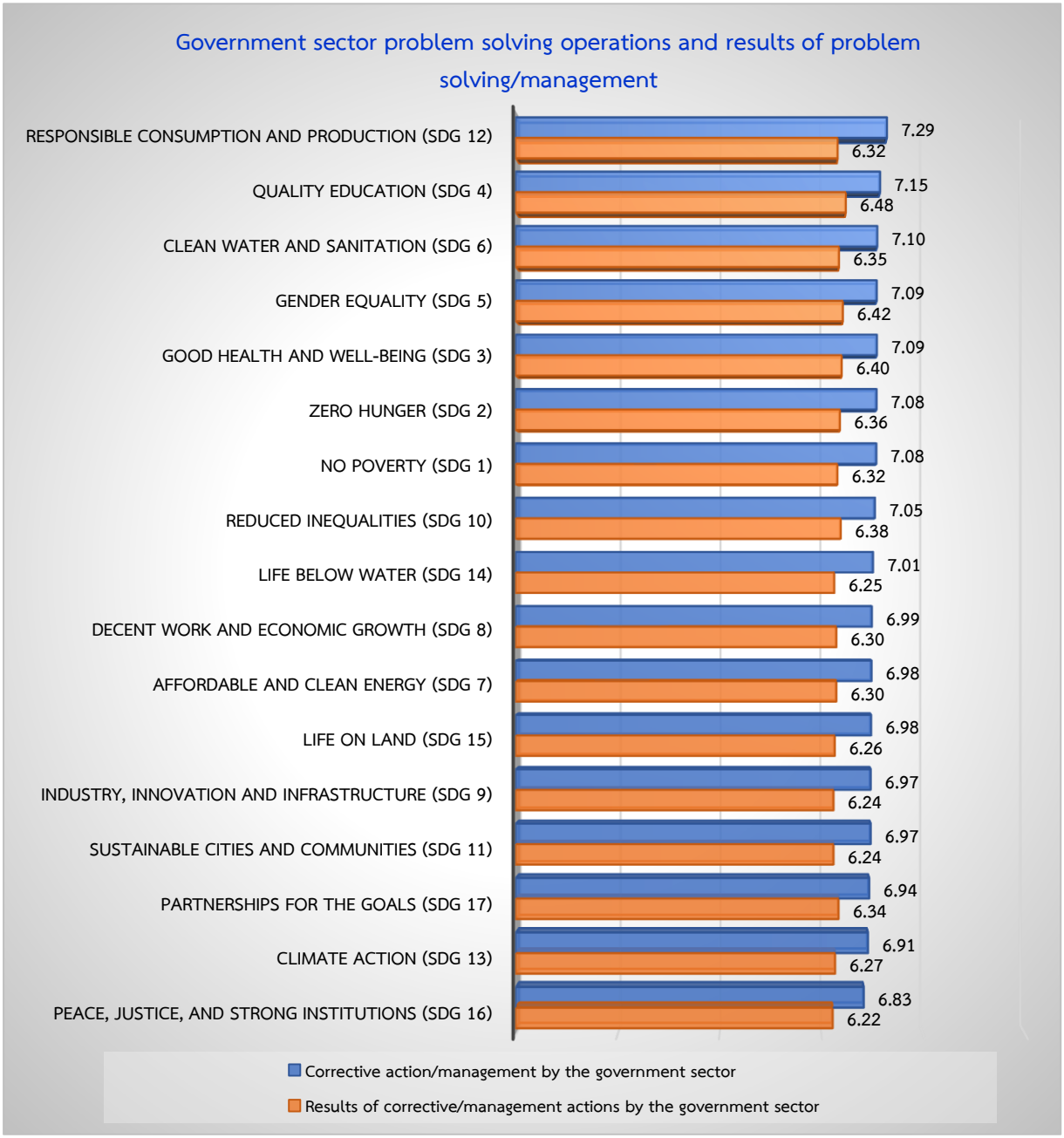


Table 4.15 Mean, standard deviation of urgent needs and actions to solve problems of the government sector. (Udon Thani Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**8.95**	**1.693**	**7.08**	**2.296**	**6.32**	**2.307**
poverty alleviation	8.95	1.693	7.08	2.296	6.32	2.307
SDG 2 Hunger elimination	**8.44**	**1.617**	**7.08**	**2.085**	**6.36**	**2.082**
Developing smallholder farmers to promote a sustainable food system	8.46	1.796	7.09	2.203	6.38	2.204
Having Good Health and nutrition *	8.41	1.770	7.10	2.183	6.39	2.145
SDG 3 Have Good Health and Well-being	**8.50**	**1.573**	**7.09**	**2.099**	**6.40**	**2.113**
Having good mental health (Mental Health)	8.48	1.740	7.07	2.158	6.40	2.177
Road safety	8.55	1.710	7.14	2.229	6.41	2.217
SDG 4 Quality Education	**8.63**	**1.677**	**7.15**	**2.073**	**6.48**	**2.120**
Quality Education	8.72	1.763	7.12	2.187	6.47	2.231
Having the skills necessary for a career	8.56	1.796	7.18	2.172	6.49	2.214
SDG 5 Gender Equality	**8.40**	**1.786**	**7.09**	**2.264**	**6.42**	**2.153**
Eliminating sexual violence in private and public spaces	8.40	1.786	7.09	2.264	6.42	2.153
SDG 6 Clean Water and Sanitation	**8.38**	**1.628**	**7.10**	**2.088**	**6.35**	**2.081**
Availability and access to clean water for drinking and use	8.46	1.758	7.21	2.186	6.47	2.209
Solving water pollution problems *	8.33	1.877	7.01	2.252	6.25	2.200
SDG 7 Affordable and Clean Energy	**8.38**	**1.799**	**6.98**	**2.206**	**6.30**	**2.182**
Having and having universal access to clean energy	8.38	1.799	6.98	2.206	6.30	2.182

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.43**	**1.788**	**6.99**	**2.244**	**6.30**	**2.211**
Employment and access to good work opportunities	8.43	1.788	6.99	2.244	6.30	2.211
SDG 9 Industry, Innovation and Infrastructure	**8.43**	**1.793**	**6.97**	**2.238**	**6.24**	**2.201**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.43	1.793	6.97	2.238	6.24	2.201
SDG 10 Reduced Inequalities	**8.27**	**1.846**	**7.05**	**2.193**	**6.38**	**2.166**
Participation and equal access to opportunities for women and gender diverse people	8.27	1.846	7.05	2.193	6.38	2.166
SDG 11 Sustainable Cities and Communities	**8.43**	**1.793**	**6.97**	**2.238**	**6.24**	**2.201**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.43	1.793	6.97	2.238	6.24	2.201
SDG 12 Responsible Consumption and Production	**8.46**	**1.908**	**7.29**	**2.342**	**6.32**	**2.276**
Waste Management (Reduce Reuse Recycle)	8.46	1.908	7.29	2.342	6.32	2.276
SDG 13 Climate Action	**8.43**	**1.744**	**6.91**	**2.200**	**6.27**	**2.105**
Solving air pollution problems	8.48	1.819	6.85	2.288	6.23	2.181
Raising awareness of the impacts of climate change or global warming. (Climate Change)	8.41	1.872	6.98	2.298	6.31	2.222

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**8.33**	**1.877**	**7.01**	**2.252**	**6.25**	**2.200**
Solving water pollution problems *	8.33	1.877	7.01	2.252	6.25	2.200
SDG 15 Life on Land	**8.41**	**1.667**	**6.98**	**2.161**	**6.26**	**2.138**
Coping with and reducing the impact of natural disasters	8.37	1.791	7.01	2.186	6.31	2.183
Participatory management of forests and green areas	8.45	1.861	6.99	2.300	6.27	2.273
SDG 16 Peace, Justice and Strong Institutions	**8.36**	**1.895**	**6.83**	**2.373**	**6.22**	**2.349**
Managing quality public services and disseminating public information in a transparent manner	8.36	1.895	6.83	2.373	6.22	2.349
SDG 17 Partnerships for the Goals	**8.51**	**1.701**	**6.94**	**2.340**	**6.34**	**2.303**
Participation in proposing policies for a better quality of life	8.51	1.701	6.94	2.340	6.34	2.303

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, most of the sample agreed that appropriate local policies should be developed and improved, 56.75 percent, followed by no corruption and increased efficiency of information disclosure for transparent administration, 46.00 percent, and there should be social and economic projects for thorough local development, 38.25 percent, details as shown in Table 4.16.

Table 4.16 Number and percentage of approaches to improving quality of life (Udon Thani Province)

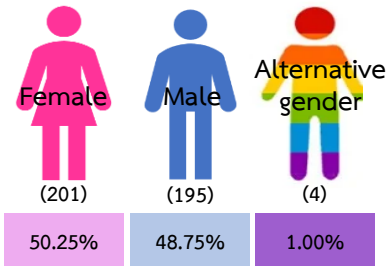
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	227	56.75
Appropriate local policies are developed and improved.	184	46.00
There is no corruption and the efficiency of information disclosure is increased for transparent management.	153	38.25
Knowledge about environmental conservation and Waste management is provided.	143	35.75
There is a space to exchange local knowledge between community members and apply it to development.	137	34.25
Social and economic projects are created for comprehensive local development.	129	32.25
Cooperation is created to create effective development policies in the community.	125	31.25
Roles of participation in the community are promoted equally for all genders.	99	24.75

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

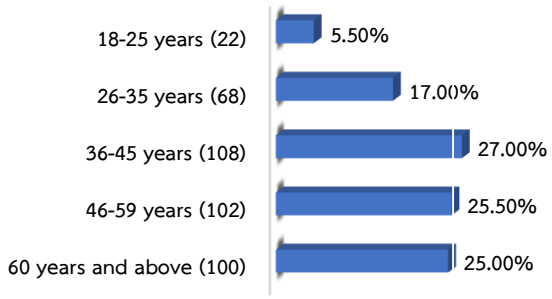
2.8 Nakhon Ratchasima Province

Part 1 Information about general characteristics

Data survey of Nakhon Ratchasima province From a total of 400 samples, the majority are female, 50.25 percent, followed by males at 48.75 percent and LGBTQ at 1.00 percent. Most are between 36-45 years old, 27.00 percent, followed by 46-59 years old, 25.50 percent, and aged 60 years and over, 25.00 percent. The highest level of education is completed at the secondary school level or equivalent, at 33.25 percent, followed by at the primary school level or below, at 30.25 percent, and bachelor's degree or equivalent, 20.25 percent. Most of the sample is Buddhists at 99.25 percent, followed by Muslims at 0.50 percent and Christian at 0.25 percent. Most have marital status of married at 61.75 percent, followed by single at 18.00 percent and widow at 13.50 percent. Their main occupation is farmers/fishermen at the most, 20.00 percent, followed by general contractors/laborers, 19.25 percent, and being the business owner/self-employment, 17.50 percent. Most have an average monthly income of not more than 10,000 baht, 35.00 percent followed by between 10,001-20,000 baht, 30.75 percent, and between 20,001-30,000 baht, 13.25 percent, respectively.



Age



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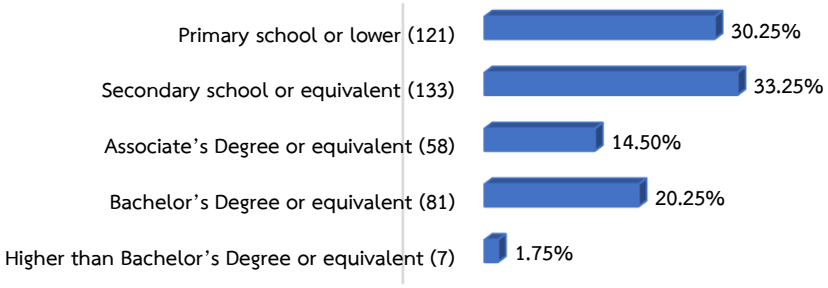
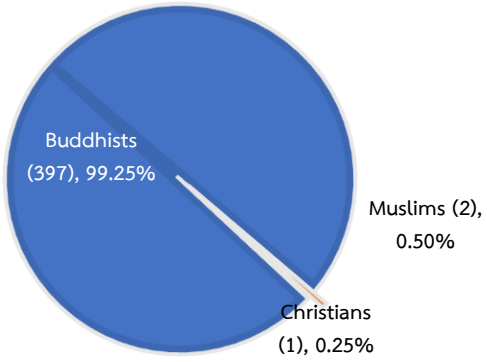
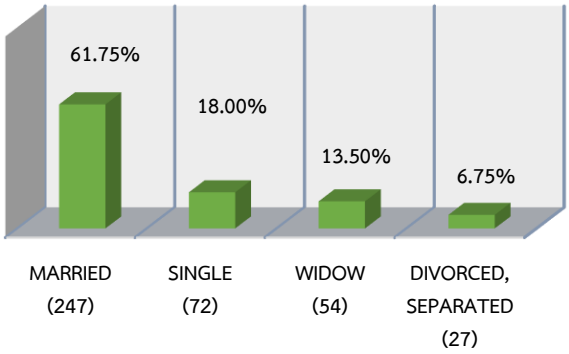
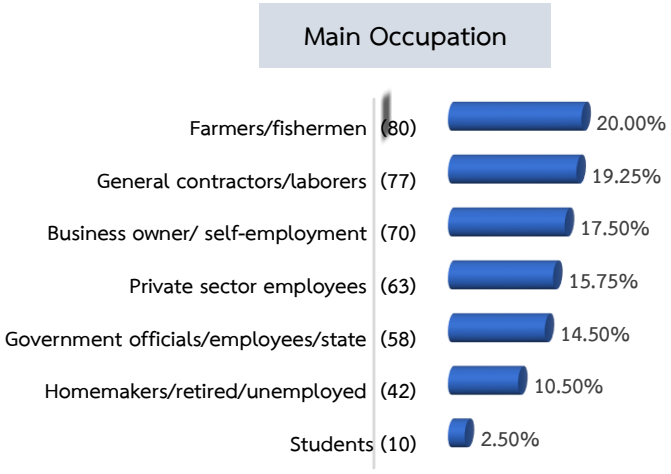


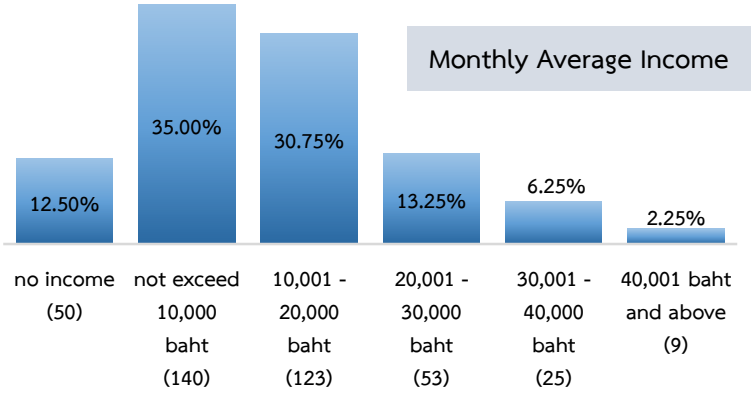
Religion



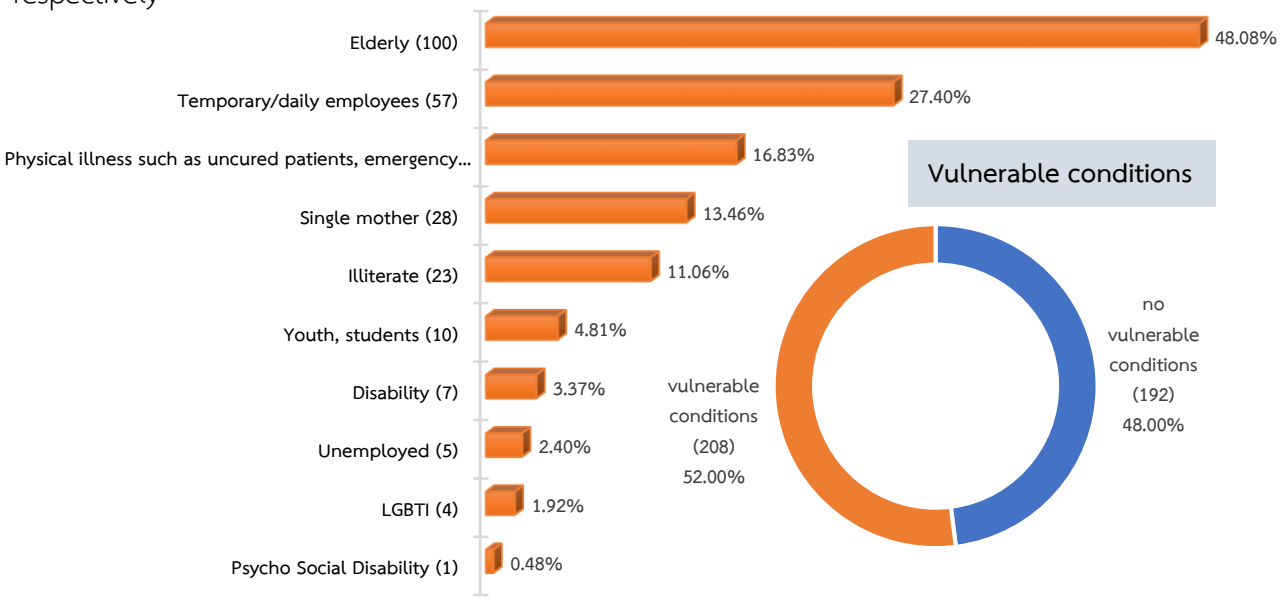
Marital Status







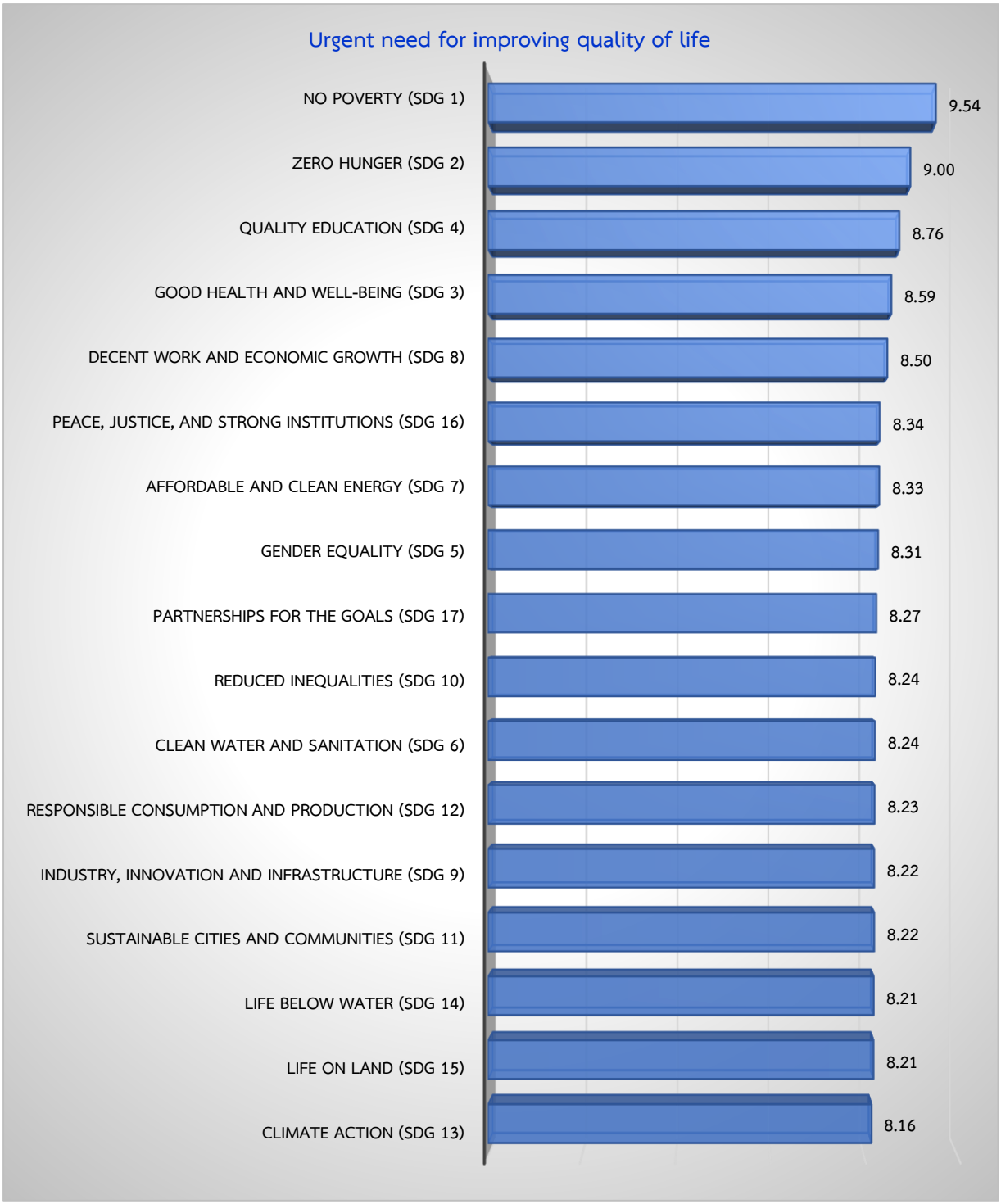
From this survey, it is found that 52.00% of the samples are in vulnerable conditions and 48.00% are not in vulnerable conditions. Among the samples with vulnerable conditions, most are the elderly, 48.08 percent, followed by temporary/daily employees at 27.40 percent, and having physical illnesses such as uncured patients and emergency patients, 16.83 percent, respectively



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.54. Next is Hunger elimination (SDG 2), the average is 9.00. Quality Education (SDG 4) average is 8.76. Good Health and Well-being (SDG 3) has an average value of 8.59 and Decent Work and Economic Growth (SDG 8) has an average value of 8.50.



For the government sector's implementation of problem solving, it is found that Clean Water and Sanitation (SDG 6) had the highest average. The average is 5.73. Next to Life on Lands (SDG 15), the average is 5.69. Quality Education (SDG 4) average is 5.63. Reduce inequality (SDG 10) and Life Below Water (SDG 14) have the same average value of 5.57, and Responsible Consumption and Production (SDG 12), the average is 5.56.

As for the results of the government sector's corrective/management actions, it is found that reducing inequality (SDG 10) had the highest average. The average is 4.88, followed by Clean Water and Sanitation (SDG 6), the average is 4.87. Life Below Water (SDG 14) average is 4.86. Industry, Innovation and Infrastructure (SDG 9) and Sustainable Cities and Communities (SDG 11) have the same average value of 4.85, and Affordable and Clean Energy (SDG 7) and Partnerships for the Goals (SDG 17) have the same average value of 4.83, details as shown in Table 4.17.

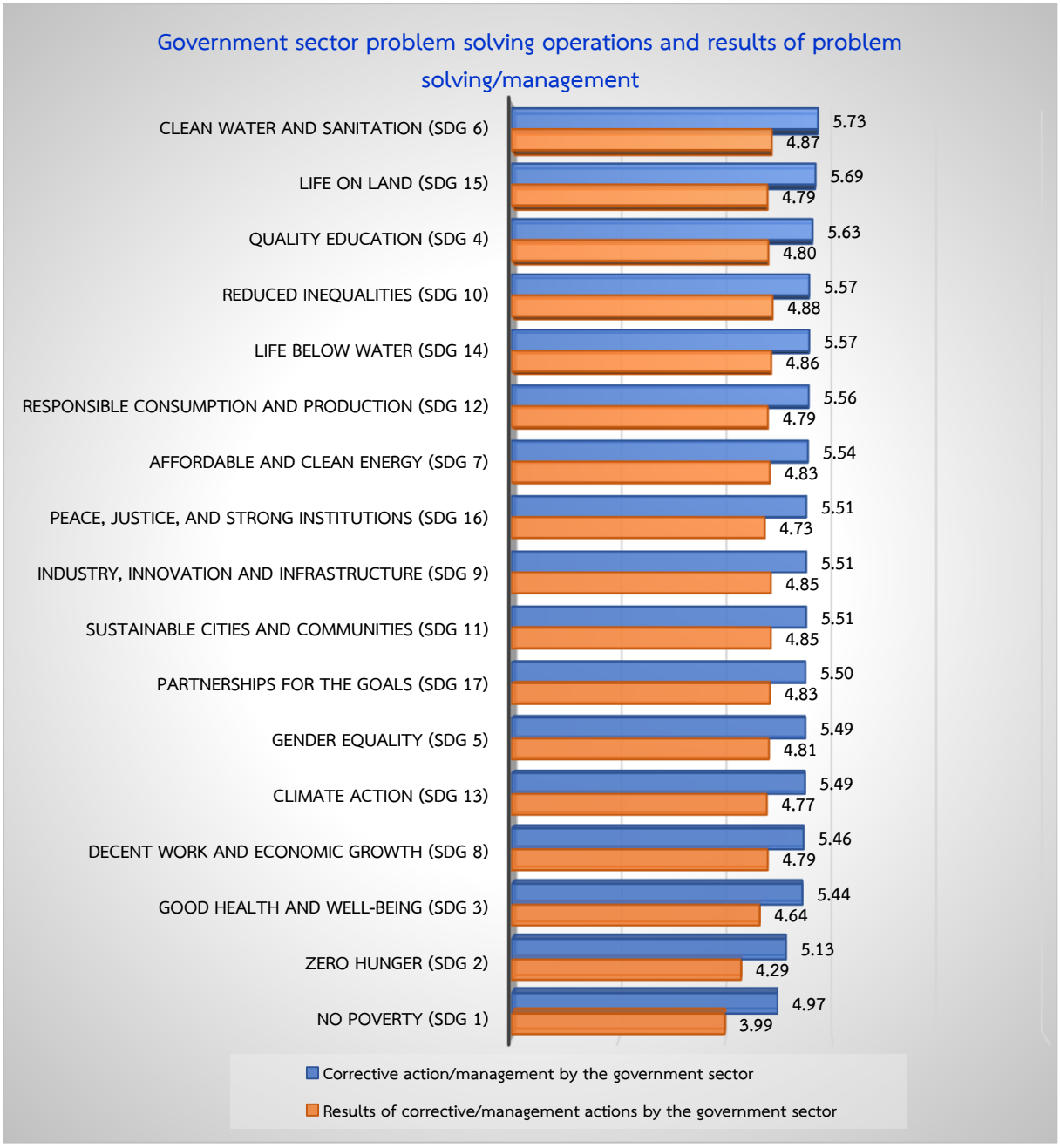


Table 4.17 Mean, standard deviation of urgent needs and actions to solve problems of the government sector. (Nakhon Ratchasima Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**9.54**	**1.040**	**4.97**	**1.944**	**3.99**	**1.760**
poverty alleviation	9.54	1.040	4.97	1.944	3.99	1.760
SDG 2 Hunger elimination	**9.00**	**1.395**	**5.13**	**1.640**	**4.29**	**1.607**
Developing smallholder farmers to promote a sustainable food system	9.14	1.550	5.03	1.882	4.12	1.861
Having Good Health and nutrition *	8.86	1.638	5.32	1.621	4.56	1.572
SDG 3 Have Good Health and Well-being	**8.59**	**1.598**	**5.44**	**1.554**	**4.64**	**1.617**
Having good mental health (Mental Health)	8.63	1.690	5.38	1.611	4.57	1.676
Road safety	8.54	1.759	5.53	1.638	4.75	1.637
SDG 4 Quality Education	**8.76**	**1.548**	**5.63**	**1.468**	**4.80**	**1.548**
Quality Education	8.90	1.657	5.76	1.628	4.84	1.591
Having the skills necessary for a career	8.62	1.772	5.50	1.471	4.82	1.579
SDG 5 Gender Equality	**8.31**	**1.766**	**5.49**	**1.454**	**4.81**	**1.529**
Eliminating sexual violence in private and public spaces	8.31	1.766	5.49	1.454	4.81	1.529
SDG 6 Clean Water and Sanitation	**8.24**	**1.597**	**5.73**	**1.387**	**4.87**	**1.601**
Availability and access to clean water for drinking and use	8.28	1.753	5.90	1.575	4.97	1.719
Solving water pollution problems *	8.21	1.763	5.57	1.456	4.86	1.631
SDG 7 Affordable and Clean Energy	**8.33**	**1.749**	**5.54**	**1.371**	**4.83**	**1.537**
Having and having universal access to clean energy	8.33	1.749	5.54	1.371	4.83	1.537

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.50**	**1.763**	**5.46**	**1.445**	**4.79**	**1.500**
Employment and access to good work opportunities	8.50	1.763	5.46	1.445	4.79	1.500
SDG 9 Industry, Innovation and Infrastructure	**8.22**	**1.775**	**5.51**	**1.454**	**4.85**	**1.470**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.22	1.775	5.51	1.454	4.85	1.470
SDG 10 Reduced Inequalities	**8.24**	**1.681**	**5.57**	**1.487**	**4.88**	**1.629**
Participation and equal access to opportunities for women and gender diverse people	8.24	1.681	5.57	1.487	4.88	1.629
SDG 11 Sustainable Cities and Communities	**8.22**	**1.775**	**5.51**	**1.454**	**4.85**	**1.470**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.22	1.775	5.51	1.454	4.85	1.470
SDG 12 Responsible Consumption and Production	**8.23**	**1.732**	**5.56**	**1.491**	**4.79**	**1.617**
Waste Management (Reduce Reuse Recycle)	8.23	1.732	5.56	1.491	4.79	1.617
SDG 13 Climate Action	**8.16**	**1.660**	**5.49**	**1.408**	**4.77**	**1.592**
Solving air pollution problems	8.14	1.776	5.43	1.580	4.78	1.674
Raising awareness of the impacts of climate change or global warming. (Climate Change)	8.18	1.762	5.55	1.413	4.86	1.566

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**8.21**	**1.763**	**5.57**	**1.456**	**4.86**	**1.631**
Solving water pollution problems *	8.21	1.763	5.57	1.456	4.86	1.631
SDG 15 Life on Land	**8.21**	**1.629**	**5.69**	**1.379**	**4.79**	**1.564**
Coping with and reducing the impact of natural disasters	8.25	1.704	5.52	1.488	4.75	1.635
Participatory management of forests and green areas	8.17	1.739	5.85	1.473	4.93	1.538
SDG 16 Peace, Justice and Strong Institutions	**8.34**	**1.720**	**5.51**	**1.447**	**4.73**	**1.634**
Managing quality public services and disseminating public information in a transparent manner	8.34	1.720	5.51	1.447	4.73	1.634
SDG 17 Partnerships for the Goals	**8.27**	**1.726**	**5.50**	**1.361**	**4.83**	**1.490**
Participation in proposing policies for a better quality of life	8.27	1.726	5.50	1.361	4.83	1.490

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, most of the sample agreed that appropriate local policies should be developed and improved, with the highest number of 56.00 percent, followed by social and economic projects that should be created for comprehensive local development, 54.00 percent and the role of participation in the community should be promoted equally for all genders, 42.75 percent, details as shown in Table 4.18.

Table 4.18 Number and percentage of approaches to improving quality of life (Nakhon Ratchasima Province)

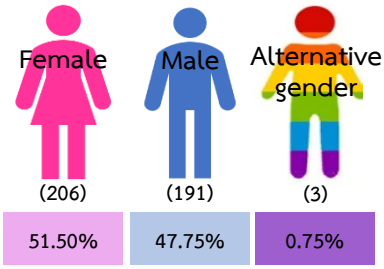
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	224	56.00
Appropriate local policies are developed and improved.	216	54.00
There is no corruption and the efficiency of information disclosure is increased for transparent management.	171	42.75
Knowledge about environmental conservation and Waste management is provided.	142	35.50
There is a space to exchange local knowledge between community members and apply it to development.	130	32.50
Social and economic projects are created for comprehensive local development.	118	29.50
Cooperation is created to create effective development policies in the community.	104	26.00
Roles of participation in the community are promoted equally for all genders.	92	23.00

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

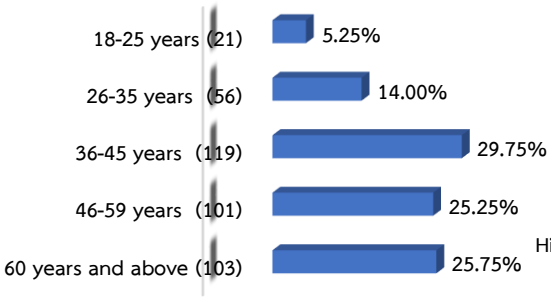
2.9 Ubon Ratchathani Province

Part 1 Information about general characteristics

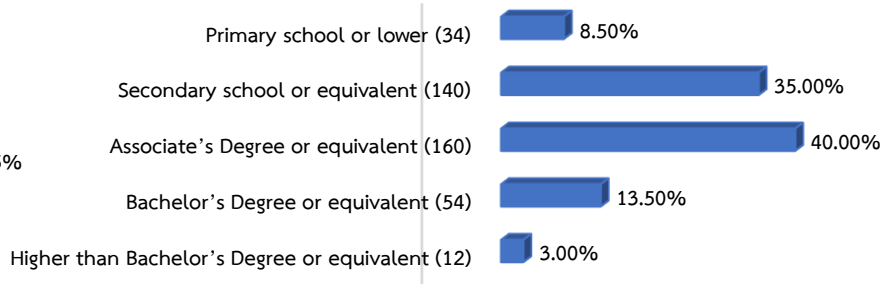
Data survey of Ubon Ratchathani province from a total of 400 samples, the majority are female at 51.50 percent, followed by males at 47.75 percent, and LGBTQ 0.75 percent. Most are between 36-45 years old, 29.75 percent, followed by 60 years and older, 25.75 percent, and between 46-59 years old, 25.25 percent. The highest number of graduates is at the associate bachelor's degree level or equivalent, 40.00 percent, followed by high school level or equivalent, 35.00 percent, and bachelor's degree or equivalent, 13.50 percent. Most of the sample is Buddhists at 96.75 percent, followed by Christians at 2.50 percent, and Muslims 0.75 percent. Marital status of married is the highest at 51.75, followed by single at 37.25 percent and widow at 5.75 percent. Most of their main occupation is the business owner/self-employed, 28.50 percent, followed by being a farmer/fisherman at 23.00 percent and general contractors/laborers 21.25 percent. Most have an average monthly income of not more than 10,000 baht, 47.25 percent, followed by 10,001-20,000 baht, 32.50 percent and 20,001-30,000 baht, 11.00 percent, respectively



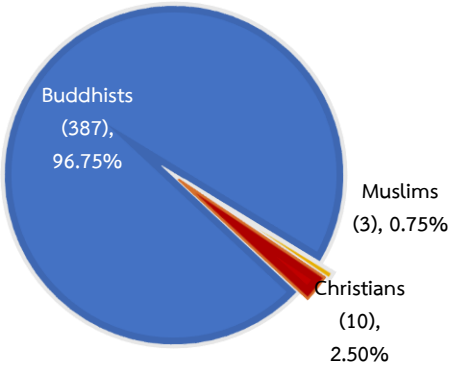
Age



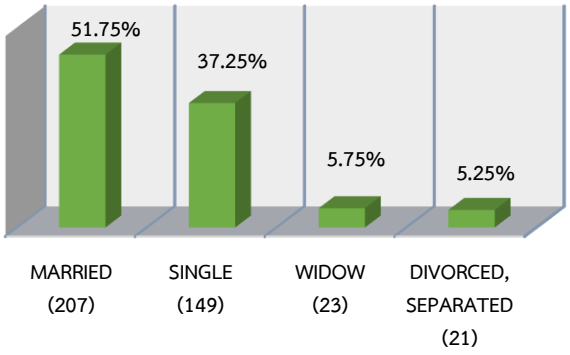
Education

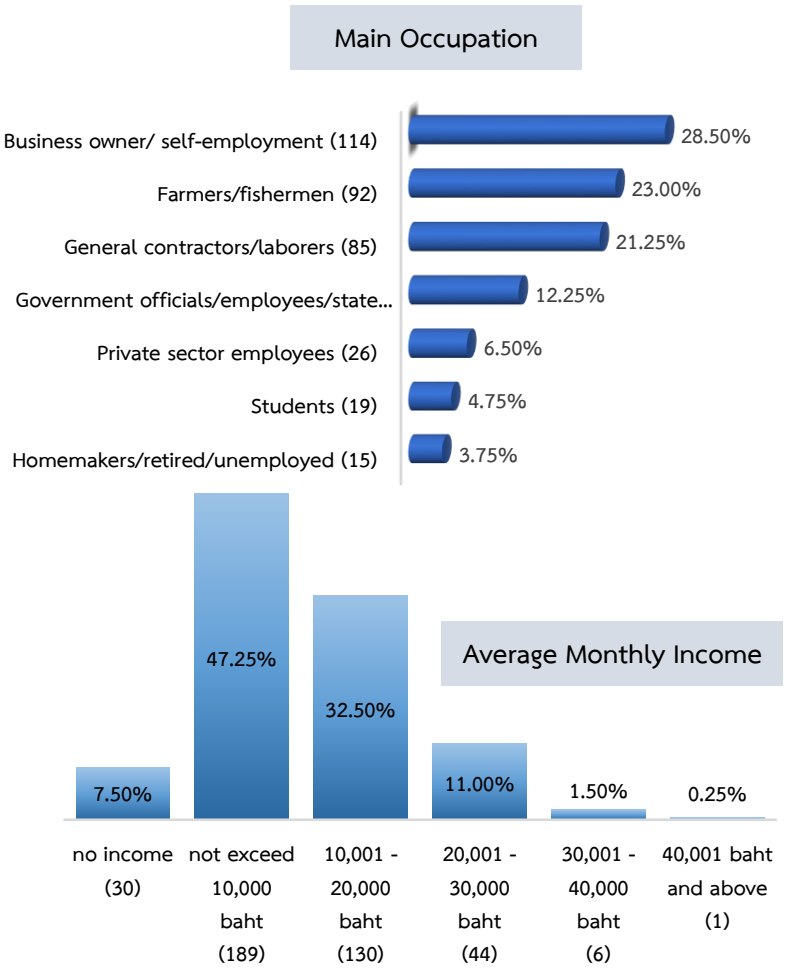


Religion

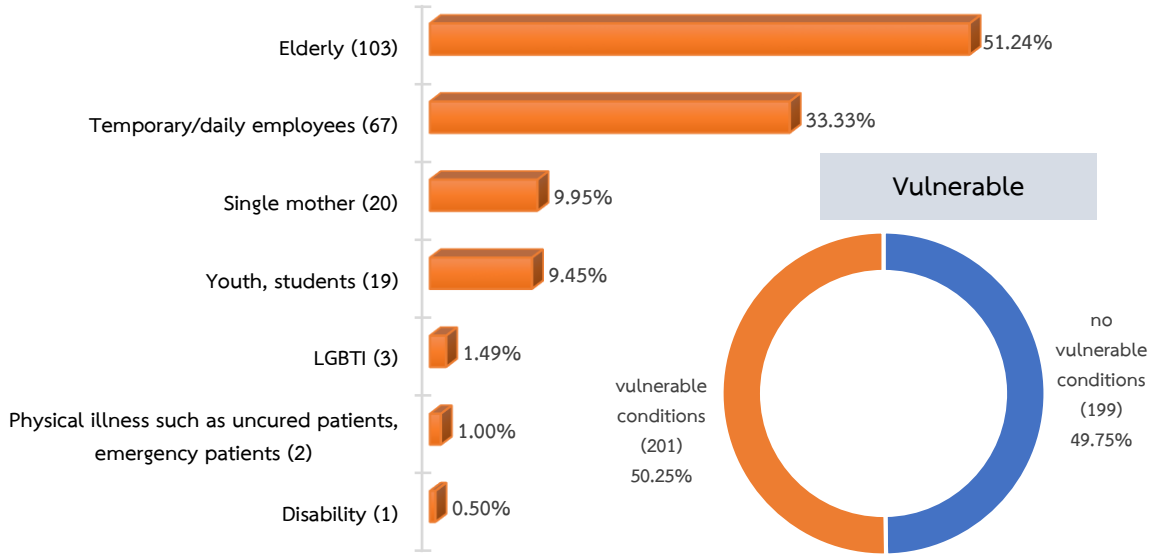


Marital Status





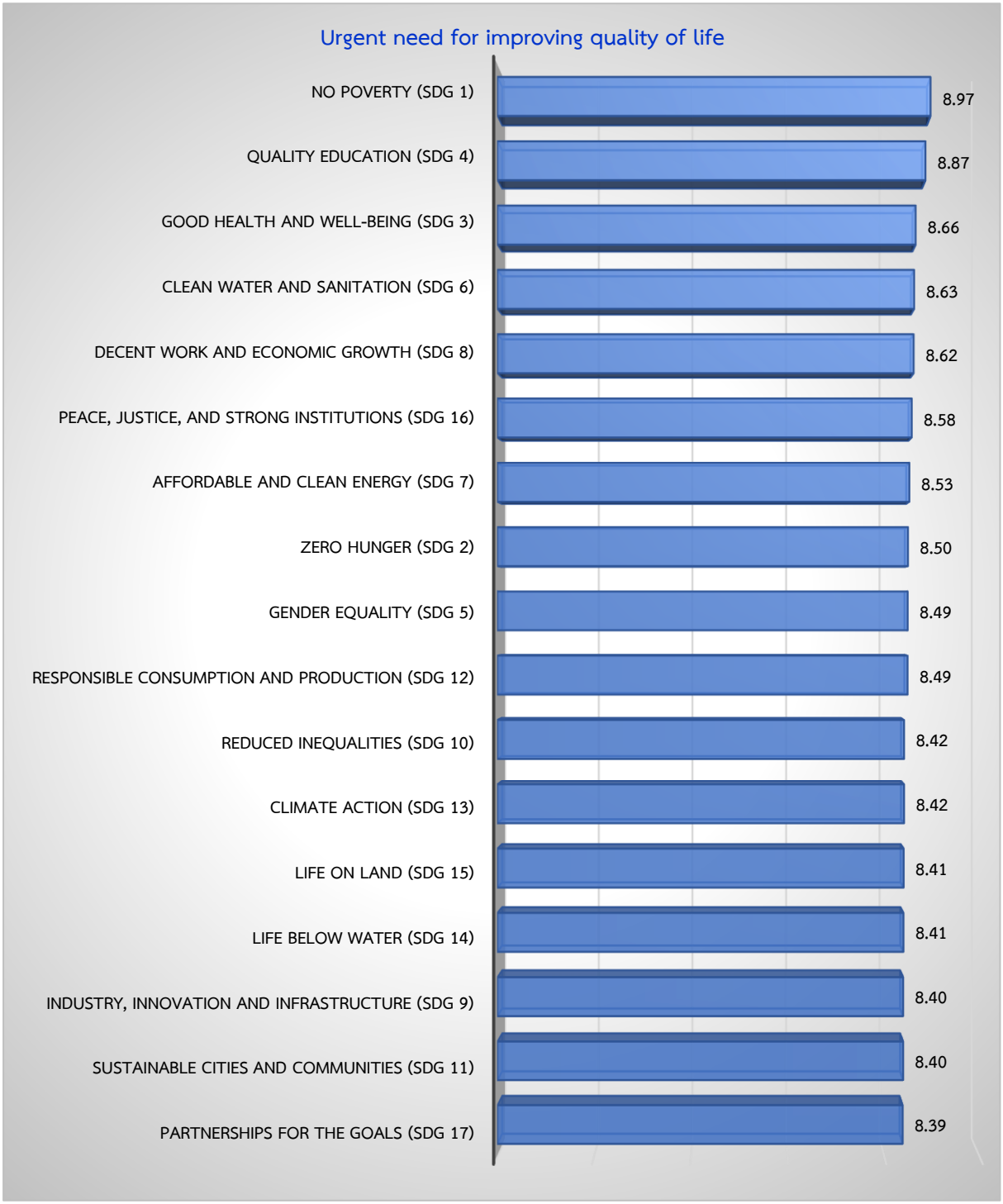
From this survey, it is found that 50.25 percent of the samples are in vulnerable conditions and 49.75 percent are not in vulnerable conditions. Among the most vulnerable subjects, 51.24 percent are elderly, followed by 33.33 percent temporary/daily employees and being a single mother, 9.95 percent, respectively



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.97, followed by Quality Education (SDG 4), the average is 8.87. Health and Well-being (SDG 3) average value is 8.66. Clean Water and Sanitation (SDG 6) average value is 8.63, and Decent Work and Economic Growth, the average value is 8.62.



As for the government's implementation of problem solving, it is found that Life on Lands (SDG 15) had the highest average. The average is 6.14, followed by Responsible Consumption and Production (SDG 12), the average is 6.13. Quality Education (SDG 4) average is 5.98, Decent Work and Economic Growth (SDG 8) and Life Below Water (SDG 14) have the same average value of 5.96. Industry, Innovation and Infrastructure (SDG 9) and Sustainable Cities and Communities (SDG 11) have the same average value of 5.90.

As for the results of the government's corrective/management actions, it is found that Life on Lands (SDG 15) and Responsible Consumption and Production (SDG 12) had the same highest average of 5.41, Next, Decent Work and Economic Growth (SDG 8) and Peace, Justice and Strong Institutions (SDG 16) have the same average value of 5.29. Life Below Water (SDG 14) average is 5.28. Quality Education (SDG 4) has an average value of 5.25 and clean energy that is accessible to everyone (SDG 7) has an average value of 5.23, details as shown in Table 4.19.

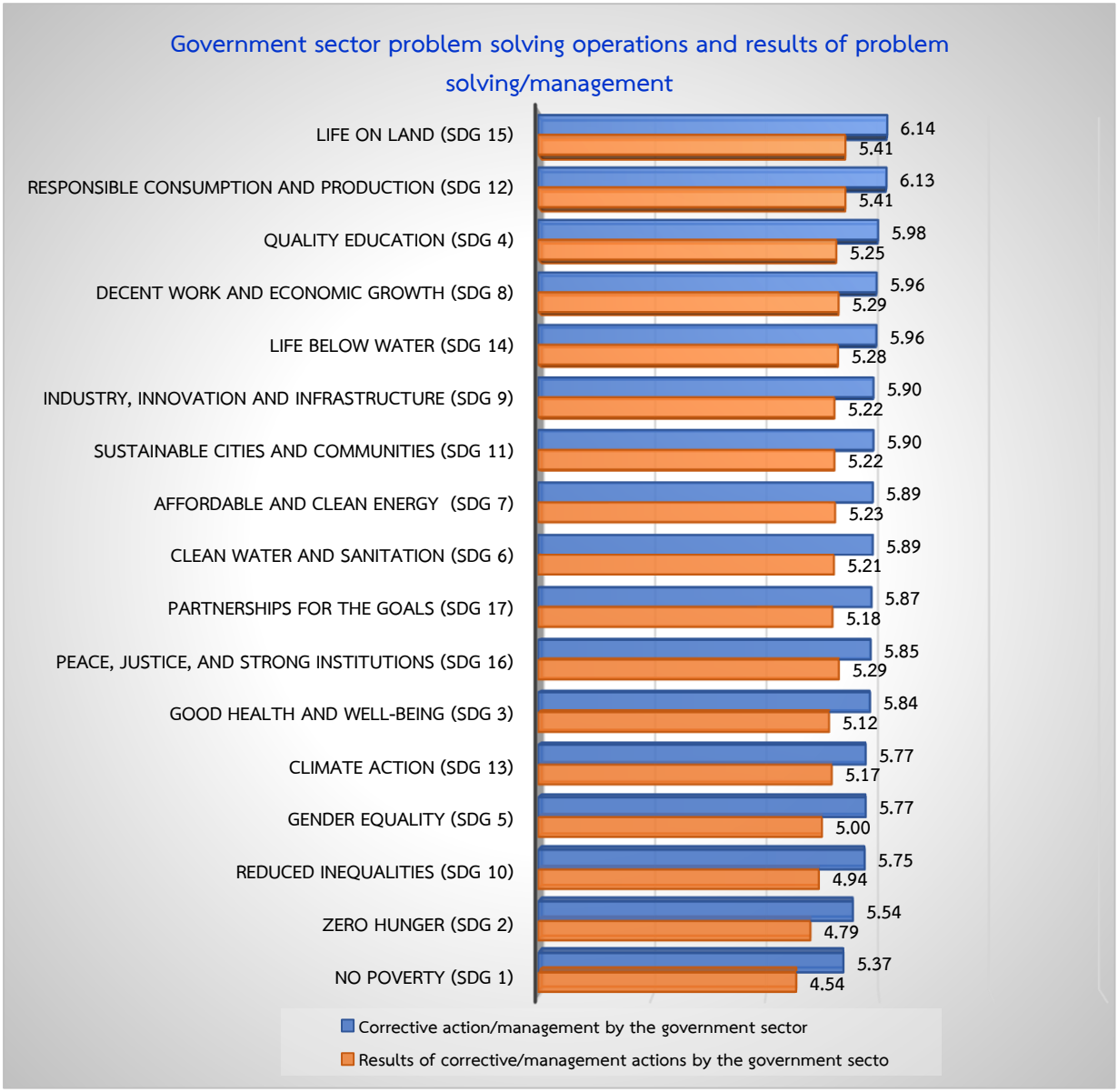


Table 4.19 Mean, standard deviation of urgent needs and actions to solve problems of the government sector. (Ubon Ratchathani Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**8.97**	**1.641**	**5.37**	**1.361**	**4.54**	**1.443**
poverty alleviation	8.97	1.641	5.37	1.361	4.54	1.443
SDG 2 Hunger elimination	**8.50**	**1.692**	**5.54**	**1.272**	**4.79**	**1.328**
Developing smallholder farmers to promote a sustainable food system	8.63	1.795	5.45	1.281	4.70	1.386
Having Good Health and nutrition *	8.38	1.722	5.63	1.469	4.87	1.471
SDG 3 Have Good Health and Well-being	**8.66**	**1.552**	**5.84**	**1.192**	**5.12**	**1.295**
Having good mental health (Mental Health)	8.57	1.657	5.79	1.348	5.03	1.418
Road safety	8.74	1.543	5.90	1.256	5.21	1.353
SDG 4 Quality Education	**8.87**	**1.458**	**5.98**	**1.230**	**5.25**	**1.223**
Quality Education	8.92	1.487	6.00	1.303	5.29	1.342
Having the skills necessary for a career	8.81	1.548	5.97	1.319	5.20	1.259
SDG 5 Gender Equality	**8.49**	**1.513**	**5.77**	**1.527**	**5.00**	**1.405**
Eliminating sexual violence in private and public spaces	8.49	1.513	5.77	1.527	5.00	1.405
SDG 6 Clean Water and Sanitation	**8.63**	**1.303**	**5.89**	**1.199**	**5.21**	**1.122**
Availability and access to clean water for drinking and use	8.85	1.496	5.82	1.502	5.13	1.325
Solving water pollution problems *	8.41	1.472	5.96	1.348	5.28	1.300
SDG 7 Affordable and Clean Energy	**8.53**	**1.498**	**5.89**	**1.428**	**5.23**	**1.267**
Having and having universal access to clean energy	8.53	1.498	5.89	1.428	5.23	1.267

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.62**	**1.506**	**5.96**	**1.336**	**5.29**	**1.218**
Employment and access to good work opportunities	8.62	1.506	5.96	1.336	5.29	1.218
SDG 9 Industry, Innovation and Infrastructure	**8.40**	**1.453**	**5.90**	**1.406**	**5.22**	**1.330**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.40	1.453	5.90	1.406	5.22	1.330
SDG 10 Reduced Inequalities	**8.42**	**1.536**	**5.75**	**1.526**	**4.94**	**1.342**
Participation and equal access to opportunities for women and gender diverse people	8.42	1.536	5.75	1.526	4.94	1.342
SDG 11 Sustainable Cities and Communities	**8.40**	**1.453**	**5.90**	**1.406**	**5.22**	**1.330**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	8.40	1.453	5.90	1.406	5.22	1.330
SDG 12 Responsible Consumption and Production	**8.49**	**1.414**	**6.13**	**1.328**	**5.41**	**1.294**
Waste Management (Reduce Reuse Recycle)	8.49	1.414	6.13	1.328	5.41	1.294
SDG 13 Climate Action	**8.42**	**1.295**	**5.77**	**1.244**	**5.17**	**1.179**
Solving air pollution problems	8.38	1.523	5.70	1.379	5.10	1.314
Raising awareness of the impacts of climate change or global warming. (Climate Change)	8.46	1.379	5.84	1.508	5.23	1.331

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**8.41**	**1.472**	**5.96**	**1.348**	**5.28**	**1.300**
Solving water pollution problems *	8.41	1.472	5.96	1.348	5.28	1.300
SDG 15 Life on Land	**8.41**	**1.329**	**6.14**	**1.187**	**5.41**	**1.164**
Coping with and reducing the impact of natural disasters	8.42	1.526	6.04	1.407	5.32	1.329
Participatory management of forests and green areas	8.40	1.461	6.25	1.400	5.50	1.334
SDG 16 Peace, Justice and Strong Institutions	**8.58**	**1.423**	**5.85**	**1.667**	**5.29**	**1.415**
Managing quality public services and disseminating public information in a transparent manner	8.58	1.423	5.85	1.667	5.29	1.415
SDG 17 Partnerships for the Goals	**8.39**	**1.532**	**5.87**	**1.386**	**5.18**	**1.238**
Participation in proposing policies for a better quality of life	8.39	1.532	5.87	1.386	5.18	1.238

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

As for guidelines for improving the quality of life, most of the sample agreed that there should be cooperation in setting development policies in the community most efficiently, 51.00 percent, Second, there should be promotion of equal participation roles in the community for all genders, 47.50 percent, and there should be a distribution of capital resources and authority for local administration, 47.25 percent, details as shown in Table 4.20.

Table 4.20 Number and percentage of approaches to improving quality of life (Ubon Ratchathani Province)

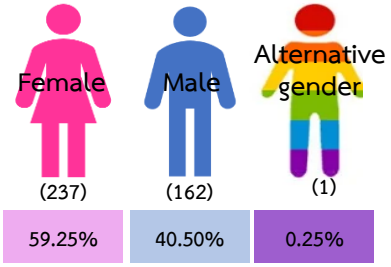
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	204	51.00
Appropriate local policies are developed and improved.	190	47.50
There is no corruption and the efficiency of information disclosure is increased for transparent management.	189	47.25
Knowledge about environmental conservation and Waste management is provided.	164	41.00
There is a space to exchange local knowledge between community members and apply it to development.	155	38.75
Social and economic projects are created for comprehensive local development.	127	31.75
Cooperation is created to create effective development policies in the community.	89	22.25
Roles of participation in the community are promoted equally for all genders.	82	20.50

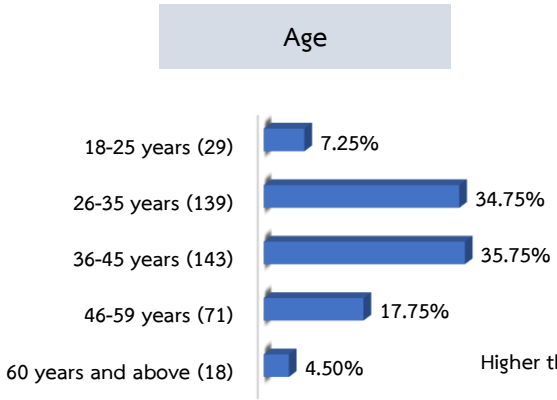
Note: Respondents can choose 3 answers, with a sample of 400 respondents.

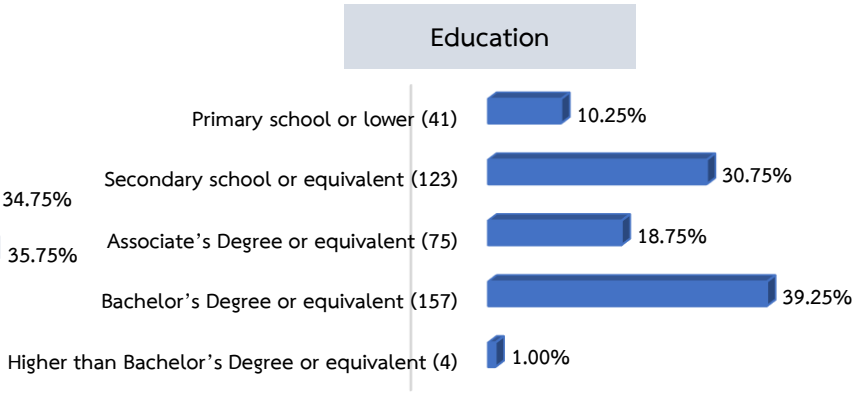
2.10 Surat Thani Province

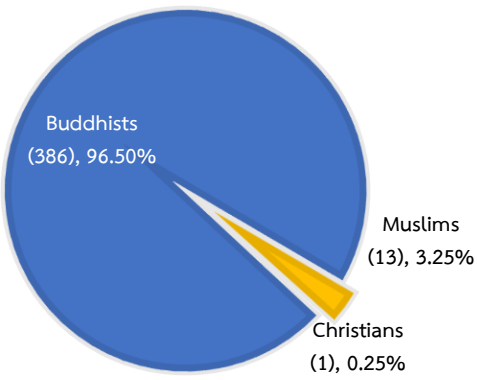
Part 1 Information about general characteristics

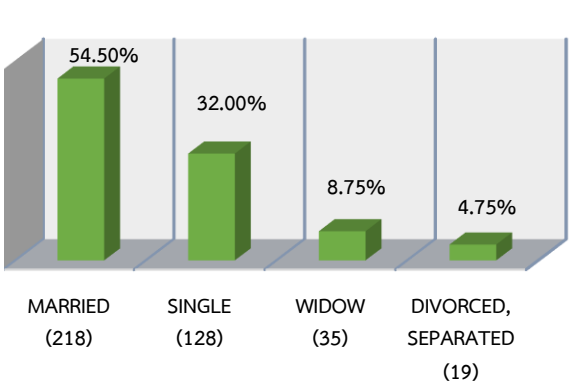
Surat Thani Province data survey from a total of 400 samples, the majority are female at 59.25 percent, followed by males at 40.50 percent and LGBTQ 0.25 percent. Most are between 36-45 years old, 35.75 percent, followed by 26-35 years old, 34.75 percent and between 45-69 years old, 17.75 percent. The highest number of graduates is a bachelor's degree or equivalent, 39.25 percent, followed by secondary education or equivalent, 30.75 percent and associate's degree or equivalent, 18.75 percent. Most of the sample is Buddhists at 96.50 percent, followed by Muslims at 3.25 percent and Christians 0.25 percent. Marital status of married is the highest at 54.50, followed by single at 32.00 percent and widow at 8.75 percent. Their main occupation is the business owner/self-employed, the most at 38.00 percent, followed by being a farmer/fisherman at 16.75 percent and are private sector employees, 15.75 percent. Most have an average monthly income 10,001-20,000 baht, 54.25 percent, followed by 20,001-30,000 baht, 20.25 percent and not more than 10,000 baht, 13.00 percent, respectively.

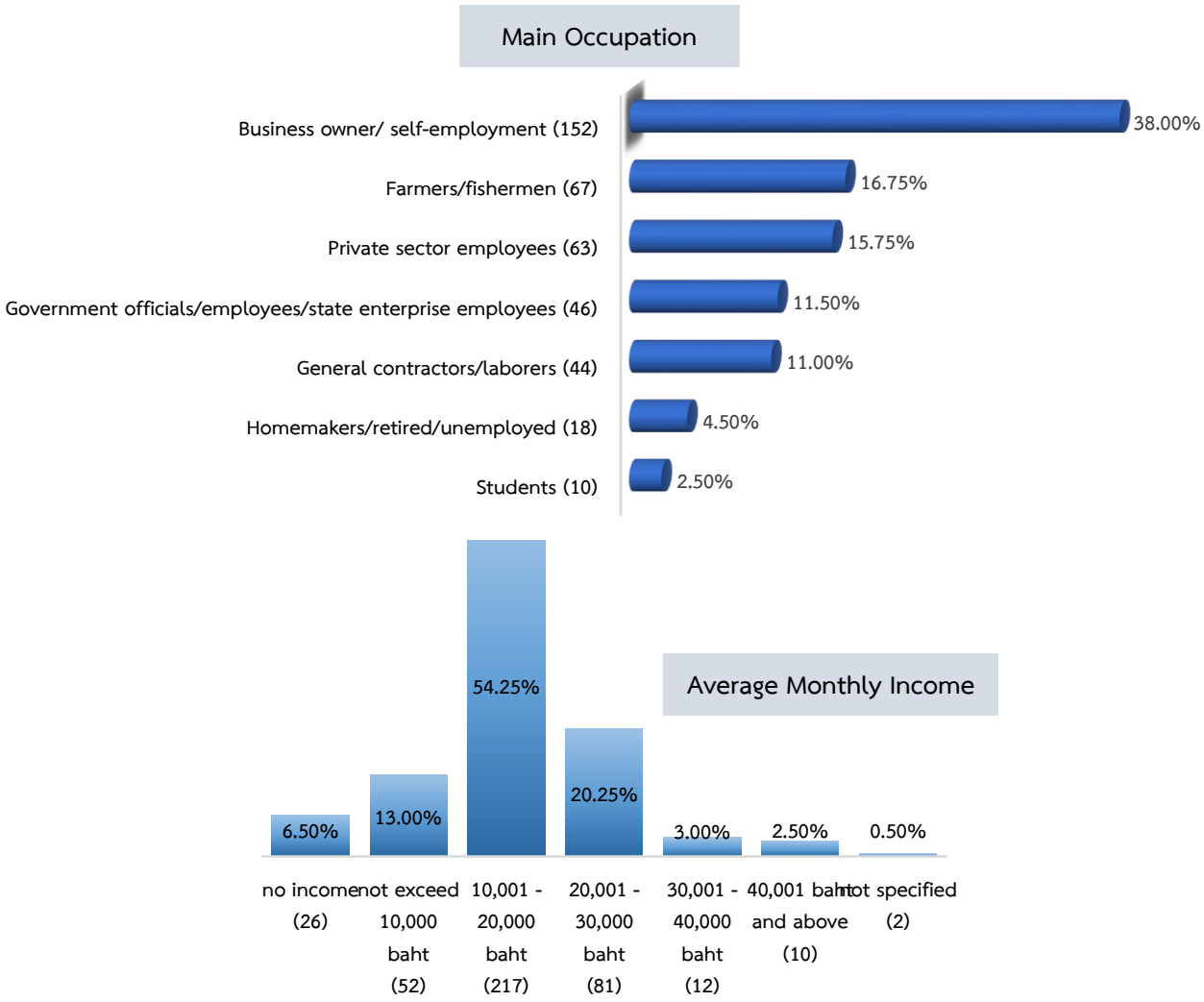




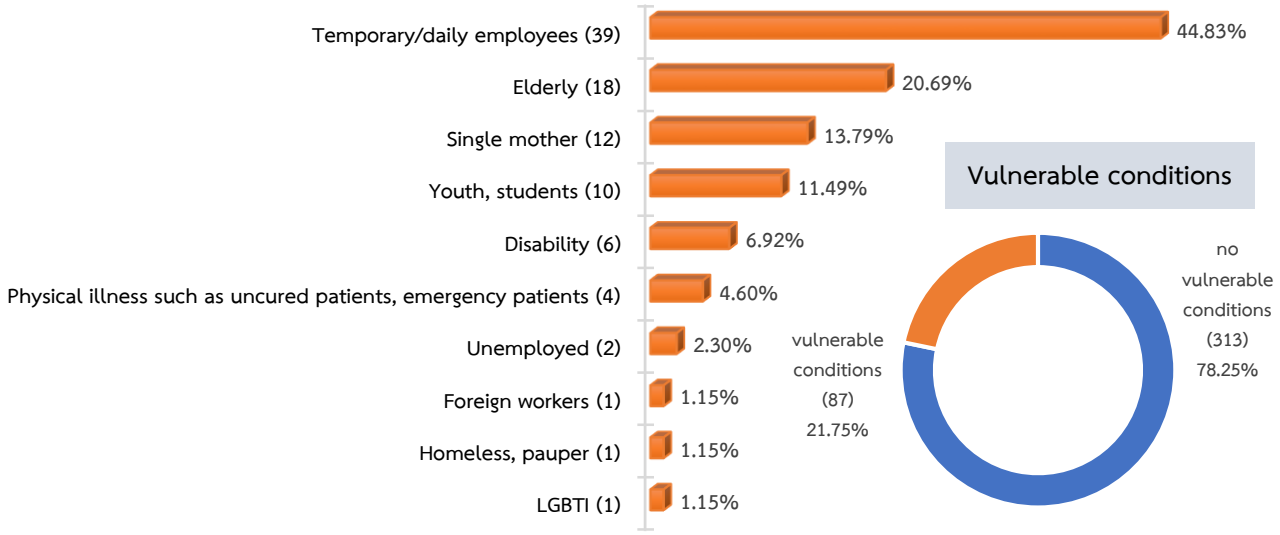








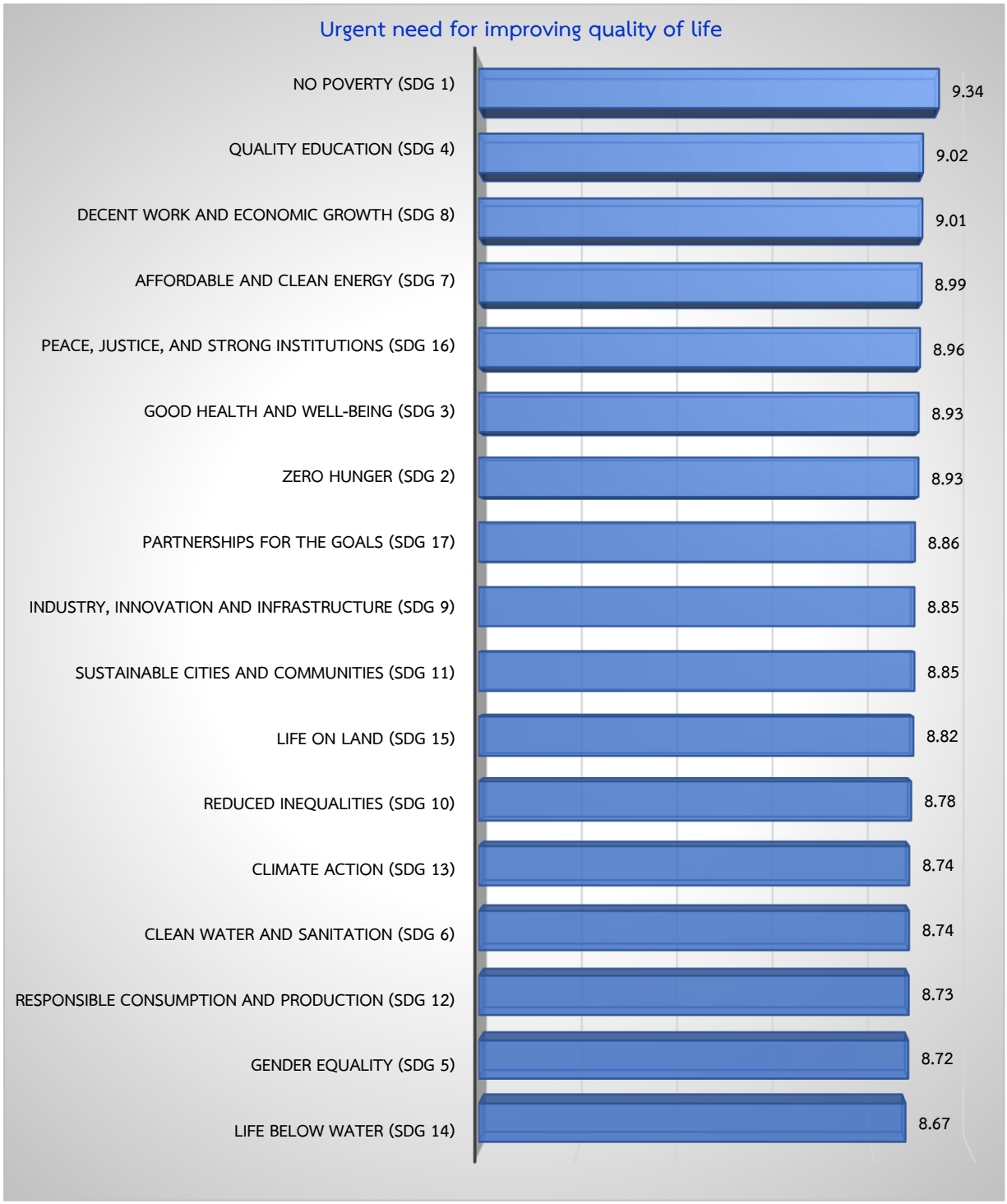
From this survey, it is found that 78.25 percent of the samples are not in vulnerable conditions and 21.75 percent are in vulnerable conditions. Among the samples with vulnerable conditions, they are temporary/daily employees, the most at 44.83 percent, followed by the elderly at 20.69 percent and being a single mother, 13.79 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 9.34, followed by Quality Education (SDG 4), the average is 9.02. Decent Work and Economic Growth (SDG 8) average is 9.01. Clean energy that is accessible to everyone (SDG 7) has an average of 8.99 and Peace, Justice and Strong Institutions (SDG 16) has an average of 8.96.



For the government sector's implementation of problem solving, it is found that Clean Water and Sanitation (SDG 6) had the highest average. The average is 6.95, followed by Quality Education (SDG 4), the average is 6.94. Health and Well-being (SDG 3) average is 6.87. Gender Equality (SDG 5) and Life on Lands (SDG 15) have the same average value of 6.83 and Responsible Consumption and Production (SDG 12) and Life Below Water (SDG 14) have the same average value of 6.81.

As for the results of the government sector's corrective/management actions, it is found that health and Well-being (SDG 3) had the highest average. The average is 5.9.6 Next, Clean Water and Sanitation (SDG 6), Quality Education (SDG 4) and reducing inequality (SDG 10) have the same average. The average is 5.95. Gender Equality (SDG 5) average is 5.94. Life on Lands (SDG 15) average value is 5.91 and Responsible Consumption and Production (SDG 12), the average is 5.90, details as shown in Table 4.21.

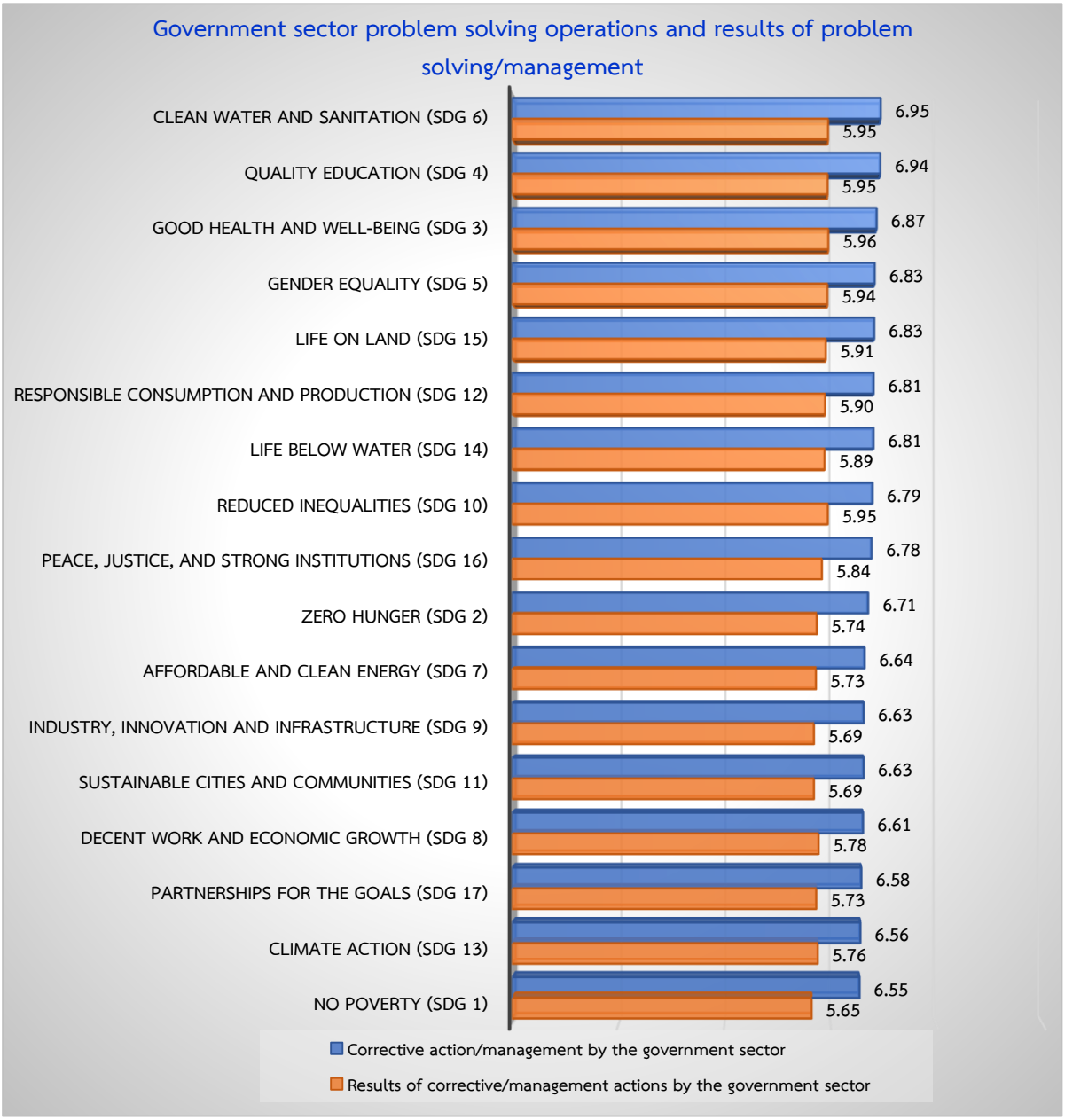


Table 4.21 Mean, standard deviation of urgent needs and actions to solve problems of the government sector (Surat Thani Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**9.34**	**1.218**	**6.55**	**2.091**	**5.65**	**2.168**
poverty alleviation	9.34	1.218	6.55	2.091	5.65	2.168
SDG 2 Hunger elimination	**8.93**	**1.198**	**6.71**	**1.842**	**5.74**	**2.103**
Developing smallholder farmers to promote a sustainable food system	8.92	1.365	6.69	1.931	5.74	2.128
Having Good Health and nutrition *	8.93	1.311	6.75	1.952	5.76	2.237
SDG 3 Have Good Health and Well-being	**8.93**	**1.227**	**6.87**	**1.927**	**5.96**	**2.252**
Having good mental health (Mental Health)	8.96	1.311	6.86	2.021	5.97	2.313
Road safety	8.90	1.410	6.89	1.981	5.96	2.316
SDG 4 Quality Education	**9.02**	**1.213**	**6.94**	**1.917**	**5.95**	**2.237**
Quality Education	9.07	1.325	6.91	1.967	5.95	2.298
Having the skills necessary for a career	9.00	1.331	6.99	2.047	5.96	2.307
SDG 5 Gender Equality	**8.72**	**1.611**	**6.83**	**2.014**	**5.94**	**2.295**
Eliminating sexual violence in private and public spaces	8.72	1.611	6.83	2.014	5.94	2.295
SDG 6 Clean Water and Sanitation	**8.74**	**1.488**	**6.95**	**1.876**	**5.95**	**2.233**
Availability and access to clean water for drinking and use	8.82	1.509	7.07	2.011	6.04	2.344
Solving water pollution problems *	8.67	1.767	6.81	2.007	5.89	2.286
SDG 7 Affordable and Clean Energy	**8.99**	**1.441**	**6.64**	**1.918**	**5.73**	**2.200**
Having and having universal access to clean energy	8.99	1.441	6.64	1.918	5.73	2.200

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**9.01**	**1.434**	**6.61**	**1.973**	**5.78**	**2.218**
Employment and access to good work opportunities	9.01	1.434	6.61	1.973	5.78	2.218
SDG 9 Industry, Innovation and Infrastructure	**8.85**	**1.550**	**6.63**	**2.022**	**5.69**	**2.280**
Adapting to a green economy (Design of infrastructure, roads water, electricity, buildings)*	8.85	1.550	6.63	2.022	5.69	2.280
SDG 10 Reduced Inequalities	**8.78**	**1.557**	**6.79**	**2.021**	**5.95**	**2.336**
Participation and equal access to opportunities for women and gender diverse people	8.78	1.557	6.79	2.021	5.95	2.336
SDG 11 Sustainable Cities and Communities	**8.85**	**1.550**	**6.63**	**2.022**	**5.69**	**2.280**
Adapting to a green economy (Design of infrastructure, roads water, electricity, buildings)*	8.85	1.550	6.63	2.022	5.69	2.280
SDG 12 Responsible Consumption and Production	**8.73**	**1.794**	**6.81**	**2.077**	**5.90**	**2.437**
Waste Management (Reduce Reuse Recycle)	8.73	1.794	6.81	2.077	5.90	2.437
SDG 13 Climate Action	**8.74**	**1.547**	**6.56**	**1.921**	**5.76**	**2.192**
Solving air pollution problems	8.70	1.748	6.59	2.078	5.83	2.314
Raising awareness of the impacts of climate change or global warming. (Climate Change)	8.80	1.611	6.56	2.049	5.70	2.261
SDG 14 Life Below Water	**8.67**	**1.767**	**6.81**	**2.007**	**5.89**	**2.286**

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Solving water pollution problems *	8.67	1.767	6.81	2.007	5.89	2.286
SDG 15 Life on Land	**8.82**	**1.479**	**6.83**	**1.873**	**5.91**	**2.222**
Coping with and reducing the impact of natural disasters	8.86	1.566	6.88	1.859	5.93	2.228
Participatory management of forests and green areas	8.79	1.650	6.79	2.096	5.91	2.378
SDG 16 Peace, Justice and Strong Institutions	**8.96**	**1.510**	**6.78**	**2.077**	**5.84**	**2.359**
Managing quality public services and disseminating public information in a transparent manner	8.96	1.510	6.78	2.077	5.84	2.359
SDG 17 Partnerships for the Goals	**8.86**	**1.481**	**6.58**	**2.028**	**5.73**	**2.274**
Participation in proposing policies for a better quality of life	8.86	1.481	6.58	2.028	5.73	2.274

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, most of the sample agreed that appropriate local policies should be developed and improved, with the highest number of 64.25 percent, Next, no corruption and the efficiency of information disclosure is increased for transparent administration, 52.75 percent. And there should be knowledge about environmental conservation and Waste management, 46.25 percent, details as shown in Table 4.22.

Table 4.22 Number and percentage of approaches to improving quality of life (Surat Thani Province)

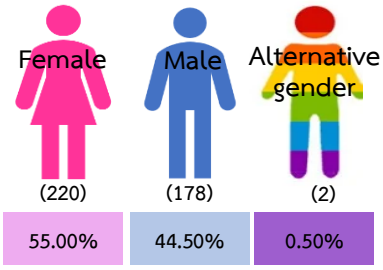
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	257	64.25
Appropriate local policies are developed and improved.	211	52.75
There is no corruption and the efficiency of information disclosure is increased for transparent management.	185	46.25
Knowledge about environmental conservation and Waste management is provided.	144	36.00
There is a space to exchange local knowledge between community members and apply it to development.	125	31.25
Social and economic projects are created for comprehensive local development.	109	27.25
Cooperation is created to create effective development policies in the community.	88	22.00
Roles of participation in the community are promoted equally for all genders.	68	17.00

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

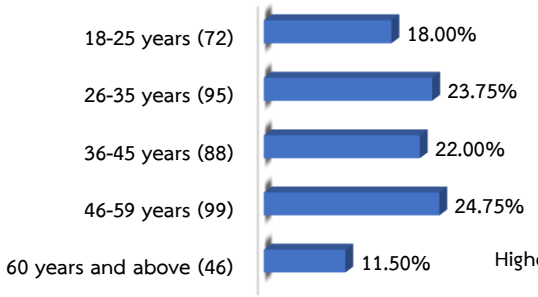
2.11 Phuket Province

Part 1 Information about general characteristics

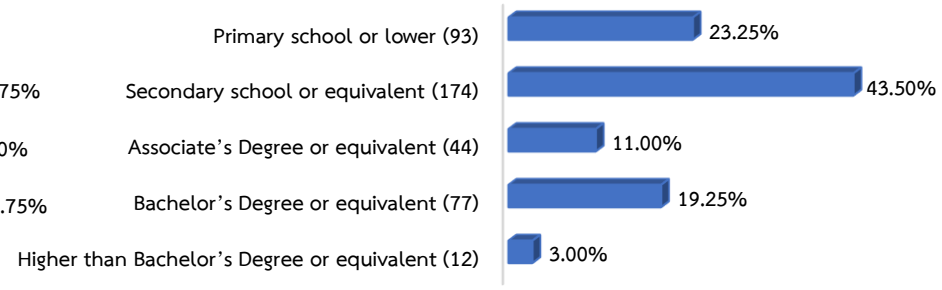
Data survey of Phuket province From a total of 400 samples, the majority are female at 55.00 percent, followed by males at 44.50 percent and LGBTQ 0.50 percent. The greatest number is between 46-59 years old, 24.75 percent, followed by 26-35 years old, 23.75 percent and between 36-45 years old, 22.00 percent. The highest number of graduates is secondary school or equivalent, 43.50 percent, followed by primary school or lower, 23.25 percent and bachelor's degree or equivalent, 19.25 percent. Most of the sample is Buddhists, 88.00 percent, followed by Muslims at 11.00 percent and 1.00 percent is Christians. Marital status of married is the highest at 52.00 percent, followed by single at 36.25 percent and widow at 6.25 percent. Their main occupation is the business owner/self-employed, the most at 26.50 percent, followed by general contractor/laborer at 22.50 percent and are government officials/employees/state enterprise employees, 15.25 percent. Have an average monthly income 10,001-20,000 baht, the most, 38.25 percent, followed by no more than 10,000 baht, 19.75 percent and have no income, 17.00 percent baht, respectively.



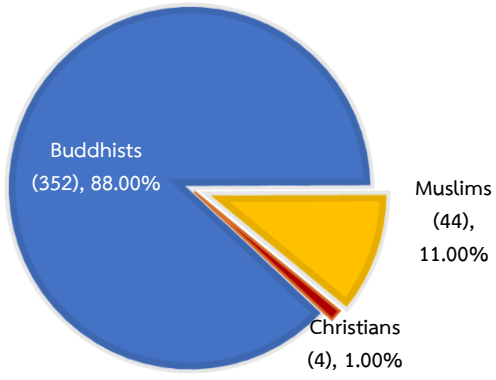
Age



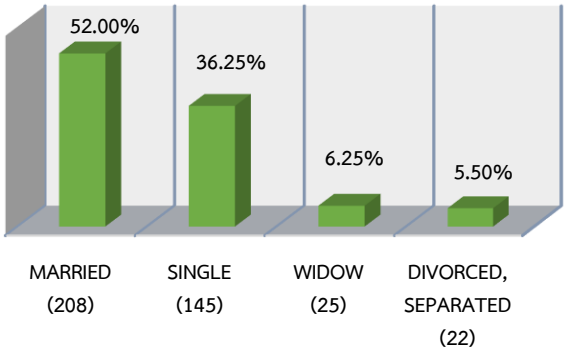
Education

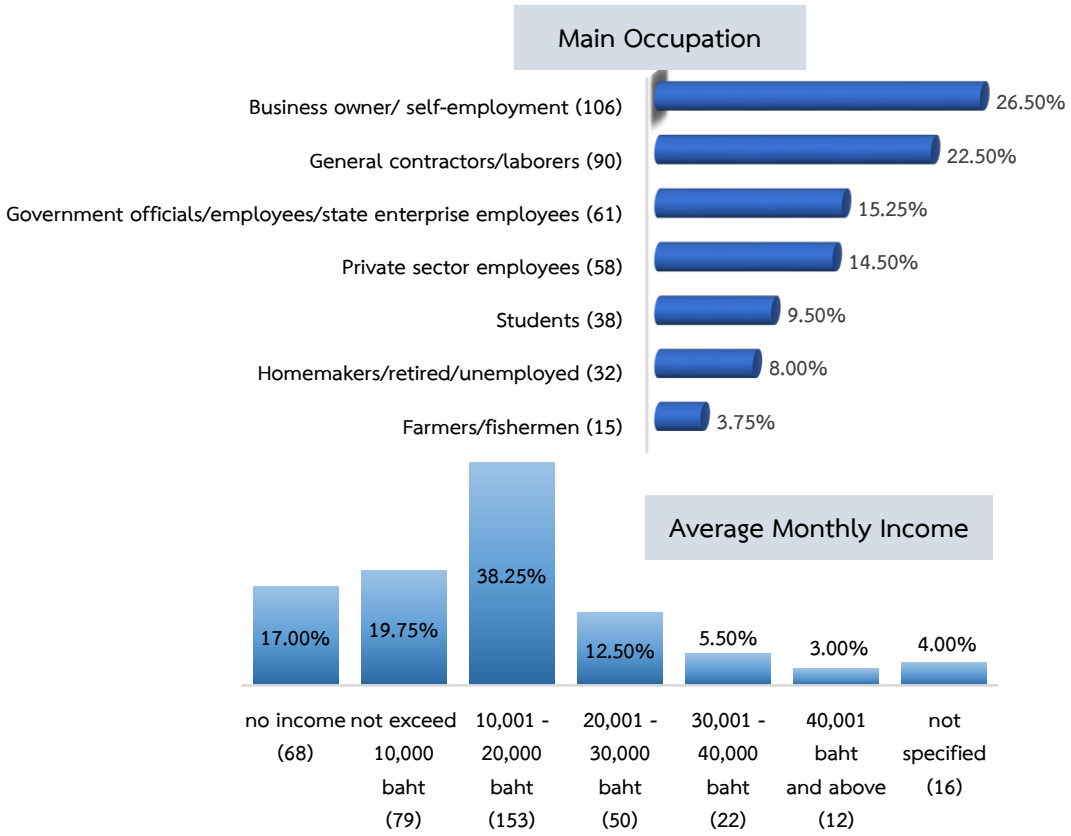


Religion

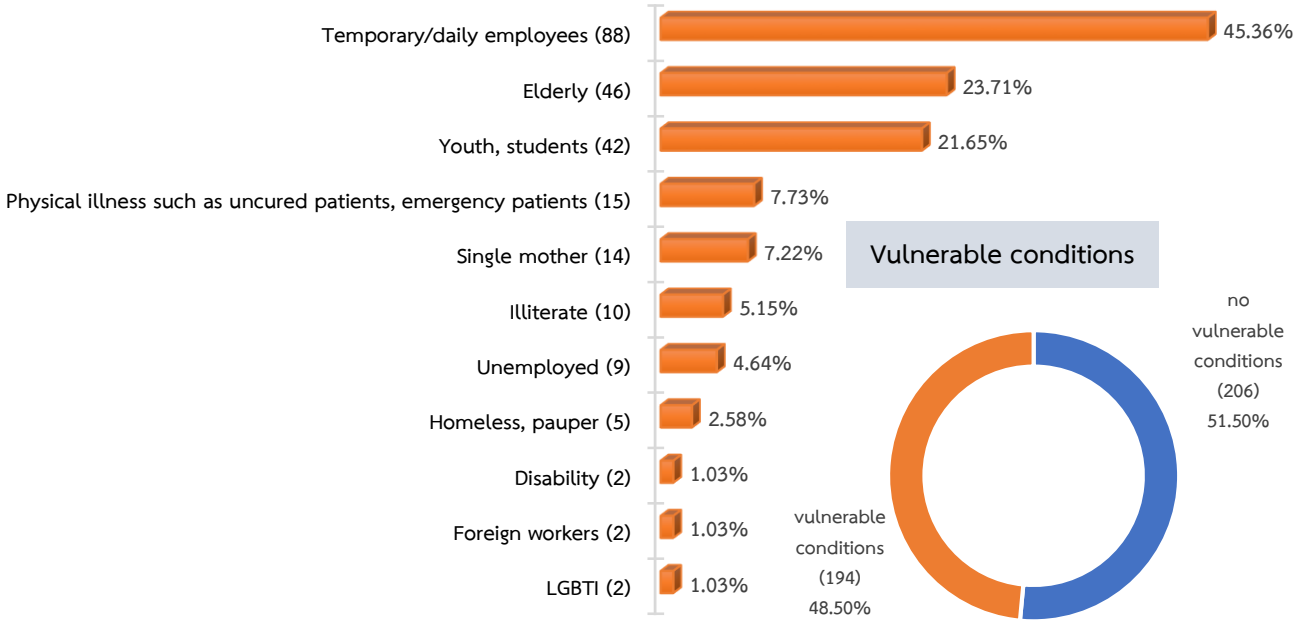


Marital Status





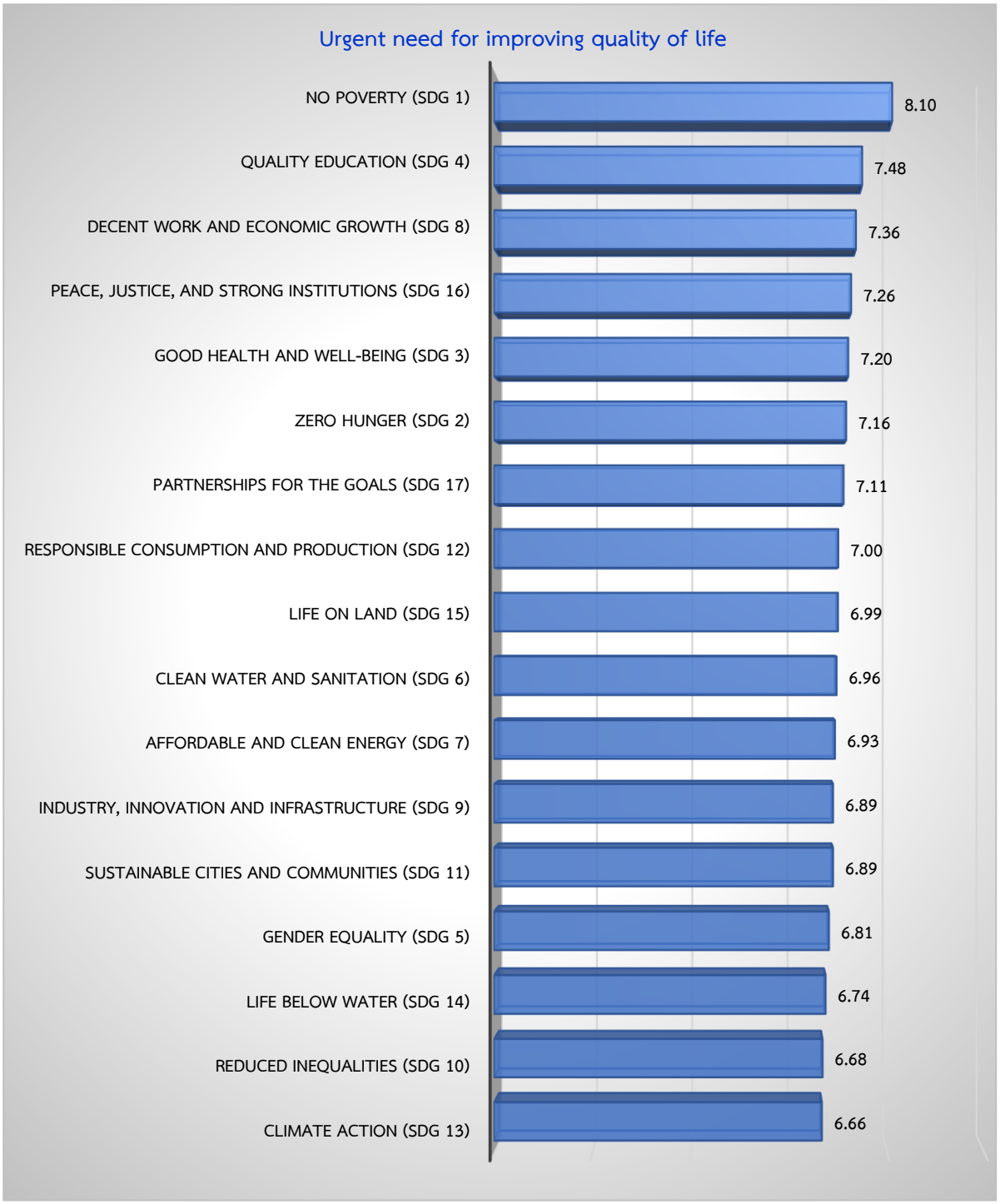
From this survey, it is found that 51.50 percent of the samples are not in vulnerable conditions and 48.50 percent are in vulnerable conditions. Among the samples with vulnerable conditions, they are temporary/daily employees, the most at 45.36 percent, followed by the elderly at 23.71 percent and are youth, students, 21.65 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.10, followed by Quality Education (SDG 4), the average is 7.48. Decent Work and Economic Growth (SDG 8) average is 7.36. Peace, Justice and Strong Institutions (SDG 16) average is 7.26 and health and Well-being (SDG 3), the average is 7.20



As for the government's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.75, followed by Gender Equality (SDG 5), the average is 5.70. Life on Lands (SDG 15) average value is 5.40. Clean Water and Sanitation (SDG 6) average value is 5.35 and Life Below Water (SDG 14) the average is 5.25.

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 4.66, followed by Gender Equality (SDG 5), the average is 4.62. Clean Water and Sanitation (SDG 6) average is 4.32. Life on Lands (SDG 15) have an average value of 4.31 and Life Below Water (SDG 14) have an average value of 4.30, details as shown in Table 4.23.

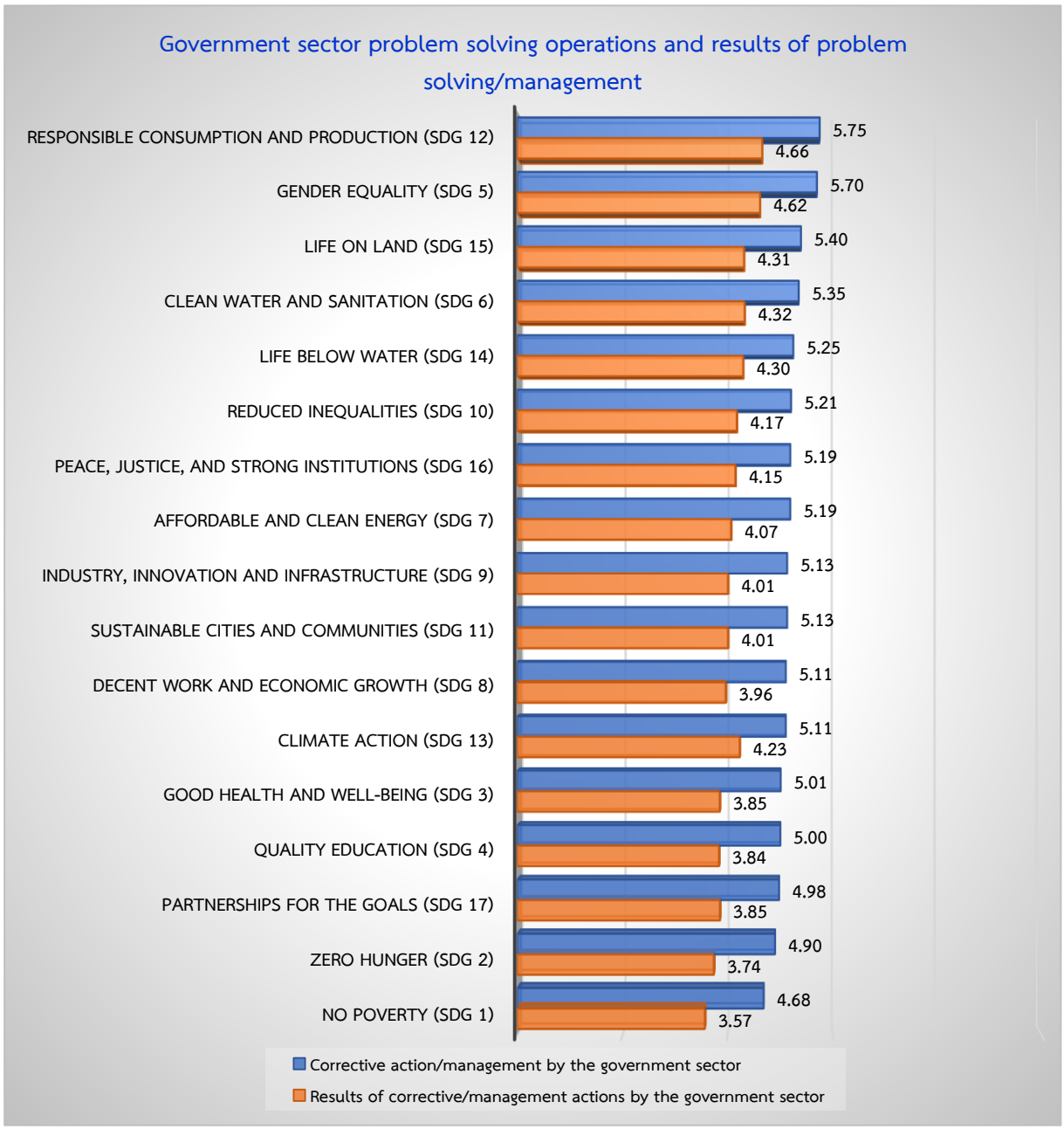


Table 4.23 Mean, standard deviation of urgent needs and actions to solve problems of the government sector. (Phuket Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**8.10**	**2.295**	**4.68**	**2.246**	**3.57**	**1.943**
poverty alleviation	8.10	2.295	4.68	2.246	3.57	1.943
SDG 2 Hunger elimination	**7.16**	**1.799**	**4.90**	**1.852**	**3.74**	**1.609**
Developing smallholder farmers to promote a sustainable food system	7.35	1.888	4.80	2.038	3.61	1.729
Having Good Health and nutrition *	6.98	2.293	5.04	2.034	3.89	1.868
SDG 3 Have Good Health and Well-being	**7.20**	**1.875**	**5.01**	**1.768**	**3.85**	**1.623**
Having good mental health (Mental Health)	6.85	2.436	4.92	2.041	3.77	1.884
Road safety	7.61	1.942	5.10	2.053	3.93	1.855
SDG 4 Quality Education	**7.48**	**1.724**	**5.00**	**1.916**	**3.84**	**1.642**
Quality Education	7.84	1.999	5.00	2.191	3.94	1.917
Having the skills necessary for a career	7.15	2.061	5.03	2.043	3.79	1.795
SDG 5 Gender Equality	**6.81**	**2.375**	**5.70**	**2.140**	**4.62**	**2.057**
Eliminating sexual violence in private and public spaces	6.81	2.375	5.70	2.140	4.62	2.057
SDG 6 Clean Water and Sanitation	**6.96**	**1.767**	**5.35**	**1.689**	**4.32**	**1.424**
Availability and access to clean water for drinking and use	7.19	2.009	5.46	2.065	4.36	1.814
Solving water pollution problems *	6.74	2.132	5.25	1.864	4.30	1.671
SDG 7 Affordable and Clean Energy	**6.93**	**2.031**	**5.19**	**1.811**	**4.07**	**1.557**
Having and having universal access to clean energy	6.93	2.031	5.19	1.811	4.07	1.557

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**7.36**	**1.888**	**5.11**	**1.877**	**3.96**	**1.616**
Employment and access to good work opportunities	7.36	1.888	5.11	1.877	3.96	1.616
SDG 9 Industry, Innovation and Infrastructure	**6.89**	**1.777**	**5.13**	**1.854**	**4.01**	**1.621**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	6.89	1.777	5.13	1.854	4.01	1.621
SDG 10 Reduced Inequalities	**6.68**	**2.126**	**5.21**	**1.797**	**4.17**	**1.716**
Participation and equal access to opportunities for women and gender diverse people	6.68	2.126	5.21	1.797	4.17	1.716
SDG 11 Sustainable Cities and Communities	**6.89**	**1.777**	**5.13**	**1.854**	**4.01**	**1.621**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	6.89	1.777	5.13	1.854	4.01	1.621
SDG 12 Responsible Consumption and Production	**7.00**	**1.982**	**5.75**	**2.041**	**4.66**	**1.868**
Waste Management (Reduce Reuse Recycle)	7.00	1.982	5.75	2.041	4.66	1.868
SDG 13 Climate Action	**6.66**	**2.025**	**5.11**	**1.636**	**4.23**	**1.399**
Solving air pollution problems	6.70	2.223	4.95	1.991	4.17	1.743
Raising awareness of the impacts of climate change or global warming. (Climate Change)	6.65	2.245	5.27	1.819	4.29	1.624

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**6.74**	**2.132**	**5.25**	**1.864**	**4.30**	**1.671**
Solving water pollution problems *	6.74	2.132	5.25	1.864	4.30	1.671
SDG 15 Life on Land	**6.99**	**1.571**	**5.40**	**1.632**	**4.31**	**1.382**
Coping with and reducing the impact of natural disasters	7.01	1.954	5.36	1.920	4.32	1.741
Participatory management of forests and green areas	6.97	1.765	5.43	1.793	4.31	1.493
SDG 16 Peace, Justice and Strong Institutions	**7.26**	**1.805**	**5.19**	**1.691**	**4.15**	**1.543**
Managing quality public services and disseminating public information in a transparent manner	7.26	1.805	5.19	1.691	4.15	1.543
SDG 17 Partnerships for the Goals	**7.11**	**1.873**	**4.98**	**1.853**	**3.85**	**1.546**
Participation in proposing policies for a better quality of life	7.11	1.873	4.98	1.853	3.85	1.546

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, most of the sample agreed that there is no corruption and increased efficiency of information disclosure for transparent administration, the highest at 59.50 percent, followed by social and economic projects that should be developed for comprehensive local development, 58.25 percent, and there should be a distribution of capital resources and authority for local administration at 53.00 percent, details as shown in Table 4.24.

Table 4.24 Number and percentage of approaches to improving quality of life (Phuket Province)

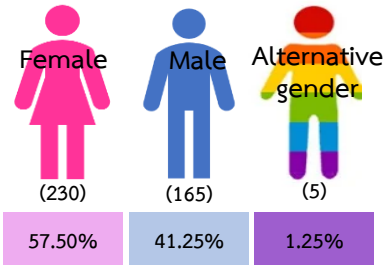
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	238	59.50
Appropriate local policies are developed and improved.	233	58.25
There is no corruption and the efficiency of information disclosure is increased for transparent management.	212	53.00
Knowledge about environmental conservation and Waste management is provided.	178	44.50
There is a space to exchange local knowledge between community members and apply it to development.	115	28.75
Social and economic projects are created for comprehensive local development.	108	27.00
Cooperation is created to create effective development policies in the community.	61	15.25
Roles of participation in the community are promoted equally for all genders.	49	12.25

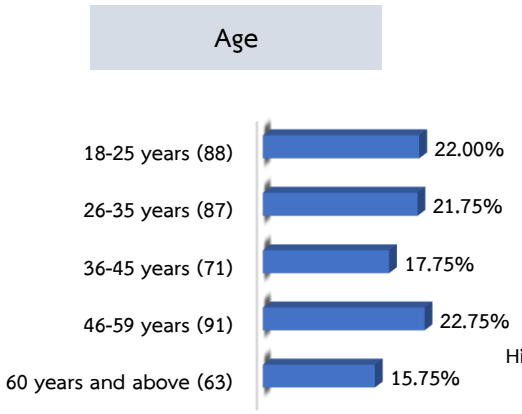
Note: Respondents can choose 3 answers, with a sample of 400 respondents.

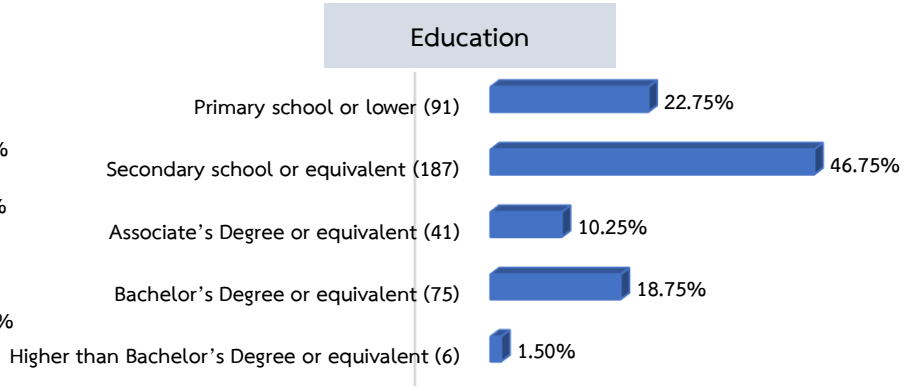
2.12 Songkhla Province

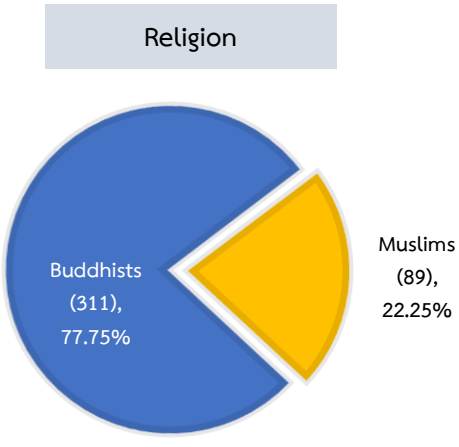
Part 1 Information about general characteristics

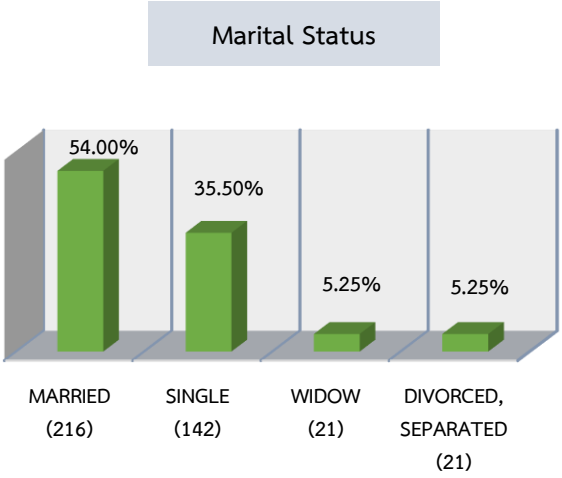
Survey data for Songkhla Province from a total of 400 samples, the majority of samples are female, 57.50 percent, followed by males, 41.25 percent and LGBTQ 1.25 percent. The greatest number is between 46-59 years old, 22.75 percent, followed by 18-25 years old, 22.00 percent and between 26-35 years old, 21.75 percent. The highest number of graduates is at the secondary school level or equivalent, 46.75 percent, followed by primary school level or less, 22.75 percent and bachelor's degree or equivalent, 18.75 percent. Most of the sample is Buddhists (77.75 percent) and Muslims (22.25 percent). Marital status of married is the highest at 54.00 percent, followed by single at 35.50 percent and have the status of being widow and divorced and separated in the same proportion, 5.25 percent. Their main occupation is general contractor/laborer, the most at 28.00 percent, followed by owning their own business/self-employment, 20.25 percent and are students/students 15.50 percent. An average monthly income not exceeding 10,000 baht is the highest at 32.50 percent, followed by 10,001-20,000 baht, 28.75 percent and have no income, 20.75 percent, respectively.

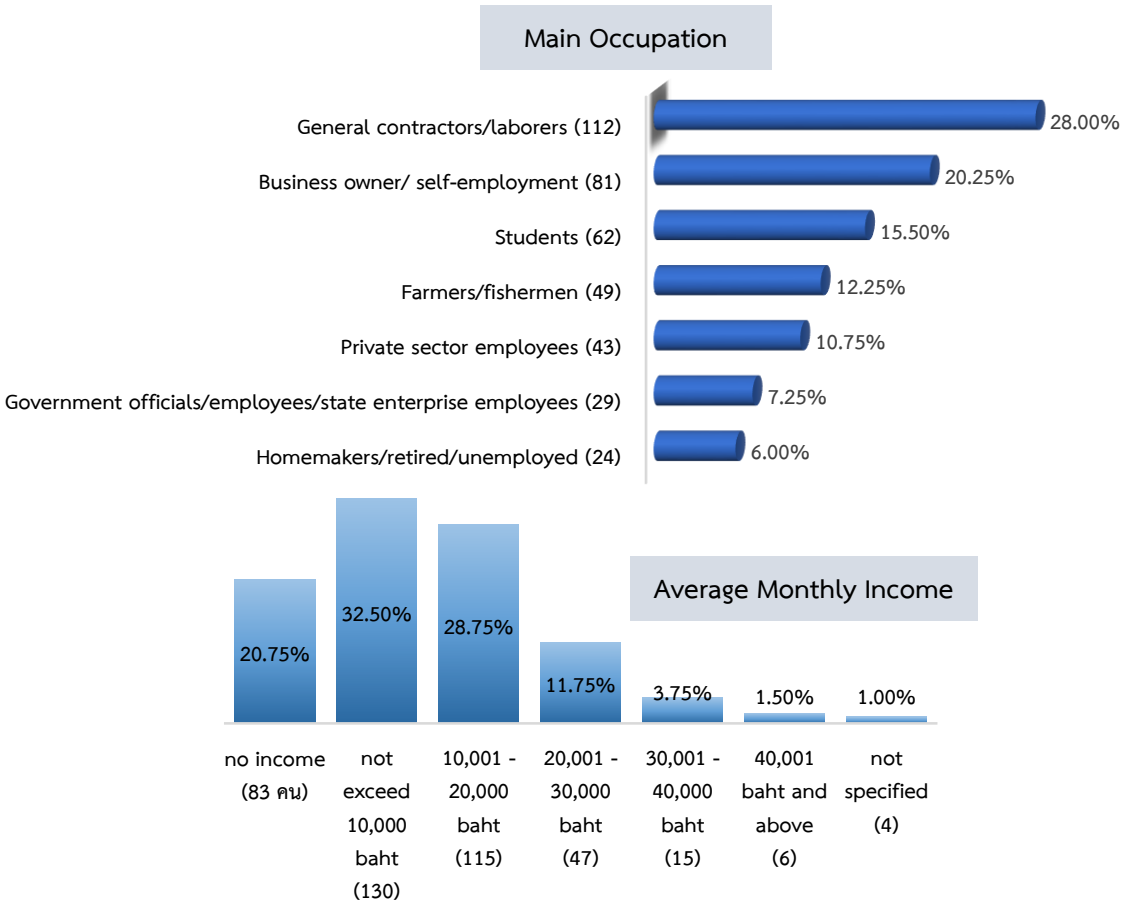




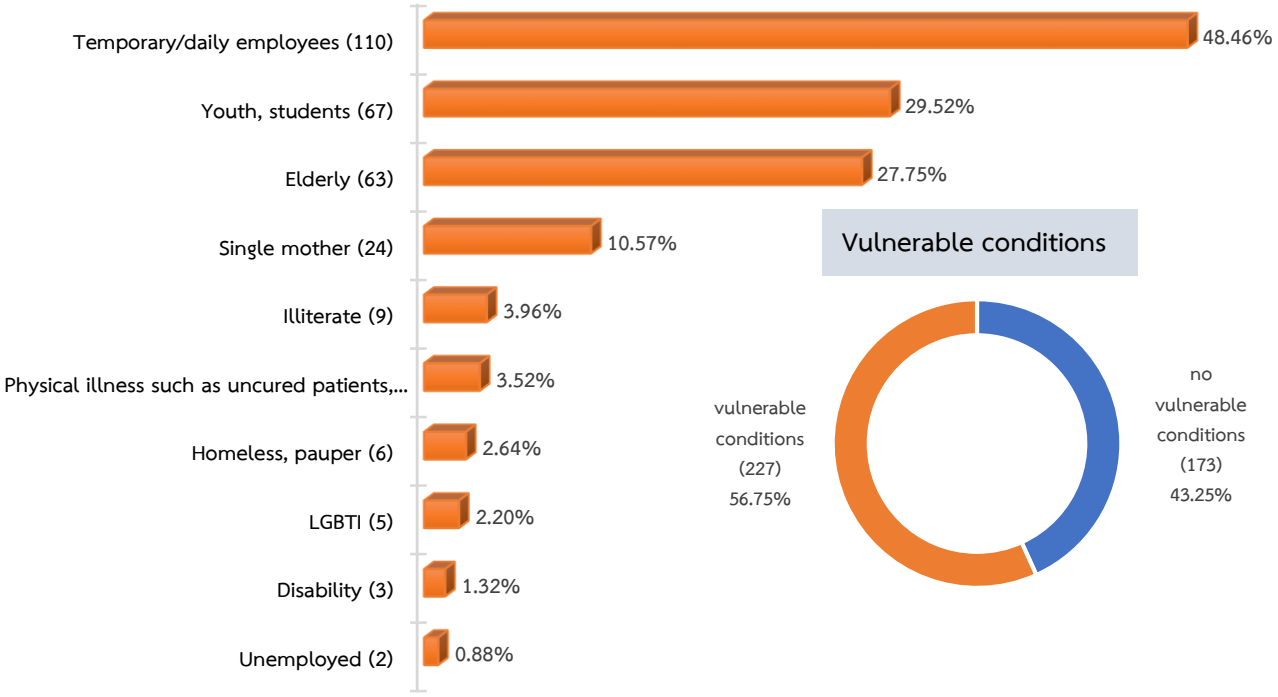








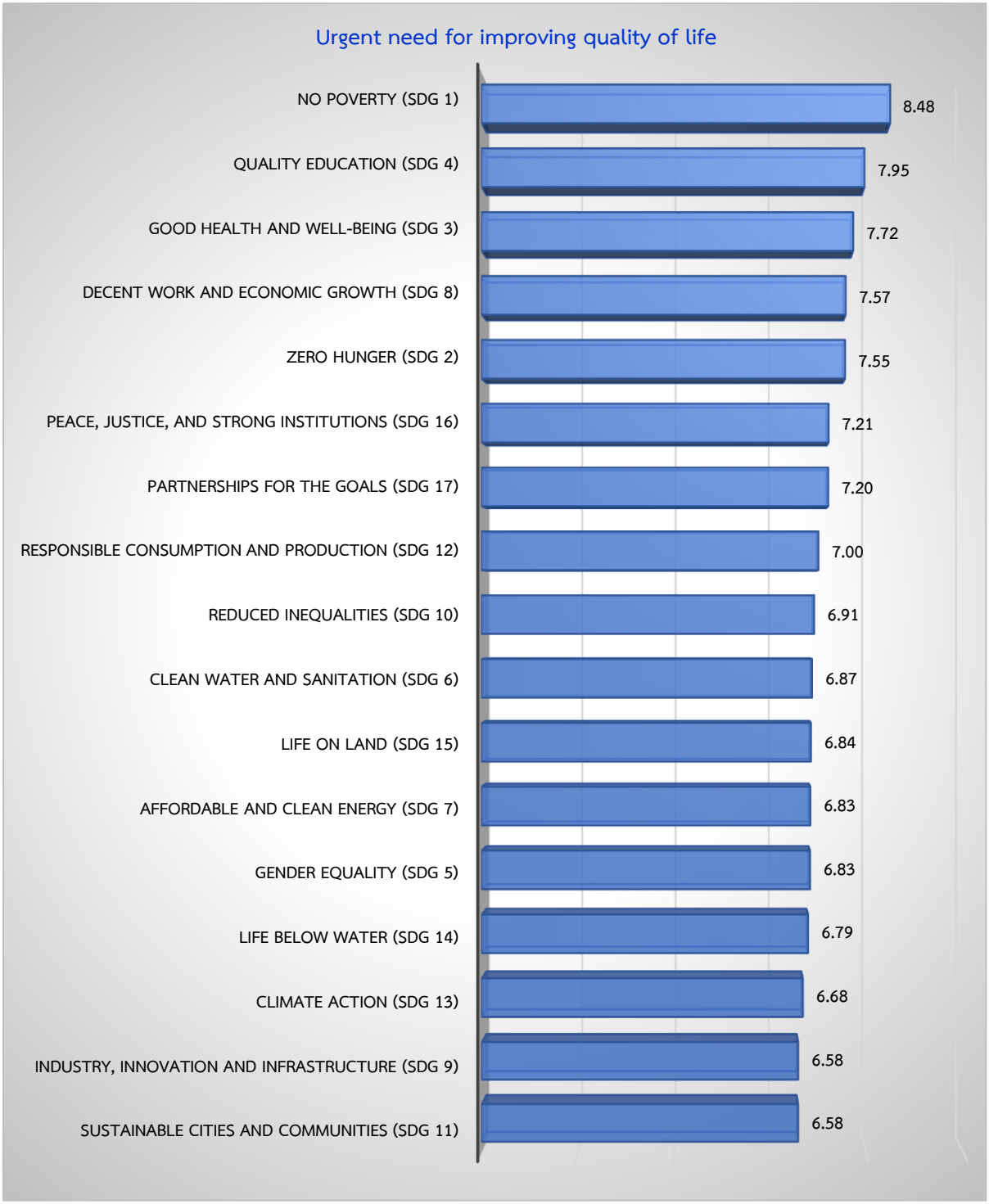
From this survey, it is found that 56.75 percent of the samples are in vulnerable conditions and 43.25 percent are not in vulnerable conditions. Among the samples with vulnerable conditions, most are temporary/daily employees at 48.46 percent, followed by youths and students at 29.52% and senior citizens at 27.75% respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.48, followed by Quality Education (SDG 4), the average is 7.95. Health and Well-being (SDG 3) average is 7.72. Decent Work and Economic Growth (SDG 8) average is 7.57 and hunger elimination (SDG 2), the average is 7.55.



As for the government's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.76, Followed by Clean Water and Sanitation (SDG 6), the average is 5.36. Life on Lands (SDG 15) average value is 5.35. Life Below Water (SDG 14) average is 5.31 and Affordable and Clean Energy (SDG 7), the average is 5.11.

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.09, followed by Life on Lands (SDG 15), the average is 4.82. Clean Water and Sanitation (SDG 6) average is 4.74. Life Below Water (SDG 14) average is 4.72 and Affordable and Clean Energy (SDG 7), the average is 4.66, details as shown in Table 4.25.

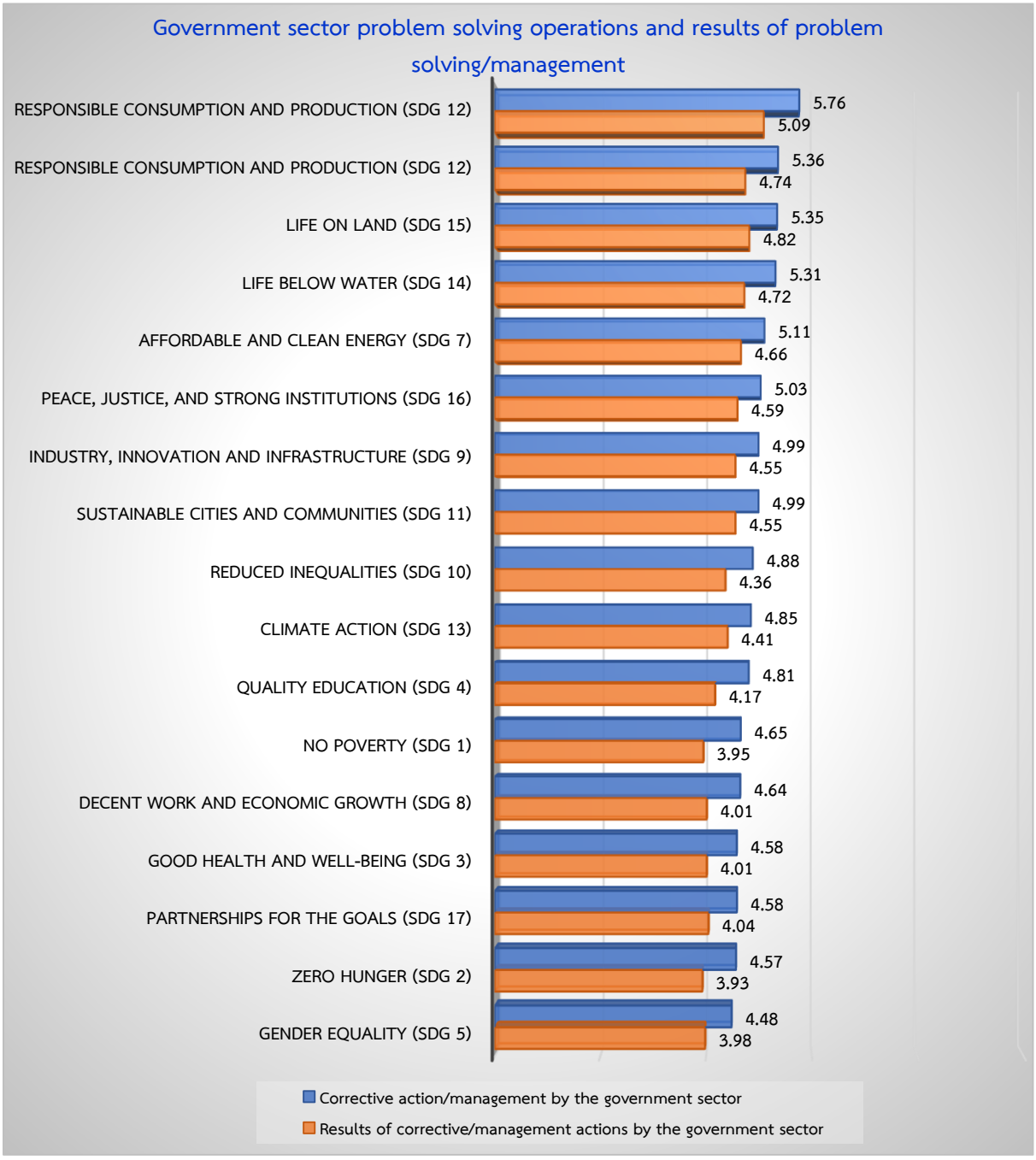


Table 4.25 Mean, standard deviation of urgent needs and actions to solve problems of the government sector (Songkhla Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**8.48**	**1.926**	**4.65**	**1.987**	**3.95**	**1.902**
poverty alleviation	8.48	1.926	4.65	1.987	3.95	1.902
SDG 2 Hunger elimination	**7.55**	**1.791**	**4.57**	**1.553**	**3.93**	**1.611**
Developing smallholder farmers to promote a sustainable food system	7.56	2.086	4.50	1.813	3.83	1.790
Having Good Health and nutrition *	7.55	1.914	4.65	1.647	4.04	1.773
SDG 3 Have Good Health and Well-being	**7.72**	**1.756**	**4.58**	**1.556**	**4.01**	**1.609**
Having good mental health (Mental Health)	7.63	2.148	4.37	1.831	3.78	1.885
Road safety	7.80	1.985	4.82	1.736	4.28	1.807
SDG 4 Quality Education	**7.95**	**1.676**	**4.81**	**1.645**	**4.17**	**1.746**
Quality Education	8.21	1.875	4.88	1.948	4.22	2.111
Having the skills necessary for a career	7.71	1.884	4.78	1.682	4.19	1.723
SDG 5 Gender Equality	**6.83**	**2.245**	**4.48**	**1.766**	**3.98**	**1.765**
Eliminating sexual violence in private and public spaces	6.83	2.245	4.48	1.766	3.98	1.765
SDG 6 Clean Water and Sanitation	**6.87**	**1.862**	**5.36**	**1.636**	**4.74**	**1.579**
Availability and access to clean water for drinking and use	6.94	2.221	5.43	2.016	4.77	1.905
Solving water pollution problems *	6.79	2.036	5.31	1.835	4.72	1.732
SDG 7 Affordable and Clean Energy	**6.83**	**1.910**	**5.11**	**1.602**	**4.66**	**1.615**
Having and having universal access to clean energy	6.83	1.910	5.11	1.602	4.66	1.615

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**7.57**	**1.917**	**4.64**	**1.652**	**4.01**	**1.632**
Employment and access to good work opportunities	7.57	1.917	4.64	1.652	4.01	1.632
SDG 9 Industry, Innovation and Infrastructure	**6.58**	**1.943**	**4.99**	**1.538**	**4.55**	**1.584**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	6.58	1.943	4.99	1.538	4.55	1.584
SDG 10 Reduced Inequalities	**6.91**	**2.013**	**4.88**	**1.683**	**4.36**	**1.800**
Participation and equal access to opportunities for women and gender diverse people	6.91	2.013	4.88	1.683	4.36	1.800
SDG 11 Sustainable Cities and Communities	**6.58**	**1.943**	**4.99**	**1.538**	**4.55**	**1.584**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	6.58	1.943	4.99	1.538	4.55	1.584
SDG 12 Responsible Consumption and Production	**7.00**	**2.229**	**5.76**	**2.102**	**5.09**	**1.994**
Waste Management (Reduce Reuse Recycle)	7.00	2.229	5.76	2.102	5.09	1.994
SDG 13 Climate Action	**6.68**	**1.871**	**4.85**	**1.481**	**4.41**	**1.419**
Solving air pollution problems	6.79	2.110	4.74	1.699	4.27	1.610
Raising awareness of the impacts of climate change or global warming. (Climate Change)	6.57	2.137	4.98	1.726	4.59	1.627

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**6.79**	**2.036**	**5.31**	**1.835**	**4.72**	**1.732**
Solving water pollution problems *	6.79	2.036	5.31	1.835	4.72	1.732
SDG 15 Life on Land	**6.84**	**1.785**	**5.35**	**1.511**	**4.82**	**1.488**
Coping with and reducing the impact of natural disasters	7.11	2.086	5.58	1.894	4.95	1.788
Participatory management of forests and green areas	6.59	1.930	5.14	1.672	4.72	1.701
SDG 16 Peace, Justice and Strong Institutions	**7.21**	**2.034**	**5.03**	**1.636**	**4.59**	**1.678**
Managing quality public services and disseminating public information in a transparent manner	7.21	2.034	5.03	1.636	4.59	1.678
SDG 17 Partnerships for the Goals	**7.20**	**1.874**	**4.58**	**1.734**	**4.04**	**1.783**
Participation in proposing policies for a better quality of life	7.20	1.874	4.58	1.734	4.04	1.783

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

As for guidelines for improving the quality of life, the sample agreed that there should be no corruption and increased efficiency of information disclosure for transparent administration, the most at 53.50 percent, followed by social and economic projects that should be created for comprehensive local development, 47.50 percent and there should be effective cooperation in formulating development policies in the community, 40.50 percent, details as shown in Table 4.26

Table 4.26 Number and percentage of approaches to improving quality of life (Songkhla Province)

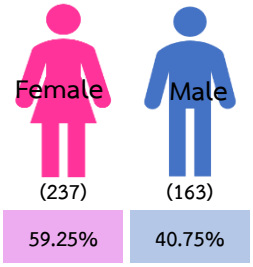
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	214	53.50
Appropriate local policies are developed and improved.	190	47.50
There is no corruption and the efficiency of information disclosure is increased for transparent management.	162	40.50
Knowledge about environmental conservation and Waste management is provided.	156	39.00
There is a space to exchange local knowledge between community members and apply it to development.	155	38.75
Social and economic projects are created for comprehensive local development.	152	38.00
Cooperation is created to create effective development policies in the community.	90	22.50
Roles of participation in the community are promoted equally for all genders.	77	19.25

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

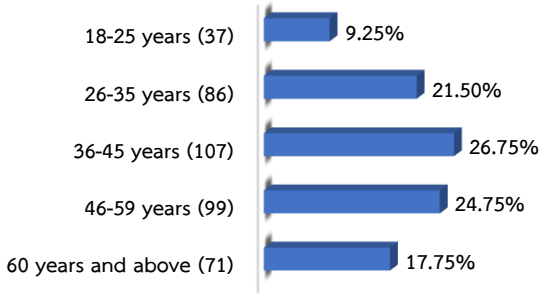
2.13 Pattani Province

Part 1 Information about general characteristics

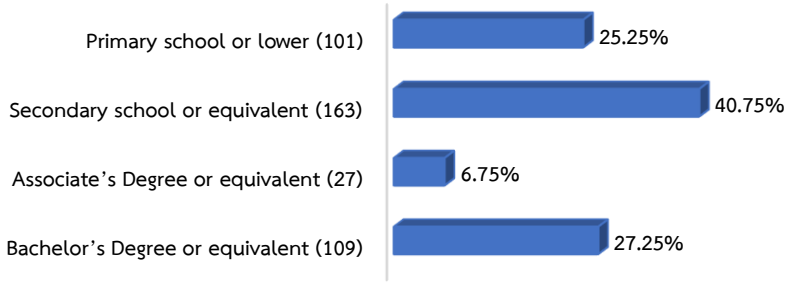
Data survey of Pattani province from a total of 400 samples, 59.25% are female and 40.75% are male. Most are between 36-45 years old, 26.75 percent, followed by 46-59 years old, 24.75 percent and between 26-35 years old, 21.50 percent. The highest number of graduates is at the secondary school level or equivalent, 40.75 percent, followed by a bachelor's degree or equivalent, 27.25 percent and primary school level or lower, 25.25 percent. All samples are Muslim, 100.00 percent. Marital status of married is the most at 67.00 percent, followed by single at 25.00 percent and 5.75 percent is widow. Their main occupation is general contractors/laborers, the most at 32.00 percent, followed by farmers/fishermen, 24.75 percent, and self-employed business owners/self-employed, 15.25 percent. Have an average monthly income not exceeding 10,000 baht, the highest at 59.00 percent, followed by no income at 22.25 percent and 10,001-20,000 baht, 12.75 percent, respectively.



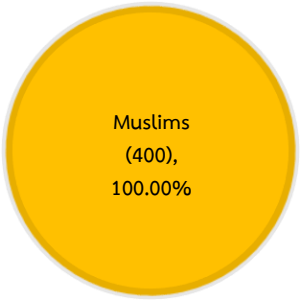
Age



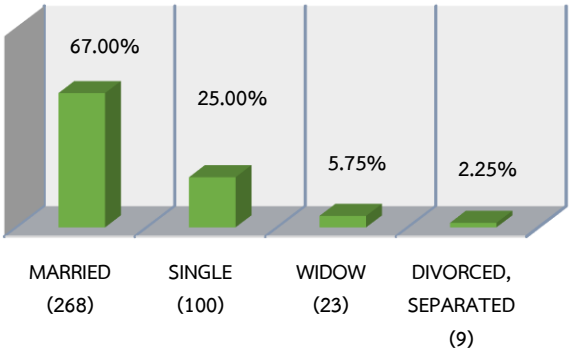
Education

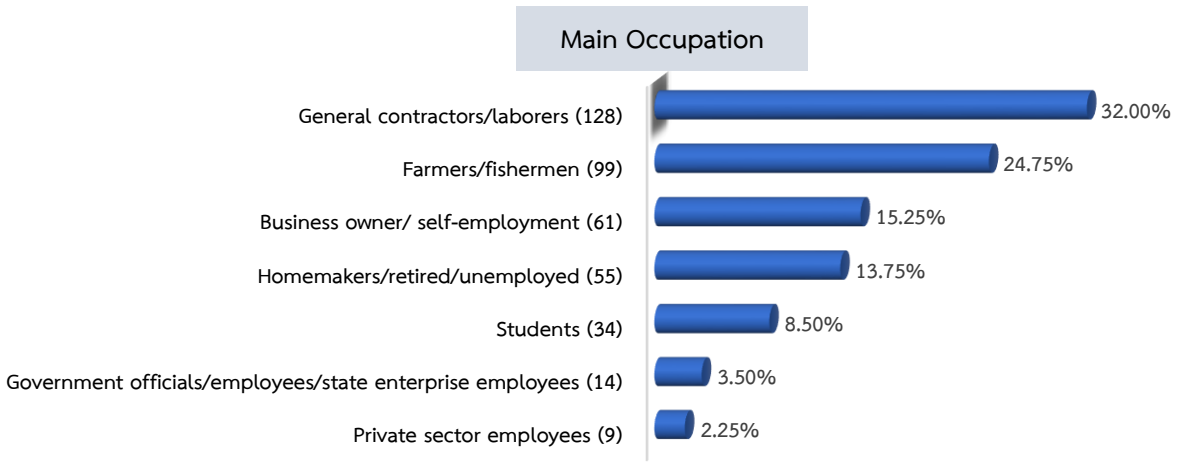


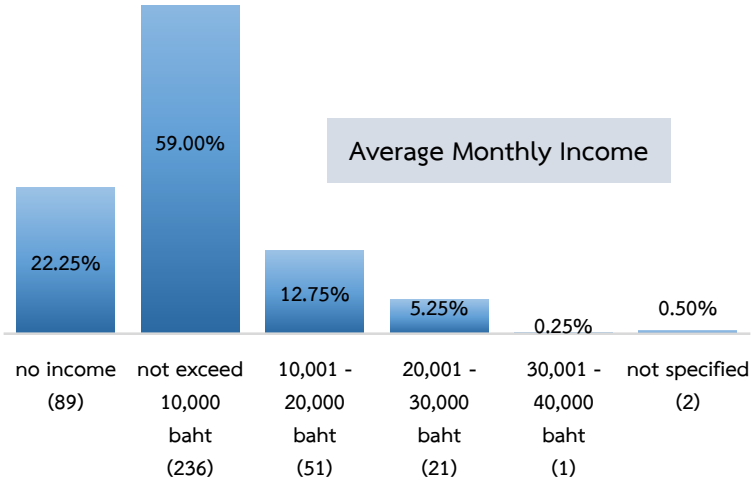
Religion



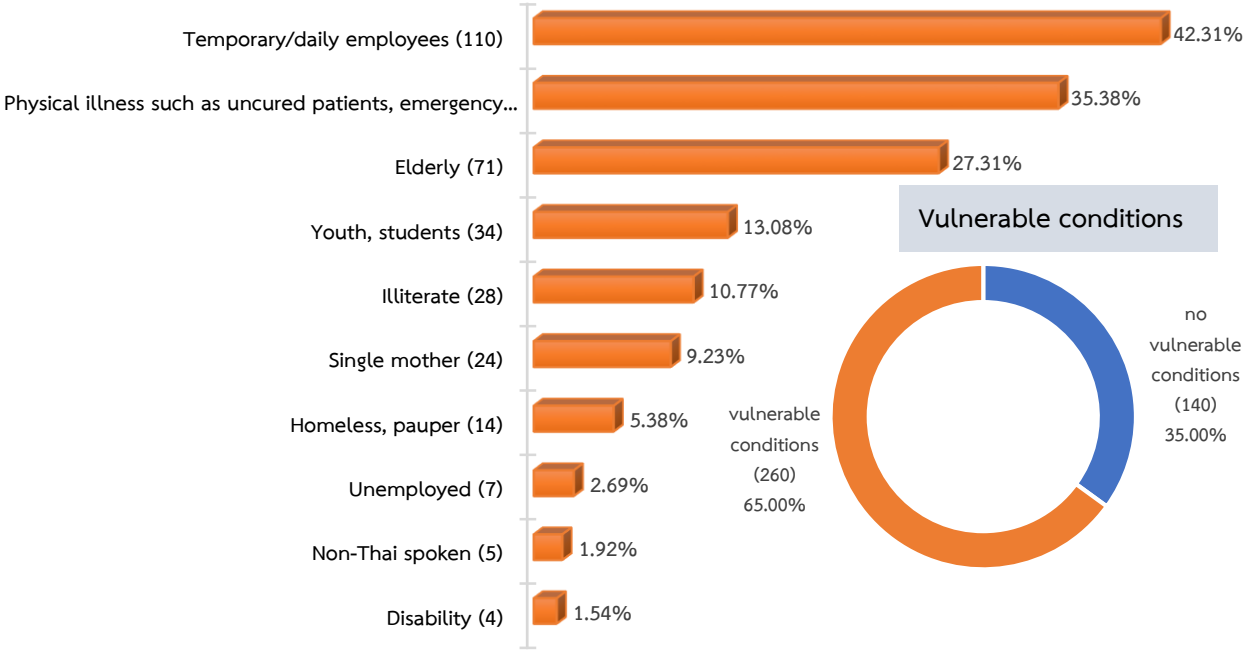
Marital Status







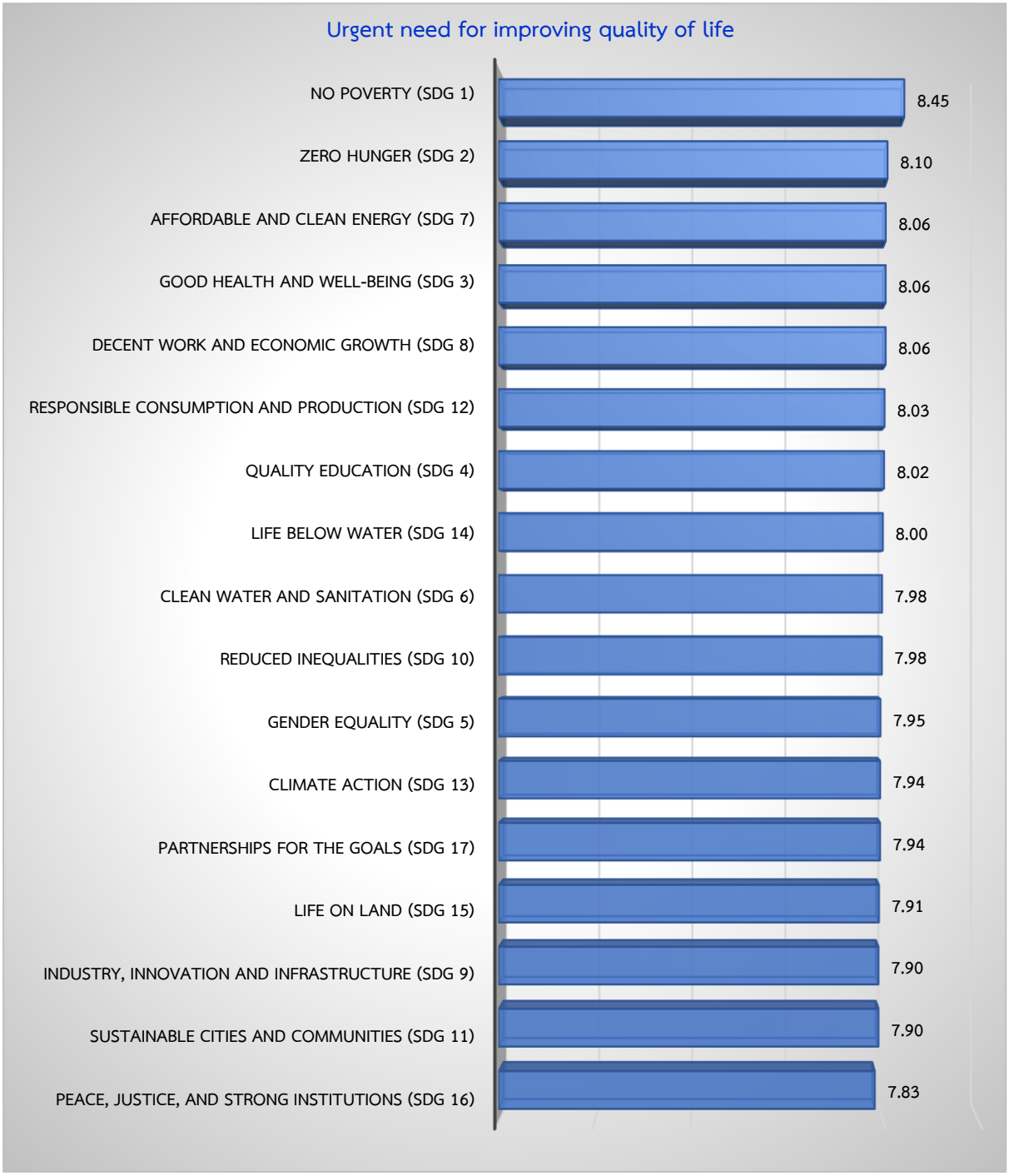
From this survey, it is found that the samples are in the most vulnerable conditions, 65.00 percent, and are not in vulnerable conditions, 35.00 percent. Among the samples with vulnerable conditions, they are temporary/daily employees, the most at 42.31 percent, followed by conditions of physical illness such as uncured patients and emergency patients, 35.38 percent and are elderly, 27.31 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.45, followed by hunger elimination (SDG 2), the average is 8.10. Access to clean energy for all (SDG 7), Good Health and Well-being (SDG 3), and Decent Work and Economic Growth (SDG 8) have the same average value of 8.06. Responsible Consumption and Production (SDG 12) has an average of 8.03 and Quality Education (SDG 4) has an average of 8.02.



For the government sector's implementation of problem solving, it is found that Quality Education (SDG 4) had the highest average. The average is 4.21, followed by Partnerships for the Goals (SDG 17), the average is 4.10. Clean Water and Sanitation (SDG 6) average is 4.08. Clean energy that is accessible to everyone (SDG 7) has an average value of 4.07 and Gender Equality (SDG 5) has an average value of 4.06.

As for the results of the government sector's corrective/management actions, it is found that Quality Education (SDG 4) had the highest average. The average is 3.63, followed by Partnerships for the Goals (SDG 17), the average is 3.62. Decent Work and Economic Growth (SDG 8) average is 3.60. Gender Equality (SDG 5) average is 3.58 and Clean Water and Sanitation (SDG 6), clean energy that is accessible to all (SDG 6), Responsible Consumption and Production (SDG 12), and Life on Lands (SDG 15) have the same average value of 3.57, details as shown in Table 4.27

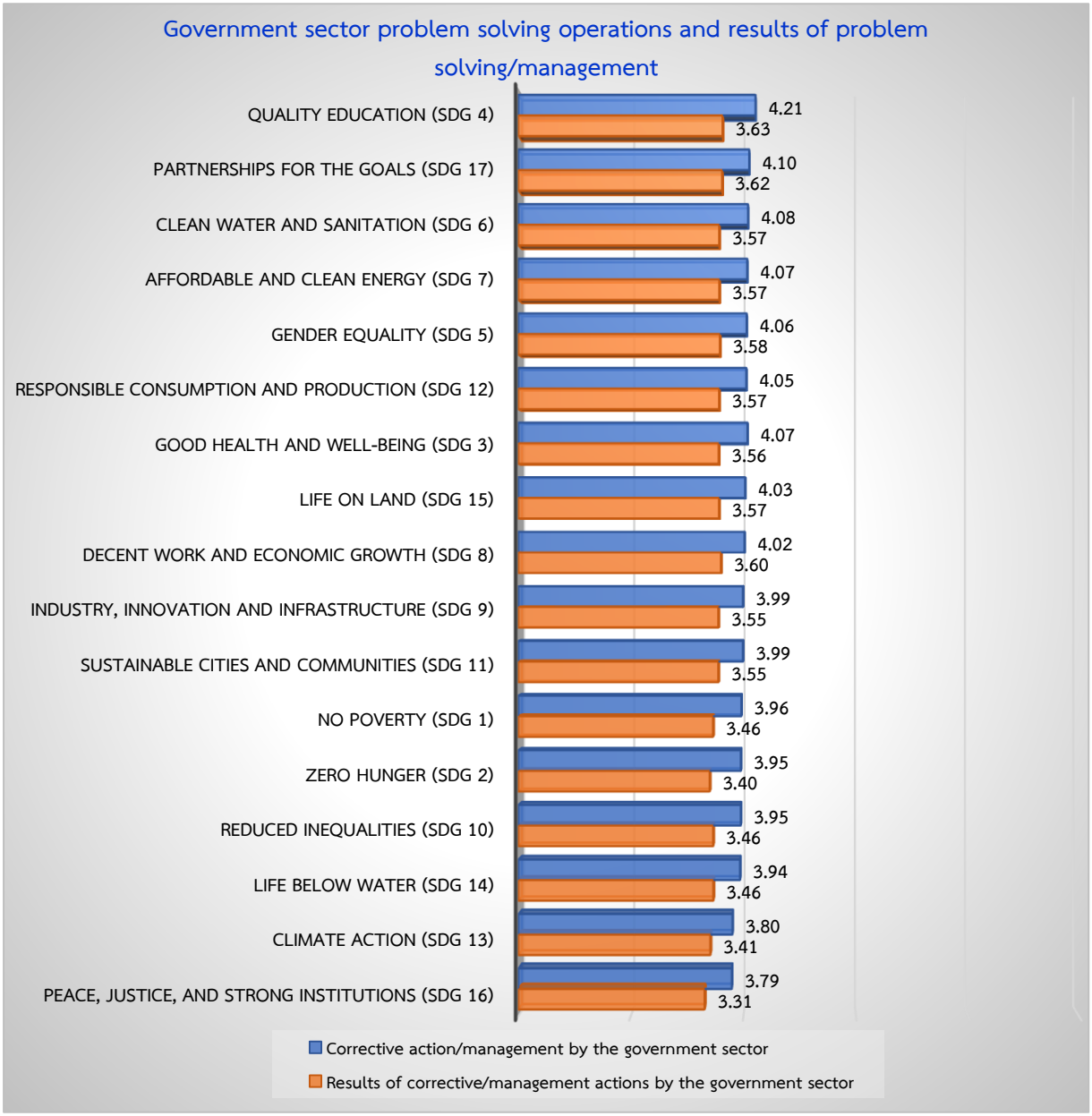


Table 4.27 Mean, standard deviation of urgent needs and actions to solve problems of the government sector (Pattani Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**8.45**	**1.109**	**3.96**	**1.395**	**3.46**	**0.967**
poverty alleviation	8.45	1.109	3.96	1.395	3.46	0.967
SDG 2 Hunger elimination	**8.10**	**0.858**	**3.95**	**1.496**	**3.40**	**1.009**
Developing smallholder farmers to promote a sustainable food system	8.14	0.920	3.90	1.628	3.36	1.145
Having Good Health and nutrition *	8.05	1.043	4.01	1.562	3.45	1.131
SDG 3 Have Good Health and Well-being	**8.06**	**0.993**	**4.07**	**1.522**	**3.56**	**1.082**
Having good mental health (Mental Health)	8.06	1.111	4.07	1.670	3.52	1.217
Road safety	8.05	1.094	4.11	1.586	3.61	1.176
SDG 4 Quality Education	**8.02**	**1.000**	**4.21**	**1.579**	**3.63**	**1.099**
Quality Education	8.09	1.107	4.13	1.695	3.58	1.248
Having the skills necessary for a career	7.95	1.115	4.32	1.706	3.69	1.221
SDG 5 Gender Equality	**7.95**	**1.015**	**4.06**	**1.525**	**3.58**	**1.148**
Eliminating sexual violence in private and public spaces	7.95	1.015	4.06	1.525	3.58	1.148
SDG 6 Clean Water and Sanitation	**7.98**	**0.878**	**4.08**	**1.487**	**3.57**	**1.043**
Availability and access to clean water for drinking and use	7.97	1.052	4.24	1.673	3.68	1.201
Solving water pollution problems *	8.00	0.971	3.94	1.503	3.46	1.101
SDG 7 Affordable and Clean Energy	**8.06**	**1.062**	**4.07**	**1.582**	**3.57**	**1.222**
Having and having universal access to clean energy	8.06	1.062	4.07	1.582	3.57	1.222

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.06**	**1.063**	**4.02**	**1.515**	**3.60**	**1.147**
Employment and access to good work opportunities	8.06	1.063	4.02	1.515	3.60	1.147
SDG 9 Industry, Innovation and Infrastructure	**7.90**	**1.043**	**3.99**	**1.529**	**3.55**	**1.200**
Adapting to a green economy (Design of infrastructure, roads water, electricity, buildings)*	7.90	1.043	3.99	1.529	3.55	1.200
SDG 10 Reduced Inequalities	**7.98**	**0.976**	**3.95**	**1.666**	**3.46**	**1.215**
Participation and equal access to opportunities for women and gender diverse people	7.98	0.976	3.95	1.666	3.46	1.215
SDG 11 Sustainable Cities and Communities	**7.90**	**1.043**	**3.99**	**1.529**	**3.55**	**1.200**
Adapting to a green economy (Design of infrastructure, roads water, electricity, buildings)*	7.90	1.043	3.99	1.529	3.55	1.200
SDG 12 Responsible Consumption and Production	**8.03**	**0.999**	**4.05**	**1.492**	**3.57**	**1.104**
Waste Management (Reduce Reuse Recycle)	8.03	0.999	4.05	1.492	3.57	1.104
SDG 13 Climate Action	**7.94**	**0.868**	**3.80**	**1.415**	**3.41**	**1.069**
Solving air pollution problems	8.01	0.996	3.67	1.536	3.33	1.238
Raising awareness of the impacts of climate change or global warming. (Climate Change)	7.87	0.971	3.96	1.452	3.51	1.117
SDG 14 Life Below Water	**8.00**	**0.971**	**3.94**	**1.503**	**3.46**	**1.101**

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Solving water pollution problems *	8.00	0.971	3.94	1.503	3.46	1.101
SDG 15 Life on Land	**7.91**	**0.799**	**4.03**	**1.322**	**3.57**	**0.982**
Coping with and reducing the impact of natural disasters	7.89	0.943	4.21	1.525	3.68	1.148
Participatory management of forests and green areas	7.94	0.936	3.89	1.291	3.48	1.026
SDG 16 Peace, Justice and Strong Institutions	**7.83**	**0.988**	**3.79**	**1.275**	**3.31**	**0.908**
Managing quality public services and disseminating public information in a transparent manner	7.83	0.988	3.79	1.275	3.31	0.908
SDG 17 Partnerships for the Goals	**7.94**	**1.037**	**4.10**	**1.496**	**3.62**	**1.079**
Participation in proposing policies for a better quality of life	7.94	1.037	4.10	1.496	3.62	1.079

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

As for guidelines for improving the quality of life, most of the sample agreed that social and economic projects should be created for thorough local development, with the highest percentage of 57.50 percent, followed by an effective cooperation in formulating development policies in the community, 55.25 percent and has a space to exchange local knowledge between community members and applied to the development of 43.00 percent, details as shown in Table 4.28

Table 4.28 Number and percentage of approaches to improving quality of life (Pattani Province)

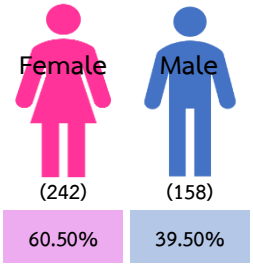
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	230	57.50
Appropriate local policies are developed and improved.	221	55.25
There is no corruption and the efficiency of information disclosure is increased for transparent management.	172	43.00
Knowledge about environmental conservation and Waste management is provided.	164	41.00
There is a space to exchange local knowledge between community members and apply it to development.	153	38.25
Social and economic projects are created for comprehensive local development.	145	36.25
Cooperation is created to create effective development policies in the community.	95	23.75
Roles of participation in the community are promoted equally for all genders.	20	5.00

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

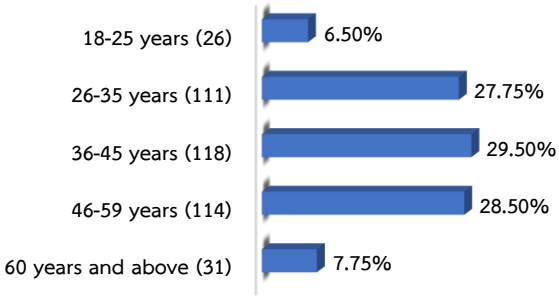
2.14 Yala Province

Part 1 Information about general characteristics

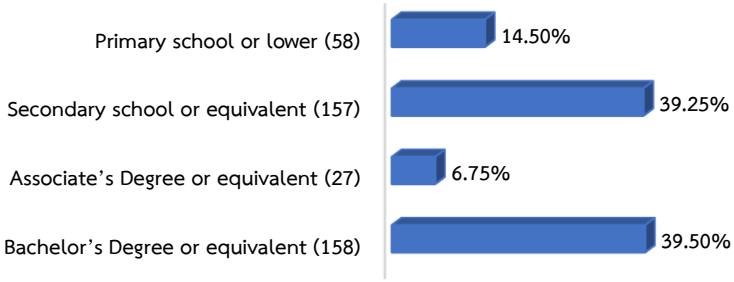
Data survey of Yala province From a total of 400 samples, 60.50% are female and 39.50% are male. Most are between 36-45 years old, 29.50 percent, followed by 46-59 years old, 28.50 percent and between 26-35 years old, 27.75 percent. The highest number of graduates is a bachelor's degree or equivalent, 39.50 percent, followed by a high school level or equivalent, 39.25 percent and primary school level or lower 14.50 percent. Most of the sample are Muslims, 99.50, and Buddhists and Christians are in equal proportions, 0.25 percent. Most of marital status of married, 71.75 percent, followed by single at 21.50 percent and 4.00 percent is widow. Their main occupation is general contractor/laborer, 42.00 percent, followed by owning their own business/self-employment, 21.75 percent and are farmers/fishermen, 20.50 percent. Most of an average monthly income not exceeding 10, 000 baht, 69.75 percent, followed by between 10,001-20,000 baht, 19.25 percent and no income at 9.75 percent respectively.



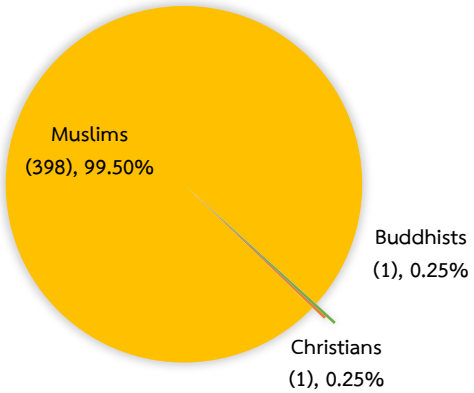
Age



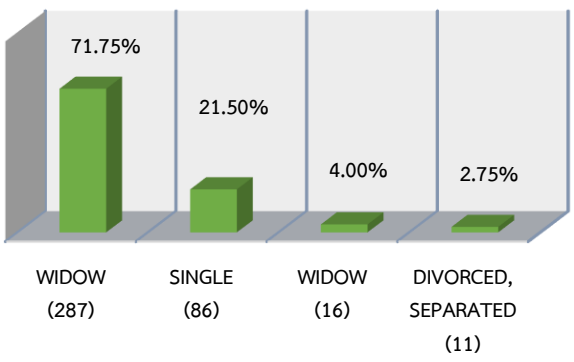
Education

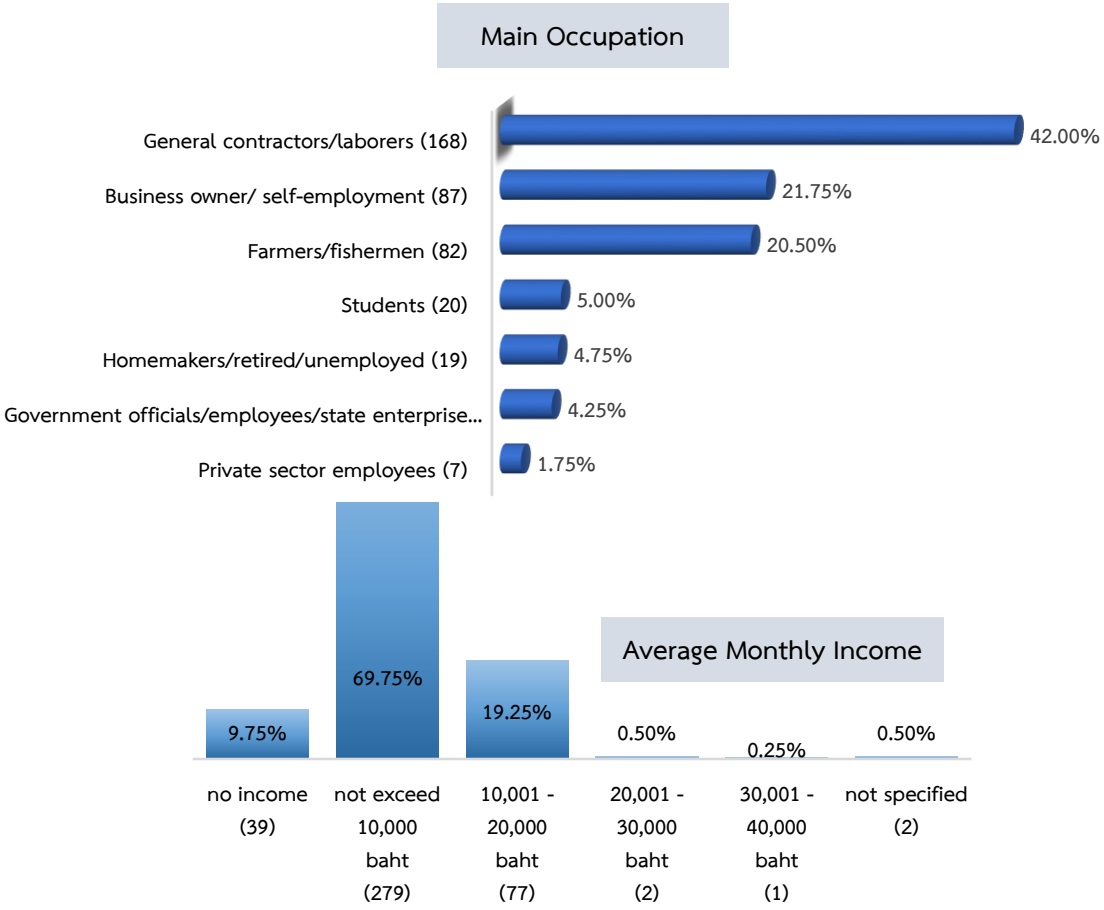


Religion

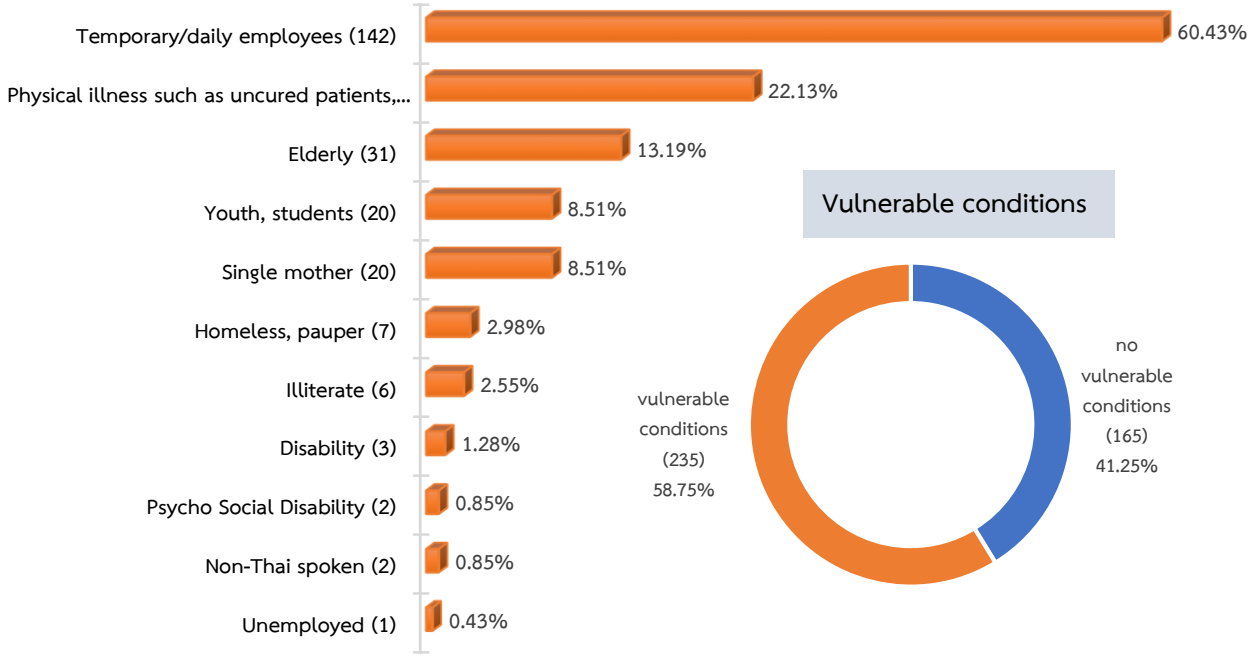


Marital Status





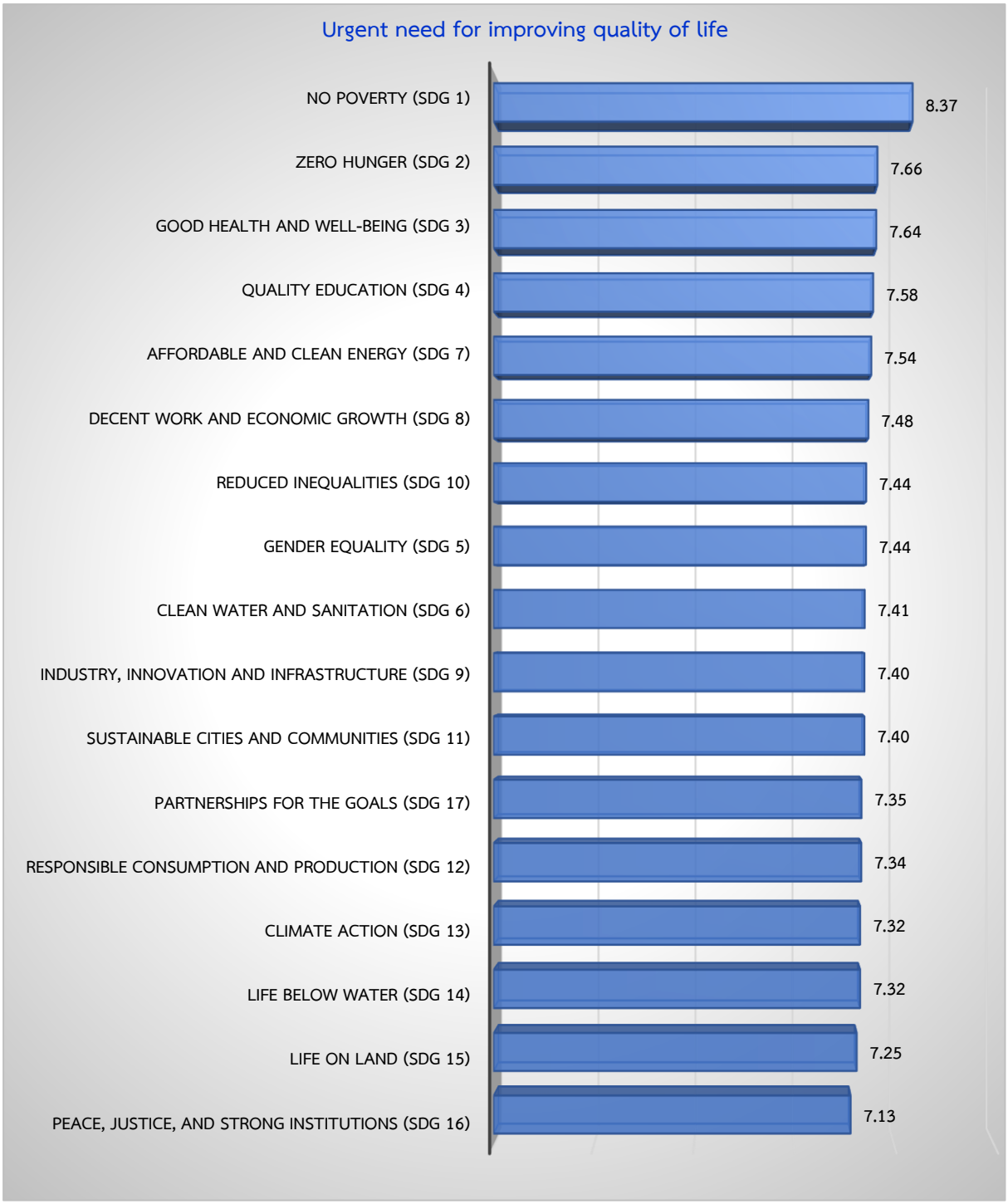
From this survey, it is found that 58.75 percent of the samples are not in vulnerable conditions and 41.25 percent are in vulnerable conditions. Among the samples with vulnerable conditions, most are temporary/daily employees at 60.43 percent, Next, the number of samples with vulnerable conditions is a condition of physical illness, such as uncured patients, emergency patients at 22.13 percent and are elderly, 13.19 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.37, followed by hunger elimination (SDG 2), with an average of 7.66. Health and Well-being (SDG 3) average is 7.64. Quality Education (SDG 4) has an average of 7.58 and clean energy that is accessible to everyone (SDG 7) has an average of 7.54.



For the government sector's problem-solving operations, it is found that health and Well-being (SDG 3) had the highest average. The average is 4.92, followed by Quality Education (SDG 4), the average is 4.86. Life on Lands (SDG 15) average value is 4.80 Industry, Innovation and Infrastructure (SDG 9) and Sustainable Cities and Communities (SDG 11) have the same average value of 4.70 and Reduced Inequalities (SDG 10), the average is 4.69.

As for the results of corrective actions/management by the government sector, it is found that Decent Work and Economic Growth (SDG 8) had the highest averages. The average is 4.07, followed by Quality Education (SDG 4), the average is 4.06. Health and Well-being (SDG 3) average is 4.05. Infrastructure, innovation, and industry (SDG 9), Sustainable Cities and Communities (SDG 11), Reduced Inequalities (SDG 10), and Gender Equality (SDG 5) have the same average value of 4.01 and Affordable and Clean Energy (SDG 7), the average is 3.98, details as shown in Table 4.29.

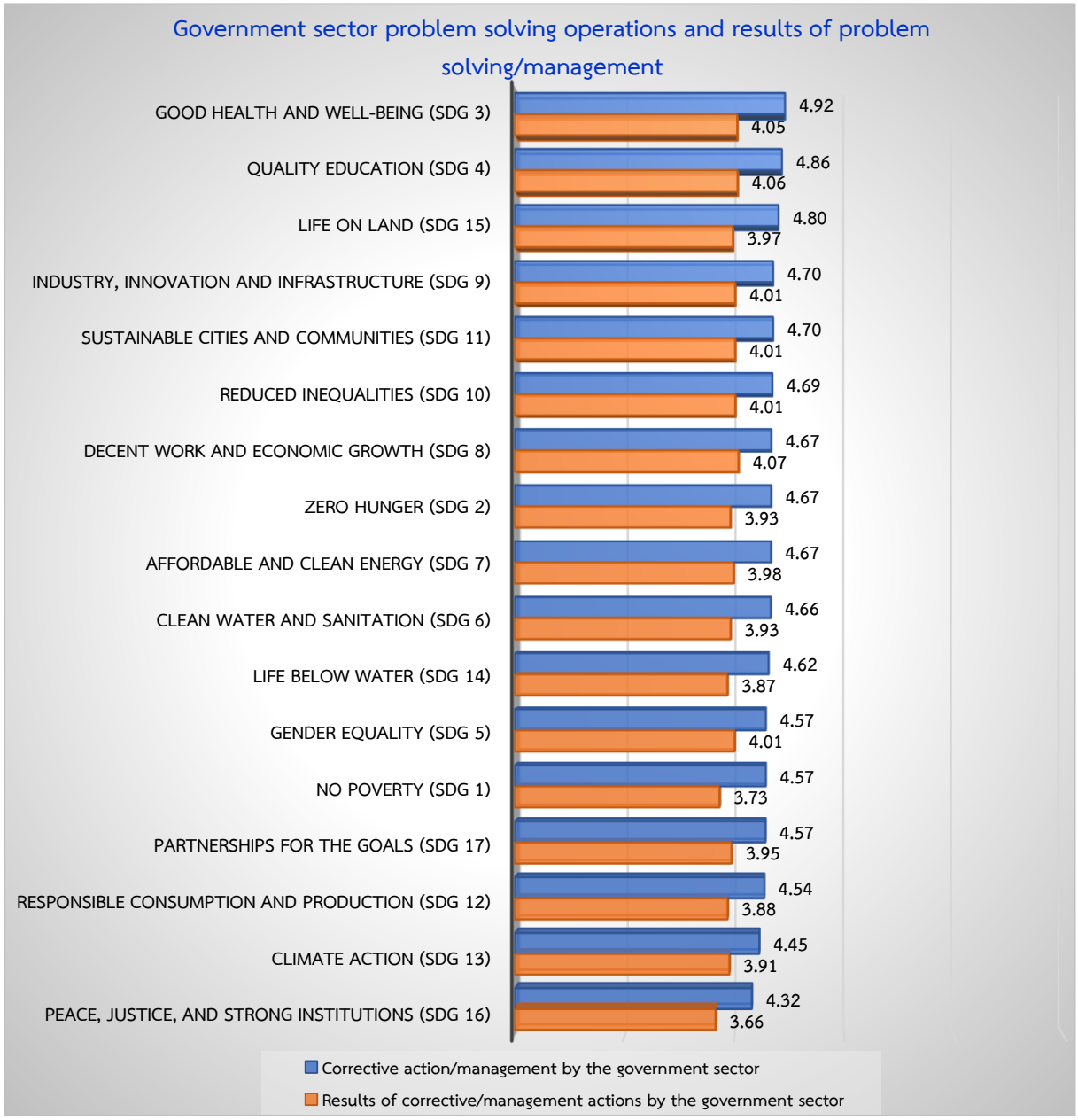


Table 4.29 Mean, standard deviation of urgent needs and actions to solve problems of the government sector (Yala Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**8.37**	**1.158**	**4.57**	**1.412**	**3.73**	**1.000**
poverty alleviation	8.37	1.158	4.57	1.412	3.73	1.000
SDG 2 Hunger elimination	**7.66**	**0.976**	**4.67**	**1.408**	**3.93**	**1.022**
Developing smallholder farmers to promote a sustainable food system	7.84	1.077	4.69	1.497	3.92	1.088
Having Good Health and nutrition *	7.49	1.101	4.65	1.522	3.93	1.176
SDG 3 Have Good Health and Well-being	**7.64**	**1.065**	**4.92**	**1.556**	**4.05**	**1.107**
Having good mental health (Mental Health)	7.62	1.148	4.79	1.542	4.06	1.203
Road safety	7.65	1.207	5.06	1.796	4.03	1.268
SDG 4 Quality Education	**7.58**	**1.053**	**4.86**	**1.479**	**4.06**	**1.098**
Quality Education	7.66	1.129	4.73	1.511	4.03	1.183
Having the skills necessary for a career	7.50	1.155	4.99	1.611	4.08	1.198
SDG 5 Gender Equality	**7.44**	**1.146**	**4.57**	**1.478**	**4.01**	**1.159**
Eliminating sexual violence in private and public spaces	7.44	1.146	4.57	1.478	4.01	1.159
SDG 6 Clean Water and Sanitation	**7.41**	**1.043**	**4.66**	**1.352**	**3.93**	**1.002**
Availability and access to clean water for drinking and use	7.50	1.204	4.70	1.500	3.98	1.150
Solving water pollution problems *	7.32	1.131	4.62	1.376	3.87	1.057
SDG 7 Affordable and Clean Energy	**7.54**	**1.130**	**4.67**	**1.440**	**3.98**	**1.134**
Having and having universal access to clean energy	7.54	1.130	4.67	1.440	3.98	1.134

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**7.48**	**1.161**	**4.67**	**1.472**	**4.07**	**1.149**
Employment and access to good work opportunities	7.48	1.161	4.67	1.472	4.07	1.149
SDG 9 Industry, Innovation and Infrastructure	**7.40**	**1.144**	**4.70**	**1.438**	**4.01**	**1.118**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.40	1.144	4.70	1.438	4.01	1.118
SDG 10 Reduced Inequalities	**7.44**	**1.179**	**4.69**	**1.454**	**4.01**	**1.113**
Participation and equal access to opportunities for women and gender diverse people	7.44	1.179	4.69	1.454	4.01	1.113
SDG 11 Sustainable Cities and Communities	**7.40**	**1.144**	**4.70**	**1.438**	**4.01**	**1.118**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	7.40	1.144	4.70	1.438	4.01	1.118
SDG 12 Responsible Consumption and Production	**7.34**	**1.178**	**4.54**	**1.370**	**3.88**	**1.066**
Waste Management (Reduce Reuse Recycle)	7.34	1.178	4.54	1.370	3.88	1.066
SDG 13 Climate Action	**7.32**	**1.006**	**4.45**	**1.294**	**3.91**	**0.980**
Solving air pollution problems	7.33	1.129	4.36	1.378	3.88	1.097
Raising awareness of the impacts of climate change or global warming. (Climate Change)	7.30	1.123	4.55	1.377	3.94	1.052

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**7.32**	**1.131**	**4.62**	**1.376**	**3.87**	**1.057**
Solving water pollution problems *	7.32	1.131	4.62	1.376	3.87	1.057
SDG 15 Life on Land	**7.25**	**1.028**	**4.80**	**1.242**	**3.97**	**0.911**
Coping with and reducing the impact of natural disasters	7.32	1.200	5.10	1.413	4.14	0.998
Participatory management of forests and green areas	7.19	1.124	4.51	1.319	3.81	1.021
SDG 16 Peace, Justice and Strong Institutions	**7.13**	**1.142**	**4.32**	**1.277**	**3.66**	**1.019**
Managing quality public services and disseminating public information in a transparent manner	7.13	1.142	4.32	1.277	3.66	1.019
SDG 17 Partnerships for the Goals	**7.35**	**1.115**	**4.57**	**1.342**	**3.95**	**1.043**
Participation in proposing policies for a better quality of life	7.35	1.115	4.57	1.342	3.95	1.043

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, most of the sample agreed that social and economic projects should be created for local development as thoroughly as possible, 63.75 percent, followed by a space for exchanging local knowledge between community members and applied to development 52.25 percent and promoting the role of participation in the community equally for all genders, 46.50 percent, details as shown in Table 4.30.

Table 4.30 Number and percentage of approaches to improving quality of life (Yala Province)

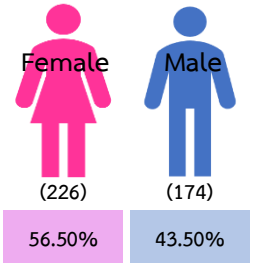
Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	255	63.75
Appropriate local policies are developed and improved.	209	52.25
There is no corruption and the efficiency of information disclosure is increased for transparent management.	186	46.50
Knowledge about environmental conservation and Waste management is provided.	182	45.50
There is a space to exchange local knowledge between community members and apply it to development.	166	41.50
Social and economic projects are created for comprehensive local development.	102	25.50
Cooperation is created to create effective development policies in the community.	71	17.75
Roles of participation in the community are promoted equally for all genders.	29	7.25

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

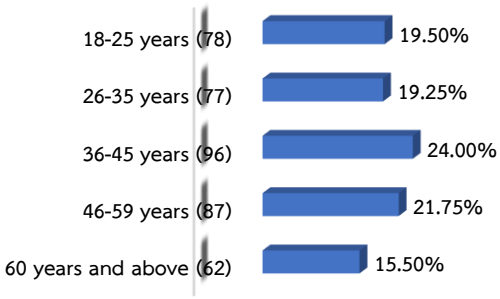
2.15 Narathiwat Province

Part 1 Information about general characteristics

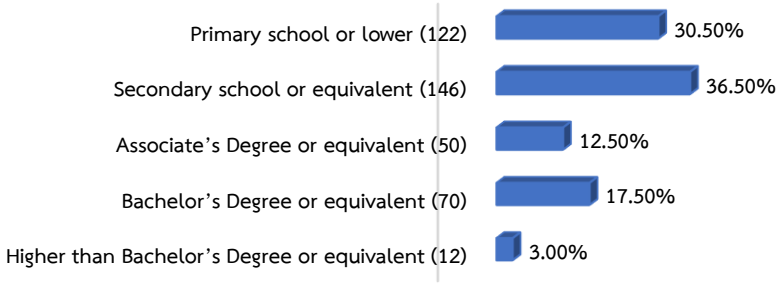
Survey of Narathiwat Province data From a total of 400 samples, 56.50% are female and 43.50% are male. Most are between 36-45 years old, 24.00 percent, followed by 46-59 years old, 21.75 percent and between 18-25 years old, 19.50 percent. The highest number of graduates is at the secondary school level or equivalent, 36.50 percent, followed by the primary school level or less, 30.50 percent and bachelor's degree or equivalent, 17.50 percent. Most of the sample are Muslims, 90.50, and 9.50 percent are Buddhists. Most have marital status of married, 58.50 percent, followed by single at 29.00 percent, and 8.75 percent is widow. Most of their main occupation is general contractor/laborer, 20.50 percent, followed by the owner of a private business/self-employed at 17.50 percent and being a homemaker/retired/unemployed 16.00 percent. Most have the average monthly income not exceeding 10,000 baht, 43.75 percent, followed by no income, 27.75 percent, and between 10,001-20,000 baht at 21.25 percent respectively.



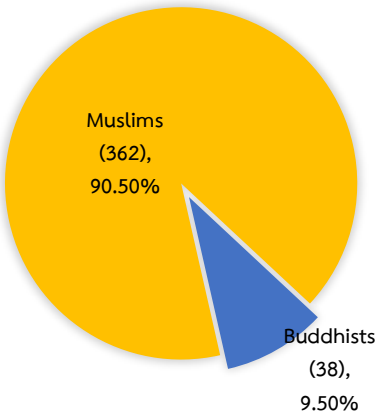
Age



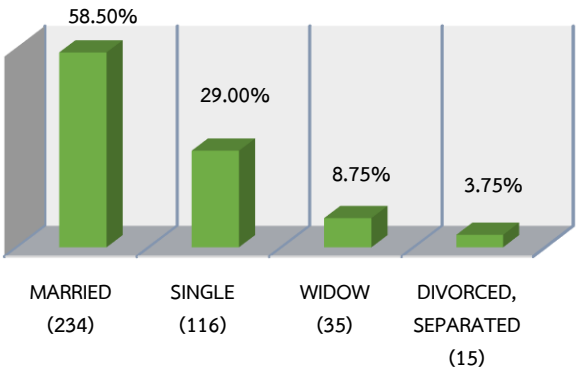
Education

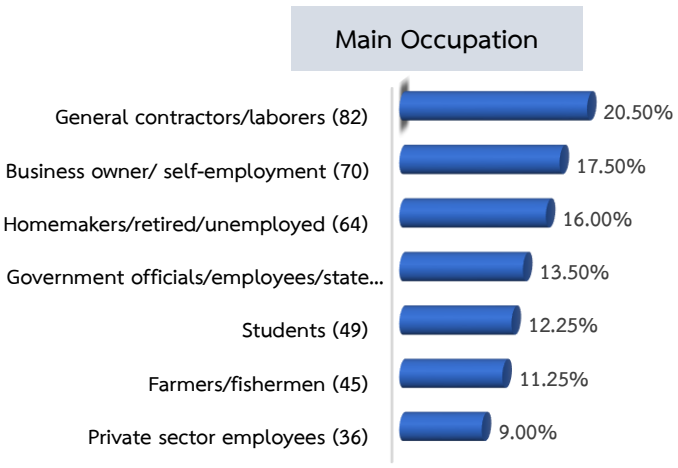


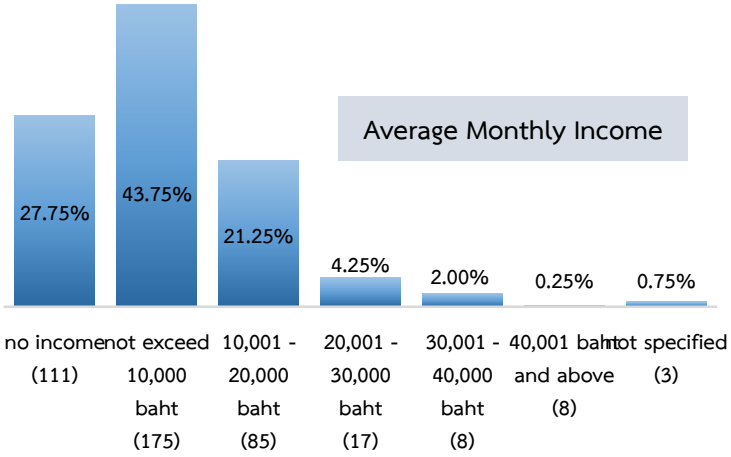
Religion



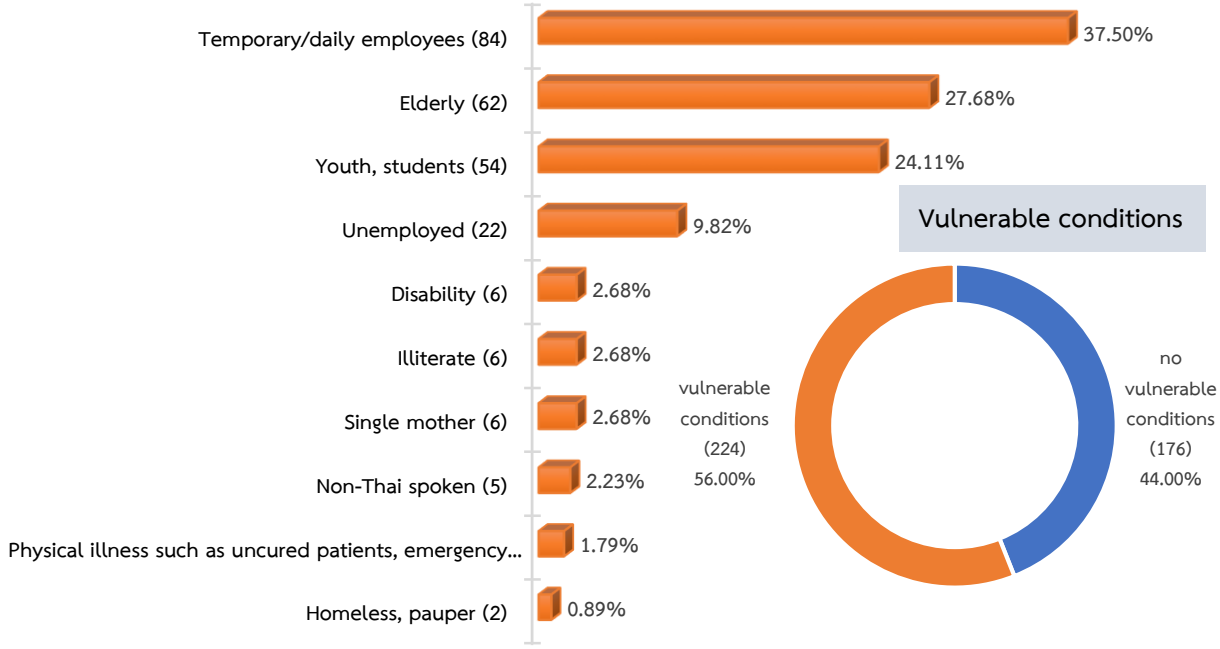
Marital Status







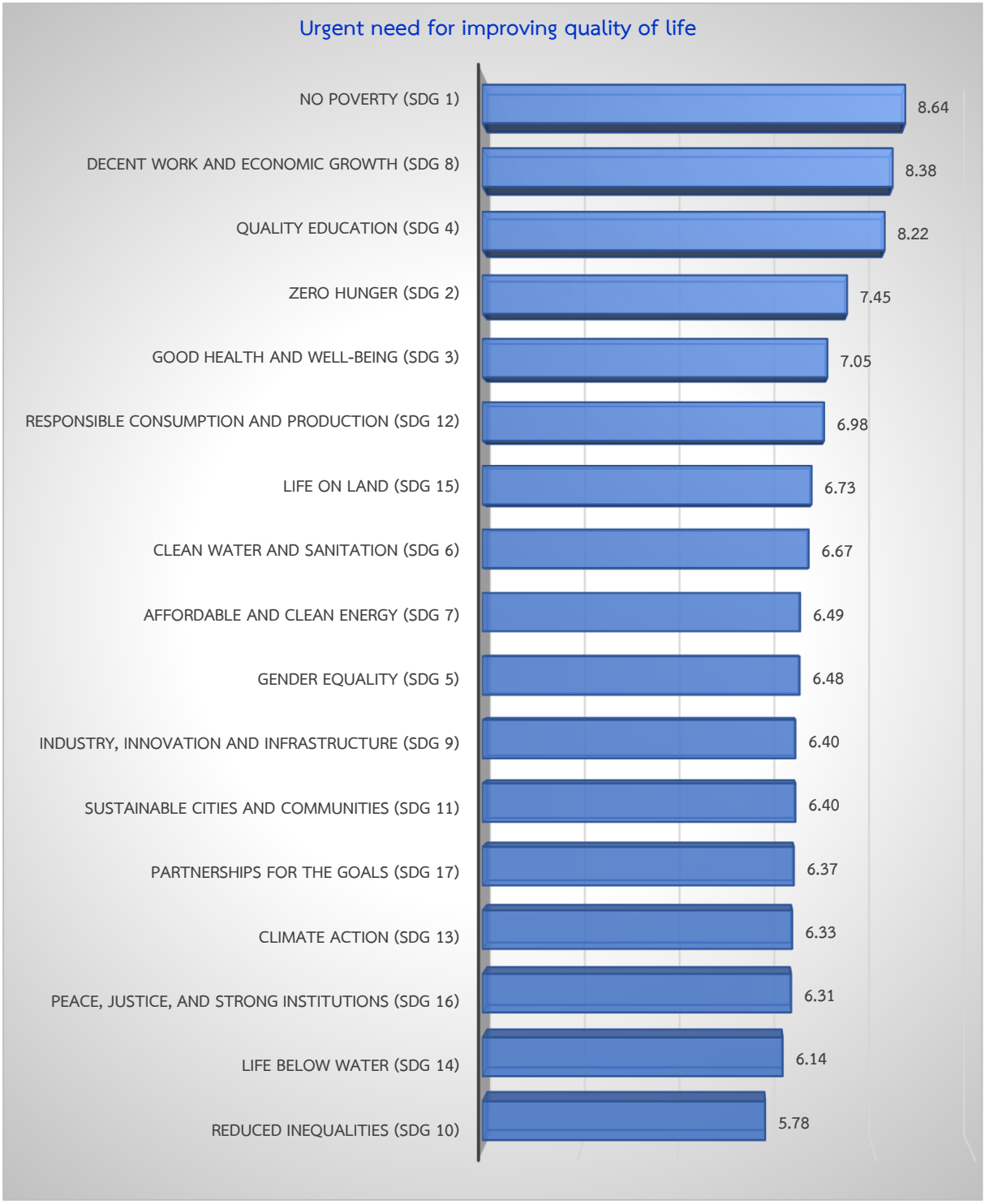
From this survey, it is found that 56.00 percent of the samples are in vulnerable conditions and 44.00 percent are not in vulnerable conditions. Among the samples with vulnerable conditions, most are temporary/daily employees, 37.50 percent, followed by the elderly at 27.68 percent and youth and students at 24.11 percent, respectively.



Part 2 Opinions on the issue of improving the quality of life

Average overview of Sustainable Development Goals (SDGs)

There are a total of 17 Sustainable Development Goals (SDGs). From the survey, it is found that the issue that is urgently needed to improve quality of life is No Poverty (SDG 1) with the highest average. The average is 8.64, followed by Decent Work and Economic Growth (SDG 8), the average is 8.38. Quality Education (SDG 4) average is 8.22. Hunger elimination (SDG 2) average is 7.45 and health and Well-being (SDG 3), the average is 7.05.



As for the government's implementation of problem solving, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 6.11, followed by health and Well-being (SDG 3), with an average of 5.72. Quality Education (SDG 4) with an average of 5.59. No Poverty (SDG 1) has an average of 5.52 and Life on Lands (SDG 15), the average is 5.36

As for the results of the government sector's corrective/management actions, it is found that Responsible Consumption and Production (SDG 12) had the highest average. The average is 5.69, followed by health and Well-being (SDG 3), with an average of 5.19. Quality Education (SDG 4) average is 5.06. Clean Water and Sanitation (SDG 6) average is 4.99 and Life on Lands (SDG 15), the average value is 4.97, details as shown in Table 4.31.

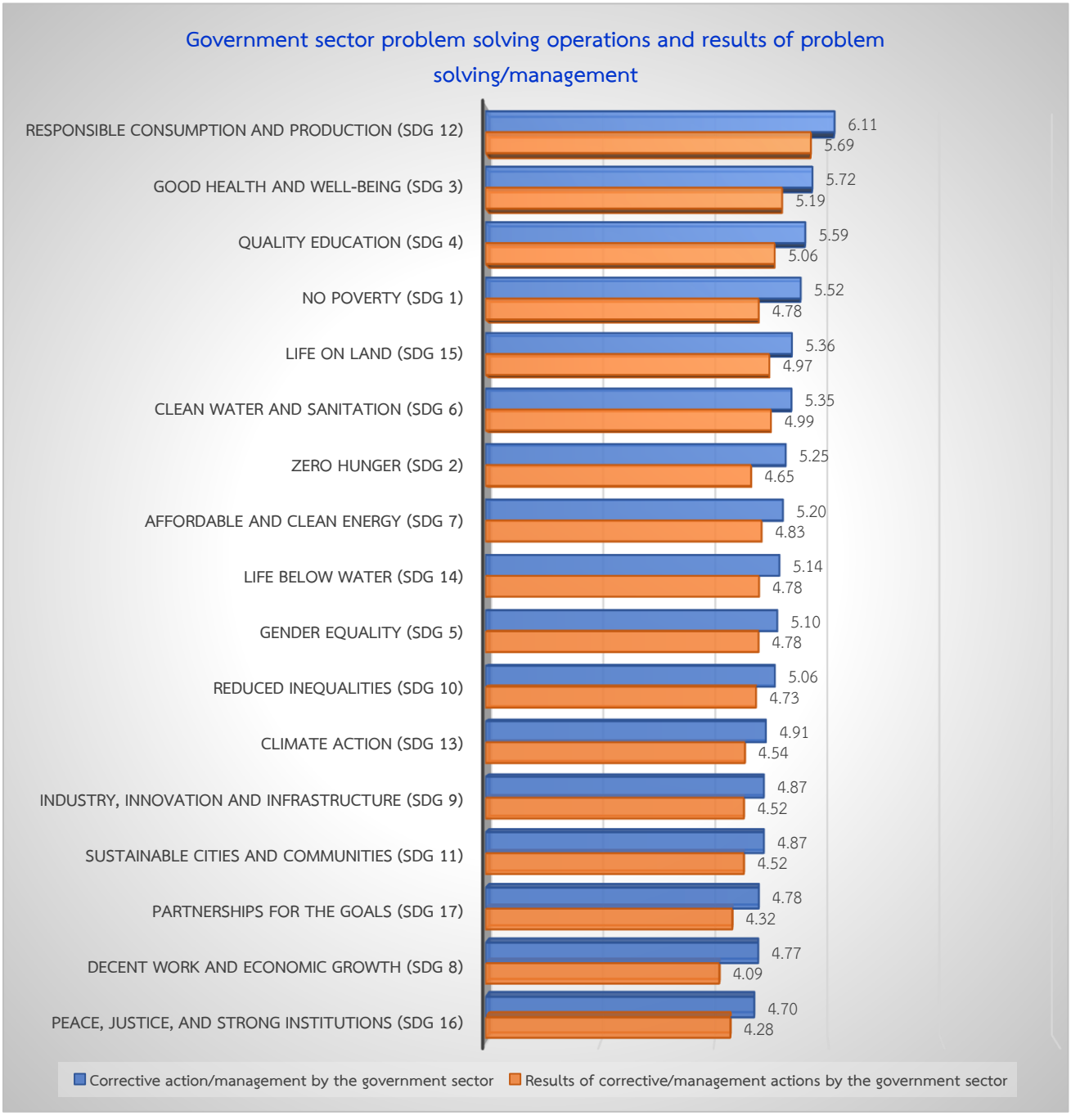


Table 4.31 Mean, standard deviation of urgent needs and actions to solve problems of the government sector (Narathiwat Province)

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 1 Poverty eradiation	**8.64**	**1.641**	**5.52**	**2.164**	**4.78**	**2.144**
poverty alleviation	8.64	1.641	5.52	2.164	4.78	2.144
SDG 2 Hunger elimination	**7.45**	**1.559**	**5.25**	**1.621**	**4.65**	**1.519**
Developing smallholder farmers to promote a sustainable food system	7.72	1.951	5.18	1.914	4.39	1.806
Having Good Health and nutrition *	7.20	1.855	5.33	1.740	4.91	1.628
SDG 3 Have Good Health and Well-being	**7.05**	**1.946**	**5.72**	**1.712**	**5.19**	**1.723**
Having good mental health (Mental Health)	6.92	2.127	5.27	1.785	4.88	1.763
Road safety	7.18	2.129	6.19	2.027	5.53	2.007
SDG 4 Quality Education	**8.22**	**1.439**	**5.59**	**1.646**	**5.06**	**1.658**
Quality Education	8.09	1.645	6.07	1.888	5.58	1.921
Having the skills necessary for a career	8.36	1.652	5.13	1.946	4.54	1.948
SDG 5 Gender Equality	**6.48**	**2.495**	**5.10**	**1.695**	**4.78**	**1.637**
Eliminating sexual violence in private and public spaces	6.48	2.495	5.10	1.695	4.78	1.637
SDG 6 Clean Water and Sanitation	**6.67**	**2.200**	**5.35**	**1.837**	**4.99**	**1.846**
Availability and access to clean water for drinking and use	7.19	2.120	5.59	2.142	5.24	2.204
Solving water pollution problems *	6.14	2.747	5.14	1.991	4.78	1.920
SDG 7 Affordable and Clean Energy	**6.49**	**2.340**	**5.20**	**1.791**	**4.83**	**1.724**
Having and having universal access to clean energy	6.49	2.340	5.20	1.791	4.83	1.724

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 8 Decent Work and Economic Growth	**8.38**	**1.796**	**4.77**	**1.994**	**4.09**	**1.893**
Employment and access to good work opportunities	8.38	1.796	4.77	1.994	4.09	1.893
SDG 9 Industry, Innovation and Infrastructure	**6.40**	**2.582**	**4.87**	**1.928**	**4.52**	**1.818**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	6.40	2.582	4.87	1.928	4.52	1.818
SDG 10 Reduced Inequalities	**5.78**	**2.219**	**5.06**	**1.800**	**4.73**	**1.766**
Participation and equal access to opportunities for women and gender diverse people	5.78	2.219	5.06	1.800	4.73	1.766
SDG 11 Sustainable Cities and Communities	**6.40**	**2.582**	**4.87**	**1.928**	**4.52**	**1.818**
Adapting to a green economy (Design of infrastructure, roads, water, electricity, buildings)*	6.40	2.582	4.87	1.928	4.52	1.818
SDG 12 Responsible Consumption and Production	**6.98**	**2.349**	**6.11**	**2.121**	**5.69**	**2.232**
Waste Management (Reduce Reuse Recycle)	6.98	2.349	6.11	2.121	5.69	2.232
SDG 13 Climate Action	**6.33**	**2.519**	**4.91**	**1.821**	**4.54**	**1.706**
Solving air pollution problems	6.27	2.648	4.87	1.903	4.52	1.828
Raising awareness of the impacts of climate change or global warming. (Climate Change)	6.41	2.690	4.99	1.991	4.68	1.875

Development issues	Urgent need towards the development of quality of life		Government operations			
			Government sector problem solving operations		Results of corrective/management actions	
	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
SDG 14 Life Below Water	**6.14**	**2.747**	**5.14**	**1.991**	**4.78**	**1.920**
Solving water pollution problems *	6.14	2.747	5.14	1.991	4.78	1.920
SDG 15 Life on Land	**6.73**	**2.095**	**5.36**	**1.602**	**4.97**	**1.659**
Coping with and reducing the impact of natural disasters	7.25	1.889	5.66	1.785	5.18	1.887
Participatory management of forests and green areas	6.22	2.662	5.10	1.999	4.83	1.937
SDG 16 Peace, Justice and Strong Institutions	**6.31**	**2.834**	**4.70**	**1.982**	**4.28**	**1.893**
Managing quality public services and disseminating public information in a transparent manner	6.31	2.834	4.70	1.982	4.28	1.893
SDG 17 Partnerships for the Goals	**6.37**	**2.355**	**4.78**	**1.903**	**4.32**	**1.752**
Participation in proposing policies for a better quality of life	6.37	2.355	4.78	1.903	4.32	1.752

Note: Calculate the average from a score of 1 - 10: necessary/implemented/effective. (Scores range from 0-10 points.)

Part 3 Guidelines for improving quality of life

For guidelines for improving the quality of life, most of the sample agree that appropriate local policies should be developed and improved, with the highest number of 61.50 percent, followed by no corruption and increased efficiency of information disclosure for transparent administration, 53.50 percent and social and economic projects have been prepared for thorough local development, 49.25 percent, details as shown in Table 4.32.

Table 4.32 Number and percentage of approaches to improving quality of life (Narathiwat Province)

Guidelines for improving quality of life	Samples	Percentage
There is a decentralization of capital resources and authority in local administration.	246	61.50
Appropriate local policies are developed and improved.	214	53.50
There is no corruption and the efficiency of information disclosure is increased for transparent management.	197	49.25
Knowledge about environmental conservation and Waste management is provided.	168	42.00
There is a space to exchange local knowledge between community members and apply it to development.	123	30.75
Social and economic projects are created for comprehensive local development.	117	29.25
Cooperation is created to create effective development policies in the community.	49	12.25
Roles of participation in the community are promoted equally for all genders.	41	10.25

Note: Respondents can choose 3 answers, with a sample of 400 respondents.

Chapter 5
Conclusion and Suggestion

The project to survey data on the status of the Sustainable Development Goals (SDGs) in Thailand overall aims to survey public opinions on the state of the Sustainable Development Goals in the targeted provinces consisting of 4 regions and 15 provinces as follows: Northern region includes 1) Chiang Rai Province 2) Chiang Mai Province 3) Mae Hong Son Province 4) Tak Province. Northeastern region includes 5) Udon Thani Province, 6) Nakhon Ratchasima Province, 7) Ubon Ratchathani Province. Central region includes 8) Bangkok Metropolitan Region 9) Phetchaburi Province, and the Southern region includes 10) Phuket Province, 11) Surat Thani Province, 12) Songkhla Province, 13) Pattani Province, 14) Yala Province, and 15) Narathiwat Province.

This survey project is a Survey Research. The research team uses a Multi-Multi-Stage Stratified Random Sampling method and the total sample size is 6,000 people. Details of the study results and study methods appear in the previous chapter. In this chapter, the research team presents a summary of the overall study results and a summary of the study results for each province, divided into 3 sections: Part 1: Information about general characteristics, namely gender, age, social disadvantage, religion, marital status, education, occupation, and income. Part 2: Various development issues consist of 2 parts. Part one: urgent need for improving quality of life It is rated from not necessary to most necessary (0-10 points). The second part: There are 2 aspects of the government sector's operations: The government sector has corrective/management actions ranging from no action to very good action (0-10 points) and results of corrective/management actions from ineffective to most effective (0-10 points). And part 3: Guidelines or conditions that will make quality of life better. The sample are allowed to choose as many guidelines or conditions as possible, the 3 most important items consist of 8 sub-items: 1) Appropriate local policies are developed and improved, 2) Social and economic projects are created for comprehensive local development, 3) Roles of participation in the community are promoted equally for all genders, 4) Cooperation is created to create effective development policies in the community, 5) Decentralization of capital resources and local administrative powers, 6) A space for exchanging local knowledge between community members and applying it to development. 7) Providing knowledge about environmental conservation and waste management, and 8) No corruption and the efficiency of information disclosure is increased for transparent management. In addition, the research team will present the results, discuss the results and present recommendations, respectively, with the following details:

5.1 Summary of Study Results

5.1.1 Summary of overall study results

5.1.1.1 Information about general characteristics It is found that the majority of the sample is female, 54.78 percent. Most are between 36-45 years, 25.55 percent. 36.27 percent has secondary school education or equivalent. Most are Buddhists, 76.43 percent. 59.95 percent are married. Their main occupation is business owner/self-employment 23.12 percent, and 31.97 percent have an average monthly income of 10,001-20,000 baht. Most do not have vulnerable condition 50.03 percent. However, when considering the sample group with vulnerable condition, it is found that the majority are temporary/daily employees, 34.99 percent.

5.1.1.2 Quality of life development It is found that the majority of The sample group has opinions on quality of life development issues as follows: **1) The top three urgent needs for improving quality of life are:** No Poverty (SDG 1) with the average of 8.94, followed by Quality Education (SDG 4) with the average of 8.50, and Decent Work and Economic Growth (SDG 8) with the average of 8.35, **2) Government Sector Operations** include **the top three issues for solving problems in the government sector are:** Responsible Consumption and Production (SDG 12) with the average of 5.84, followed by Quality Education (SDG 4) with the average of 5.71, and Clean Water and Sanitation (SDG 6) with the average of 5.70**, 3) The top three results of corrective/management actions by the government sector are:** Responsible Consumption and Production (SDG 12) with the highest average of 5.15, followed by Life on Land (SDG 15) with the average of 5.00, and Clean Water and Sanitation (SDG 6) with the average of 4.99.

5.1.1.3 The gap between the needs of the people and actions the government is taking to solve. When considering the urgent need to develop people's quality of life and the government's implementation of problem solving, it is found that there is a gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) has gap scores of 3.52, 2) Zero Hunger (SDG 2) has gap scores of 2.87, 3) Decent Work and Economic Growth (SDG 8) has gap scores of 2.84, 4) Quality Education (SDG 4) has gap scores of 2.79, and 5) Good Health and Well-being (SDG 3) has gap scores of 2.73 (details as shown in Table 5.1).

Table 5.1 The gap between the needs of the people and actions the government is taking to solve

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	8.94	5.42	3.52
Zero Hunger (SDG 2)	8.32	5.45	2.87
Decent Work and Economic Growth (SDG 8)	8.35	5.51	2.84
Quality Education (SDG 4)	8.50	5.71	2.79
Good Health and Well-being (SDG 3)	8.34	5.61	2.73

Sources: Research team

5.1.1.4 Guidelines or conditions that will improve the quality of life. It is found that the majority of the sample group has opinions on guidelines or conditions that would improve the quality of life. The top three are: Developing and improving appropriate local policies 47.23 percent, followed by no corruption and increased efficiency of information disclosure for transparent administration, 44.50 percent, and creating social and economic projects for comprehensive local development, 43.93 percent.

5.1.2 Summary of study results by target province

5.1.2.1 Chiang Rai Province

1. Information about general characteristics. It is found that the majority of the sample is male, 52.75 percent. Most are between 46-59 years, 26.00 percent. Most have the highest education of Bachelor's Degree or equivalent, 36.50 percent. Most are Buddhists, 93.75 percent. 68.50 percent are married. The most main occupation is business owner / self-employment, 22.75 percent. The average monthly income is 10,001-20,000 baht, 32.50 percent. Most of the sample group are in a vulnerable condition, 52.25 percent of the sample group that are in a vulnerable condition, they are ethnic minorities, 45.45 percent.

2. Quality of Life Development. It is found that the majority of the sample group has opinions on quality of life development issues as follows: **1) The top three urgent needs for improving quality of life are:** No Poverty (SDG 1) with the average of 9.07, and Responsible Consumption and Production (SDG 12) with the average of 9.06.

and **2) Government sector operations include the top three issues for solving problems in the government sector are:** Quality Education (SDG 4) with the average of 6.22, followed by Life on Land (SDG 15) with the average of 6.18, and Clean Water and Sanitation (SDG 6) with the average of 6.16. The top three results of corrective/management actions by the government sector are: Decent Work and Economic Growth (SDG 8) with the average of 5.20, followed by Quality Education (SDG 4) with the average of 5.15, and No Poverty (SDG 1) with the average of 5.14.

3. The gap between the needs of the people and actions the government is taking to solve. When considering the urgent need for improving the quality of life of the people and the government's solutions to problems, it is found that there is a gap between the needs of the people and what the government has taken to solve are as follows: 1) Climate Action (SDG 13) with gap scores of 3.11, 2) No Poverty (SDG 1) with gap scores of 3.09, 3) Decent Work and Economic Growth (SDG 8) with gap scores of 2.97, 4) Partnerships for the Goals (SDG 17) with gap scores of 2.97, and 5) Responsible Consumption and Production (SDG 12) with gap scores of 2.96 (details as shown in table 5.2).

Table 5.2 The gap between the needs of the people and actions the government is taking to solve of Chiang Rai Province.

Sustainable Development Goals (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
Climate Action (SDG 13)	9.05	5.94	3.11
No Poverty (SDG 1)	9.19	6.10	3.09
Decent Work and Economic Growth (SDG 8)	9.07	6.10	2.97
Partnerships for the Goals (SDG 17)	8.95	5.98	2.97
Responsible Consumption and Production (SDG 12)	9.06	6.10	2.96

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. It is found that the majority of the sample group has top three opinions towards guidelines or conditions that will improve the quality of life which are: Distribution of capital resources and local administrative powers 54.00 percent, followed by developing and improving

appropriate local policies 43.50 percent, and no corruption and increases the efficiency of information disclosure for transparent management 41.25 percent.

5.1.2.2 Chiang Mai Province

1. Information about general characteristics. it is found that the majority of the sample are male, 51.25 percent. Most are between 26-35 years, 24.75 percent. Most have the highest education of Bachelor's Degree or equivalent, 41.25 percent. 99.75 percent are Buddhists. Most have the marital status of married, 56.75 percent. Their main occupation is business owner/self-employment, 22.50 percent. Their average monthly income is 10,001-20,000 baht 31.75 percent. Most of the sample group are in a vulnerable condition, 59.75 percent. However, when considering a sample group that is in a vulnerable condition, it is found that most are elderly 36.65 percent.

2. Quality of life development It is found that the majority of The sample group has opinions towards quality of life development as follows: **1) Urgent need for improving quality of life**, top three are No Poverty (SDG 1) with the average of 9.15, followed by Climate Action (SDG 13) with the average of 9.11, Responsible Consumption and Production (SDG 12) with the average of 9.08**,** and **2) Government sector operations include government sector problem solving operations**, top three are Quality Education (SDG 4) with the average of 6.07, followed by Clean Water and Sanitation (SDG 6) with the average of 6.05, Life on Land (SDG 15) with the average of 6.03, and **Results of corrective/management actions by the government sector, top three are** Quality Education (SDG 4) with the average of 5.57, followed by Life on Land (SDG 15) with the average of 5.56, Decent Work and Economic Growth (SDG 8) with the average of 5.55.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and Government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) Climate Action (SDG 13) with gap scores of 3.44, 2) Responsible Consumption and Production (SDG 12) with gap scores of 3.27, 3) No Poverty (SDG 1) with gap scores of 3.22, 4) Peace, Justice, and Strong Institutions (SDG 16) with gap scores of 3.16, and 5) Partnerships for the Goals (SDG 17) with gap scores of 3.06 (details as shown in table5.3).

Table 5.3 The gap between the needs of the people and actions the government is taking to solve of Chiang Mai Province.

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
Climate Action (SDG 13)	9.11	5.67	3.44
Responsible Consumption and Production (SDG 12)	9.08	5.81	3.27
No Poverty (SDG 1)	9.15	5.93	3.22
Peace, Justice, and Strong Institutions (SDG 16)	8.87	5.71	3.16
Partnerships for the Goals (SDG 17)	8.89	5.83	3.06

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are distribution of capital resources and local administrative powers 61.00 percent, followed by developing and improving appropriate local policies 47.50 percent, and no corruption and increases the efficiency of information disclosure for transparent management 44.25 percent.

5.1.2.3 Mae Hong Son Province

1. Information about general characteristics. It is found that the majority of the sample are female, 53.75 percent. Most are between 46-59 years, 31.25 percent. Most have the highest education of secondary school or equivalent, 34.75 percent. 99.50 are Buddhists. Most have the marital status of married, 69.75 percent. Their main occupation is business owner/self-employment, 24.25 percent. Their average monthly income is 10,001-20,000 baht, 30.00 percent. Most of the sample group are in a vulnerable condition, 56.00 percent. Among the samples are those who are in a vulnerable condition, it is found that most are ethnic minorities, 68.30 percent.

2. Quality of life development. It is found that the majority of The sample group has opinions towardsquality of life development as follows: **1) urgent need for improving quality of life**, top three are No Poverty (SDG 1) with the average of 9.16, followed by Climate Action (SDG 13) with the average of 9.01, and Quality Education (SDG 4)

with the average of 8.98, and **2) Government sector operations include Government sector problem solving operations**, top three are Responsible Consumption and Production (SDG 12) with the average of 6.04, followed by Clean Water and Sanitation (SDG 6) with the average of 6.01, Quality Education (SDG 4) with the average of 6.00, and **Results of corrective/management actions by the government sector, top three are** Responsible Consumption and Production (SDG 12) with the average of 5.59, followed by Life on Land (SDG 15) with the average of 5.47, Life Below Water (SDG 14) with the average of 5.43.

3. The gap between the needs of the people and actions the government is taking to solve. When considering Urgent need for improving quality of people's life and government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) Climate Action (SDG 13) with gap scores of 3.42, 2) No Poverty (SDG 1) with gap scores of 3.41, 3) Gender Equality (SDG 5) with gap scores of 3.18, 4) Zero Hunger (SDG 2) with gap scores of 3.16, and 5) Decent Work and Economic Growth (SDG 8) with gap scores of 3.10 (details as shown in table 5.4).

Table 5.4 The gap between the needs of the people and actions the government is taking to solve of Mae Hong Son Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
Climate Action (SDG 13)	9.01	5.59	3.42
No Poverty (SDG 1)	9.16	5.75	3.41
Gender Equality (SDG 5)	8.78	5.60	3.18
Zero Hunger (SDG 2)	8.82	5.66	3.16
Decent Work and Economic Growth (SDG 8)	8.90	5.80	3.10

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are Distribution of capital resources and local administrative powers, 64.50 percent, followed by Developing and improving appropriate local policies, 52.00percent, and

no corruption and increases the efficiency of information disclosure for transparent management, 46.25 percent.

5.1.2.4 Tak Province

1. Information about general characteristics. It is found that the majority of the sample are female, 61.25 percent. Most are between 46-59 years, 27.00 percent. Most have the highest education of secondary school or equivalent, 28.00 percent. 93.00 percent are Buddhists. Most have the marital status of married, 67.75 percent. Their main occupation is business owner/self-employment, 24.75 percent. Their average monthly income is 10,001-20,000 baht, 35.50 percent. Most of the sample group are in a vulnerable condition, 54.25 percent. Among the samples who are in a vulnerable condition, it is found that most are elderly, 33.18 percent.

2. Quality of life development. It is found that the majority of The sample group has opinions towards quality of life development as follows: **1) Urgent need for improving quality of life**, top three are No Poverty (SDG 1) with the average of 9.15, followed by Zero Hunger (SDG 2) with the average of 8.88, Quality Education (SDG 4) with the average of 8.83, and **2) Government sector operations include government sector problem solving operations**, top three are Clean Water and Sanitation (SDG 6) with the average of 6.12, followed by Responsible Consumption and Production (SDG 12) with the average of 6.09, Life on Land (SDG 15) with the average of 6.07, and **3) Results of corrective/management actions by the government sector, top three are** Responsible Consumption and Production (SDG 12) with the average of 5.70, followed by Life on Land (SDG 15) with the average of 5.68, Affordable and Clean Energy (SDG 7) with the average of 5.65.

3. The gap between the needs of the people and actions the government is taking to solve. When considering rrgent need for improving quality of people's life and government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 3.38, 2) Zero Hunger (SDG 2) with gap scores of 3.00, 3) Good Health and Well-being (SDG 3) with gap scores of 2.87, 4) Quality Education (SDG 4) with gap scores of 2.77, and 5) Peace, Justice, and Strong Institutions (SDG 16) with gap scores of 2.77 (details as shown in table 5.5).

Table 5.5 The gap between the needs of the people and actions the government is taking to solve of Tak Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	9.15	5.77	3.38
Zero Hunger (SDG 2)	8.88	5.88	3.00
Good Health and Well-being (SDG 3)	8.81	5.94	2.87
Quality Education (SDG 4)	8.83	6.06	2.77
Peace, Justice, and Strong Institutions (SDG 16)	8.62	5.85	2.77

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on Guidelines or conditions that will improve the quality of life, top three are Distribution of capital resources and local administrative powers, 65.75 percent, followed by developing and improving appropriate local policies, 53.50percent and no corruption and increases the efficiency of information disclosure for transparent management, 53.25 percent.

5.1.2.5 Bangkok Province

1. Information about general characteristics. It is found that the majority of the sample are male, 50.50 percent. Most are between 36-45 years, 28.50 percent. Most have the highest education of secondary school or equivalent, 35.00 percent. 95.00 percent are Buddhists. Most have the marital status of married, 54.50 percent. Their main occupation is business owner/self-employment, 31.25percent. Their average monthly income is 10,001-20,000 baht, 44.75 percent, and Most of them are in a vulnerable condition and not in a vulnerable condition in equal proportions, 50.00 percent. Among the samples who are in a vulnerable condition, most are elderly, 43.50 percent.

2. Quality of life development. It is found that The sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** include No Poverty (SDG 1) with the average of 9.30, followed by Good Health

and Well-being (SDG 3) with the average of 8.70 Quality Education (SDG 4) with the average of 8.53 and **2) Government sector operations include government sector problem solving operations**, top three are Responsible Consumption and Production (SDG 12) with the average of 6.40, followed by Life Below Water (SDG 14) with the average of 6.18. Clean Water and Sanitation (SDG 6) with the average of 5.99, and **3) Results of corrective/management actions by the government sector, top three are** Responsible Consumption and Production (SDG 12) with the average of 5.80, followed by Life Below Water (SDG 14) with the average of 5.57, Clean Water and Sanitation (SDG 6) with the average of 5.36.

3. The gap between the needs of the people and actions the government is taking to solve. When considering Urgent need for improving quality of people's life and Government sector problem solving operations it is found that The gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 3.73, 2) Climate Action (SDG 13) with gap scores of 2.87, 3) Good Health and Well-being (SDG 3) with gap scores of 2.82, 4) Decent Work and Economic Growth (SDG 8) with gap scores of 2.69, and 5) Quality Education (SDG 4) with gap scores of 2.64 (details as shown in table 5.6).

Table 5.6 The gap between the needs of the people and actions the government is taking to solve of Bangkok Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	9.30	5.57	3.73
Climate Action (SDG 13)	8.42	5.55	2.87
Good Health and Well-being (SDG 3)	8.70	5.88	2.82
Decent Work and Economic Growth (SDG 8)	8.29	5.60	2.69
Quality Education (SDG 4)	8.53	5.89	2.64

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on Guidelines or conditions that will improve the quality of life, top three are Developing and improving appropriate local policies, 49.75 percent, followed by social and economic projects are created for comprehensive local development, 43.00 percent, and no corruption and increases the efficiency of information disclosure for transparent management, 41.00 percent.

5.1.2.6 Petchaburi Province

1. Information about general characteristics it is found that the majority of the sample are female, 56.00 percent. Most are between 36-45 years, 28.50 percent. Most have the highest education of secondary school or equivalent, 41.25 percent. 97.75 percent are Buddhists. Most have the marital status of married, 64.25 percent. Main occupation of general contractors / laborers is 25.25 percent. Their average monthly income is 10,001-20,000 baht, 38.25 percent. Most of the sample group are not in a vulnerable condition, 50.25 percent. However, when considering the sample group who is in a vulnerable condition, it is found that most are elderly, 45.23 percent.

2. Quality of life development. It is found that The sample group has opinions on quality of life development as follows: **(1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 9.28, followed by Good Health and Well-being (SDG 3) with the average of 8.61, and Quality Education (SDG 4) with the average of 8.60, and **(2) Government sector operations include government sector problem solving operations**, top three are Responsible Consumption and Production (SDG 12) with the average of 5.21, followed by Quality Education (SDG 4) with the average of 5.16, Good Health and Well-being (SDG 3) with the average of 4.93, and **3) Results of corrective/management actions by the government sector, top three are** Responsible Consumption and Production (SDG 12) with the average of 4.34, followed by Quality Education (SDG 4) with the average of 4.18 Life Below Water (SDG 14) with the average of 4.14.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and government sector problem solving operations, it is found that The gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 4.48, 2) Zero Hunger (SDG 2) with gap scores of 3.77, 3) Good Health and Well-being (SDG 3) with gap scores of 3.68, 4) Quality Education (SDG 4) with gap scores of 3.44, and 5) Gender Equality (SDG 5) with gap scores of 3.37 (details as shown in table5.7).

Table 5.7 The gap between the needs of the people and actions the government is taking to solve of Petchaburi Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	9.28	4.80	4.48
Zero Hunger (SDG 2)	8.56	4.79	3.77
Good Health and Well-being (SDG 3)	8.61	4.93	3.68
Quality Education (SDG 4)	8.60	5.16	3.44
Gender Equality (SDG 5)	7.97	4.60	3.37

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are no corruption and increase the efficiency of information disclosure for transparent management 50.25 percent, followed by providing knowledge about environmental conservation and waste management, 48.25 percent, and no corruption and a space to exchange local knowledge between community members and applied to development, 40.50 percent.

5.1.2.7 Udon Thani Province

1. Information about general characteristics. It is found that the majority of the sample are female, 56.75 percent. Most are between 46-59 years, 25.00 percent. Most have the highest education of secondary school or equivalent, 32.75 percent. 99.75 percent are buddhists. Most have the marital status of married, 46.50 percent. Their main occupation is government officials/employees/state enterprise employees, 40.25 percent. Their average monthly income is 10,001-20,000 baht, 29.00 percent. Most of the sample group are not in a vulnerable condition, 62.00 percent. However, when considering the sample group who is in a vulnerable condition, it is found that most are elderly, 32.24 percent.

2. Quality of life development. it is found that the sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 8.95, followed by Quality Education (SDG 4) with the average of 8.63, Partnerships for the Goals (SDG 17) with the average of 8.51 and **2) Government sector operations include Government sector**

problem solving operations, top three are Responsible Consumption and Production (SDG 12) with the average of 7.29, followed by Quality Education (SDG 4) with the average of 7.15, Clean Water and Sanitation (SDG 6) with the average of 7.10 and **3) Results of corrective/management actions by the government sector, top three are** Quality Education (SDG 4) with the average of 6.48, followed by Gender Equality (SDG 5) with the average of 6.42, Good Health and Well-being (SDG 3) with the average of 6.40.

3. The gap between the needs of the people and actions the government is taking to solve. When considering rrgent need for improving quality of people's life and government sector problem solving operations, it is found that The gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 1.87, 2) Partnerships for the Goals (SDG 17) with gap scores of 1.57, 3) Peace, Justice, and Strong Institutions (SDG 16) with gap scores of 1.53, 4) Climate Action (SDG 13) with gap scores of 1.52, and 5) Quality Education (SDG 4) with gap scores of 1.48 (details as shown in table 5.8).

Table 5.8 The gap between the needs of the people and actions the government is taking to solve of Udon Thani Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	8.95	7.08	1.87
Partnerships for the Goals (SDG 17)	8.51	6.94	1.57
Peace, Justice, and Strong Institutions (SDG 16)	8.36	6.83	1.53
Climate Action (SDG 13)	8.43	6.91	1.52
Quality Education (SDG 4)	8.63	7.15	1.48

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are Developing and improving appropriate local policies, 56.75 percent, followed by no corruption and increases the efficiency of information disclosure for

transparent management, 46.00 percent, and social and economic projects are created for comprehensive local development, 38.25 percent.

5.1.2.8 Nakhon Ratchasima Province

1. Information about general characteristics. It is found that the majority of the sample are female, 50.25 percent. Most are between 36-45 years, 27.00 percent. Most have the highest education of secondary school or equivalent, 33.25 percent. 99.25 percent are buddhists. Most have the marital status of married, 61.75 percent. Their main occupation is farmers/ fishermen, 20.00percent. Their average monthly income does not exceed 10,000 baht, 35.00 percent. Most of the sample group are in a vulnerable condition, 52.00percent. Among the samples who is in a vulnerable condition, it is found that most are elderly, 48.08 percent.

2. Quality of life development. It is found that the sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 9.54, followed by Zero Hunger (SDG 2) with the average of 9.00, Quality Education (SDG 4) with the average of 8.76, and **2) Government sector operations include government sector problem solving operations**, top three are Clean Water and Sanitation (SDG 6) with the average of 5.73, followed by Life on Land (SDG 15) with the average of 5.69, Quality Education (SDG 4) with the average of 5.63, and **3) Results of corrective/management actions by the government sector, top three are** Reduced Inequalities (SDG 10) with the average of 4.88, followed by Clean Water and Sanitation (SDG 6) with the average of 4.87, Life Below Water (SDG 14) with the average of 4.86.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 4.57, 2) Zero Hunger (SDG 2) with gap scores of 3.87, 3) Good Health and Well-being (SDG 3) with gap scores of 3.15, 4) Quality Education (SDG 4) with gap scores of 3.13, and 5) Decent Work and Economic Growth (SDG 8) with gap scores of 3.04 (details as shown in table 5.9).

Table 5.9 The gap between the needs of the people and actions the government is taking to solve of Nakhon Ratchasima Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	9.54	4.97	4.57
Zero Hunger (SDG 2)	9.00	5.13	3.87
Good Health and Well-being (SDG 3)	8.59	5.44	3.15
Quality Education (SDG 4)	8.76	5.63	3.13
Decent Work and Economic Growth (SDG 8)	8.50	5.46	3.04

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are Developing and improving appropriate local policies 56.00 percent, followed by social and economic projects are created for comprehensive local development, 54.00 percent, and the role of participation in the community is promoted equally for all genders, 42.75 percent.

5.1.2.9 Ubon Ratchathani Province

1. Information about general characteristics it is found that the majority of the sample are female, 51.50 percent. Most are between 36-45 years, 29.75 percent. Most have the highest education of Associate's Degree or equivalent, 40.00 percent. 96.75 percent are Buddhists. Most have the marital status of married, 51.75 percent. Their main occupation is business owner/self-employment, 28.50 percent. Their average monthly income does not exceed 10,000 baht, 47.25 percent. Most of the sample group are in a vulnerable condition, 50.25 percent. Among the samples who are in a vulnerable condition, it is found that most are elderly, 51.24 percent.

2. Quality of life development. It is found that The sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 8.97, followed by Quality

Education (SDG 4) with the average of 8.87, Good Health and Well-being (SDG 3) with the average of 8.66, and **(2) Government sector operations include government sector problem solving operations**, top three are Life on Land (SDG 15) with the average of 6.14, followed by Responsible Consumption and Production (SDG 12) with the average of 6.13, Quality Education (SDG 4) with the average of 5.98, and **3) Results of corrective/management actions by the government sector, top three are** Life on Land (SDG 15) and Responsible Consumption and Production (SDG 12) with the average of 5.41, followed by Decent Work and Economic Growth (SDG 8), and Peace, Justice, and Strong Institutions (SDG 16) with the same average of 5.29.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 3.60, 2) Zero Hunger (SDG 2) with gap scores of 2.96, 3) Quality Education (SDG 4) with gap scores of 2.89, 4) Good Health and Well-being (SDG 3) with gap scores of 2.82, and 5) Clean Water and Sanitation (SDG 6) with gap scores of 2.74 (details as shown in table 5.10).

Table 5.10 The gap between the needs of the people and actions the government is taking to solve of Ubon Ratchathani Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	8.97	5.37	3.60
Zero Hunger (SDG 2)	8.50	5.54	2.96
Quality Education (SDG 4)	8.87	5.98	2.89
Good Health and Well-being (SDG 3)	8.66	5.84	2.82
Clean Water and Sanitation (SDG 6)	8.63	5.89	2.74

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are cooperation is created to create effective development policies in the community, 51.00 percent, followed by the role of participation in the community is promoted equally for all genders, 47.50 percent, and distribution of capital resources and local administrative powers, 47.25 percent.

5.1.2.10 Surat Thani Province

1. Information about general characteristics. It is found that the majority of the sample are female, 59.25 percent. Most are between 36-45 years, 35.75 percent. Most have the highest education of Bachelor's Degree or equivalent, 39.25 percent. 96.50 percent are Buddhists. Most have the marital status of married, 54.50 percent. Their main occupation is business owner/self-employment, 38.00 percent. Their average monthly income is 10,001-20,000 baht, 54.25 percent. Most of the sample group are not in a vulnerable condition, 78.25 percent. However, when considering the sample group who are in a vulnerable condition, it is found that most are temporary / daily employees, 44.83 percent.

2. Quality of life development it is found that The sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 9.34, followed by Quality Education (SDG 4) with the average of 9.02, Decent Work and Economic Growth (SDG 8) with the average of 9.01, and **2) Government sector operations include Government sector problem solving operations**, top three are Clean Water and Sanitation (SDG 6) with the average of 6.95, followed by Quality Education (SDG 4) with the average of 6.94, Good Health and Well-being (SDG 3) with the average of 6.87, and **3) Results of corrective/management actions by the government sector, top three are** Good Health and Well-being (SDG 3) with the average of 5.96, followed by Clean Water and Sanitation (SDG 6), Quality Education (SDG 4), and Reduced Inequalities (SDG 10) with the same average of 5.95.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and Government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 2.79, 2) Decent Work and Economic Growth (SDG 8) with gap scores of 2.40, 3) Affordable and Clean Energy (SDG 7) with gap scores of 2.35, 4) Partnerships for the Goals (SDG 17) with gap scores of 2.28, and 5) Zero Hunger (SDG 2) with gap scores of 2.22 (details as shown in table 5.11).

Table 5.11 The gap between the needs of the people and actions the government is taking to solve of Surat Thani Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	9.34	6.55	2.79
Decent Work and Economic Growth (SDG 8)	9.01	6.61	2.40
Affordable and Clean Energy (SDG 7)	8.99	6.64	2.35
Partnerships for the Goals (SDG 17)	8.86	6.58	2.28
Zero Hunger (SDG 2)	8.93	6.71	2.22

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are developing and improving appropriate local policies, 64.25 percent, followed by no corruption and increases the efficiency of information disclosure for transparent management, 52.75percent, and providing knowledge about environmental conservation and waste management, 46.25 percent.

5.1.2.11 Phuket Province

1. Information about general characteristics. It is found that the majority of the sample are female, 55.00 percent. Most are between 46-59 years, 24.75 percent. Most have the highest education of secondary school or equivalent, 43.50 percent. 88.00 percent are Buddhists. Most have the marital status of married, 52.00 percent. Their main occupation is business owner/self-employment, 26.50 percent. Their average monthly income is 10,001-20,000 baht, 38.25 percent. Most of the sample group are not in a vulnerable condition, 51.50 percent. However, when considering the sample group who are in a vulnerable condition, it is found that most are temporary / daily employees, 45.36 percent.

2. Quality of life development. It is found that the sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 8.10, followed by Quality

Education (SDG 4) with the average of 7.48, Decent Work and Economic Growth (SDG 8) with the average of 7.36, and **2) Government sector operations include Government sector problem solving operations**, top three are Responsible Consumption and Production (SDG 12) with the average of 5.75, followed by Gender Equality (SDG 5) with the average of 5.70, Life on Land (SDG 15) with the average of 5.40, and **3) Results of corrective/management actions by the government sector, top three are** Responsible Consumption and Production (SDG 12) with the average of 4.66, followed by Gender Equality (SDG 5) with the average of 4.62, Clean Water and Sanitation (SDG 6) with the average of 4.32.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 3.42, 2) Quality Education (SDG 4) with gap scores of 2.48, 3) Zero Hunger (SDG 2) with gap scores of 2.26, 4) Decent Work and Economic Growth (SDG 8) with gap scores of 2.25, and 5) Good Health and Well-being (SDG 3) with gap scores of 2.19 (details as shown in table 5.12).

Table 5.12 The gap between the needs of the people and actions the government is taking to solve of Phuket Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	8.10	4.68	3.42
Quality Education (SDG 4)	7.48	5.00	2.48
Zero Hunger (SDG 2)	7.16	4.90	2.26
Decent Work and Economic Growth (SDG 8)	7.36	5.11	2.25
Good Health and Well-being (SDG 3)	7.20	5.01	2.19

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on Guidelines or conditions that will improve the quality of life, top three are no corruption and increases the efficiency of information disclosure for transparent management 59.50 percent, followed by social and economic projects are created for comprehensive local development, 58.25 percent, and distribution of capital resources and local administrative powers, 53.00 percent.

5.1.2.12 Songkhla Province

1. Information about general characteristics. It is found that the majority of the sample are female, 57.50 percent. Most are between 46-59 years, 22.75 percent. Most have the highest education of secondary school or equivalent, 46.75percent. 77.75 percent are Buddhists. Most have the marital status of married, 54.00 percent. Their main occupation is general contractors / laborers, 28.00 percent. Their average monthly income does not exceed 10,000 baht, 32.50 percent. Most of the sample group are in a vulnerable condition, 56.75 percent. Among the samples are those who are in a vulnerable condition, most are temporary / daily employees, 48.46 percent.

2. Quality of life development. It is found that the sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 8.48, followed by Quality Education (SDG 4) with the average of 7.95, Good Health and Well-being (SDG 3) with the average of 7.72, and **2) Government sector operations include government sector problem solving operations**, top three are Responsible Consumption and Production (SDG 12) with the average of 5.76, followed by Clean Water and Sanitation (SDG 6) with the average of 5.36, Life on Land (SDG 15) with the average of 5.35, and **3) Results of corrective/management actions by the government sector, top three are** Responsible Consumption and Production (SDG 12) with the average of 5.09, followed by Life on Land (SDG 15) with the average of 4.82, Clean Water and Sanitation (SDG 6) with the average of 4.74.

3. The gap between the needs of the people and actions the government is taking to solve. When considering rgent need for improving quality of people's life and ıovernment sector problem solving operationsม it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 3.83, 2) Quality Education (SDG 4) with gap scores of 3.14, 3) Good Health and Well-being (SDG 3) with gap scores of 3.14, 4) Zero Hunger (SDG 2) with gap scores of 2.98, and 5) Decent Work and Economic Growth (SDG 8) with gap scores of 2.93 (details as shown in table 5.13).

Table 5.13 The gap between the needs of the people and actions the government is taking to solve of Songkhla Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	8.48	4.65	3.83
Quality Education (SDG 4)	7.95	4.81	3.14
Good Health and Well-being (SDG 3)	7.72	4.58	3.14
Zero Hunger (SDG 2)	7.55	4.57	2.98
Decent Work and Economic Growth (SDG 8)	7.57	4.64	2.93

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are no corruption and increases the efficiency of information disclosure for transparent management, 53.50 percent, followed by social and economic projects are created for comprehensive local development, 47.50 percent, and cooperation is created to create effective development policies in the community, 40.50 percent.

5.1.2.13 Pattani Province

1. **Information about general characteristics.** It is found that the majority of the sample are female, 59.25 percent. Most are between 36-45 years, 26.75 percent. Most have the highest education of secondary school or equivalent, 40.75 percent. 100.00 percent are Muslims. Most have the marital status of married, 67.00 percent. Their main occupation is general contractors / laborers, 32.00percent. Their average monthly income does not exceed 10,000 baht, 59.00 percent. Most of the sample group are in a vulnerable condition, 65.00 percent. Among the samples are those who are in a vulnerable condition, it is found that most are temporary / daily employees, 42.31 percent.

2. Quality of life development. It is found that the sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 8.45 percent, followed by Zero

Hunger (SDG 2) with the average of 8.10, Affordable and Clean Energy (SDG 7), Good Health and Well-being (SDG 3) and Decent Work and Economic Growth (SDG 8) have the same average of 8.06 and **2) Government sector operations include government sector problem solving operations**, top three are Quality Education (SDG 4) with the average of 4.21, followed by Partnerships for the Goals (SDG 17) with the average of 4.10, Clean Water and Sanitation (SDG 6) with the average of 4.08, and **3) Results of corrective/management actions by the government sector, top three are** Quality Education (SDG 4) with the average of 3.63, followed by Partnerships for the Goals (SDG 17) with the average of 3.62, Decent Work and Economic Growth (SDG 8) with the average of 3.60.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 4.49, 2) Zero Hunger (SDG 2) with gap scores of 4.15, 3) Climate Action (SDG 13) with gap scores of 4.14, 4) Life Below Water (SDG 14) with gap scores of 4.06, and 5) Decent Work and Economic Growth (SDG 8) with gap scores of 4.04 (details as shown in table 5.14).

Table 5.14 The gap between the needs of the people and actions the government is taking to solve of Pattani Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	8.45	3.96	4.49
Zero Hunger (SDG 2)	8.10	3.95	4.15
Climate Action (SDG 13)	7.94	3.80	4.14
Life Below Water (SDG 14)	8.00	3.94	4.06
Decent Work and Economic Growth (SDG 8)	8.06	4.02	4.04

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are social and economic projects are created for comprehensive local development, 57.50 percent, followed by cooperation is created to create effective development policies in the community, 55.25 percent, and a space to exchange local knowledge between community members and apply it to development, 43.00 percent.

5.1.2.14 Yala Province

1. Information about general characteristics. It is found that the majority of the sample are female, 60.50 percent. Most are between 36-45 years, 29.50 percent. Most have the highest education of Bachelor's Degree or equivalent, 39.50 percent. 99.50 percent are Muslims. Most have the marital status of married, 71.75 percent. Their main occupation is general contractors / laborers, 42.00 percent. Their average monthly income does not exceed 10,000 baht, 69.75 percent. Most of the sample group are not in a vulnerable condition, 58.75 However, when considering a sample group that is in a vulnerable condition, it is found that most are temporary / daily employees, 60.43 percent.

2. Quality of life development. It is found that the sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 8.37, followed by Zero Hunger (SDG 2) with the average of 7.66, Good Health and Well-being (SDG 3) with the average of 7.64 and **2) Government sector operations include government sector problem solving operations**, top three are Good Health and Well-being (SDG 3) with the average of 4.92, followed by Quality Education (SDG 4) with the average of 4.86, Life on Land (SDG 15) with the average of 4.80, and **3) Results of corrective/management actions by the government sector, top three are** Decent Work and Economic Growth (SDG 8) with the average of 4.07, followed by Quality Education (SDG 4) with the average of 4.06, Good Health and Well-being (SDG 3) with the average of 4.05.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and government sector problem solving operations, It is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) No Poverty (SDG 1) with gap scores of 3.80, 2) Zero Hunger (SDG 2) with gap scores of 2.99, 3) Affordable and Clean Energy (SDG 7) with gap scores of 2.87, 4) Gender Equality (SDG 5) with gap scores of 2.87, and 5) Climate Action (SDG 13) with gap scores of 2.87 (details as shown in table 5.15).

Table 5.15 The gap between the needs of the people and actions the government is taking to solve of Yala Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
No Poverty (SDG 1)	8.37	4.57	3.80
Zero Hunger (SDG 2)	7.66	4.67	2.99
Affordable and Clean Energy (SDG 7)	7.54	4.67	2.87
Gender Equality (SDG 5)	7.44	4.57	2.87
Climate Action (SDG 13)	7.32	4.45	2.87

Sources: Research team

4. Guidelines or conditions that will improve the quality of life The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are Social and economic projects are created for comprehensive local development, 63.75 percent, followed by a space to exchange local knowledge between community members and apply it to development, 52.25 percent, andthe role of participation in the community is promoted equally for all genders, 46.50 percent.

5.1.2.15 Narathiwat Province

1. Information about general characteristics it is found that the majority of the sample are female, 56.50 percent. Most are between 36-45 years, 24.00 percent. Most have the highest education of secondary school or equivalent, 36.50 percent. 90.50 percent are Muslims. Most have the marital status of married, 58.50 percent. Their main occupation is general contractors / laborers, 20.50percent. Their average monthly income does not exceed 10,000 baht, 43.75 percent. Most of the sample group are in a vulnerable condition, 56.00 percent. Among the samples are those who are in a vulnerable condition, it is found that most are temporary / daily employees, 37.50 percent.

2. Quality of life development. It is found that the sample group has opinions on quality of life development as follows: **1) Urgent need for improving quality of life** are No Poverty (SDG 1) with the average of 8.64, followed by Decent Work and Economic Growth (SDG 8) with the average of 8.38, Quality Education (SDG 4) with the average of 8.22, and **2) Government sector operations include government sector problem solving operations**, top three are Responsible Consumption and Production (SDG 12)

with the average of 6.11, followed by Good Health and Well-being (SDG 3) with the average of 5.72, Quality Education (SDG 4) with the average of 5.59, and **3) Results of corrective/management actions by the government sector, top three are** Responsible Consumption and Production (SDG 12) with the average of 5.69, followed by Good Health and Well-being (SDG 3) with the average of 5.19, Quality Education (SDG 4) with the average of 5.06.

3. The gap between the needs of the people and actions the government is taking to solve. When considering urgent need for improving quality of people's life and government sector problem solving operations, it is found that the gap between the needs of the people and actions the government is taking to solve are as follows: 1) Decent Work and Economic Growth (SDG 8) with gap scores of 3.61, 2) No Poverty (SDG 1) with gap scores of 3.12, 3) Quality Education (SDG 4) with gap scores of 2.63, 4) Zero Hunger (SDG 2) with gap scores of 2.20, and 5) Peace, Justice, and Strong Institutions (SDG 16) with gap scores of 1.61 (details as shown in table 5.16).

Table 5.16 The gap between the needs of the people and actions the government is taking to solve of Narathiwat Province

Sustainable Development Goal (SDG)	Urgent need for improving quality of life	Government sector problem solving operations	The gap between the needs of the people and actions the government is taking to solve
Decent Work and Economic Growth (SDG 8)	8.38	4.77	3.61
No Poverty (SDG 1)	8.64	5.52	3.12
Quality Education (SDG 4)	8.22	5.59	2.63
Zero Hunger (SDG 2)	7.45	5.25	2.20
Peace, Justice, and Strong Institutions (SDG 16)	6.31	4.70	1.61

Sources: Research team

4. Guidelines or conditions that will improve the quality of life. The sample group has opinions on guidelines or conditions that will improve the quality of life, top three are developing and improving appropriate local policies, 61.50 percent, followed by no corruption and increases the efficiency of information disclosure for transparent management, 53.50 percent, and social and economic projects are created for comprehensive local development, 49.25 percent.

5.2 Discussion

In this section, the results of the survey “Opinions on quality of life development” are analyzed and reflected on the needs of the people. This is the use of questionnaire response data from sample groups in the Sustainable Development Goal (SDG). Targeted Provinces group of provinces in quality of life development consisting of urgent needs and government actions which is scored between 0-10. That is, 0 means there is no urgent need/not resolved/addressed and 10 means it is most urgently needed/resolved/addressed. Therefore, quality of life development can be classified into 5 ranks as follows:

Number 1: Improving the quality of life in the issue of “Poverty Alleviation” or Sustainable Development Goal No. 1 “No Poverty” (SDG 1) has an average of 8.94. It shows that improving the quality of life in No Poverty has the most pressing needs related to improving quality of life. And when considering the operation of the government sector, it is found that the sample group has opinions on the corrective action/management of the government sector with an average of 5.42. and the results of corrective action/management of the government sector has an average of 4.63. It can be said that the sample group of Sustainable Development Goal (SDGs) provinces knows that the government sector has taken corrective/management steps. But it may be at the middle level. When considering from the criteria of scoring 0-10, it is found that gaps that require urgent action in order to achieve Sustainable Development Goal 1 are Enforcement of legislation and legislation is at a moderate level. But enforcement is still at a low level. The same is true of the government setting policies and measures at a large level and when setting any project or plan, money must be used, which is an important mechanism for driving it, but budget readiness is at a low level. Therefore, the drive to achieve the Sustainable Development Goal (SDGs) has obstacles. Therefore, if the government or related agencies work together to manage various mechanisms, Thailand will have the opportunity to achieve Sustainable Development Goal 1.

Number 2: Improving the quality of life in the areas of “Quality Education” and “Having the skills necessary for employment” or Sustainable Development Goal No. 4 Quality Education (SDG 4) has the average of 8.50. It shows that the demand for Quality Education has an urgent need for improving quality of life because it will help increase knowledge, professional skills and social opportunities. And when considering the operation of the government sector, it is found that the sample group's opinions regarding the corrective action/management of the government sector has an average of 5.71, and the results of the government sector's corrective/management actions has an average of 4.94. It can be said that the sample group of Sustainable Development Goal (SDGs) provinces knows that the government sector has taken corrective/management steps. But it may be at the middle level when considering from the criteria of scoring 0-10. However, when conducting

the research study, problems and limitations were found, including Government agencies do not have statistical information publicly available on their websites or other sources. Or if there is, there is incomplete information, such as the NT and O-NET exams, where only the average of children in the entire country is announced on the website. There is no percentage of children who receive an average of more than 50 percent, etc. The government sector does not yet have appropriate data to answer the indicators. For example, the NT or O-NET exams do not have a minimum criteria for passing the exams, including information provided by many government agencies that do not match, such as the definition of each goal.

Number 3: Improving the quality of life in the issue of Decent Work and Economic Growth or Sustainable Development Goal No. 8 Decent Work and Economic Growth (SDG 8) has the average of 8.35. It shows that in the view of the sample group of Sustainable Development Goal (SDGs) provinces, all 15 provinces view that the issue of Decent Work and Economic Growth has an urgent need for improving quality of life. And when considering government operations, it is found that the sample group's opinions regarding corrective actions/management of the government sector has an average of 5.51, and the results of the government sector's corrective/management actions has an average of 4.83. It can be said that the sample group of Sustainable Development Goal (SDGs) provinces knows that the government sector has taken corrective/management steps. But it may be at the middle level when considering from the criteria of scoring 0-10.

Number 4: Improving the quality of life in the issue “Having good mental health (Mental Health)” and “Road Safety” or Sustainable Development Goal No. 3 Good Health and Well-being (SDG 3) has the average of 8.34. It shows that the sample group has a desire to improve their quality of life. And when considering government operations, it is found that the sample group's opinions regarding corrective actions/management by the government sector has an average of 5.61 and the results of corrective action/management of the government sector has an average of 4.88. It can be said that the sample group of Sustainable Development Goal provinces knows that the government sector has taken corrective/management steps. But it may be at the middle level. And in the comments section from government agencies and non-government agencies, they viewed that operations to solve the country's problems were not yet a sustainable development approach. There is a lack of full integration and there is a shortage of personnel in some fields. As for medical personnel, they are still concentrated in Bangkok. There are frequent job changes, causing discontinuous operations. The follow-up of the evaluation results is not strong and there is a lack of efficiency in enforcing the law. The research team believes that Thailand is more aware of health. There is a short-term, medium-term and long-term operational plan and there is a person responsible for the operation. Therefore, it is a good

trend in the health development of Thailand. However, if you want the health and welfare conditions to be good and sustainable, it will require cooperation from all relevant agencies and in solving problems with other Sustainable Development Goals, it will be possible to have sustainable health conditions. For example, solving poverty problems, agriculture, water, soil, chemicals because health problems are the result of other causes as well.

Number 5: Improving the quality of life in the issue “Developing small farmers to promote a sustainable food system” and improving the quality of life in the issue “Having good health and nutrition” or Sustainable Development Goal No. 2 Zero Hunger (SDG 2) has the average of 8.32. Shows that the demand of Zero Hunger is an important quality of life development ecause it is a general basic need that is important for living. When considering government action, it is found that the sample group has opinions on corrective action/management by the government sector with the average of 5.45 and opinions on the results of the government sector's corrective/management actions were average 4.71. It can be said that the sample group of Sustainable Development Goal (SDGs) provinces knows that the government sector has taken corrective/management steps. But it may be at the middle level. when considering from the criteria of scoring 0-10. This is consistent with the study results of Sathian Chantha and colleagues (2019) which explained that current operations of various sectors regarding Sustainable Development Goal 2 in the Thai context have relevant agencies that perform primary duties and some agencies that perform secondary duties, and various activities have been carried out for each goal. However, it can be seen that most of the operations are based on the mission of performing regular duties that each agency carries out itself. There’s a lack of connection and integration, especially on the same issue or goal with many agencies having related activities. Although Thailand's readiness is mainly carried out in specific parts of the government sector, there is a lack of coordination and drive of the private sector which is an important organization that will help push the country to achieve the desired Sustainable Development Goal. Therefore, bringing in the private sector to be a partner in development in Sustainable Development Goal 2 is very necessary. Especially the dimension of poverty that is related to the problem of hunger, increasing labor productivity and agricultural income that will be obtained from selling fair produce. Therefore, the operations of the government sector must establish appropriate policies regarding promoting and supporting the private sector to work in development to be socially responsible.

And when considering the issue of what guidelines or conditions will improve the quality of life of the people, it is found that the sample group of Sustainable Development Goal (SDGs) provinces focuses on 1) Developing and improving appropriate local policies which is the matter that the sample group of Sustainable Development Goal (SDGs) provinces give the mist importance to. This is because local policies may not yet be fully

decentralized. 2) No corruption and increases the efficiency of information disclosure for transparent management. This is because in the past people were still not confident in the operations or various projects that the government implemented. With modern communication systems and information technology, the government sector must disseminate information to the public. In addition, people today can conveniently access various information systems and data. Therefore, disclosing information is necessary to build confidence among the public. And 3) Social and economic projects are created for comprehensive local development. From the point of view of the public sector, they still give importance to the problems of livelihood and the economy as main issues. Therefore, creating social projects that can stimulate the economy for local development is important. This is coupled with Thailand and the international community having just overcome the COVID-19 situation. As a result, the world's economy is at a standstill. Especially Thailand, whose main income comes from the tourism sector. Therefore, when the COVID-19 outbreak situation occurred, it affected the tourism sector. As a result, income cannot be distributed to the public sector in terms of tourism. In addition, Thailand's political uncertainty is still not stable. It was also during the election period in the past years and a new government has just been established. There are also policy changes and budget delays in the government sector. As a result, the economy cannot be stimulated thoroughly.

In addition, the research team has additional findings from the overall project as follows:

1) General characteristics: It is found that the new generation is more interested in and has a better understanding of the Sustainable Development Goals (SDGs) than other generations. The issue of dividing individual characteristics according to time period or generation is therefore one of the important factors.

2) Urgent need for improving quality of life: It is found to be quite high in demand because the Sustainable Development Goals (SDGs) have a direct impact on people's lives, especially the overview of the top 5 results from the survey.

3) Corrective action/management by the government sector: It was found that there is continuous progress related to the Sustainable Development Goals (SDGs) in every sector. There are the following observations:

- There may be a lack of integration among relevant sectors or agencies, causing the information to be quite scattered. The public sector may not yet be aware of it and may not yet have access to it.

- The operational indicators of each sector have already been implemented but may not yet clearly indicate that they meet the goals of development that meet the needs, or focus on development that matches whice one of the Sustainable Development Goals (SDGs).

- Lack of public relations using media to be accessible to all sectors of the public to know what actions the government has taken through social media and communications that can reach each group easily and thoroughly.

- Policy changes and the discontinuity of the political civil service sector affects the development of the country as a whole which affects the overall sustainable development goals of Thailand.

- The leadership of those in command plays an important role. It is found that provinces where the governor places importance on sustainable development (SDGs) have sustainable development goal status. Overall, the survey results are clearly good.

4) Serious cooperation from all sectors. Driving Thailand to achieve the Sustainable Development Goals (SDGs) requires cooperation from all sectors including the government sector, related private sectors, educational sector, and civil society sector. It is noted that which provinces have a strong education sector to support will affect the overall results of the survey. Considering the evaluation results, it is clearly at a good level when compared to other provinces that do not have an educational sector involved.

5) The distribution of areas and people in the overall survey of each province should be comprehensive in order to know the actual results of each province.

5.3 Suggestions

5.3.1 There should be a nationwide survey to get clearer and more reliable information.

5.3.2 Because this survey was conducted to collect data through two survey methods, namely survey using interview methods from respondents (In-person Survey) and Survey using online survey method (Online Survey) together. And from time limitations, it is found that the distribution of the sample using the online survey method was not appropriate. Therefore, it cannot be analyzed. If the next study is carried out by means of an online survey (Online Survey), data should be collected and distributed thoroughly in order to obtain the desired number of samples. In collecting data, surveyors may be involved to provide advice in order to obtain complete and efficient information.

5.3.3 Data collection using qualitative methods should be carried out together in order to expand the study results to be more efficient.

5.3.4 Study further about surveys of a vulnerable condition and vulnerable populations in order to consider policy recommendations.

5.3.5 Learn more about evaluating the performance of the government sector to be consistent with the reality regarding the implementation of the Sustainable Development Goals of Thailand.

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Annexes

Annex A
Research Instrument (Questionnaire)

Questionnaire

Explanation

The Ministry of Interior of the Government of Thailand in collaboration with the United Nations Development Programme (UNDP), funded by the European Union, hurry to propel sustainable development goals at the local level in Thailand. They have initiated the project on "Survey on the Overview Status of Thailand's Sustainable Development Goals" with the aim to propel Thailand's determination to achieve its sustinable development goals 2030 through cooperations with organizations in the public, private and civil society sectors starting in 15 pilot provinces. There are plans to expand to other provinces across the country in the future.

This survey project has been implemented by the UNDP whereby the information you supply in this set of questionnaire will be kept confidential. No information will be disclosed to other people. Results of the survey will be published, but only in the overall statistical form.

Thank you for your cooperation to truthfully complete this survey.

United Nations Development Programme

Instruction Please tick ☑ appropriately and as per your opinions.

Part 1: General information

1. Gender	☐Male	☐Female
	☐Others: Please specify.....	
2. Age	☐Ages 18-25 years	☐Ages 26-35 years
	☐Ages 36-45 years	☐Ages 46-59 years
	☐Ages 60 years and above	
3. Vulnerability	☐Vulnerable conditions (You can tick more than 1)	
	☐Physical injuries i.e. impairments, emergencies	
	☐Psycho-social disability	
	☐Senior citizen	☐Disabled
	☐Minority	☐Immigrant worker
	☐Homeless, stray, pauper	☐Temporary/Daily hire
	☐Youth, student	☐Unemployed
	☐Stateless	☐LBGTI
	☐Iliterate	☐Non-Thai speaking person
	☐Single mother	☐Other. Please specify.....
	☐No vulnerable conditions	

Source: National Research Council of Thailand, Ethics Guildelines for Human Research 2nd Updated Edition, 2021

4. Religion	☐Budhism	☐Islam
	☐Christianity	☐Other. Please specify.....
5. Marital status	☐Single	☐Married
	☐Widow	☐Divorced, separated
6. Education	☐Primary or lower	☐Secondary or equivalent
	☐Diploma or equivalent	☐Undergraduate or equivalent
	☐Graduate or equivalent	
7. Career	☐Civil servant/staff/state employee	☐Private sector officer
	☐Business owner/freelancer	☐Farmer/fisher
	☐General worker/Laborer	☐Househusband/wife/retiree/unemployed
	☐Student	☐Other. Please specify.....
8. Income	☐No income	☐Not more than 10,000 baht
	☐10,001-20,000 baht	☐20,001-30,000 baht
	☐30,001-40,000 baht	☐40,001 baht and above
	☐n/a	

Instructions Please tick ☑ appropriately and as per your opinions.

Score 0-10 (10 being most urgent/requiring improvement/management and 0 being least)

Part 2 How do think the following developments are necessary in terms of urgency for quality of life for you and your family? Have they been improved/managed and how?

Development issues	Urgency for quality of life → most necessary	Public sector implementation: improve/managed → positively	Public sector implementation: Outcomes have been → most effective
1.Solution to poverty	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
2.Development of small group of famers for sustainable food systems	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
3.Well-being and good nutrition	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
4.Good mental health	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
5.Road safety	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
6.Quality education	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
7.Necessary skills for employment	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
8.Elimination of violence against gender in private and public spaces	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
9.Being involved and having equal access for women and LGBTQ+	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
10.Possessing and having access to clean water for drinking and use	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
11.Possessing and having access to clean energy for all	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
12.Employment and access to good jobs	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
13.Adjusting to green economy (designing of basic infrastructures, roads, water, power, buildings, houses)	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
14.Being involved in proposing policies for better quality of life	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
15.Solutions to air pollution	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
16.Resilience and reduction of impacts from natural disasters	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
17.Solutions to water pollution	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
18.Reducing and reusing recycle	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
19.Building awareness of impacts from climate change and global warming	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
20.Participation in allocating forests and greenery areas.	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**
21. Transparent and high quality management of public services and disemination	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**	0 1 2 3 4 **5** 6 7 8 9 **10**

Instructions Please tick ☑ as per your opinions

Part 3 Which methods allow better quality of life for you (Choose 3 most importone ones)

___ 3.1 Having **development and improvement** of appropriate local policies.

___ 3.2 Creating social and economic projects for local development **for all**.

___ 3.3 Promoting equal roles and participation in communities for **all genders**.

___ 3.4 Building collaborations for **development policies** in communities effectively.

___ 3.5 Ensuring **distribution of funds and authorites** for local management.

___ 3.6 Having **platforms to exchange** local wisdoms among community memebers to adapt for development.

___ 3.7 Providing **knowledge of** conservation for the **environment and waste management.**

___ 3.8 Being **without** corruption while **increasing efficiency** of information disclosure for transparent administration.

Annex B
Field Work Photos – Trial of Research Instrument

Field work photos – Trail of research instrument

Field work photos – Trial of research instrument (Continued)