

**Revised ASEAN-JAPAN Healthy & Active
Ageing Index (Revised HAAI)
and Policy Guide for its Application**

Summary of Revised HAAI

Health and Labour Administration Promotion Research Project

Research Project on Administrative Policies to Promote Solutions to
Global Health Issues

**Research on the Promotion of Active and
Healthy Ageing in ASEAN
FY2020-2022**

May 2023

Revised ASEAN-JAPAN Healthy and Active Ageing Index (2023)

Domain	Indicator	SDG indicator
1. Policy & Statistics (10 indicators)		
	1) Policy-Multisectoral healthy and active ageing: yes/no	
	2) Policy-Health care including NCD: yes/no	
	3) Policy-Long-term care system: yes/no	
	4) Statistics-Older population proportion and distribution: yes/no data	
	5) Statistics-Vital statistics (including cause of death)	
	6) Statistics-Health / living conditions of older persons	
	7) Statistics-Health care expenditure for older persons: yes/no data	
	8) Statistics-Number of health and long-term care workers: yes/no data	
	9) Statistics- Capacity of long-term care facility: yes/no data	
	10) Total	
2. Income & Livelihood Security (7 indicators)		
	1) Absolute poverty rate	1.2.1
	2) Relative poverty rate	10.2.1
	3) Financial tools	8.10.2
	4) Food insecurity	2.1.2
	5) Employment	8.5.2
	6) Coverage of income security measures such as public pension or welfare benefits	1.3.1
	7) Home ownership	1.4.2
3. Health & Quality of Life (12 indicators)		
	1) Life Expectancy at age 60	
	2) Healthy life expectancy at age 60	
	3) NCD mortality	3.4.1
	4) Suicide mortality rate among older people	3.4.2
	5) Disability/ADLs	
	6) Disability/WG (Washington Group)	
	7) Disability/GALI (Global Activity Limitation Index)	
	8) Prevalence of dementia	
	9) Subjective, self-rated health	
	10) Rate of receiving long-term care	
	11) Unmet need for healthcare	
	12) Physical exercise, including walking	
4. Social Capital (6 indicators)		
	1) Loneliness / social isolation	
	2) Engagement of social activities (community, political & religious activities)	
	3) Communication with family or friends	
	4) Trust in the community	
	5) Safety in the community	16.1.4
	6) Care to children and/or grandchildren	
5. Capacity and Enabling Environment (6 indicators)		
	1) Having a mobile phone	
	2) Access to the Internet	17.8.1
	3) Living in a house with safe drinking water	6.1.1
	4) Living in a house with toilet	6.2.1
	5) Education (completed at least primary level)	
	6) Free from physical, psychological, financial or sexual violence	16.1.3
6. COVID-19 (2 indicators)		
	1) COVID-19 case fatality ratio	
	2) COVID-19 vaccine coverage	

HAAI structure and data

A. Domains and indicators

Healthy and active ageing must be captured using a multidimensional approach. In 2017, during the 3rd ASEAN-Japan Active Ageing Regional Conference held in Manila, members of this project participated and discussed the possible framework of the ASEAN-JAPAN Healthy and Active Ageing Index (HAAI). In addition, several studies and indices of healthy ageing have been proposed and used. These studies include the European Active Aging Index (UNECE/EU 2019), Asian Active Aging Index (Zaidi and Um 2019a, Zaidi and Um 2019b), and New Global AgeWatch Index (HelpAge International 2015). The concept and framework of the UN Decade of Healthy Ageing and the UN Sustainable Development Goals indicator framework are also referred to. For detailed descriptions, please refer to our report from FY2020 and FY2021. After examining the relevant documents and discussing them with persons in charge of or related to those works, we structured the HAAI into six domains and 43 indicators, which are presented in this report. Each domain and indicator is described in this section.

Domain 1. Policy & statistics (10 indicators)

This domain captures the availability of policies and statistics on health and active ageing in the target country. Because the existence of a policy is binary (yes or no), but the policy differs from country to country, the value of each indicator was scaled from 0 to 1, and the completeness and appropriateness of each policy were judged subjectively.

Indicator 1.1 Policy - multisectoral health and active ageing

Ageing policy is multi-sectoral. Different ministries and departments within the national government are in charge of different administrative tasks, such as health, welfare, employment, and the living environment of older persons. Therefore, coordination is needed. This indicator verifies whether there is a law, act, or national plan stipulated and effective across different governmental bodies. For example, in Vietnam, the Law on the Elderly, enacted in 2009, defines the responsibilities of elderly related work among different departments within the government.

Indicator 1.2 Policy - health care, including NCD

Every country has a ministry in charge of health and disease control programs. However, in middle- and low-income countries, the focus has been on infectious disease control or maternal-child health, and a policy framework for noncommunicable diseases (NCD) is sometimes lacking. This indicator verifies whether there is a national policy addressing the prevention and treatment of NCD, including hypertensive diseases, diabetes, cardiovascular diseases, cerebrovascular diseases, chronic respiratory diseases, and cancer. For example, in the Myanmar National Health Plan (2017-2021), NCD database maintenance and programs are well defined.

Indicator 1.3 Policy - long-term care system

As the population ages, the need for long-term care to support the elderly, who have increased physical and mental limitations in daily life, increases. Globally, only South Korea, Japan, and Germany have public long-term care insurance. Some countries deliver care through national and local government schemes, whereas others deliver

care through private service operators. However, in middle- and low-income countries, families are the main caregivers and do not receive any remuneration. Considering the increasing number of elderly people and decreasing number of children, the traditional family-dependent long-term care system should be reinforced with public policies. This indicator measures the existence of public policies.

Indicator 1.4 Statistics - older population proportion and distribution

Population of a country disaggregated by sub-national level, is easy to obtain; however, the statistics are not always disaggregated by sex and age. This indicator measures if there are national statistics on the age-disaggregated number of people (proportion) at the subnational level (distribution). The cut-off age for “older persons” differs by country, due to the different historical context; those countries which started population ageing policies prior to the 1982 Vienna World Assembly on Ageing (VIPAA) tend to define older persons as 65 years and over, while those which started after the VIPAA tend to define them as 60 years and over. In this report, we attempted to use 60 years as the cutoff age wherever possible.

Indicator 1.5 Statistics - Vital statistics (including cause of death)

Vital statistics, the number of births, deaths, marriages, and divorces are crucial data for understanding population dynamics. However, many middle- and low-income countries have difficulty gathering information through registration. In this case, census or sample surveys were used for estimation. In particular, death information, including the cause of death, is important for understanding the health of older persons. This indicator was set to 1 if all deaths were collected through registration with the cause of death certified by a medical doctor. If there are no data on mortality published by the national authority, the indicator is 0.

Indicator 1.6 Statistics - health / living conditions of older persons

Statistics on health and living conditions cover vast areas, such as household composition, employment, healthcare access, subjective health, and social security coverage. This indicator evaluates the existence of a national-level sample survey addressed to older persons or with results disaggregated by age.

Indicator 1.7 Statistics - health care expenditure for older persons

Healthcare expenditures are derived from the internationally standardized accounting framework of the System of Health Accounts 2011 (SHA2011) (OECD, Eurostat, and WHO 2017). As of 2022, among the 194 WHO member states, only two countries—Somalia and the Democratic People’s Republic of Korea—did not report any data. However, if we want healthcare expenditures limited to older persons, country reports with more detailed data are needed. This indicator is set to 1 if the country report is available on the web and healthcare expenditure for older persons is shown.

Indicator 1.8 Statistics - number of health and long-term care workers

The health and long-term care workforce is a key determinant of quality care. This indicator was set to 1 if the number of health and long-term care workers was measured and published. Often, the statistics on the number of healthcare workers are more available than that of long-term care workers.

Indicator 1.9 Statistics - capacity of long-term care facility

To measure the long-term care service level, this indicator captures the number of available rooms or beds for older persons who require facility care. These statistics are only available when long-term care facilities exist and are recognized by the statistical authority. If those statistics are available, this indicator is set to 1.

Indicator 1.10 Total of policies and statistics

The total of indicator 1.1 to 1.9 is set as indicator 1.10. Therefore, indicator 1.10 has a maximum of 9 and a minimum of 0.

Domain 2. Income & livelihood security (7 indicators)

Indicator 2.1 Absolute poverty rate

There are two main methods for measuring poverty: absolute and relative poverty. Absolute poverty, which this indicator is concerned with, is measured by the percentage of the population living below the national poverty line set by the government of each country, based on the calculation of the costs necessary to live the minimum standard of living in each society. In some countries, poverty lines are set for each subnational division within the country. For example, Indonesia has updated its poverty line for each of its 67 regions based on the results of the National Socioeconomic Survey (SUSENAS), a large-scale sample survey conducted annually by the Central Statistical Office (BPS). The most commonly used international “absolute poverty” line is the World Bank standard of “less than \$1.90 per day” (revised in 2015 from \$1.25 per day previously) (World Bank 2016).

In this study, the absolute poverty rate was defined as the percentage of those living below the national poverty line. If the national poverty line is not defined, the internationally used definition of the proportion of people living on less than 1.90 USD a day. This indicator is also an SDG indicator (1.2.1).

Indicator 2.2 Relative poverty rate

Relative poverty is calculated by the proportion of people living below 50% of the median household income. The household income was adjusted by the household size, employing the OECD method in which the disposable income was divided by the square root of the number of household members. While absolute poverty indicates a state of deprivation based on the minimum standard of living, relative poverty measures wealth distribution and inequality within a country (OECD, 2005). This indicator 2.2 is the same as that used by the OECD and the same as SDG indicator 10.2.1.

Indicator 2.3 Financial tools

Maintaining financial activity is an important factor in guaranteeing the independence of older people. It is an instrumental activity in daily living. This indicator is defined as the proportion of older persons with an account at a bank or other financial institution, or with a mobile money service provider. This indicator is the same as SDG 8.10.2. However, thus far, the SDG indicator database has not included the values for older persons.

Indicator 2.4 Food insecurity

Malnutrition in older persons is often neglected in health and nutrition programs, and is strongly related to their economic and social situation. This indicator is defined as the prevalence of moderate or severe food insecurity

among older people, as taken from SDG 2.1.2.

Indicator 2.5 Employment

Regarding the employment of the elderly, especially in Asia, there is a situation in which people have no choice but to work because social security systems such as pensions are not well developed. A survey in Indonesia reported that older persons with lower educational levels tended to continue working to secure their income (Utomo et al. 2018). In some countries, there is also a cultural norm that the work of older persons is shameful because it indicates that children do not support their parents adequately.

On the other hand, it is also possible to realize economic independence and social participation by working. Decent work is one of the goals of the SDGs and is important for older persons who are willing to work satisfactorily in terms of social participation and economic fulfillment. The ILO advocates supportive measures for older workers to enable active ageing (ILO, 2019).

This indicator is defined as the proportion of older persons employed or self-employed who receive a monetary salary. This indicator is difficult to obtain as the definition of “working age population” excludes older persons, and some countries, such as Malaysia, only publish the employment rate for younger age groups.

Indicator 2.6 Coverage of income security measures such as public pension or welfare benefits

As the financial protection system differs from country to country, this indicator attempts to capture whether an older person is financially protected by any public scheme other than her/his own salary, savings, or family transfers. This indicator is the same as SDG indicator 1.3.1, but focuses on older persons.

Indicator 2.7 Home ownership

Housing is a key element in maintaining a decent life. This indicator is the same as SDG indicator 1.4.2, but focuses on older persons.

Domain 3. Health & quality of life (12 indicators)

Indicator 3.1 Life Expectancy at age 60

Life expectancy at age 60 measures the average number of years one can expect to live at the age of 60. In middle- and low-income countries where death registration is not complete, this indicator is based on the estimated life table, which is heavily dependent on the infant mortality rate and not the real level of old age mortality. However, for data availability, World Health Organization Global Health Observatory values were used for all countries.

Indicator 3.2 Healthy Life Expectancy at age 60

The definitions of health vary. However, for this indicator, WHO Global Health Observatory values were used, as data are available for all countries.

Indicator 3.3 NCD mortality

This indicator is derived from SDG indicator 3.4.1., and values from the UN SDGs database were used for all countries. The definition of this indicator is “probability of dying between the ages of 30 and 70 years from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases” according to the UN SDG database

metadata. The causes included in the ICD-10 are I00-I99, COO-C97, E10-E14 and J30-J98, therefore including cerebrovascular diseases as well.

Indicator 3.4 Suicide mortality rate among older people

Suicide is the final indicator of the aggravation of mental status in older adults. Although the definition is clear, not all suicides are reported as suicides. Some cultural settings do not allow suicide, particularly when a person is surrounded by family. In addition, when there are no complete cause-of-death statistics, it is difficult to obtain true figures. Here, the suicide mortality rate for older persons was derived from the national cause of death statistics when available. Otherwise, figures from the World Health Organization Global Health Estimates were used.

Indicator 3.5 Disability: ADLs (Activities of Daily Living)

There are various methods of measuring health and disability. This indicator captures the proportion of older persons who have difficulty performing activities of daily living, such as grooming, dressing, eating, using the toilet, bathing or showering, walking, and transferring. ADLs are well-known indicators; however, the questions and items differ slightly from country to country. For example, Indonesia's ADL questions include changing clothes, bathing, getting up, eating (eating prepared food), and going to the toilet (can do it by themselves), and in Thailand, changing clothes, washing face, bathing, and eating are included (Asghar and Um 2019). National-level statistics are missing for Japan, so the substitute question on the "need of help and support" is used.

Indicator 3.6 Disability: WG (Washington Group)

The Washington Group's disability question was elaborated upon by the group originally endorsed by the Statistical Commission of the United Nations for the purpose of establishing an internationally agreed definition of disability (The Washington Group on Disability Statistics 2023). Several question sets have been proposed that are now widely used in many countries. This indicator uses a short set of six questions on difficulty in seeing, hearing, walking or climbing, remembering or concentrating, self-care, and communication. The proportion of those who responded "A lot of difficulty" or "Cannot do at all" is set as the disability rate.

Indicator 3.7 Disability: GALI (Global Activity Limitation Indicator)

The GALI is a simple question included in Eurostat's Minimum European Health Module (MEHM) to measure disability. The question is "Do you have limitation in activities people usually do because of health problems for at least the past six months," and the response has three choices; "severely limited," "limited but not severely," and "not limited at all." Disability is defined as the proportion of those who responded "severely limited" and "limited but not severely."

Indicator 3.8 Prevalence of dementia

Dementia is a disease that increases with age, and its prevention, mitigation, treatment, and coexistence are urgent policy needs. This indicator defined the proportion of older adults with dementia. However, caution should be exercised when interpreting these results. If dementia is well recognized in society and there are sufficient medical services to diagnose it, then the prevalence of dementia can be measured properly. However, if these environments are lacking, the reported prevalence of dementia would be lower than the true figure. On the other

hand, if many people survive to become very old before dying from other diseases, then there will be more persons suffering from dementia. For these reasons, one can also assume that nations with a higher prevalence of dementia are better and more advanced. However, at this stage, we adhered to the conventional approach in which a lower prevalence is better.

Indicator 3.9 Subjective, self-rated health

Subjective self-rated health is a commonly used measure of health and well-being. The question text is simple, such as, “are you healthy?” However, the response categories differed from survey to survey, causing standardization problems. For example, the response categories such as “Good,” “Normal,” and “Bad,” or “Very good,” “Good,” “Bad,” and “Very bad,” would not provide comparable indicators depending on which categories should be included. In this study, we defined the proportion of those who responded positively on their health, such as “Very healthy,” “Healthier than average,” “Excellent,” or “Good,” not including “Normal” or “Either.”

Indicator 3.10 Receiving long-term care

Similar to the prevalence of dementia, this indicator is difficult to interpret. This indicator is defined as the proportion of individuals receiving long-term care. However, those who needed care but could not receive it were not included in the data. It should capture the unmet needs for long-term care; however, thus far, it has been difficult to obtain such an indicator.

Indicator 3.11 Unmet need for healthcare

Unlike long-term care, unmet healthcare needs are becoming a common question used in sample surveys. This indicator used the proportion of people who did not receive medical care when needed.

Indicator 3.12 Physical exercise (including walking)

Physical exercise is useful in maintaining good health in old age and preventing physical decline and accidental injuries (Asghar and Um 2019). However, as with the disability/activities of daily living (ADL) above, the items used for measurement differ greatly depending on the survey data available for each country. Health promotion is measured by various items, but here, physical exercise is chosen, including walking.

Domain 4. Social capital (6 indicators)

Indicator 4.1 Loneliness / social isolation

In an ageing society, the number of elderly people who become lonely and isolated after retirement is increasing. Loneliness is a subjective emotion, whereas isolation is an objective situation. Furthermore, social isolation of the elderly has become an increasingly serious issue owing to the prolongation of the COVID-19 epidemic. The degree of impact may differ depending on the country; for example, the implementation of strict lockdowns.

Loneliness affects a third of the population of industrialized countries, with an increasing prevalence and risk of premature mortality (Cacioppo 2018). In G7 countries, such as the United Kingdom, Germany, and Japan, governments are working on countermeasures. In Japan, the Office for Loneliness Countermeasures was established in 2021 at the Cabinet Office, and national surveys are being conducted. It is not certain whether this “pandemic”

of loneliness is only limited to high-income countries, but as a social capital indicator, it is worthwhile to measure it among the ASEAN countries.

There are two internationally used measures of loneliness. The UCLA Loneliness Scale is a conventional method; however, the British one-question format is also becoming prevalent (ONS, 2018). Here, indicator 4.1 captures the proportion of older persons who feel lonely according to the definition adopted by each survey.

Indicator 4.2 Engagement of social activities (community, political & religious activities)

This indicator captures how older adults engage in social activities. However, the questions in these surveys differ substantially. Whenever possible, we chose community, political, and/or religious activities as the social activities. The frequency is described differently as well, such as “usually” or “in the past 12 months.” The definition provided in each survey was used; therefore, it was not identical from country to country.

Various survey results have confirmed that women are more active than men, a trend specific to Asia related to social participation among the elderly. It is possible that the strong sense of gender division of labor during working life—men working outside and women doing housework— contributed to the gender gap in social participation even after retirement.

Indicator 4.3 Communication with family or friends

In an increasingly common setting in which older persons live alone, without mandatory work or schooling, some are deprived of the chance to communicate with others. This indicator captures the proportion of older adults who do not communicate with their family or friends within a month.

Indicator 4.4 Trust in the community

Trust in the community in which an older person lives is an important measure of social capital. This indicator is defined as the proportion of older adults who trust their neighbors or people in the community.

Indicator 4.5 Safety in the community

Community safety is important for building social capital. This indicator is derived from SDG indicator 16.1.4. and is defined as the proportion of the population that feels safe walking alone around the area in which they live after dark. As age-disaggregated values were not available, all age values were used for this indicator.

Indicator 4.6 Care of children and/or grandchildren

Taking care of children and grandchildren can be viewed as an aspect of older people’s social participation (Asghar and Um 2019). However, it is necessary to keep in mind that elderly people can receive support due to the physical changes and functional decline associated with ageing. In addition, supportive relationships between families are related to household structures such as parent-child cohabitation and multi-generational cohabitation, as well as social norms and systems surrounding care. For example, an international comparative study on the residential relationship between adult children and their parents in Europe found that the residential relationship and distance between parents and children differ not only according to the number and composition of siblings of the adult child but also according to the public policy measures in each country (Rainer and Siedler 2012). In Asia, the provision of care, such as childcare and nursing care, has traditionally tended to depend on kinship resources

centered on families living together. However, amid the recent rapid ageing and lowering of fertility, there are differences in the ways people and national governments respond (Ochiai 2013). These institutional factors and backgrounds also need to be considered when evaluating indicators related to intergenerational support such as the care of children and grandchildren by older persons.

This indicator is calculated as the proportion of older persons taking care of their children or grandchildren regardless of their living arrangements, such as living together.

Domain 5. Capacity and enabling environment (6 indicators)

Indicator 5.1 Having a mobile phone

Mobile phone use is now more prevalent than landline phone use, particularly in middle- and low-income countries. Older persons are less acquainted with mobile phones than younger persons, but the COVID-19 pandemic has pushed mobile utilization in the elderly to replace conventional face-to-face communication.

This indicator measures the proportion of older adults who use mobile smart phones.

Indicator 5.2 Access to the internet

Access to the internet expands information sources and widens the range of activities, which is also true for older people. This indicator might be the same as the previous indicator, “having a mobile phone,” as mobile phone or smart phone allows access to the internet. However, internet access also includes those who are connected through a PC or tablet via Wi-Fi or LAN, at home with their family, or at work. This is also SDG indicator 17.8.1. However, the data in the UN SDG Indicators Database are not age-disaggregated.

Indicator 5.3 Living in a house with safe drinking water

This indicator is the same as SDG indicator 6.1.1; however, the data in the UN SDG Indicators Database are not age-disaggregated. At this stage, when data were not available from national sources, the SDG indicator was used for all ages.

Indicator 5.4 Living in a house with a toilet

This indicator is the same as SDG indicator 6.2.1; however, the data in the UN SDG Indicators Database are not age-disaggregated. However, in most countries, the existence and type of toilets are asked about in the census or sample surveys. In Japan, in addition to flush toilets, the existence of Western-style toilets was assessed through a survey. This is because non-Western or Japanese conventional toilets are squat style, which can cause stroke, and older people have difficulties in using them. The proportion of Western-style toilets was lower (89.4% in 2008 in households with older persons aged 65 years and over) than that of flush toilets (94.3% in 2017). The same differentiation is required in countries in which conventional squat-style toilets are prevalent.

Indicator 5.5 Education (completed at least primary level)

The educational level of older adults is typically obtained from a population census. Here, the indicator is defined as the proportion of older people who have graduated at least in primary education. Malaysia’s indicator is much lower (50% in 2000), which could be due to different education systems not included in the census questionnaire, such as Islamic Koranic schools.

Indicator 5.6 Free from physical, psychological, financial, or sexual violence

Violence toward older persons could be of various types, and even close kin, such as sons or daughters living together, could be perpetrators. In such cases, it is difficult to capture by household surveys when the perpetrator is sitting next to the older person or even responding to the survey. However, various methods have been used to properly capture violence against older persons and some data are available. This indicator is the same as SDG indicator 16.1.3, but thus far, the data in the UN SDG Indicators Database are not age-disaggregated.

Domain 6. COVID-19 (2 indicators)

For three years from 2020 to 2023, COVID-19 greatly affected people's lives. At the time of writing this report (March 2023), the pandemic was moving towards the end, but this is not certain. As COVID-19 affects the lives of older persons and the mortality is high among them, indicators related to COVID-19 are deemed necessary, not only for COVID-19, but also in view of possible future pandemics of similar strains.

Indicator 6.1 COVID-19 case fatality ratio

COVID-19 is known to have a higher prevalence among younger people but higher mortality rates among older people. This indicator captures the case fatality ratio, defined as the number of deaths due to COVID-19 divided by the number of COVID-19 cases among people aged 60 years and older. However, one must be cautious in that the figures of countries without universal coverage of death registration tend to underestimate the number of deaths and hence lower the indicator value.

Indicator 6.2 COVID-19 vaccine coverage

The provision of a vaccine is crucial for the prevention of COVID-19, especially in older people who are more vulnerable to mortality. This indicator is defined as the proportion of older adults who received the COVID-19 vaccine. However, vaccine coverage data are often not disaggregated by age. At this point, only Japanese data were available, and cross-country comparisons could not be conducted.

B. Calculation method

43 indicators in 6 domains described in the previous section were collected from various data sources as described in Table 2. As stated elsewhere, data availability is the problem, and it is very rare to have data available from all the countries chosen for the comparison. To cope with this situation, and to use the existing data effectively, we employed a method to allow the comparison only with existing data. The existing data is translated into a T-score calculated from the mean and standard deviation of available data. For example, indicator 3.7, Disability/GALI, has three entries from Japan, Vietnam, and Philippines. The mean and standard deviation of three values are calculated and each T-score is calculated as follows;

$$Tscore_i = \frac{10(x_i - \mu_x)}{\sigma_x} + 50$$

where x_i is the indicator x value of i country, μ_x is the mean and σ_x is the standard deviation of indicator x .

Because some indicators are better when the value is larger and others are better when the value is smaller, it is necessary to align the directions. For example, in the case of Indicator 3.7, the lower the disability, the better the calculated T-score, which should be inverted as follows:

$$AdjustedTscore_i = 100 - Tscore_i$$

Table 1 Calculation of Adjusted T-score (Example: Indicator 3.7 Disability/GALI)

Data	Japan	Indonesia	Thailand	Myanmar	Malaysia	Vietnam	Philippines
3.7 Disability /GALI	21.8%	-	-	-	-	59.6%	59.0%
↓ Mean=46.8%, Standard deviation=17.7%							
T-score	Japan	Indonesia	Thailand	Myanmar	Malaysia	Vietnam	Philippines
3.7 Disability /GALI	35.9	-	-	-	-	57.2	56.9
↓ Invert as this indicator is lower with better conditions							
Adjusted T-score	Japan	Indonesia	Thailand	Myanmar	Malaysia	Vietnam	Philippines
3.7 Disability /GALI	64.1	-	-	-	-	42.8	43.1

The adjusted T-scores for each domain were averaged without weighting. The average HAAI for each domain was the HAAI for the country.

C. HAAI for Japan and six ASEAN countries

Six ASEAN countries were chosen for the HAAI calculations. These countries include Indonesia, Thailand, Myanmar, Malaysia, Vietnam, and the Philippines. The total population of these six countries was 644 million, accounting for 95% of the total ASEAN population. Along with Japan, the results of the HAAI are shown in Table 2 (T-score and Adjusted T-scores are shown in the excel file).

The summary of HAAI by domain is shown in **Table 3** and **Figure 1**.

Table 3 Japan-ASEAN HAAI by domain

	Japan	Indonesia	Thailand	Myanmar	Malaysia	Vietnam	Philippines
1.Policy & statistics	69.9	38.4	49.1	37.6	53.7	50.7	50.7
2.Income & livelihood security	51.1	51.1	53.1	41.7	49.1	52.1	54.3
3.Health & quality of life	57.1	43.9	52.1	51.4	49.4	46.7	48.4
4.Social capital	49.0	48.6	56.8	45.7	53.3	44.7	51.2
5.Capacity and enabling environment	61.7	41.0	49.1	42.5	53.6	48.9	49.6
6. COVID-19	47.4	62.6	-	35.5	47.6	63.4	43.6
Total	56.0	47.6	52.1	42.4	51.1	51.1	49.6

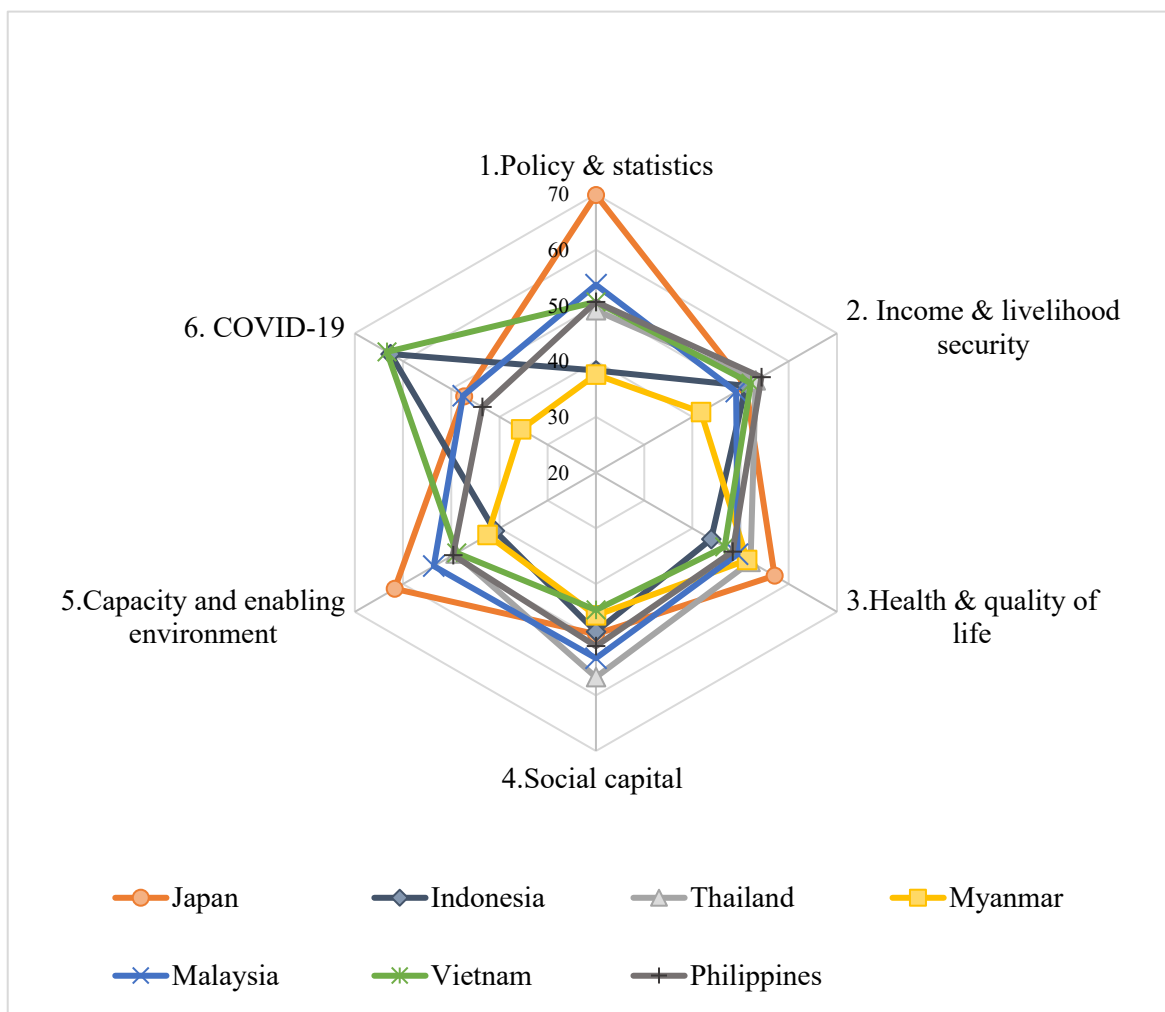


Figure 1 Japan-ASEAN HAAI by domain

References

Cacioppo, John T; Stephanie Cacioppo (2018) “The growing problem of loneliness,” *Lancet*, 391(10119):426. [http://dx.doi.org/10.1016/S0140-6736\(18\)30142-9](http://dx.doi.org/10.1016/S0140-6736(18)30142-9)

HelpAge International (2015) *Global AgeWatch Index 2015 Insight report*, <https://www.helpage.org/global-agemwatch/reports/global-agemwatch-index-2015-insight-report-summary-and-methodology/>

ILO (2019) *ILO Centenary Declaration For the Future of Work*, International Labour Conference 180th Session, Geneva,

- <https://www.ilo.org/global/about-the-ilo/mission-and-objectives/centenary-declaration/lang--en/>
- Ochiai, Emiko (2013) “Care Diamonds and Welfare Regimes: Comparative Analysis of Six Societies in East and Southeast Asia” (in Japanese) in Ochiai, E. ed. *Transformation of the Intimate and the Public in Asian Modernity*, Kyoto: Kyoto University Press, pp. 177-200.
- OECD (2005) “Equity Indicators,” in *Society at a Glance 2005: OECD Social Indicators*, Paris: OECD Publishing
- OECD, Eurostat and WHO (2017) *A System of Health Accounts 2011: Revised edition*, OECD Publishing, <http://dx.doi.org/10.1787/9789264270985-en>
- ONS (Office for National Statistics, UK) (2018) “Loneliness - What characteristics and circumstances are associated with feeling lonely? Analysis of characteristics and circumstances associated with loneliness in England using the Community Life Survey, 2016 to 2017”, <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/lonelinesswhatcharacteristicsandcircumstancesassociatedwithfeelinglonely/2018-04-10>
- Rainer, H. and Siedler, T. (2021) “Family Location and Caregiving Patterns from an International Perspective,” *Population and Development Review*, Vol.38, No.2, pp.337-351
- The Washington Group on Disability Statistics (2023) <https://www.washingtongroup-disability.com/>
- UNECE / European Commission (2019) *2018 Active Ageing Index: Analytical Report*, <https://unece.org/population/publications/active-ageing-index-analytical-report>
- Utomo, A., McDonald, P., Utomo, I., Cahyadi, N. and Sparrow, R. (2019) “Social Engagement and the Elderly in Rural Indonesia,” *Social Science & Medicine* 224, pp.22-31
- World Bank (2016) *Poverty and Shared Prosperity 2016: Taking on Inequality*, Washington DC: World Bank
- Zaidi, Asghar; and Jinpil Um (2019a) *The Asian Active Ageing Index: Results for Indonesia and Thailand*, Social Development Working Papers, 2019/05, United Nations ESCAP
- Zaidi, Asghar; and Jinpil Um (2019b) “The New Asian Active Ageing Index for ASEAN+3”, *Journal of Asian Sociology*, Vol. 48, No. 4 (December 2019), pp. 523-558

Conclusion and Recommendation

Significance of the revised HAAI (ASEAN-Japan Healthy & Active Ageing Index)

We developed a revised HAAI based on the 2017 version with reference to similar indicators from other organizations and suggestions by researchers. The revised version of the HAAI consists of 43 indicators across six domains. The contents of the indicators were thoroughly reviewed to redefine the concept of healthy and active ageing. In addition, a comprehensive index was calculated as the deviation value by quantifying the numerical values and categories applicable to each indicator. This index can also be used to compare domains and countries. The results are presented using visually user-friendly radar charts.

The problem with developing indicators is that the measurement methods differ from country to country, and there are no numerical values in themselves. These problems continue, but this integrated index will help us grasp the overall trend of healthy and active ageing. The revised HAAI, along with the radar charts, can be used for policy development in ASEAN countries.

Indicators should be meaningful despite non-uniform definitions or incomplete data collection. It is important to handle variations and missing values appropriately to roughly understand the current situation and make comparisons. The revised HAAI would be a fairly useful index in the field of real policy development.

In ASEAN countries with close cultural and policy proximity, the revised HAAI has great merit for comparing the advantages and problems of ageing policies among countries.

Because the revised HAAI includes several indicators related to the SDGs, appropriate figures can be obtained efficiently. The position of each country's ageing policies in the SDGs is also clarified.

Several challenges, however, need to be overcome. First, in some indicators, it is difficult to determine whether a higher or lower value is preferable, such as Indicator 3.8, Prevalence of dementia and Indicator 3.10, Receiving long-term care. In general, for events that have not received much attention, as surveillance starts, the number and proportion of cases apparently start to increase. This increase may attract public attention, leading to more cases discovered even when policies have been implemented. This is a sort of paradox in which the number of cases continues to increase despite the implementation of policies. At some point, the upward trend subsides, and thereafter starts to decline due to the effects of policies. The meaning of the indicator changes depending on the stage of policy development in each country; therefore, it is necessary to interpret carefully.

The second challenge was the lack of data on older adults. Many indicators have countrywide data, but age-specific data on older people have not been classified nor published. It is important to collect and publish data on older adults to promote ageing policies.

Recommendations for Policymakers and Stakeholders

The research team makes the following recommendations for policymakers and stakeholders on ageing.

1. The index should be used to organize and compare statistical information on ageing, which is particularly important for planning, implementing, and evaluating ageing policies.
2. Data on older adults should be enhanced.
3. While data at the national level are important, data from rural areas and hard-to-reach populations are also important for ageing policies, and field surveys should be used as needed.
4. Good practices in countries and regions should be linked to indices and utilized for policy development.
5. The government and relevant organizations should more actively find out and disseminate good practices.

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