



# SITUATION OF THE THAI ELDERLY 2014

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สถานการณ์ผู้สูงอายุไทย พ.ศ. ๒๕๕๗





ปก : นายพารณ อิศรเสนา ณ อยุธยา, ผู้สูงอายุแห่งชาติ ประจำปี พุทธศักราช 2557

COVER : Paron Israsena Na Ayudhaya, The Honorary Senior Fellow of 2014

# SITUATION OF THE THAI ELDERLY

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## 2014





## FOREWORD

This report of the situation of the elderly in Thailand is a report commissioned by the National Committee for the Elderly, in accordance with the Elderly Act of 2003 Article 9 (10) stipulating the preparation of an annual report on the status of the elderly for submission to the Cabinet.

The National Committee for the Elderly has assigned the Foundation of Thai Gerontology Research and Development Institute (TGRI) to prepare this assessment of the situation of the elderly in Thailand annually since 2004.

This report is an annual report for 2014 and compiles data which portray the status of the elderly at present and projected for the coming decades. The report of this year has a special focus on the theme of the elderly and natural disasters.

In the preparation of this report, the TGRI has received excellent collaboration from government and private agencies in sharing up-to-date data. The TGRI would like to express its gratitude to all cooperating agencies for their contribution to this year's report. TGRI also thanks the Fund for the Elderly for funding the preparation of this report.



(Banloo Siripanich, M.D.)

President

Foundation of Thai Gerontology Research and Development Institute



# Executive Summary and Recommendations

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## Situation of the population aging in Thailand

As of 2014, the Thai population had reached a total of 68 million persons. This total includes 65 million Thai citizens and non-Thais in the civil registration system, and 3 million non-Thai residents not included in the civil registration system (most of whom are migrant workers from Thailand's lower-income neighbors).

Over the past decade, Thailand's overall population has remained rather stable due to its very low growth rate of 0.5% per year as of 2014. The current trend is toward even slower population growth in the coming years, possibly reaching negative growth in the coming decade.

Even though the total number is peaking, the age structure of the Thai population is changing rapidly. Fifty years ago, Thailand had a "young" population with a large percentage under age 15 years. However, by 2014, the population age 60 years or more had reached 10 million persons, or 15% of the total.

This aging of the Thai population is a major challenge for economic development of the country. In 2014, there were 4.3 Thais in the working age group (15 to 59 years) for each elderly person (age 60 or more years). This ratio is projected to decrease to 2 working-age Thais per one elderly person in the coming 20 years.

At present, more and more people are becoming aware of Thailand's demographic transition toward an aged society. However, most people, especially planners and policy makers probably do not realize how fast this transition toward an aged society is occurring. Thailand reached the demographic criteria for being labeled an "aged society" in 2005, when the proportion of the total population age 60 years or over reached 10%. It is projected that Thailand will achieve the status of a "complete aged society" in 2021 when the elderly proportion reaches 20%. It is further projected that Thailand will achieve "super aged society" status (28% of the population is elderly) within the coming 20 years.

The rapid aging of the Thai population is the culmination of a relatively rapid demographic transition after the end of the Second World War from a population with low fertility and high infant mortality to low childhood mortality and high fertility. This imbalance produced the “million birth cohort” (born during the period from 1963 to 1983) who represent a demographic bulge which is aging through the population structure. As of 2014, this cohort was between the age of 31 and 51 years, and will begin to transition into elderly status in ten years and more from now.

### **The number of elderly in smaller families or living alone is on the rise**

A part of this transition to an aged society is the changing of family size. Historically, Thais lived in extended-family households with many members. But now, as fertility declines and the population ages, the elderly are in households with only three persons on average (compared to an average of five persons since 30 years ago).

The increasing isolation of the Thai elderly presents a social challenge for the country. In 2002, the proportion of elderly living alone was 6% while 16% were living only with a spouse. As of 2014, these proportions increased to 9% and 19%, respectively. Clearly, this group of isolated elderly will be in need of social services and monitoring.

### **There is a large number of elderly in low-income families**

In 2014, fully one-third (34%) of elderly lived in families below the poverty line.

The proportion of elderly receiving income from one or more of their children has declined from 52% in 2007 to 37% in 2014. Conversely, the proportion of elderly having income from work/employment increased from 29% in 2007 to 34% in 2014.

In 2014, income from work/employment was the primary source for those in the early-elderly age group, 59% and 46% for those age 60–64 and 65–69 years, respectively.

## When longevity of the Thai population expands, Expenses of government and family for taking care of the elderly's health will be increasing

Thai life expectancy has increased significantly over the past 50 years, from 58 years since five decades ago to 75 years in 2014. Thais who reached the age of 60 will have a life expectancy of additional 22 years.

The 2013 health survey of the elderly found that 2% were bed-ridden and 19% were home-bound because they had limited mobility and could not easily go outside their home.

The same survey found that the most common health complaint was limited physical ability (58%), followed by hearing impairment or communication problems (24%), vision impairment (19%), learning disability (4%), emotional problems (3%) and diminished intellect (2%).

Hypertension, diabetes and knee joint impairment also be found at 41%, 18% and 9% of the elderly, respectively in that survey.

## The elderly and natural disasters

At present, the global environment is becoming more fragile. There is unusual variation in climate patterns, and these are resulting in increased prevalence of natural disasters with loss of life and property. The increasing and concentration of global population also amplifies the danger and loss from these disasters when they strike.

These natural disasters, such as floods, forest fires, violent storms (e.g., Hurricane Katrina in Louisiana in 2005), or earthquakes (e.g., Haiti in 2010; Kobe, Japan in 1995), often kill more elderly than younger population, and the mere threat of these disasters may cause more emotional distress and stress among the elderly than other age groups.

Those elderly that do survive natural disasters may suffer chronic stress and anxiety, phobias, and depression.

It had been believed that, among countries in the Southeast Asia, Thailand was relatively better protected from natural disasters. However, over the past 20 years, Thailand has experienced at least ten natural disasters of a severe scale, including flooding from the Sita tropical storm (1997), windstorms from Typhoon Linda (1997), flooding and landslides in Nam Kaw village, Lomsak District, Petchabun Province (2001), the 2004 Tsunami, the great flood of 2011 which impacted on 65 provinces of the country, and the 2014 earthquake in Chiang Rai Province.

The elderly are especially vulnerable during natural disasters. Many elderly are infirm or have chronic disease. Thus, they may feel insecure and reluctant to relocate to safer locations or shelters, preferring the familiarity of their home and neighborhood, despite the danger. The elderly are commonly difficult to adapt to new place.

Even more at-risk are those elderly who live alone or with an elderly companion, live in low-income families or lack of support from relatives or social network.

## Guidelines for prevention and mitigation of the impact of natural disasters

Following the disastrous Tsunami of December, 2004, a global conference was held in Kobe, Japan to consider ways to reduce disaster risk and impact. Representatives from 168 countries signed the Hyogo Frame of Action which addresses the period from 2005–15 and provides guidelines for disaster preparedness and mitigation.

A year later, the members of ASEAN signed the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) to operationalize the guidelines in the Hyogo declaration.

In Thailand, the Department of Disaster Prevention and Mitigation of the Ministry of Interior (MOI), has prepared the “**National Strategic Plan for Reducing Risk of Disaster – 2010–19**” which embodies the principles of the Hyogo guidelines. Thailand also has the 2007 Disaster Prevention and Mitigation Act, and the **Five-year National Plan for Disaster Prevention and Mitigation: 2010–14**.

However, despite these strategies and plans, Thailand has not yet singled out the elderly as a priority target population for protection from disaster.

Many agencies have produced handbooks on disaster preparedness and response, such as the MOI, Ministry of Social Development and Human Security (MSDHS), the Ministry of Public Health (MOPH), the Phrapoklao Institute, the Damrong Rachanupap Institute, as well as private sector agencies, such as the Mirror Foundation, the Volunteer Network Group, and the Bangjak Petroleum Co. Ltd. However only one Thai agency has produced a handbook which specifically identifies the elderly as priority target population: The Office of the Promotion and Protection of Children, Youth, the Elderly and Vulnerable Groups of the MSDHS, and its handbook “**Protection of the Elderly and All Persons before Disaster Strikes.**”

Given the projected increase of the elderly population combined with their special vulnerabilities, it is imperative that all related agencies have plans and procedures for coping with natural disasters, with special attention to the needs of the elderly for assistant services.



## Policy Recommendations

There is ample evidence that Thailand is rapidly becoming an aged society. The government needs to develop clear policies and measures to cope with the new and expanding demands to meet the needs of the elderly population in the coming years and decades. The following are recommendations for developing those policies and measures:

### 1.

#### Support elderly lifestyles promotion that offer security and dignity

- 1.1 Increase the ability of elderly to protect themselves from threats by providing relevant information and education, and developing appropriate tools/mechanisms/technology to help the elderly live secure and dignified lives;
- 1.2 Promote a greater role of local administrative organizations and community to help look after the welfare of the elderly to help relieve the burden on family members;
- 1.3 Set up a system to monitor the welfare of elderly who live by themselves, both in rural and urban communities;
- 1.4 Design, create, and improve the living environment, including home, domicile, transportation, and essential utilities to facilitate lifestyle of the elderly;
- 1.5 Combat “ageism” or negative stigma of old-age in both sexes and all age groups;
- 1.6 Promote elderly support groups and encourage their role and involvement in community affairs.

## 2.

### Support health promotion for the elderly

- 2.1 Improve health service system to increase accessibility for the elderly;
- 2.2 Build capacity of the population, starting from the younger age groups, to maintain their own health so that they can remain healthy when become elderly;
- 2.3 Build a cadre of trained volunteers to monitor the welfare of the elderly in their community.

## 3.

### Promote sustainable income security for the elderly

- 3.1 Promote the elderly employment;
- 3.2 Create a new concept of “the elderly” so that society will recognize them as productive members of the society and economy;
- 3.3 Revise laws that obstruct or discriminate against hiring the elderly, and increase the mandatory age of retirement for government officers or civil servants and state enterprise workers;
- 3.4 Motivate the working-age population to save and be frugal in order to have enough financial resources for use in their retirement;
- 3.5 Promote the viability of the National Savings Fund and ensure that it is managed well;
- 3.6 Improve the pension system for retirees and increase the elderly welfare subsidy so that it is appropriate for the cost of living and inflation rate.

#### 4.

##### Prepare plans for assisting the elderly when disaster strikes

- 4.1 Local administrative organizations at all levels should designate the elderly as a priority population in their plans for disaster prevention and mitigation;
- 4.2 Develop a handbook on “Disaster Response” which gives importance to assistance for the elderly;
- 4.3 Those agencies with a mandate to respond to a disaster must have a database on the elderly in their catchment area. The database should have the relevant and up-to-date data on name, address, health status, and contact persons in the event of an emergency;
- 4.4 The relevant disaster response agencies should conduct regular drills, with a focus on assistance to potential elderly victims;
- 4.5 Educate the elderly on preparedness, self-care and rehabilitation in the event of a disaster.

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## Definition of “The Elderly”

At present, the United Nations (UN) still does not have a fixed age cut-off to classify a person as “the elderly”. However, as a practical measure, the UN uses 60 years as the starting point when presenting statistical data for the elderly.

Most of the countries in the developed world use 65 years as the cut-off point for “the elderly.”

World Health Organization, 2001

In Thailand, “the elderly” is defined in the 2003 Elderly Act, Article 3, as a Thai citizen ages 60 years or more.



# The Population Aging in Thailand

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# 1.1

## THE THAI POPULATION WAS INCREASING ONLY AT THE RATE OF 0.5% IN THE YEAR 2014

Over the past two centuries, the Thai population has increased 15-fold. At the start of the Rattanakosin Era, the Thai population is estimated to have been 4 million. Then, at the time of the first national census in 1909, the population of, then, Siam totaled 8 million. That total had increased to an estimated 68 million persons as of 2014, comprised of 65 million Thai citizens and 3 million non-Thai migrants.

20–30 years in the past, not counting migrants from its neighbors, Thailand’s population increased at a much slower rate when compared with 40–50 years ago when the annual growth rate was over 3%. As of 2014, that growth rate had declined to only 0.5%, and the rate is projected to decline further, resulting in a peaking of the total population at 67 million Thais in the next 15 years, and then actually declining to about 64 million in 30 years from now.

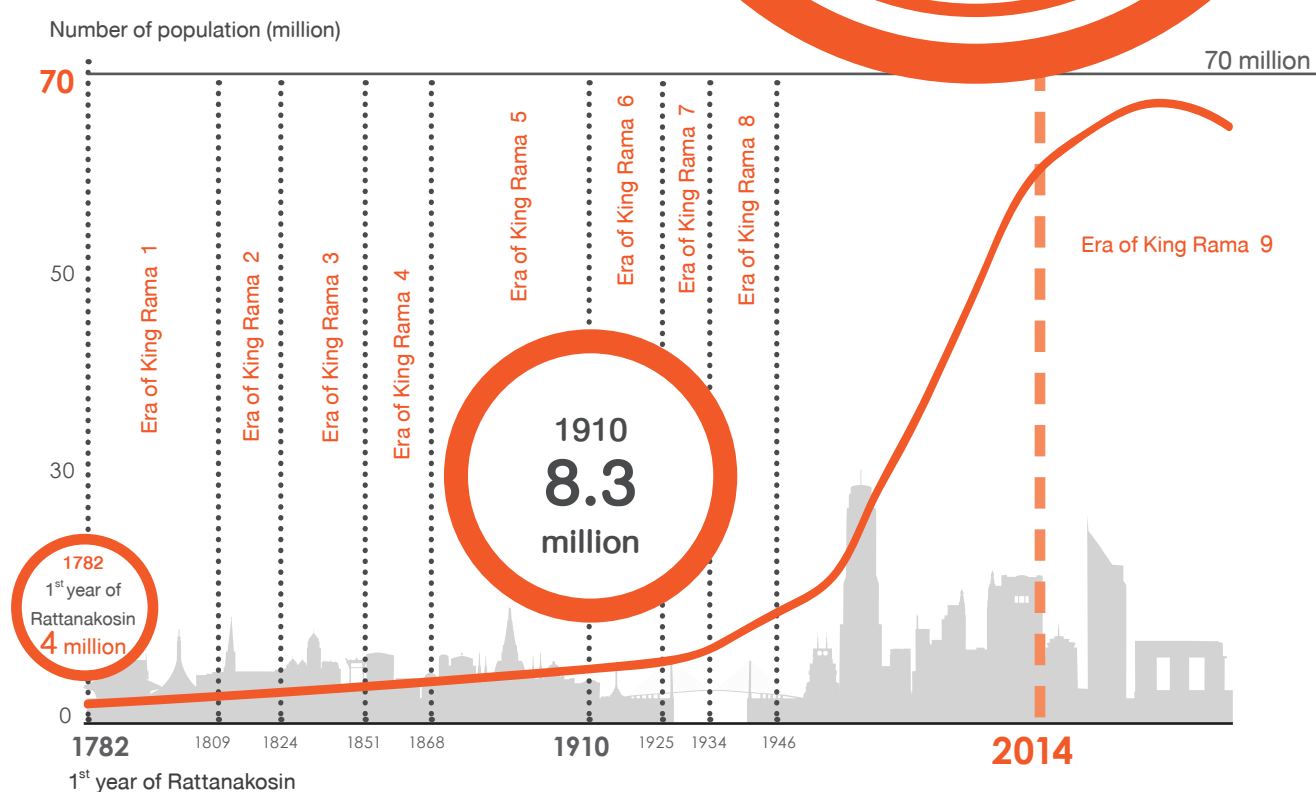
Despite the stabilizing of the size of the Thai population, the age structure is changing radically. Once a demographically “young” country, Thailand is rapidly becoming an aged society.



## Thai Population Increase in the Rattanakosin Era: Chakri Dynasty

2014  
**68** million

Thai and non-Thai residents: 65 million  
in the Civil Registration system,  
and 3 million unregistered



### Remarks:

- The first five censuses (1909–1910, 1919, 1929, 1937, 1947) were called “Household Survey” and implemented by the Ministry of Interior during 1782 – 1910.
- The 6<sup>th</sup> (1960) to the 11<sup>th</sup> (2010) censuses were conducted by the National Statistical Office (NSO)

### Source:

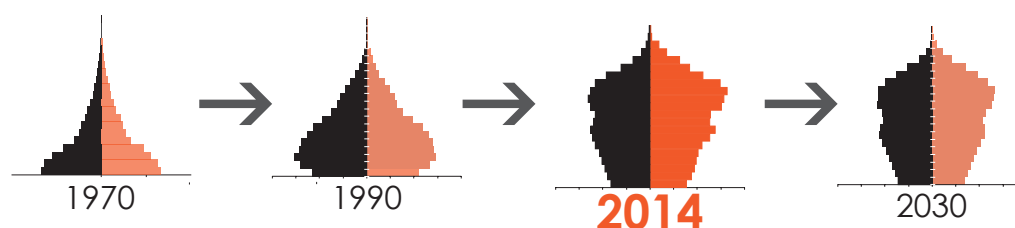
- Population Projections for Thailand, 2010 – 2040. NESDB (Office of the National Economic and Social Development Board)

# 1.2

## ONCE A YOUNG POPULATION COUNTRY, THAILAND IS NOW AN AGED SOCIETY

Over the past 30 years, the age structure of the Thai population has changed significantly, as a result of rapid aging of the population. The cause of this demographic phenomenon is the rapid decline of fertility over the past several decades combined with the increased longevity of the older population. The following series of population pyramids clearly shows the Thai transition from a young to an older population.

Thai population pyramids: year 1970, 1990, 2014, and 2030



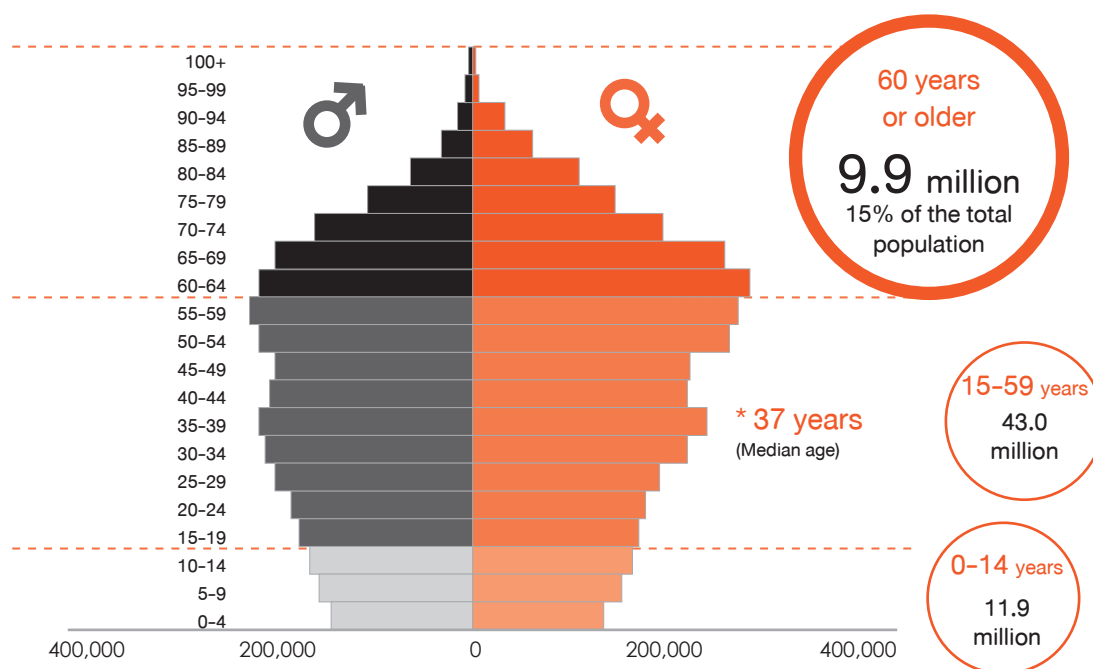
Source:

- Population and Housing Census: 1970 and 1990. NSO (The National Statistical Office)
- Population Projections for Thailand, 2010 – 2040. NESDB

Historically, the shape of the Thai population pyramid was the classic format for a young population in which both fertility and mortality are high: Broad base and progressive narrowing toward the top. In a young population, children always outnumber the elderly. About a century ago, the population under age 15 years was approximately half the total population, while the elderly population (age 60 years or older) was only 5% of the total.

The population pyramid is a visual depiction of the age and sex distribution of the population across all age groups. The horizontal bars show the proportion of the population in that age group, ranging from youngest at the bottom to oldest at the top. Males are shown on the left and females on the right of the pyramid.

## Thai Population Pyramid 2014

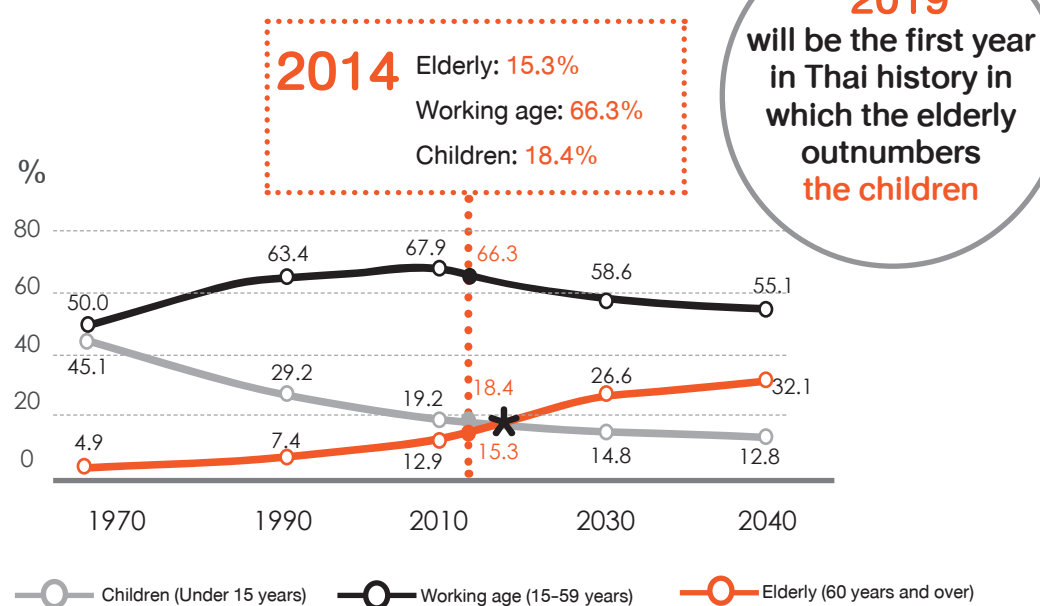


Source:

- Population Projections for Thailand, 2010 – 2040. NESDB

\* **Median age** is the midpoint at which half the population is older and half under that age. A population with median age of over 30 years is considered an **aged society**

## Population of children, working-age and elderly population



Sources:

- Population and Housing Census: 1970, 1990, and 2010. NSO

- Population Projections for Thailand, 2010 – 2040. NESDB

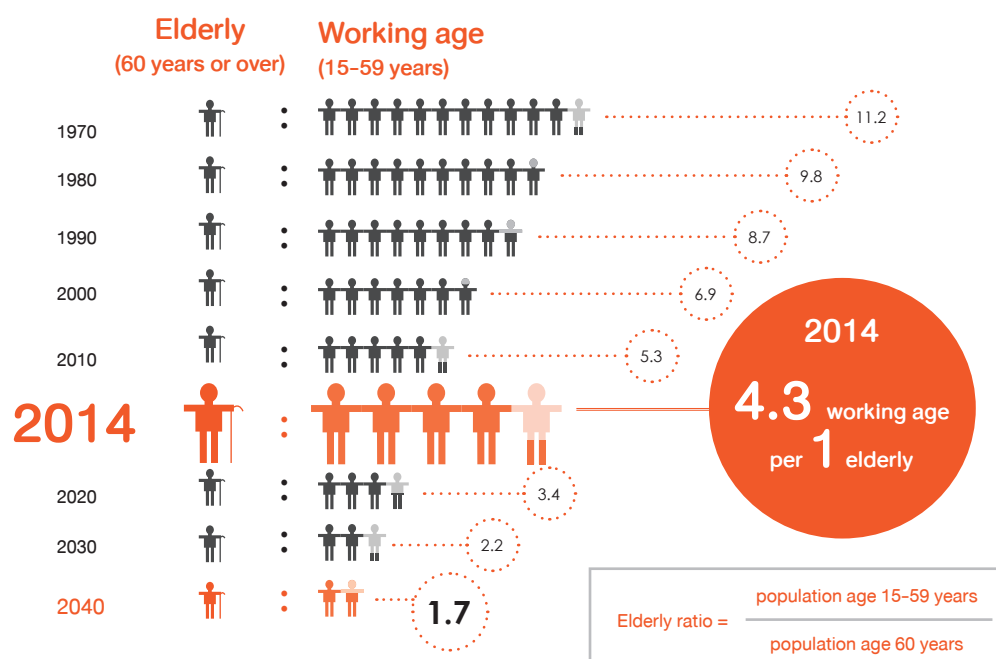
# 1.3

## THE RATIO OF THE WORKING AGE POPULATION TO THE ELDERLY DECLINES WHEN THE POPULATION AGES

As fertility declines and longevity increases, the population pyramid begins to transform, as the base narrows and the upper sections broaden.

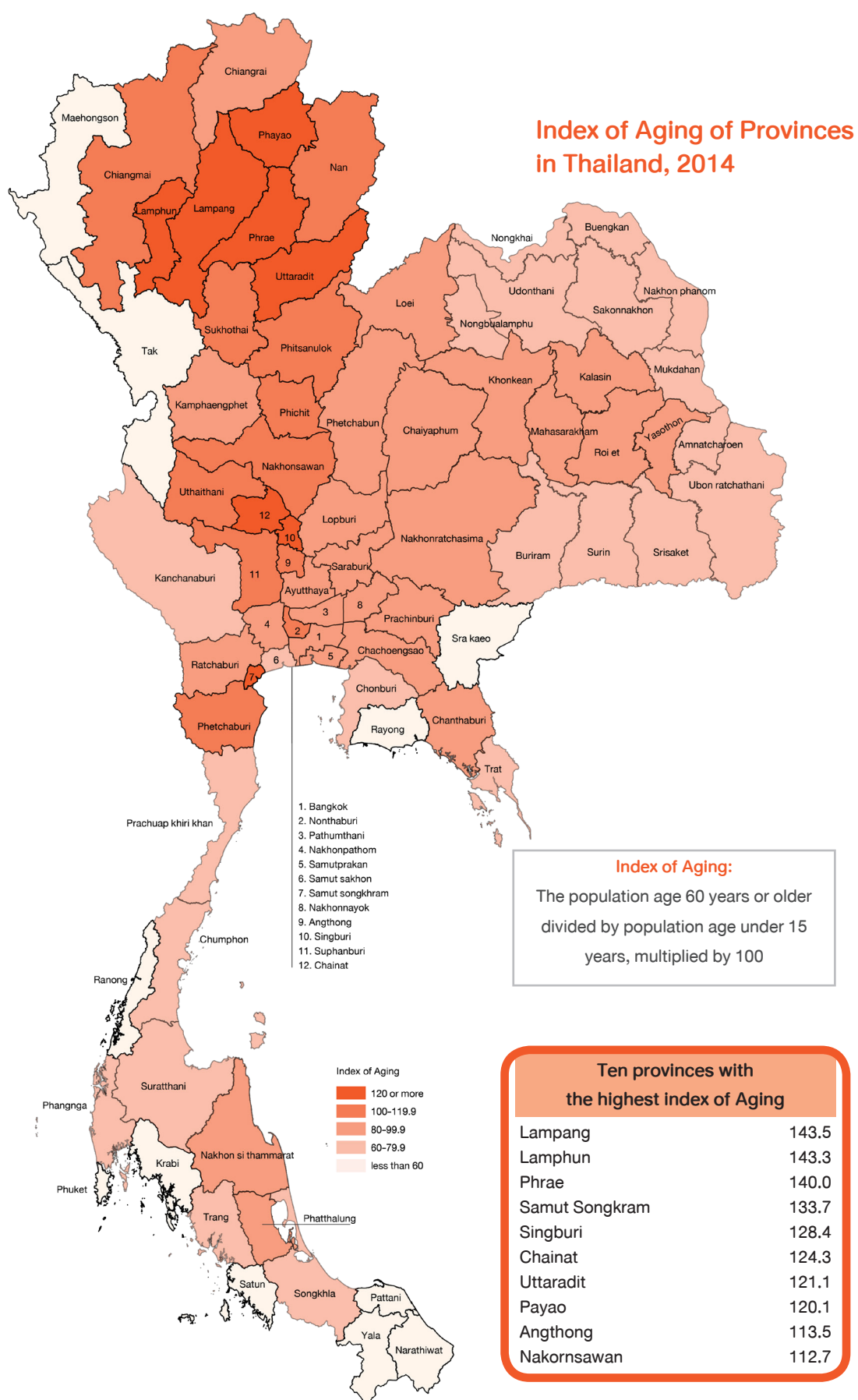
One indicator of this phenomenon is the elderly ratio, which is the number of the population in the working ages (15–59 years) divided by the elderly population (age 60 years or more).

This ratio declined from 10 working age to 1 elderly population in 1970 to only 4 to 1 in 2014. It is projected that the ratio will continue to decline, reaching 1 : 2 in the coming 25 years.



Sources:

- Population and Housing Census: 1970, 1980, 1990, 2000 and 2010. NSO
- Population Projections for Thailand, 2010 – 2040. NESDB



Source:  
- Population Projections for Thailand, 2010 – 2040. NESDB



## 1.4

## THE THAI POPULATION IS AGING RAPIDLY

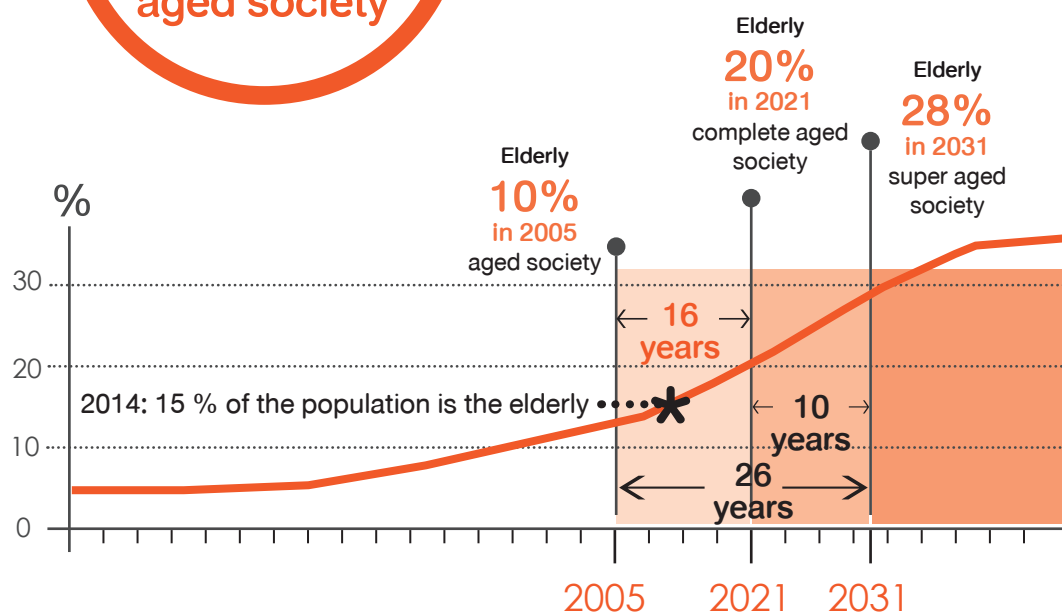
Thailand transitioned into the classification of an “aged society” in 2005, and is projected to reach the status of a “complete aged society” by 2021. In 2031, it will become a “super aged society.”

**7 years**  
from 2014  
Thailand will become a  
“complete  
aged society”

An “aged society” is defined as a population which over 10% of the total population is 60 years or more (or 7% of the population is 65 years or more).

A “complete aged society” is one which 20% of the total population is 60 years or more (or 14% of the population is 65 years or more).

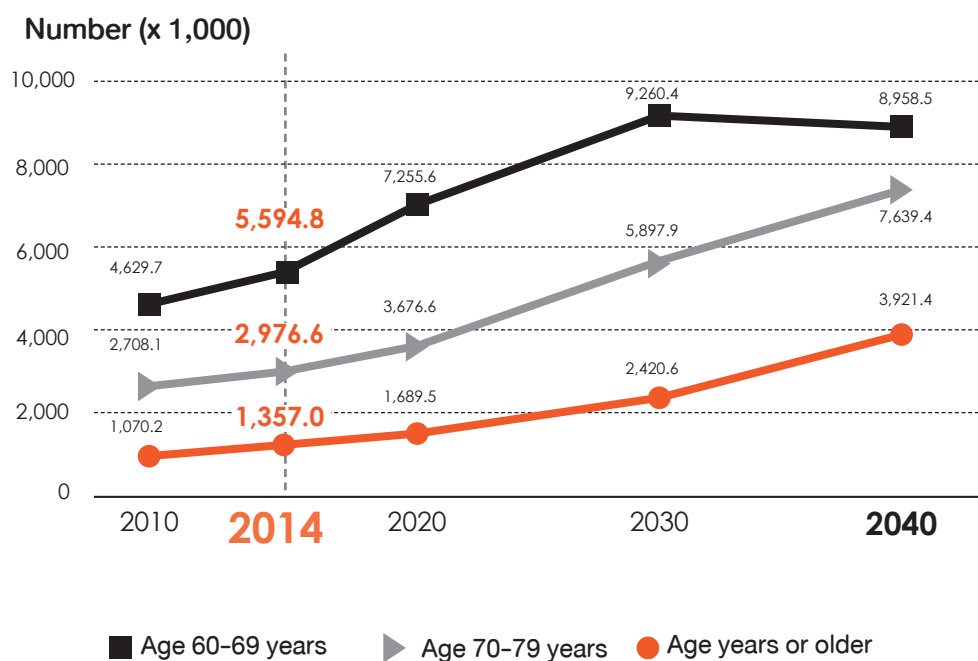
A “super-aged society” is one which 28% of the total population is 60 years or more (or 20% of the population is 65 years or more).



Sources:

- Population and Housing Census: 1970, 1980, 1990, 2000 and 2010. NSO
- Population Projections for Thailand, 2010 – 2040. NESDB

### Number of the early-, mid- and late-elderly population



Source:

- Population Projections for Thailand, 2010 – 2040. NESDB

In 2014, Thailand had 5.6 million young elderly (or 8.6% of the population), 3.0 million old elderly (or 4.6%), and 1.4 million oldest elderly (2.1%).

By 2040, it is estimated that the population age 80 years or older will be double the 2014 level. That rate of increase is higher than the other two age groups of elderly. It is undeniable that, with advanced age, the risk of illness, disability and dependence on other increases significantly. Thus, it is safe to predict that, as Thai society ages, the need for elderly care will increase proportionately.

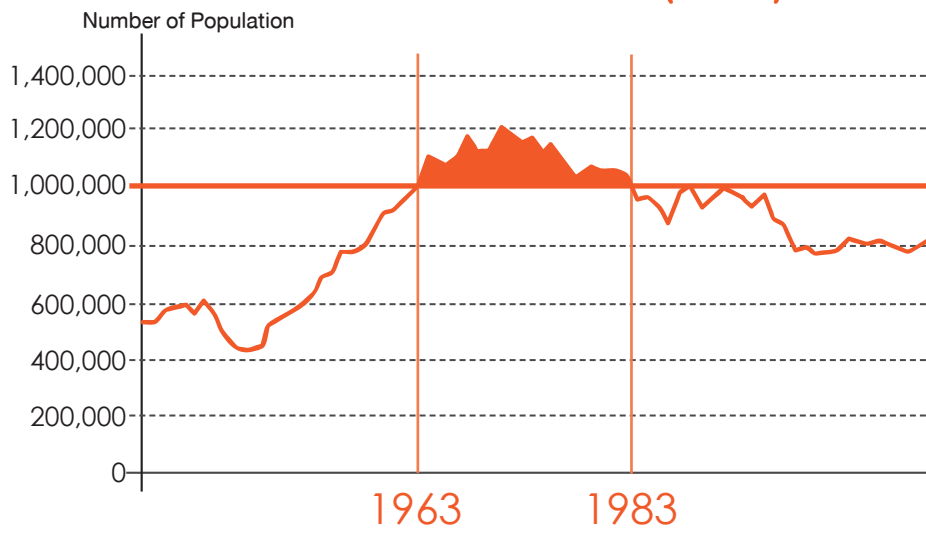
## The “Million Birth Cohort” (born between the years of 1963 and 1983) are aging into the elderly

**The Million Birth Cohort** is noteworthy for its size and demographic momentum, as its members approach the elderly age group. This bulge in the population pyramid will have a distinct and rapid impact on the number and proportion of the Thai elderly population that is elderly. In 2014, members of this cohort were age 31–51 years. When they start to reach age 60, they will accelerate the transition to an aged society. When the entire cohort is elderly, their collective demand for elder healthcare and welfare will be enormous.

Thus, the Million Birth Cohort may be viewed as a **“Population Tsunami”** which is rapidly approaching the ‘shores’ of the elderly.

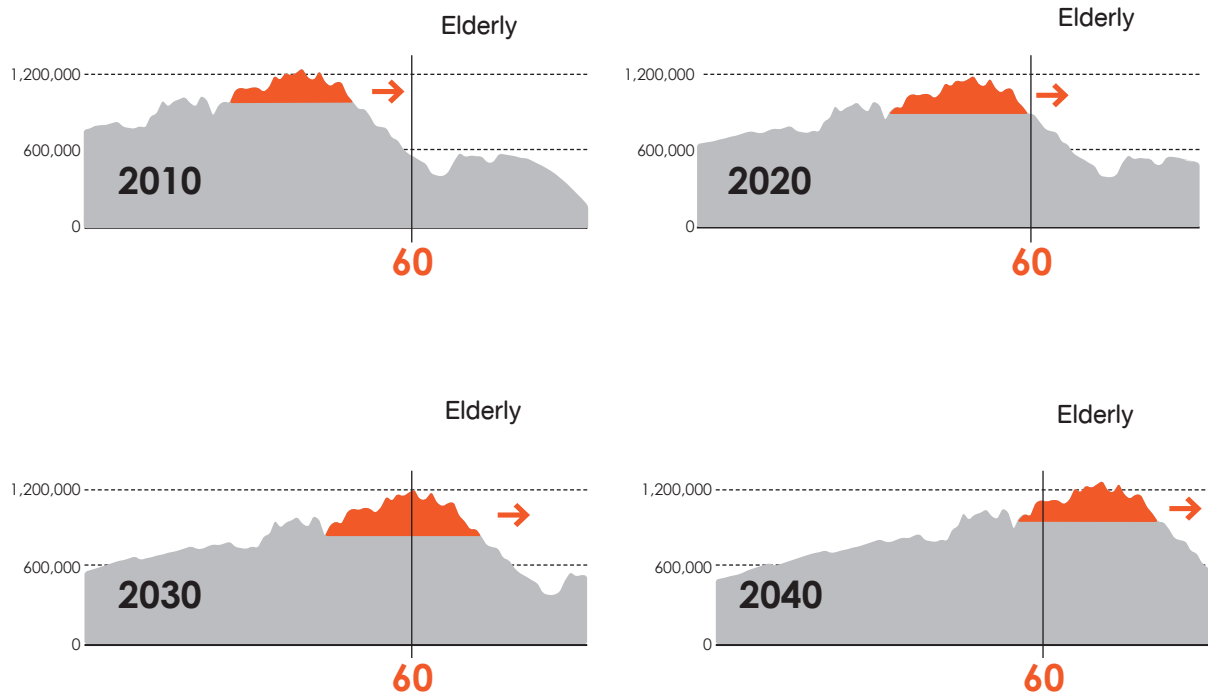


## Million Birth Cohort (MBC)



Source:

- Pramote Prasartkul and Patama Vapattanawong, 2005



Source:

- Prasartkul, P., 2013

1.5

## MORE FEMALES THAN MALES IN THE AGED SOCIETY

In 2014, Thailand had a population of 33.3 million females compared to only 31.5 million males. This sex ratio of 94.6 means 94.6 males per 100 females. In the elderly population, the sex ratio will decrease: There are only 81.1 males per 100 females.

**The sex ratio** is the number of males divided by  
the number of females and multiplied by 100

Since females have longer life expectancy than males, the older the population, the more females than males. In 2014:-

among the young old (age 60–69 years), the sex ratio is 87.0

among the middle old (age 70–79 years), the sex ratio is 78.7

among the oldest old (age 80 years and over), the sex ratio is 64.7

From the fact of females' longer life expectancy, we can see clearly the future scenario of more female population than males. In 2040, it is projected that the sex ratio of the overall population in Thailand will be 91.6, or there will be 91.6 males per 100 females.

In 2040, only among the elderly (60 years and older), the sex ratio will be 76.2, or there will be 76.2 male elderly per 100 female elderly. And in 2040:-

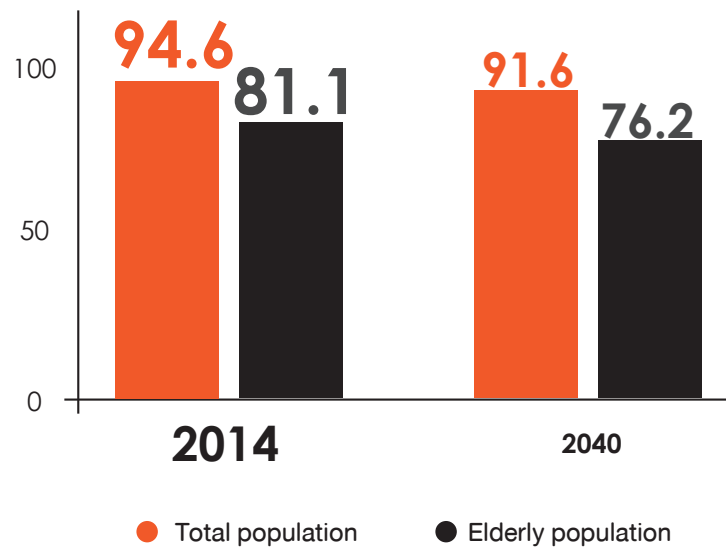
among the young old (age 60–69 years), the sex ratio is 85.7

among the middle old (age 70–79 years), the sex ratio is 76.1

among the oldest old (age 80 years and over), the sex ratio is 57.9

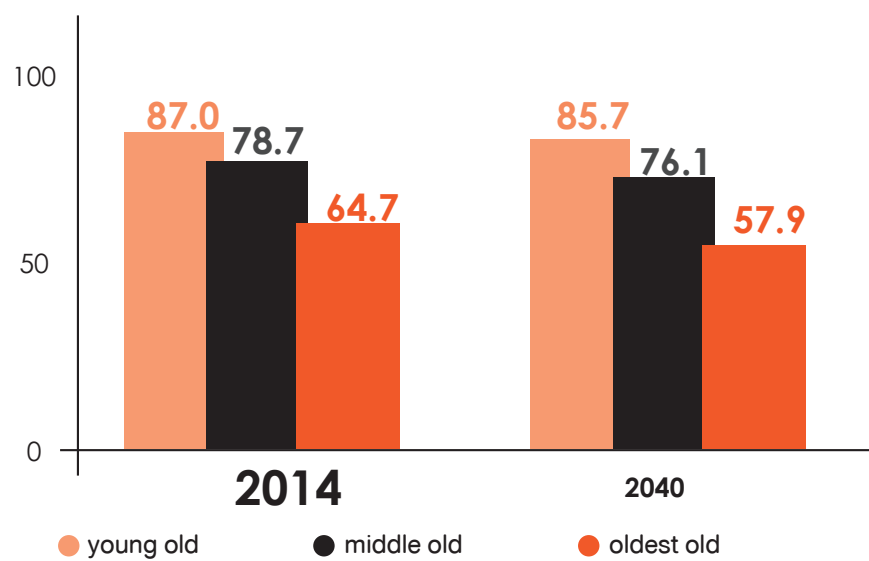
## Sex Ratio

males per 100 females



## Sex Ratio

males per 100 females



Source:

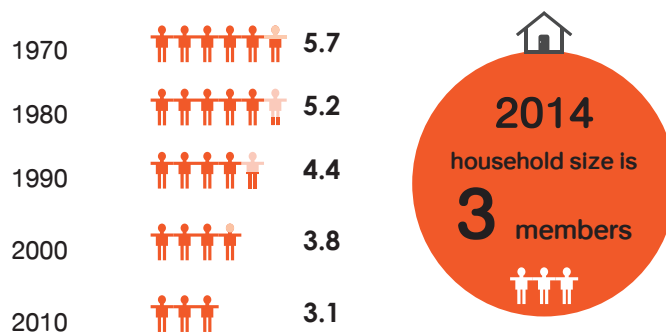
- Population Projections for Thailand, 2010 – 2040. NESDB

# 1.6

## MORE THAI ELDERLY ARE LIVING ALONE

The pattern of Thai residential living has changed dramatically in the past 2-3 decades as the average size of the Thai household has declined sharply. Thirty years ago, there was an average of 5 persons per Thai household, and this declined to 4 persons in 2000 and 3 persons in 2014.

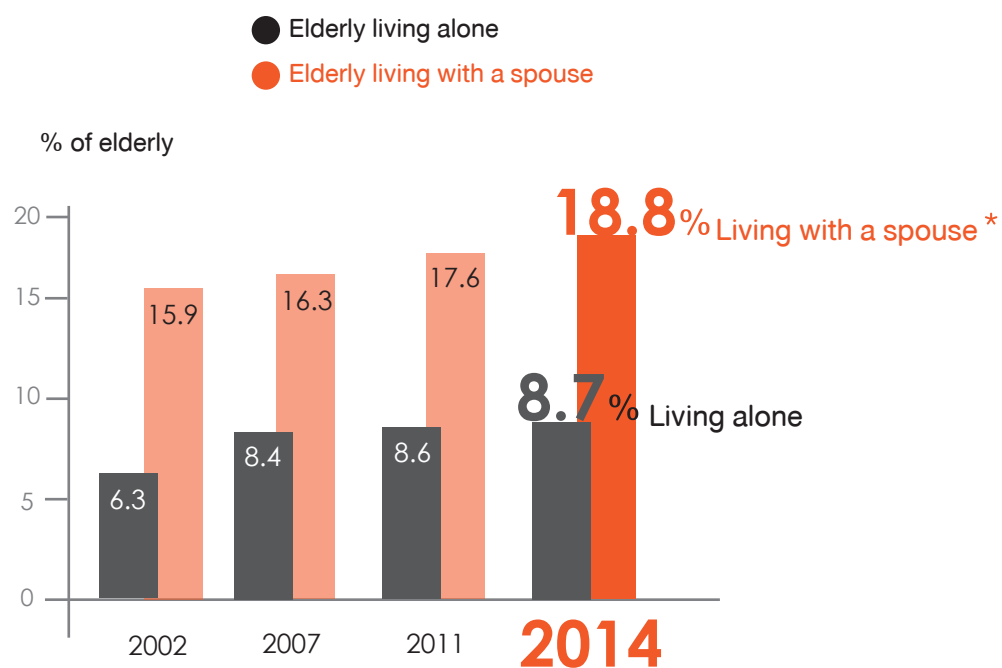
### Thai Household Size



#### Sources:

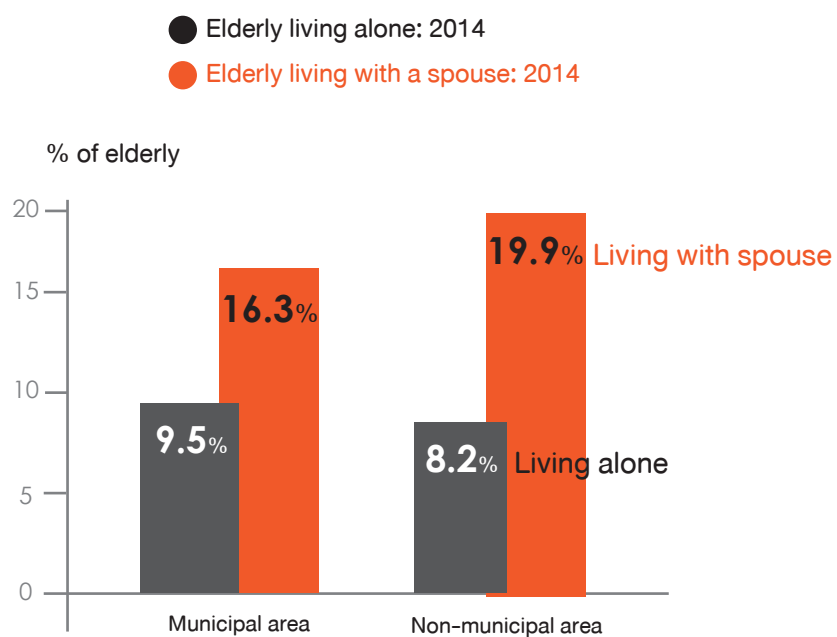
- Population and Housing Census: 1970, 1980, 1990, 2000 and 2010. NSO
- The average household size in 2014 is an estimation.

The current trend in Thailand, number of elderly to live alone or only with their spouse is increasing. This is truer in urban and municipal areas than non-municipal areas. If this trend continues, then this will cause serious implications for care of the elderly.



Source:  
- Survey of the Elderly, 2002, 2007, 2011 and 2014. NSO

\* % of the elderly living with a spouse to the total elderly in that year.  
(The proportion of the elderly living with a spouse to the total elderly not including those living alone is 20.6% in 2014)



Source:  
- Survey of the Elderly, 2014. NSO

## 1.7

**ONE-THIRD OF THE ELDERLY ARE LIVING BELOW THE POVERTY LINE**

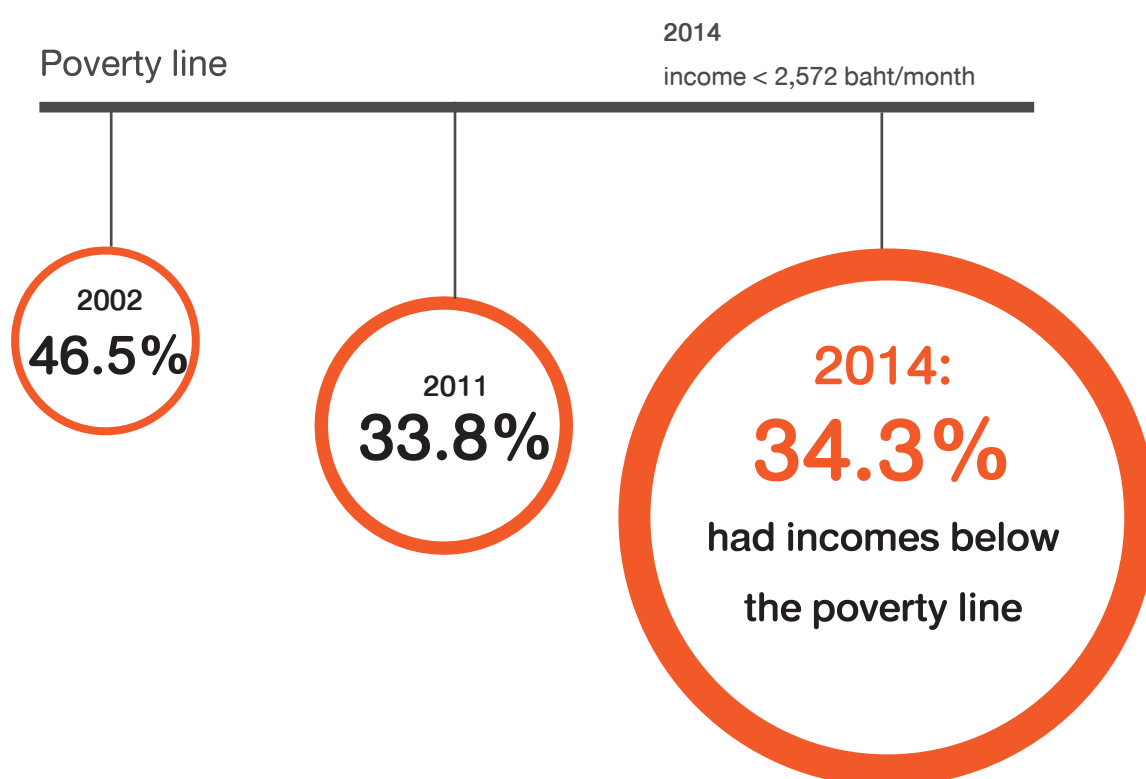
The 2014 Survey of the Elderly found that over one-third (34.3%) of the elderly (age 60 years or more) had incomes below **the poverty line**, but this represents a decline from 46.5% found in the same survey conducted in 2002.

**The poverty line:** In 2013, persons who earned less than 2,572 baht per month or less than 30,864 baht per year were considered to be living under the poverty line. In 2002, the corresponding figures were 1,607 baht and 19,284 baht, respectively. These figures refer to both urban and rural settings.

Source:

- Office of Database Development and Social Indicators. NESDB

## Elderly with income under the poverty line



Source:

- Survey of the Elderly, 2002, 2011, and 2014. NSO

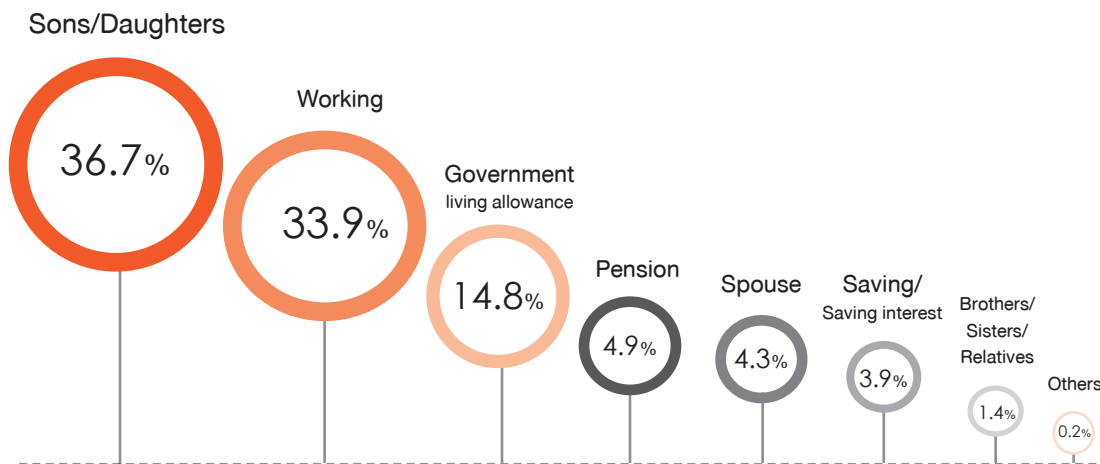
**The poverty line** reflects the minimal money for buying food and other basic needs to live a sustainable life. It reflects the minimal standard of living in a society.

Children remain an important source of income for the elderly at present. The 2014 Survey of Elderly in Thailand found that the principal source (36.7%) of elderly income came from a child (including a foster or adopted child). The second most common source (33.9%) of elderly income was from work/employment. About one-seventh (14.8%) of the sample relied primarily on the monthly elderly welfare subsidy, while 4.9% had pension income as their primary source, 4.3% relied on a spouse, and under 4% had primary income from interest income (savings account or other asset with dividends).

Nevertheless, the trend in elderly income from a child is on the decline. The National Survey of the Elderly in years 2007, 2011, and 2014 found that reliance on a child for primary source of income declined from 52.3% in 2007 to 40.1% in 2011 and to 36.7% in 2014.



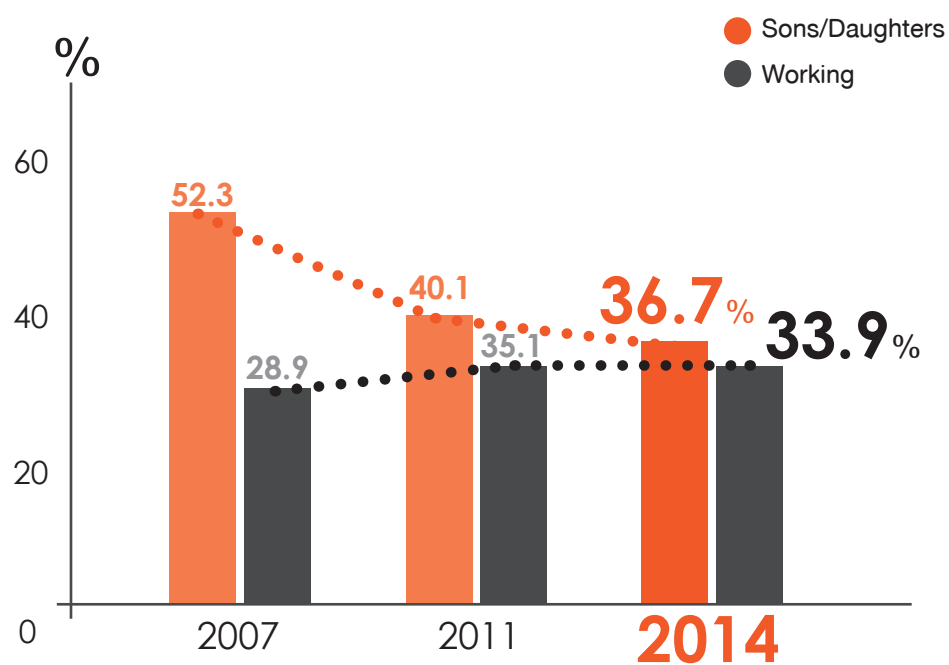
### Elderly's main sources of income 2014



Source:

- Survey of the Elderly in Thailand, 2014. NSO

Elderly Income from a **Child** is Declining  
while **Work Income** is Increasing



Source:

- Survey of the Elderly in Thailand, 2002, 2011, and 2014. NSO

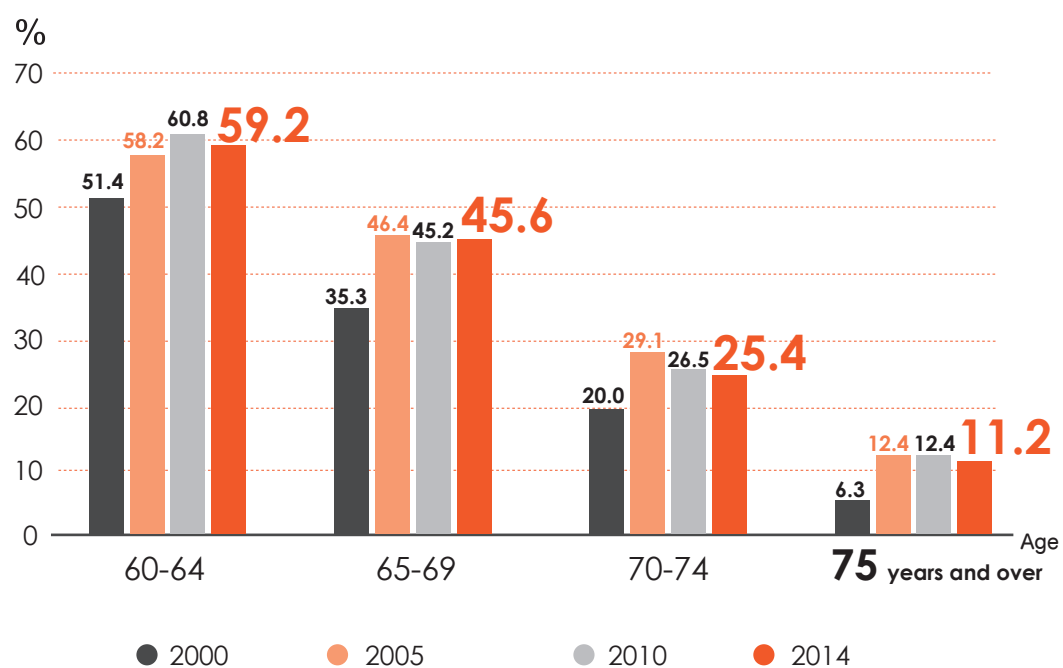


### More than half of the early elderly are still earning income from work/employment

Despite reaching the Thai mandatory retirement age of 60 years, many new elderly continue to work in gainful employment. The Labor Force Survey for 2000-2014 found that young elderly (60-64 years) show an increased tendency to be employed. Of those age 60-64 years in 2000, 51.4% were still employed, and this percent increased to 60.8% in 2010. By 2014, this proportion had declined slightly to 59.2%. The corresponding figures for the elderly age 65-69 years old are 35.3% and 45.6% in 2000 and 2014, respectively, while the figures for those age 70 or over are 20.0% in 2000, and increased to 29.1% in 2005 but decreased to 25.4 in 2014. At that point, the proportion of elderly in gainful employment begins to decline. The elderly age 75 years or older still worked at the proportion of 11-12% from the year 2005 to 2014.

## Elderly still Employed

in 2000, 2005, 2010 and 2014



Source:

- Labor Force Survey, 2000, 2005, 2010, and 2014. NSO

1.8

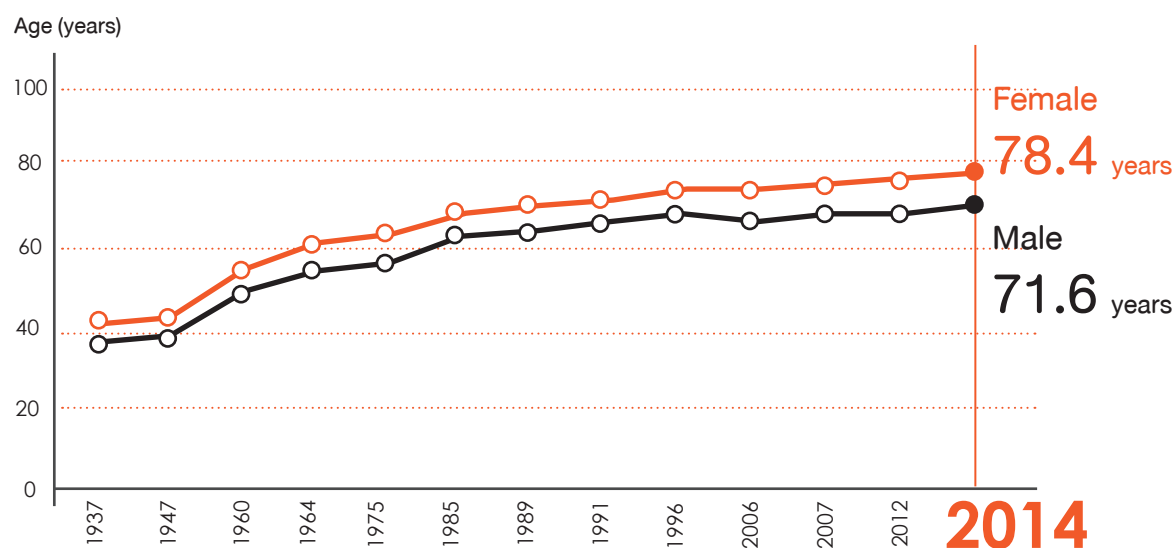
## THERE WILL BE A SIGNIFICANT INCREASE IN DEMAND FOR HEALTH SERVICES IN AN AGED SOCIETY

Over the past century, there have been significant advances in medical care and public health in Thailand. As a result, **life expectancy at birth** increased from 40 years one century ago to 58 years five decades ago and to 75 years at present.

In 2014, life expectancy at birth for males was 71.6 years and 78.4 years for females. Today, if reaching age 65 years, Thai males can expect to live an additional 16.4 years, while females can expect to live an additional 19.2 years.

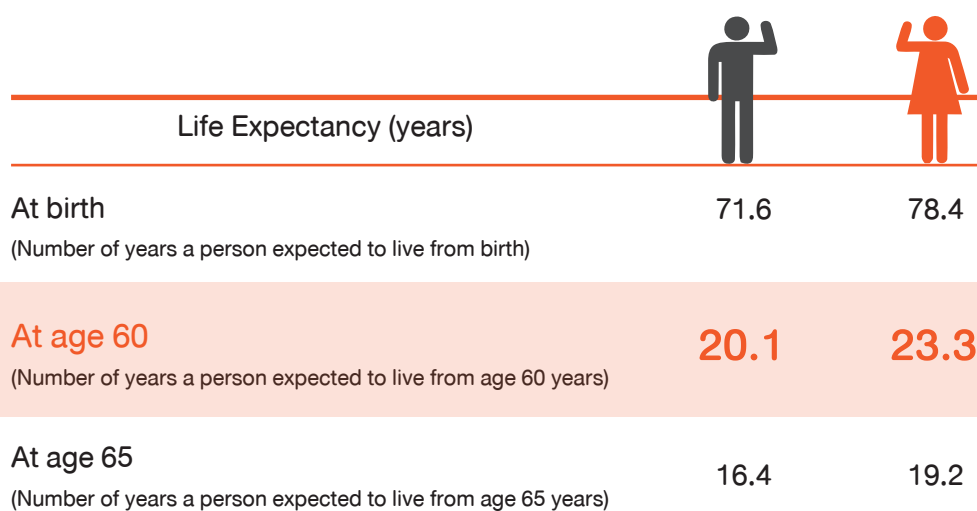
Thirty years from now, it is projected that Thais who reach age 60 and 65 will have a life expectancy of additional 26 and 20 years, respectively.

## Life Expectancy at Birth by Sex



Sources:

- Rungpitarangsi, B., 1974
- Report on the Survey of Population Change, 1964-5, 1974-6, 1985-6, 1989, 1991, 1995-6. NSO
- Mahidol Population Gazette, 2014



Source:

- Mahidol Population Gazette, 2015

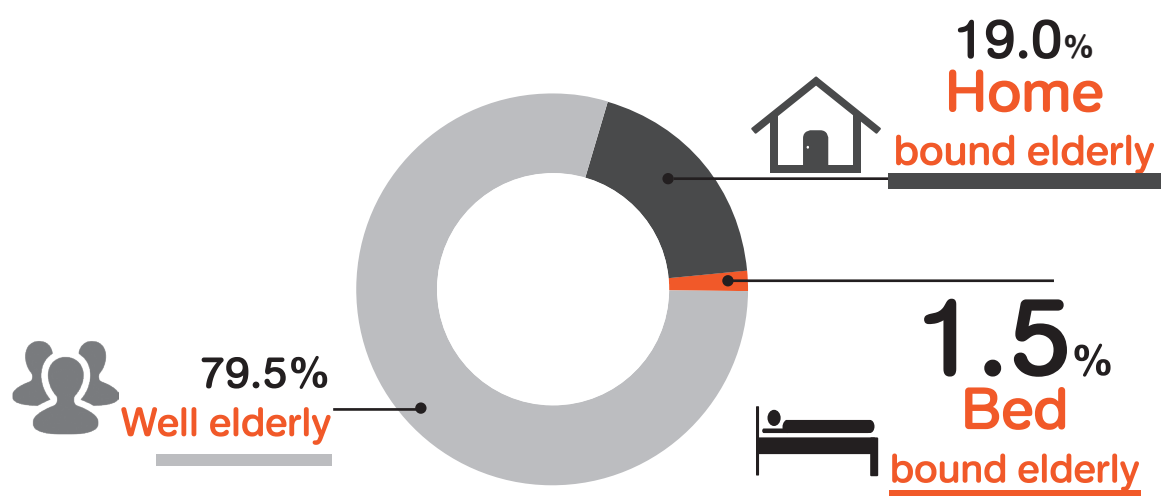
The 2013 Survey of the Elderly in Thailand under the Health Promotion Program of the Elderly and the Disabled, had studied the health status and problems of the elderly. The survey was conducted among 13,642 persons in 28 provinces, covering the 12 health service networks of the MOPH. The survey found that 1.5% of elderly were bed bound, 19.0% were home bound, and 79.5% were well elderly, i.e., they could function independently inside and outside their home.

**“Bed bound”** denotes elderly who cannot perform essential daily functions by themselves.

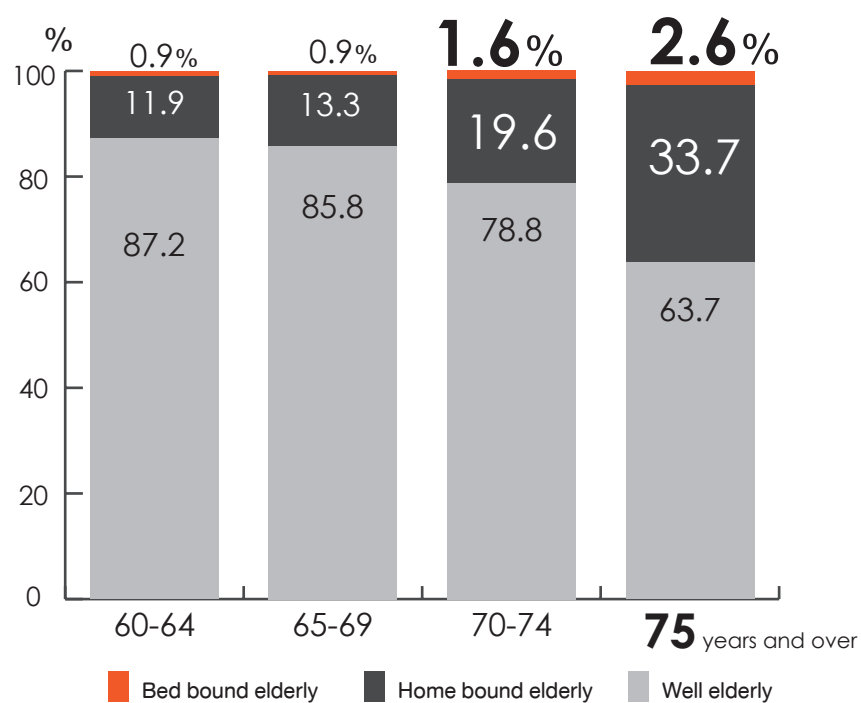
**“Home bound”** denotes elderly who can perform basic essential functions in their home, but have limited mobility and cannot easily venture outside their home.

**“Well elderly”** denotes elderly who can perform essential daily functions in their home and also be able to perform social relations outside their home.

### Ability of the elderly to perform daily functions



### Ability of the elderly to perform basic daily functions, by age



#### Remarks:

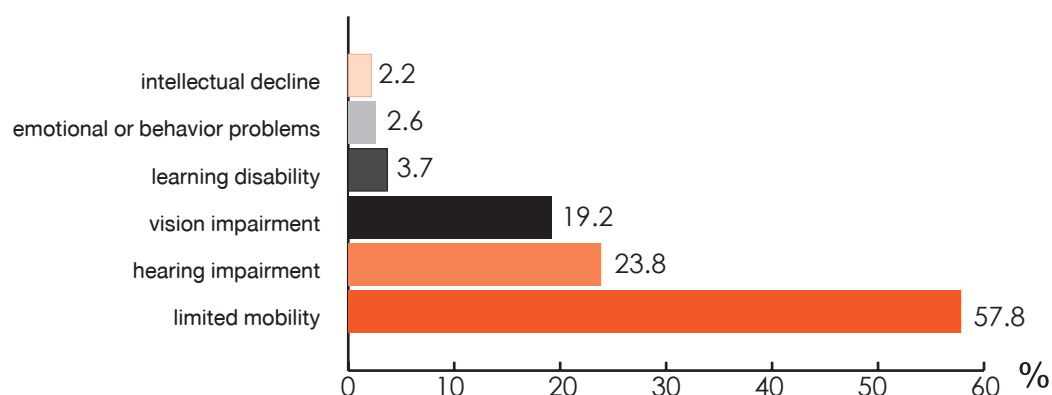
- For this variable, 35% of the total sample was selected, and excludes those with no response

#### Source:

- Survey of the Health Status among the Elderly, 2013, under the Health Promotion Program of the Elderly and the Disabled, MOPH

The 2013 Survey of the Elderly found that the most prevalent complaint was limited mobility (57.8%), followed by hearing impairment (23.8%), vision impairment (19.2%), learning disability (3.7%), emotional or behavioral problems (2.6%) and intellectual decline (2.2%). These complaints tend to increase with age.

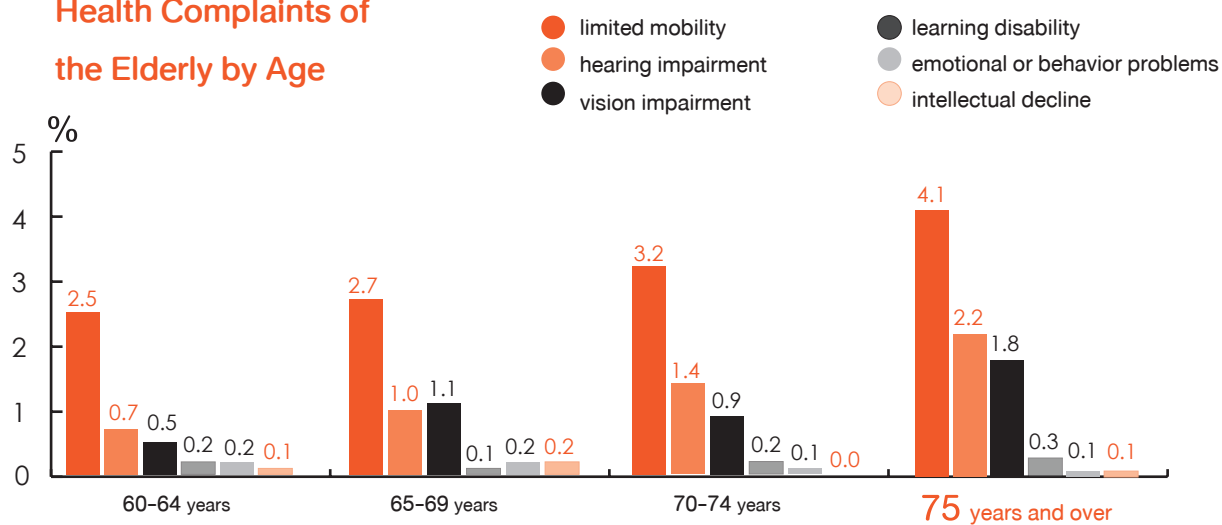
### Health Complaints of the Elderly, 2013



Source:

- Survey of the Health Status among the Elderly, 2013, under the Health Promotion Program of the Elderly and the Disabled, MOPH

### Health Complaints of the Elderly by Age



Remarks:

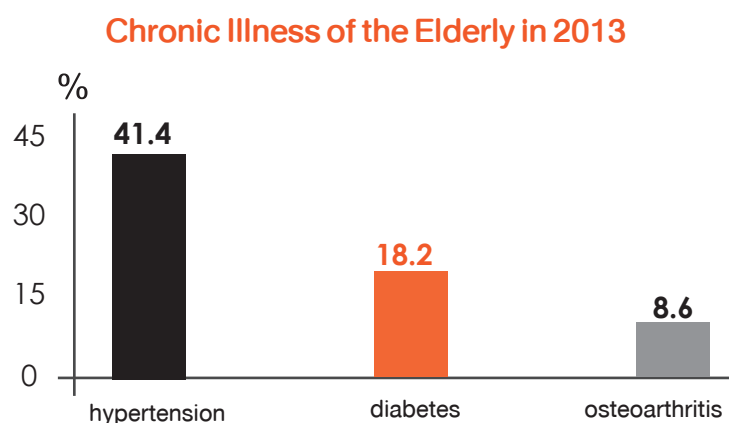
These findings are only for those with health complaints

Source:

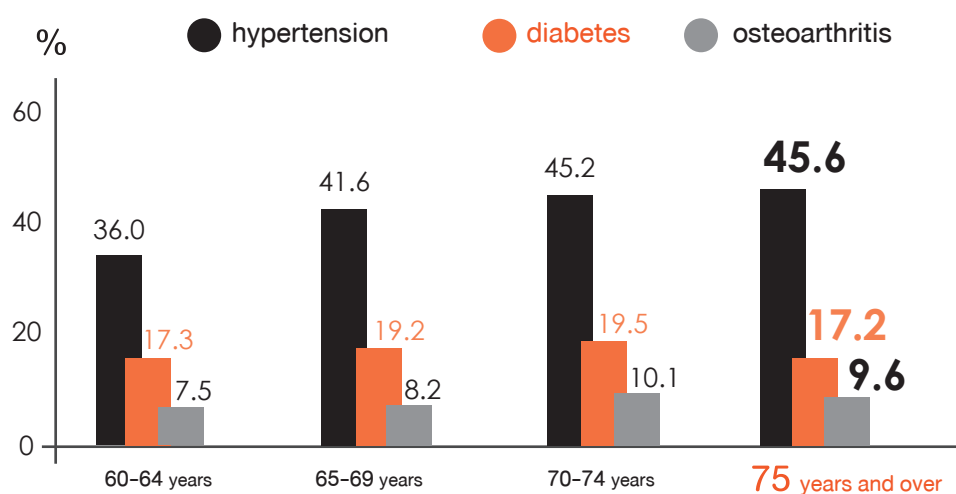
- Survey of the Health Status among the Elderly, 2013, under the Health Promotion Program of the Elderly and the Disabled, MOPH



The 2013 Survey of Health Status of the Elderly asked about existence of chronic illness, including the most prevalent, and those requiring a medical diagnosis. The survey found that 41.4% of the sample had been diagnosed with hypertension, 18.2% with diabetes and 8.6% with osteoarthritis.



When examining prevalence of chronic disease by age group, it can be seen that these three conditions become more prevalent with age. For example, hypertension, diabetes and osteoarthritis were found in the elderly age 75 years and over, at 45.6%, 17.2% and 9.6% of them respectively.



**Remarks:**

- These data refer to those who had been diagnosed with hypertension, and/or diabetes, and/or osteoarthritis

**Source:**

- Survey of the Health Status among the Elderly, 2013, under the Health Promotion Program of the Elderly and the Disabled, MOPH



# The Elderly and Natural Disasters

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# 2

“Natural disasters are a significant threat to the development of low- and middle-income countries and an obstacle toward improving quality of life. The loss from and response to these natural disasters is becoming more complex challenge given changing climactic and demographic factors around the world. Clearly, one of the most vulnerable population groups toward the adverse effects of natural disasters is the elderly. Many elderly are infirm and have declining efficiency of bodily function and movement. Resistance to infectious disease declines with age. Because of these factors, the elderly face more threats and require more assistance than other age groups during a natural disaster. Elderly are also prone to emotional distress during times of hardship. They may experience more stress and anxiety, irritation, sense of abandonment, depression, loss of hope and reduced self-esteem. Thus, when disaster strikes, the relevant relief agencies and personnel need to have special plans of safety taking care, assistance and rehabilitation for the elderly to minimize loss of their lives. The preparedness includes the need for a monitoring and warning system that easily implement and understand, with a special emphasis on potential elderly victims. The warning system should be linked with the support network for the elderly, and neighbors in the community to help protect each other. This is an important part of the strategy to reduce loss of life and property, promote warmth, happiness and sense of belonging.”

Project to Strengthen the Social Safety Net of the Elderly

# 2.1

## SITUATION OF THE ELDERLY AND NATURAL DISASTER AROUND THE WORLD

Over its existence, humankind has always had to confront the threat and effects of “natural disasters”, whether it is violent storms, floods, earthquakes, or landslides. Despite the many advances of civilization over the millennia, natural disasters are still a force which is largely out of control, and they can occur without warning, creating devastation and death in their path.



Source: bluesguy

## The elderly are specially vulnerable when disaster strikes

In many of the natural disasters records, the elderly suffer and lose more than any other age groups. For example, Hurricane Katrina in 2005 which struck New Orleans, Louisiana in the USA, killed at least 1,800 persons and resulted in billions of dollars of damage. The post-Katrina assessment found that 75% of deaths occurred to those age 60 years or older, despite the elderly were only 15% of the population in that area. This finding clearly shows that the impact of disasters is not felt equally across population groups: The elderly are clearly more vulnerable to loss and death when disaster strikes.

**“75% of the deaths caused  
by Hurricane Katrina were  
elderly persons”**

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Source: [http://api.theweek.com/sites/default/files/styles/tw\\_image\\_9\\_4/public/59978\\_article\\_full.jpg?itok=VdLBspv3&resize=1260x560](http://api.theweek.com/sites/default/files/styles/tw_image_9_4/public/59978_article_full.jpg?itok=VdLBspv3&resize=1260x560)



## “16% of the fatalities attributed to the 2010 Haiti earthquake were among the elderly”

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Source: [http://newsimg.bbc.co.uk/media/images/44989000/jpg/\\_44989886\\_carryap.jpg](http://newsimg.bbc.co.uk/media/images/44989000/jpg/_44989886_carryap.jpg)

Another disaster which disproportionately impacted on the elderly was the 2010 earthquake in Haiti, which was the most devastating earthquake in 200 years. Mortality is estimated to be over 100,000 persons, and the population over age 50 was more adversely affected than other age groups: Though they represented just 9% of the pre-quake population, they were accounted for 16% of the deaths. Even five years after this disaster has passed, many survivors still cannot find stable housing, and most of these victims are the elderly.

## Even in the aftermath of a disaster, risk of harm remains

The Kobe earthquake in Japan 20 years ago, caused nearly 6,000 immediate deaths (over half of whom were over age 60 years). However, even after the earthquake and aftershocks had well subsided, an additional 1,000 deaths occurred as a result of that disaster, nearly all of whom were elderly. Most of these elderly deaths were due to a rapid decline in health status caused by having to live in difficult housing circumstances, whether that be a shelter for victims which was either too hot or cold, inappropriate food and, importantly, lack of needed medical care for diseases which may develop into life-threatening complications among the elderly (e.g., pneumonia, diarrhea, or more serious manifestations of the primary illness).

**“Even after the Kobe earthquake had subsided,  
an additional 1,000 deaths occurred as  
a result of that disaster, most of whom  
were the elderly”**



Source:

1. [http://i.telegraph.co.uk/multimedia/archive/01847/jap1\\_1847535i.jpg](http://i.telegraph.co.uk/multimedia/archive/01847/jap1_1847535i.jpg)
2. <http://2.bp.blogspot.com/-ITPZHcZZGZk/UF4pDmeplhI/AAAAAAAAAN7Q/LPpV2CAViAI/s1600/Kobe34.jpeg>



## Mental health: An impact not to be overlooked

Even though they may survive a deadly disaster, many victims experience post-traumatic stress disorder (PTSD) which causes chronic anxiety and paranoia. Persons with PTSD are phobic about being in situations of disaster environment. The PTSD triggers may be news reports or talking about the disaster, leading to acute hypertension and irrational fear. Some with PTSD also develop symptoms of depression or survivor's guilt. In extreme cases, victims cannot ease their anxiety and resort to hurt themselves.

The 2008 earthquake in Szechuan Province of China measured 8 on the Richter scale, causing an estimated 70,000 deaths and 400,000 injuries. In the aftermath of the quake, many survivors experienced anxiety disorders or PTSD, and the elderly were twice as likely to suffer these effects than younger age groups (Jia et al., 2010). Thus, the elderly are twice as vulnerable when disaster strikes, either from death or post-disaster emotional trauma.

**“The elderly are twice as likely to experience stress than other age groups”**

These examples show that natural disasters cause significant loss of life and property, and adverse physical and mental health effects for all age groups of victims but with different levels of impacts. The elderly are more vulnerable and at-risk of harm than other age groups during preparation for, coping with and rehabilitating from a disaster. Thus, any disaster prevention and mitigation plan needs to understand the differential risk and need for assistance of the different population groups, especially the elderly. There need to be comprehensive guidelines to reduce loss and degradation of society from natural disaster.



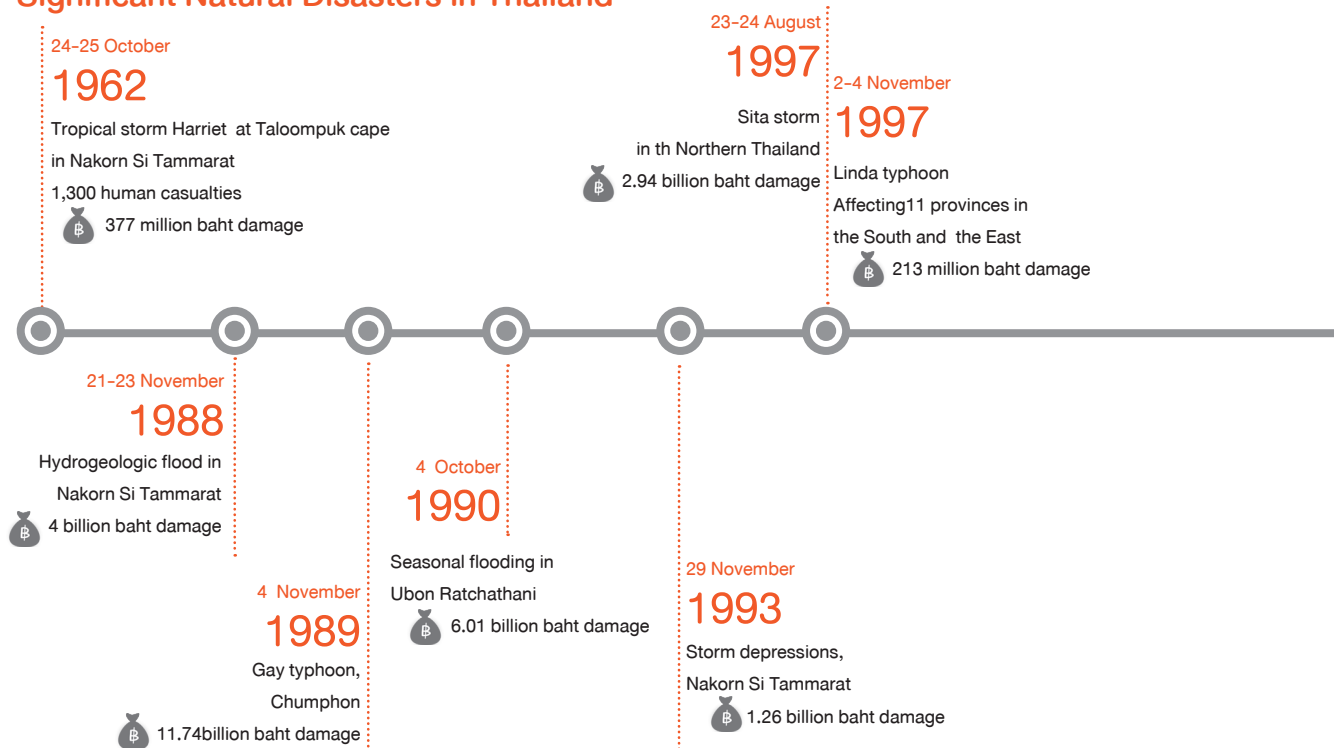
Source:  
[http://i.telegraph.co.uk/multimedia/archive/01847/jap1\\_1847535i.jpg](http://i.telegraph.co.uk/multimedia/archive/01847/jap1_1847535i.jpg)

# 2.2

## RETRACING NATURAL DISASTERS IN THAILAND

Over its history, Thailand has experienced natural disasters on numerous occasions, including floods, forest fires, violent thunderstorms, drought, landslides, and Tsunamis. Some low-lying areas experience flooding on an annual basis and, thus, are considered flood land.<sup>1</sup> Floods and mudslides are a regular occurrence in Thailand. The damage that occurs each time depends on the severity of the natural disaster. The most notable disasters in Thailand include severe storm at Taloompuk cape in 1962, Gay typhoon which struck Chumphon in 1989, the 2004 Tsunami which impacted six provinces on the Andaman Sea coast, the 2011 Great Floods on 65 provinces, and sporadic earthquakes which tend to strike the mountainous north region of the country (e.g., Chiang Rai which recorded the most severe earthquake in Thai history in 2014).

### Significant Natural Disasters in Thailand



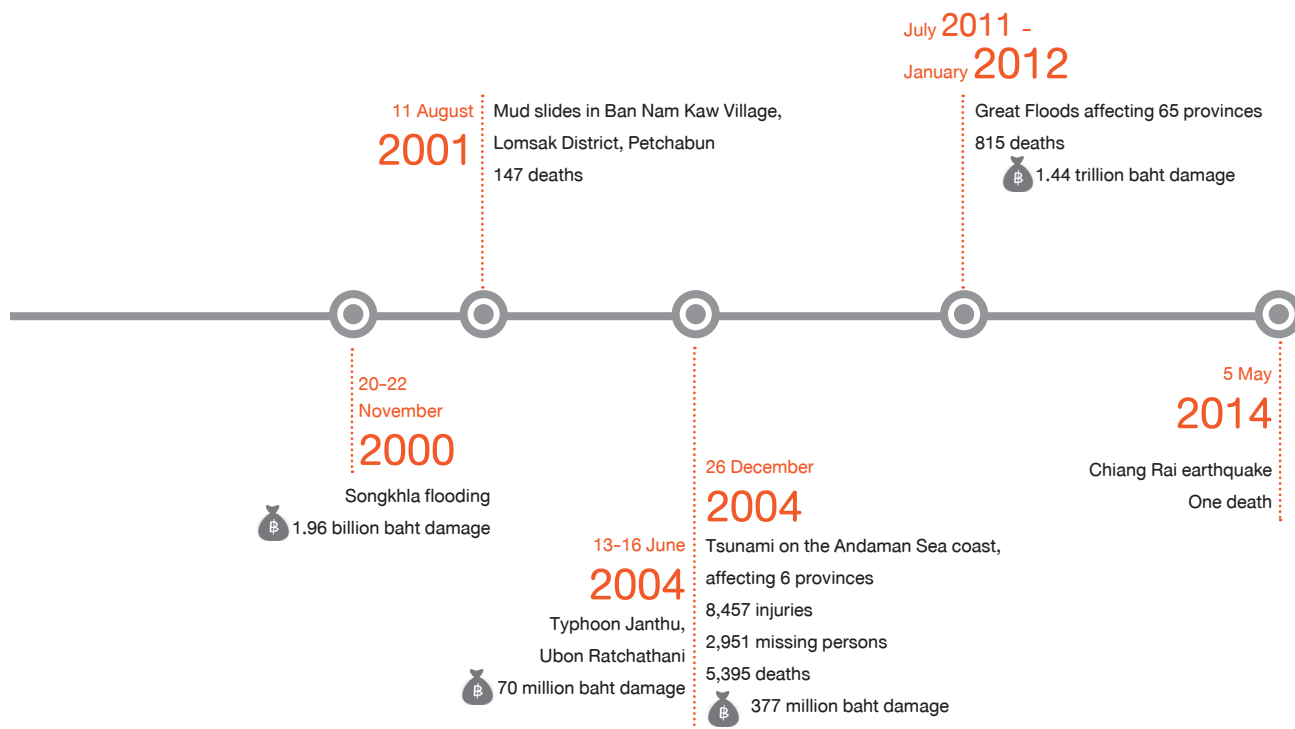
<sup>1</sup> This refers to low-lying areas which collect and retain flood water from runoff from surrounding higher-elevation terrain. The inability to drain the flood water out of the area results in extensive damage to agriculture, property, and even life.

Nearly one out of ten deaths from the 2004 Tsunami were elderly persons (Pimonpan Isarabhakdi, 2006), and, in the 2011 Great Floods, elderly in all regions of Thailand were impacted. Elderly in the North also had to cope with landslides resulting from the flood, and many elderly in the Central region refused to leave their homes to take temporary shelter in a sanctuary. It took up to four months for the flood waters in some provinces to fully recede. The Chiang Rai earthquake of 2014 killed one person age 83 years (with 107 injured; Meteorological Department, 2014). Most areas hit with disaster did not have age-specific data on the victims; thus it is difficult to estimate the total tally of elderly victims of Thai disasters.

**“Some members of my family went to harvest chili peppers on the river bank; they disappeared after a sudden rise in the water level. I had no way of finding what happened to them. The thunderstorms were so severe at that time that I thought I would die. I didn’t want to die alone; I wanted my relatives to be with me in our darkest hours.”**

Elderly person in Chiang Mai impacted by the 2011 flood

Source: APG Task Force, Thailand, 2012



Sources: Multiple sources

Young children and the elderly are specially vulnerable to the psycho-emotional impacts of a disaster due to their weaker ability to cope. It is estimated that one out of five of the survivors of the 2004 Tsunami suffered from PTSD (Manager, on-line, 2005). Similarly, it is estimated that one out of five victims of the Uttaradit landslide in 2006 suffered from severe stress and anxiety (Sirisak Titidilokrat, Walli Tammakosit, and Rani Chaiyinthu, 2012). The 2014 earthquake in Chiang Rai is estimated to have caused extensive emotional harm to the elderly victims, leading to chronic anxiety and depression. Some of the elderly victims were afraid of returning to their homes, (Thai PBS News, 2014). One of the tasks in the aftermath of a disaster is to identify victims with PTSD, which is often coupled with depression. Some elderly with PTSD may only be diagnosed with depression and, thus, not receive proper or comprehensive treatment. Victims need to be monitored over the longer-term.

**“There was unemployment  
caused by the floods.  
My children and grandchildren  
lost their jobs,  
we felt very stressed.”**

Elderly key informant in Ayutthaya (Suwaraporn Phoromyen, 2012)



# 2.3

## WHY ARE THE ELDERLY MORE VULNERABLE WHEN A DISASTER STRIKES?

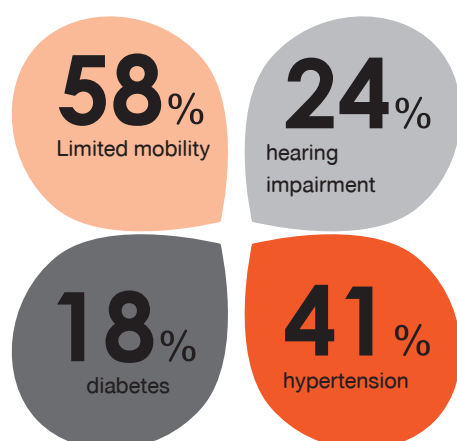
From past experiences it was found that most elderly are not physically as strong as younger age groups.

### Limited mobility

Most elderly experience some form of limited mobility which inhibits them to rapidly flee sudden disaster to safer locations. Oftenly, getting out of the disaster area requires agility, ability to climb, going up and down stairs, or climbing in and out of small, unsteady boats. Without someone to assist them in evacuation, many elderly cannot leave their domicile to safe places.

### Many elderly have less ability to tolerate difficult living conditions

Victims fleeing natural disaster will often find themselves in temporary relief centers or camps with limited comforts and amenities. Often residents of camps have to walk distances in the heat or cold for basic necessities. There may be loud noises throughout the day and night in crowded living conditions which might fray peace of mind of the elderly occupants more than the younger generation. Camp food is usually packaged, which might not be suitable to elder people. All these factors can compound the discomfort of the elderly, making them more vulnerable to illness.



### Chronic illness is more common in the elderly, increasing risk

Elderly with chronic illness requiring essential medicine may become cut off from their supply of prescription drugs during a disaster, and this could cause a worsening of the condition, or even death.

Source:

- Survey of the Health Status among the Elderly, 2013, under the Health Promotion Program of the Elderly and the Disabled, MOPH



**“I don’t think I would go to  
the victims’ shelter;  
the living is hard and unfamiliar.”**

Elderly key informant from Ayutthaya (Suwaraporn Phoromyen, 2012)

## **Mental aspect adds risks for many elderly**

### **Adaptation**

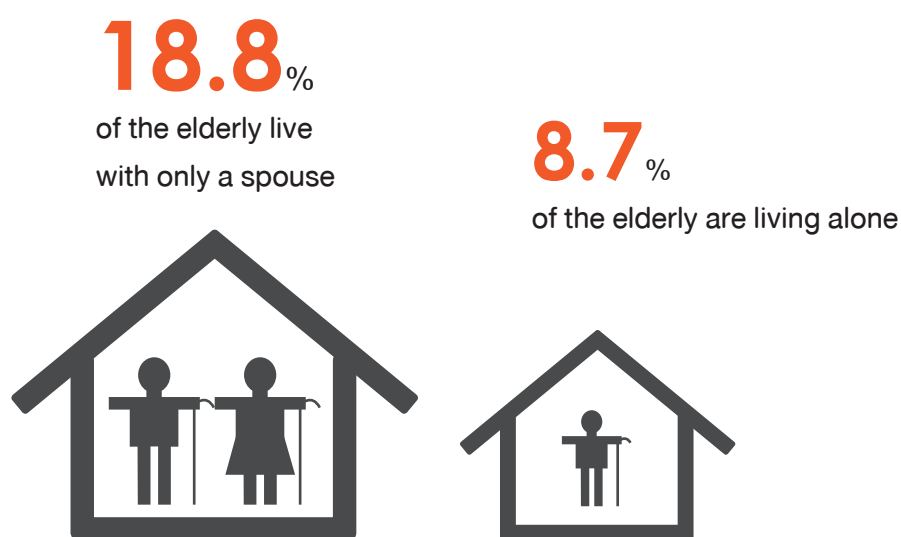
In all populations around the world, the elderly are generally less willing or able to adopt new behaviors or change. In the face of an imminent disaster, a sudden evacuation to a new and unfamiliar habitat often causes a loss of self-confidence and increased anxiety among the elderly refugees (Prawet Tantipiwatanasakun, undated).

### **Elderly believe that home is the safest place**

Many elderly may have lived through natural disasters in the past without having to evacuate, and may feel an exaggerated sense of security or ability to cope. A study of the 2011 flooding in Ayutthaya by Suwapaporn Phoromyen (2012) found that over 60% of the elderly sample remained in their home, despite being in an area of risk.

### **Elderly always be worried about their home**

The elderly who have always lived in their home community may be very attached to their home and property, pets, and their neighbors, while the younger generation may feel less attached to these. Thus, even the threat of lethal disaster may not be enough to persuade the elderly to move to a safer location.



Source:  
– Survey of the Elderly, 2014. NSO

## More elderly are living alone, while social network weakens

### Thai elderly are more likely to be living alone than in the past

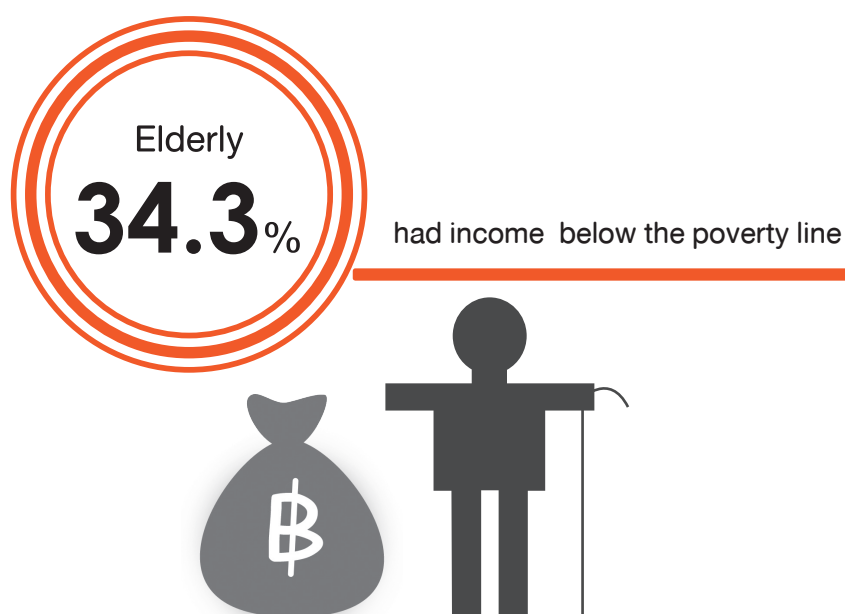
Currently, 8.7% of elderly were living alone, while 18.8% were living only with a spouse. This will be an obstacle for infirm elderly or those with limited mobility to flee disaster and make their way to a sanctuary.

### Thai elderly have weaker social networks than in the past

Thai society places high value on one's social network, whether that is siblings, family members, care providers, neighbors, or other friends and acquaintances in the community. As that network weakens, the elderly become more vulnerable to an adverse event, or lack timely access to assistance. A shrunken social network requires elderly to be more self-reliant than in the past. The social network is an important source of information, especially about looming threats and disasters. There is the need for crucial information such as steps and procedures to follow. This information network and timely sharing of advice is a critical feature of an efficient disaster response, especially for the elderly.

## Disadvantaged economic status of elderly hinders rehabilitation

In most cases, persons with higher economic status will have more options to cope with disaster, and more options to evacuate. This includes greater access to essential health care for disaster-related injury or conditions. The more well-off are usually able to rehabilitate more rapidly in the aftermath of a disaster. By contrast, the lower-income usually suffer greater loss of property and domicile due to a disaster, and it is correspondingly more difficult for them to reconstruct their lives. This is more serious for the elderly who are unemployed and without significant savings. Rehabilitation therefore depends largely on outside help.



Source:  
- Survey of the Elderly, 2014. NSO



# 2.4

## GUIDELINES FOR DISASTER PREVENTION AND MITIGATION FOR THE ELDERLY

Any disaster response policy must prioritize groups by level of vulnerability and potential need for timely assistance. This section reviews past implementation, including international collaboration, and Thai domestic policy and mechanisms, as well as actions which communities and individuals can take to be prepared and effectively cope when disaster strikes in the future.

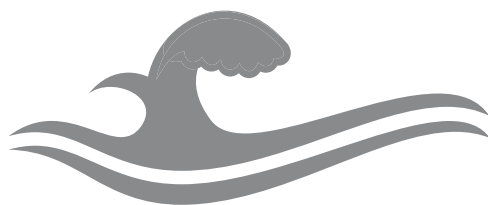



### 2.4.1 Past effort in disaster management

Natural disasters can strike at any time, and comprehensive preparedness requires collaboration from the levels of the international arena, domestically, down to the individual.

## The 2004 Tsunami disaster called for the need for better disaster management

On December 26, 2004 Tsunami off the shores of Indonesia in the Indian Ocean affected many countries in South and Southeast Asia. The world was shocked at the level of devastation and death caused by the Tsunami. Within a month of the disaster, a global conference was convened in Kobe, Japan to review steps to better manage disaster risk. Representatives from 168 countries signed the Hyogo Framework for Action (HFA) covering the timeframe of 2005–2015. The HFA prioritizes the need for disaster mitigation, with the overall goal to reduce loss of life and property, and minimize the socio-economic and environmental damage to the community and the nation. The HFA framework does not single out the elderly for special consideration, but calls attention to the need to reduce risk factors by implementing an improved social safety net for the elderly, which can play a significant role in curing psycho-emotional problems of disaster victims together with rehabilitation.





**“Education on mitigating disaster risks **always** directs to only children and youth.”**

### **ASEAN member countries still do not give adequate attention to the elderly in their disaster management plans**

Members of ASEAN signed the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) on July 26, 2005, effective on December 24, 2009. The AADMER is the first agreement emerging from the HFA that is legally-binding, and there is an associated implementation plan for the period of 2010–15.

The plan is divided into four strategies: Risk assessment, prevention/mitigation, preparedness and response, and rehabilitation.

However, the plan does not give adequate importance to the elderly; priority is given mainly to the vulnerability and needs of children and youth, such as calling for disaster management education to be integrated into the school curriculum. Furthermore, representatives of the elderly had no chance to participate in the plan development process, resulted in lacking of understanding about the elderly’s vulnerability.

## Action by THAILAND

Thailand has developed a disaster management and emergency response plan as part of national policy, embodied in

### The 11<sup>th</sup> National Economic and Social Development Plan (2012–16)

The plan calls for people-centered development, and people participation in planning. The plan highlights vulnerable population groups including the elderly, in view of their disadvantaged access to timely assistance when disaster strikes. However, the input of the elderly into the policy, plan and consultation in practice is limited.

### National Strategic Plan to Reduce Disaster Risk: 2010–2019

The Department of Disaster Prevention and Mitigation has primary responsibility for implementing this plan which is a commitment toward the HFA. The plan makes the national policy of disaster preparedness more concrete at all levels.

### 2007 Disaster Prevention and Mitigation Act

This Act specifies the framework for management, and enumerates the steps involved the response to disaster, by different types, procedures and guidelines for coordination from the national level down to the affected communities.

### National Disaster Prevention and Mitigation Plan: 2010–14

The Department of Disaster Prevention and Mitigation (DDPM) is the main agency for managing disaster in Thailand. The DDPM has four core strategies: (1) Prevention and mitigation; (2) Preparedness; (3) Management during an emergency; and (4) Post-disaster management.

In accordance with the HFA, Thailand has created the National Disaster Warning Center as a center for collecting and disseminating information about natural disasters. However, creation of this Center has not resulted in optimal collaboration from all the essential agencies and sectors to enable a timely response. Indeed, it is the active involvement of Civil Society groups that is the key to ensuring coverage of the elderly when disaster strikes.

### **Serving the Needs of the Elderly during the 2011 Floods by the MOPH**

The MOPH created a Center for Disaster Prevention and Mitigation with linkages with multiple agencies. This Center focuses on the health needs of the population when disaster strikes, especially the elderly, disabled, dependents, pregnant women, and persons with chronic illness.

Assisting the elderly before or during a disaster involves the following components:

1. Local health outlets install sign boards at the targeting houses to show the elderly living there; there are also regular home visits to these houses to check on the status of these elderly residents;
2. Provide two-month supply of prescription medicines for elderly with chronic illness requiring continuous medication;
3. Local hospitals establish patient wards specifically for elderly with chronic disease for immediate, temporary in-patient admission as needed;
4. Full-time physicians are assigned to the big disaster relief centers, with health personnel in the smaller centers to ensure that the elderly occupants receive the necessary care;
5. Health outlets in disaster-affected areas which cannot operate safely are shifted to safer areas so that they can continue to provide health care to the population;
6. For those requiring kidney dialysis and cannot travel elsewhere for this treatment, local nurses will try to find another feasible places for them

Source:

- Extracted from Patchara Satirapak

## The community:

### A key mechanism to protect the elderly when disaster strikes

The local network plays a critical role in preparedness and response for the elderly in times of disaster. The network includes household members, neighbors and local key performers such as the village headmen, village health volunteers (VHV), village defense volunteers, and the Subdistrict Administrative Organization (SAO). The local network needs to have data on the population in each area, including the vulnerable, elderly, and others who may need special assistance. The network should be knowledgeable about where these people live, the type of housing, their limitations and needs in case of disaster.

**“Persons who work in the community should know which households have elderly members, other occupants, the extent and type of assistance needed in times of disaster, and whether those elderly persons have chronic illness or not.”**



## Preparedness: Individual level

Most elderly can actively take part in preparations for their own welfare in case of disaster. Local authorities in disaster risk area should implement training for elderly residents on disaster preparedness in ways that are appropriate for the local context. There should be formal guidelines on how to protect and prepare oneself from different types of disaster which include the following core points:

**Risk assessment:** The elderly should be able to accurately assess whether their residence is vulnerable to adverse impacts of natural disaster, and in what ways. This applies to flooding, mudslides, flash floods, or out-of-control fires;

**Planning:** The elderly need to have a plan in advance of disaster including details on where the nearest sanctuary is, with whom to contact, phone numbers of key persons, family members, care providers, physicians, etc.;

**Creating a support network:** This is a very important step, especially for elderly who cannot fully help themselves and would require the assistance of another in case of evacuation. Members of the network need to know the needs of the elderly, e.g., medicine, etc.;

**Preparation of emergency supplies:** The elderly in disaster zones need to know what emergency supplies they should have in the event of disaster. This may include bottled water, dry food, spare clothes, first aid kit, spare batteries, can openers, cash money, and the medicines they have to take on a regular basis.



### 2.4.2 Guidelines and recommendations for disaster management and mitigation for the elderly

Thailand still has considerable work to do to achieve full and comprehensive coverage of the elderly to reduce risk and harm from natural disasters. This is an urgent task given the projected massive expansion of the Thai elderly population in the decades ahead. There will need to be improved policies as well as front-line implementation to manage this challenge effectively. Some of the key components of guidelines to protect the elderly from impacts of natural disaster are as follows:

- Disaster plans need to give more importance to assisting the elderly;
- Disaster assistance must be equitable;
- The elderly should participate in the process of planning;
- Key representatives from all sectors must participate.



## Policy recommendations

1. There should be a national plan for the response to disaster, including a section on “the elderly” as a vulnerable and priority group with special need for assistance;
2. Provincial government offices/local administrative organizations need to include the elderly as a priority target population in their plans for disaster prevention and response;
3. Thailand needs to produce a standard “Disaster Response Handbook” which has a section on assistance for the elderly;
4. The relevant agencies involved in disaster management need to have databases with information on the elderly in disaster-prone areas, including location, health status, care providers, etc., which is up-dated periodically;
5. The relevant agencies need to conduct drills, including practicing giving assistance to the elderly victims of a disaster;
6. Community strengthening is needed by building cadres of volunteers who can help implement a system of prevention and preparedness for evacuation, and build capacity of community members to look after their own welfare when disaster strikes rather than simply waiting for government assistance to arrive;
7. There should be training for the elderly in disaster preparedness, self-protection and rehabilitation after the disaster has passed;
8. There need to be improvements in environment and infrastructure of each area, appropriately to all age groups to augment mobility and agility of the elderly when disaster strikes.

“

The elderly have strong potential to actively participate in projects of reducing disaster risk.

Even though they may have some physical limitations, but with appropriate support, the elderly can be well-prepared to protect themselves and assist others in an emergency.

”

Lessons learned: Case study of the mass flooding in Chainat Province, 2011.  
AADMER Partnership Group Task Force

# Highlights 2014

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# 3

“

Lead your life the natural way,  
Lord Buddha taught us to respect the  
nature”.

Don't underestimate the situation.

Don't encroach on others.

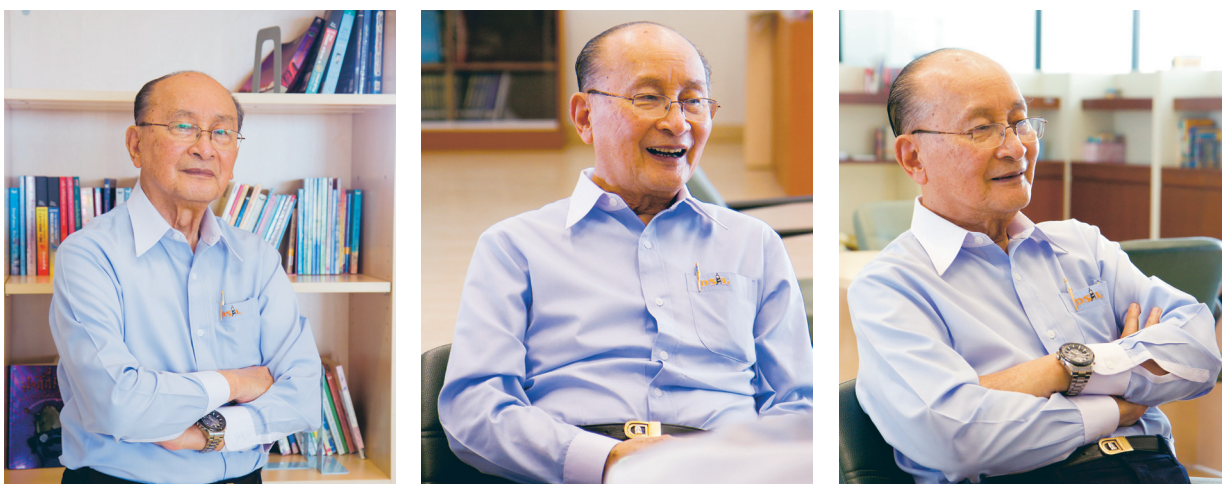
Giving makes us happier than  
taking.

”

Mr. Paron Isarasena Na Ayutthaya

Ever since 2007, the National Committee for the Elderly has presented an award to the “Honorary Senior Fellow of the year”

Each year, the Committee identifies an elderly individual who has made exceptional contributions to society over a long period, is well-equipped, embodies the morals and ethics of the nation, and can be a model for others.



**MR. PARON ISARASENA NA AYUTTHAYA**  
**THE NATIONAL ELDERLY PERSON OF THE YEAR 2014**

## COMMENDATION TO

### MR. PARON ISARASENA NA AYUTTHAYA THE NATIONAL ELDERLY PERSON OF THE YEAR 2014

Mr. Paron was born on May 10, 1927 and had reached 87 years of age at the time of this report. He is the son of Phraya Isarapongpipat and M.L. Samli Isarasena Na Ayutthaya. Mr. Paron married Ms. Bunnak and they have one child, Mr. Pipatpong Isarasena Na Ayutthaya.

### EDUCATIONAL ATTAINMENT

- Primary: Debsirin School
- Secondary: Vajiravudh College
- Bachelor's degree (Electrical engineering) Honors, Chulalongkorn University
- Bachelor's Degree (Mechanical engineering), Chulalongkorn University
- Master of Science (Mechanical engineering), MIT, USA
- Honorary Doctorate (Business Administration), Chulalongkorn University
- Honorary Doctorate, Chiang Mai University
- Honorary Doctorate (Management), Yonok College
- Honorary Doctorate, Suranaree University of Technology (Industrial Engineering)
- Honorary Doctorate, King Mongkut University of Technology, Thonburi
- Honorary Doctorate (Human Resources Management), Mahasarakham University



## EMPLOYMENT

- Apprentice engineer, General Electric Co., Ltd. USA (after graduating from MIT)
- Sales engineer, Kamolsukosol Co. Ltd.
- Shell (Thailand): Initially as Engineer until eventually rising to the position of Manager of Procurement and Transportation
- Start working with Siam Cement Group
- Secretary of the Sub-committee for Organizational Reform Review of SCG
- Director of Methods and Inspections System, and Secretary of the Board of SCG
- Temporary position to address challenges of the Thai Industrial Paper Co. Ltd.
- First Inspector and Director of Central Personnel, SCG
- Assistant Managing Director, Central Administration, SCG, responsible for central personnel management, legal affairs and central administration
- Co-founder of the Siam Kubota Diesel Co., and first managing director and advisor
- Assistant Senior Manager for Central Administration and Coordinator of the Machinery Group, SCG
- Managing Director, SCG
- Honorary Award: Outstanding Chula Engineer
- APO National Awardee, 2000
- Honorary Award from the Teacher's Council for contribution to national education (2007)
- Outstanding Human Resource in Thailand (2007), Thammasat University
- Award for Outstanding Return to the Country (Industry) from The Nation Group
- Honorary Award: Outstanding Senior Chula Engineer, Faculty of Engineering and Engineering Alumni Association, Chulalongkorn University

## INSIGNIA RECEIVED

- 1991 The Royal Decorations –Knight Grand Cordon of the Most Noble Order of the Crown of Thailand. (Major General rank)
- 1996 The Royal Decorations – Knight Grand Commander (Second Class, higher grade) of the Most Illustrious Order of Chula Chom Klao.

## MAJOR PROFESSIONAL ACTIVITIES AND SOCIAL CONTRIBUTIONS

In the educational circles, there are few practitioners as accomplished as Mr. Paron for his role in Thai educational development, capacity building, and motivation for thought and learning. At the time of this publication, Mr. Paron was director of the Darunsikkhalai School for Innovative Learning of the King Mongkut University of Technology, Thonburi. This school uses principles of “constructionism” to promote self-development of thought.

In the private sector, Mr. Paron has held senior positions in Shell (Thailand) and SCG over a 12-year period, including Director of Human Resources for SCG.

Mr. Paron believes that personnel are the heart of an organization, and has applied his experience and skills to build capacity, domestically and internationally, adhering to principles of good governance.

Recognizing that children are valuable asset of the country, Mr. Paron is dedicating the current phase of his long life to develop better ways of educating Thai children so that they can compete with their peers around the world. The success of Mr. Paron can be seen in the advancement of the personnel he guided in his previous positions, and how this is helping people and communities in many parts of the country. Models of these efforts are the community-based learning development projects in collaboration with Thaicom Foundation and the Educational Development Foundation which Mr. Paron has been closely involved with.





“

To be a quality elderly citizen, serving the educational needs is the ultimate goal. Belief is powerful motivation, especially believes that good deeds are rewarded. I was a taker when I was young but I turned to a giver when I was grown up until nowadays.



Some persons cannot avoid certain conditions such as Alzheimer's Disease, and nature must run its course. However, those persons who are over 60 years old and still of sound mind and body should devote themselves to the public, like me and many other elderly.



To properly care for yourself, you must not underestimate your condition. If you think there is a problem, you must seek medical advice without delay. Health is the primacy, without good health, so many other good deeds and contributions are not possible.



It may not be correct to view human development as a capital investment in the business sense. Otherwise, one might cease developing persons if there weren't sufficient material returns. Instead, we should never stop our human development efforts. Especially those of us who have travelled so far on the path of life. Many of the experienced elderly must join brain. Perhaps my thoughts are out of the mainstream in this regard.

”

# 11 of 12 national artists in 2014 are the elderly

In 2014, the Office of the National Culture Commission bestowed honorary awards to 12 National Artists. Of these, 11 are the elderly. They represent a cultural heritage who are valuable for studying by the younger generation.

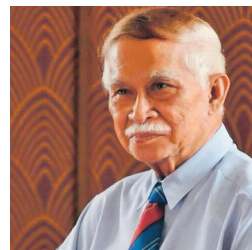
**Mr.Nij Hinchiranan** Visual Arts (Urban Design) Age 90 years



Born May 30<sup>th</sup>, 1924 in Bangkok. Discovered the ancient city of Chansen of the Dhavaravati Era, in Nakhonsawan. Spearheaded the historical conservation movement to support and promote projects to declare parts of Ayutthaya and Sukhothai as national heritage sites. Being awarded a Royal Medallion for “Outstanding Guardian of the Thai Architectural Heritage.”

**Mr.Sa-art Piampongsan** Performing Arts (Television & Film) Age 82 years

Born June 24<sup>th</sup>, 1932 in Bangkok. Produced a wide range of creative works through dedicating his life to cultural entertainment, including live performance, playwriting, screenwriting and directing. Frequently honored by the entertainment industry, including the Mahachon Golden Doll Award for television, the Golden Supannahong Award, the Golden Television Award, People’s TV Award.



**Mr. Boonchuay Hiranwith** Visual Arts (Fine Arts) Age 81 years

Born February 5<sup>th</sup>, 1933 in Nan Province. Skilled artisan in the craft of ancient silverwork, and preserved the ancient traditional designs, as well as created new designs, such as the Kathin Flower Design. Engaged in creative pursuits throughout his long life. Received 25 awards over a 40-year period of his contribution to the arts. His own typical works are known as unique products of Nan Province until now.



**Mr. Pongsak Jantruksa** Performing Arts (Thai Folk Music) Age 78 years



Born December 21<sup>st</sup>, 1936 in Ubon Ratchathani Province. Well-known for his work in film with such songs as Mon Rak Lam Nam Phong, and Mon Rak Mae Nam Mun. Has written more than 700 folk songs. Popularized the use of the North-eastern Thai dialect (“Isaan”) as part of the songs. Recognized for his work in promotion of Buddhism by use of song to transmit the teachings of the Dharma.

**Mr. Jarun Angsawanon** Visual Arts (Interior Design) Age 78 years

Born February 14<sup>th</sup>, 1936 in Bangkok. Began his career in interior design by using innovative techniques for creating space to optimize utility or affect perception in positive ways. These concepts were applied to many houses and office buildings of various types. Venerable instructor of principles of interior design in Thailand.



**Ms. Dusadee Buntasanakul** Performing Arts (Universal Music) Age 75 years



Born February 18<sup>th</sup>, 1939 in Bangkok. Singer for over 50 years and prolific author of books, and the magazine column “Kawb Fah Kwang” under the pen name of Dusadee Panomyong. Created a course of instruction which uses music to promote quality of life under the project entitled: “Lom Hai Jai Dontri Chiwit.”

**Mr. Chawalit Sermprungsuk** Visual Arts (Fine Arts) Age 75 years



Born July 30<sup>th</sup>, 1939 in Khon Kaen Province. The first Thai artist to be appointed by the Netherlands Government as professor to represent independent artists who pursue art for the love of it. Accomplished abstract artist whose work reflects the life and soul, dedicated to pure art under the philosophy of “Art for Art’s Sake.”

**Mr. Narong Janphum** Performing Arts (Shadow Puppetry) Age 75 years

Born May 22<sup>nd</sup>, 1939 in Trang Province. Worked using the alias of “Nang Ajarn Narong Talung Graduate.” Helped to improve the technique of shadow puppetry using effects of lighting to enhance the performance of the puppets, appropriate to each region. The play content is also a crowd favorite and never fails to bring laughter to the audience.



**Mr. Sirichaichan Fakjamroon**

Performing Arts (Thai traditional music) Age 71 years



Born April 17<sup>th</sup>, 1943 in Bangkok. Advocated innovation in the Department of Fine Arts, and is an expert in conducting traditional Thai musical ensembles. Tirelessly promoted traditional Thai culture to create a system for educational development of the musical arts, so that it is standardized and accepted by mainstream society.

**Ms. Patrawadee Meechutone** Performing Arts (Stageplay & Film) Age 66 years

Born May 27<sup>th</sup>, 1948 in Bangkok. Formed the Patrawadee Theatre Group and opened the Patrawadee Riverside Theatre to provide a forum for senior artists from various fields to share their wisdom through performance, to enhance the arts and nourish the soul.



**Ms. Chamaiporn Bangkombang (Saengkrajang)**

Literature (Art created language) Age 64 years



Born June 5<sup>th</sup>, 1950 in Chantaburi. Prolific author in both fiction and documentary genres. Popular author for recreational readers in high school and university level, and adaptations into plays and theatre productions, including Krathom Saeng Ngern, Jote Mai Theung Duang Dao, Ban Rai Reuan Tawan, and Phra Athit Kheun Raem.

In 2014, only one of the 12 National Artist honorees was under 60 years old: **Mr. Panya Wichintanasarn, Visual Arts (Fine Arts) 58 year-old artist.** Recognized for fusion of multiple eras of Thai history. Served as the Deputy Rector of the Arts Division, of Silapakorn University.



## Thai society is becoming more attentive to elderly lifestyles

Over the past one to two years, there were a number of events that indicate that Thai society is becoming more alert to the rapid aging of the population and the need to address the daily lifestyle and quality of life of the elderly.

These issues intersect with new technology within the household which can help the elderly to take care of themselves independently from others, and the development of public transportation which is more accessible and convenient for the elderly.

In 2014, a movement has emerged to promote **universal design** of the environment and construct buildings and others for optimal utilization of vulnerable groups of the population, not just for the elderly, but the infirm, pregnant women, young children in strollers, the disabled, the illiterate, etc. The goal is to promote seamless and equal access for all citizens when they are outside their home in ways that are convenient and safe. Some of the highlights of these developments which improve convenience and access for travel and communication of the elderly include the followings:

## **Elevators at the electric train stations for the elderly**

The Bangkok mass transit links (e.g., BTS sky train) are improving access for the elderly by, for example, installing more elevators to accommodate elderly commuters. This is an important and essential advancement to increase options for the elderly to maintain and expand their social network.



## Number of BTS stations with elevator:

**Sukhumvit Line :** Mo Chit, Asok, On Nut, Siam



9

**Silom Line :** Chong Nonsi, Krung Thon Buri, Wongwian Yai, Pho Nimit,  
Talat Phlu, Wutthakat, Bang Wa

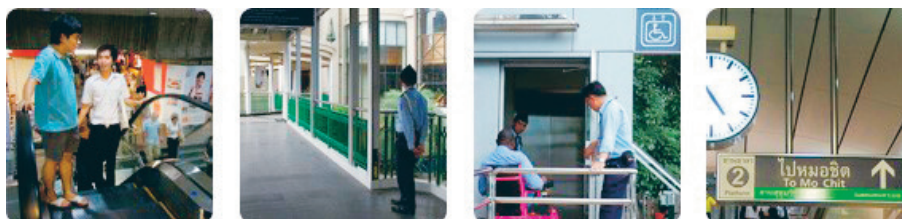


26

**Extension of Sukhumvit Line :** Bang Chak, Punnawithi, Udom Suk, Bang Na, Bearing



20



Source : <http://www.bts.co.th/corporate/th/02-structure02-3.aspx>

The sky train system is undergoing expansion and, when fully complete, there will be elevators in all stations (111 elevators in 34 stations).



## Taxis

### for the elderly in 2013-2014

Some elderly are disabled and/or require the use of a wheel chair to get around. The Bangkok Metropolitan Administration (BMA) is collaborating with Krungthep Thanakom Co. to implement **a pilot project of Taxis for the elderly & the disabled**. This is being done by modifying taxis to accommodate the elderly and those who need a wheel chair like the Japanese model.



Hydrolic lift with handles

Extra 2 seats for followers

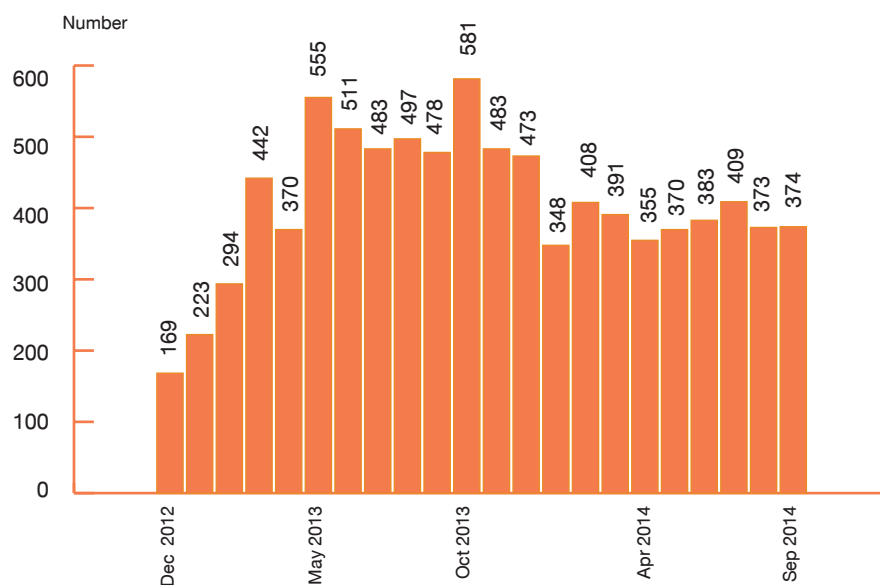


Secured screws with safty belt

Source: <http://www.thanakom.co.th/thanakom/taxi.html>

If the pilot system is approved for expansion, it should significantly improve mobility for the elderly and link them to mass transit throughout the city, including pre-arranged pick up and drop off.

### Number of customers using Taxis for the elderly & the disabled



Source:  
<http://www.thanakom.co.th/thanakom/taxi.html>

## Low-riding buses

Another innovative concept that is under the development involves the expansion of the fleet of Bangkok Mass Transit Authority buses by procuring over 3,000 low-riding buses which are wider and easier to mount and alight from. They will also be equipped with a ramp to make them wheel-chair accessible. This concept is being implemented with the elderly and other vulnerable populations in mind. This new design is also intended to reduce accident and injury from negotiating the high steps of the average bus in Bangkok today.



Sources:

- <http://www.busandtruckmedia.com/page.php>
- <http://social.tnews.co.th/content/129647>

## The 2014 Chiang Rai earthquake and impact on the Thai elderly

On the evening of May 5, 2014, an earthquake struck with the force of 6.3 on the Richter scale, with an epicenter in Sai Khao Subdistrict, Phan District, Chiang Rai Province. This was like an alarm clock going off in the agencies around the country involved with disaster preparedness. This earthquake had an impact beyond the seven directly-affected provinces of Chiang Rai, Chiang Mai, Phayao, Nan, Phrae, Lampang and Kampaengpet, including 50 Subdistrict and 609 villages. A total of 8,935 houses were destroyed, and, regrettably, one elderly person (age 83) died when the wall of his home collapsed on him. **It is difficult to calculate the material and psycho-emotional toll that this earthquake took on its victims.** (Thai Meteorological Department, 2014)



Source: <http://www.banidea.com/chiang-rai-earthquake-2014>



Source: <http://www.greennewstv.com>

The devastation was clearly visible by the damage to buildings, offices, ancient remains, government centers, roads, transport, and houses of the people in affected areas. However, what was not so tangible was the adverse impact on the mental health of many of the victims who suffered from persistent fear, anxiety and sorrow due to the loss of their only homestead and lifestyle (meals, sleeping quarters, etc.). A number of victims displayed symptoms of PTSD such as being easily shocked, insomnia, depression and lack of hope.

Despite these direct and indirect casualties and loss of property, it was heartwarming to see the dedicated effort of the public and private relief agencies and personnel who rapidly responded to the disaster. This was augmented by cash donations from the public, provision of free medical care, psychological counseling, and house restoration where possible, especially for those with no alternative residence or without the means to rebuild on their own, such as the elderly, ill or disabled. These vulnerable populations were given highest priority for assistance, then their sufferings were mitigated.



In the same time, many communities had turned crisis into opportunity. These communities have mobilized its members to be better prepared and self-reliant. Projects were launched to empower communities such as the project of repairing houses of the elderly victims from the earthquake through collaboration of the local administrative organization and community. Many other communities established self-help groups to help victims, with priority for the elderly and the disadvantaged, in terms of domicile, lifestyle and nourishment.

The 2014 earthquake has provided important lessons and a warning to Thai society at the central, provincial and peripheral levels to be prepared for future disaster that may occur. **Guidelines and measures are being developed to increase knowledge and skills to cope with disaster, especially for the Thai elderly.** This makes the 2014 earthquake an important milestone in Thailand's evolution toward protecting its aging society from harm.

## Government efforts to provide insurance and savings for the Thai elderly

In 2014, the Cabinet began considering measures to extend insurance for the elderly population (age 60 years or older). The goal is to mitigate risk and increase life security for the population, whether the threat is illness, death, unemployment, or income insecurity in the elderly.

The Thai Social Security Office has proposed that those are not covered by insurance under Articles 33 or 39, are not civil servants or have other exemption from social insurance, and are 60 years or older, be eligible for insurance under Article 40.



## 5 options for insurance under Article 40

- Option 1** Pay a premium of 100 baht per month (70 baht by the insured with 30 baht from the government) to be eligible for coverage for illness, disability or death;
- Option 2** Pay a premium of 150 baht (100 baht by the insured with 50 baht from the government) to be eligible for coverage for injury, illness, disability, death and elderly pension. In this option, there will be an increase in the elderly welfare subsidy but not more than 1,000 baht per month;
- Option 3** Pay a premium of 200 baht (100 baht by the insured with 100 baht from the government) as savings to be repaid as elderly pension (government contribution not more than 1,200 baht/person/year);
- Option 4** Pay a premium of 300 baht (170 baht by the insured with 130 baht from the government) to be eligible for benefits as in Options 1 and 3 combined;
- Option 5** Pay a premium of 350 baht (200 baht by the insured with 150 baht from the government) to be eligible for benefits as in Options 2 and 3 combined.



The population age 60–65 can apply for any of these five options, and those over age 65 can apply for Option 3 only (elderly pension). The insured will be able to make retroactive contributions to their plan as far back as May 2012. In addition, the Social Security Office also allows the insured under Options 1 or 2 to upgrade to Option 3 to increase their benefits.

Furthermore, there has recently been an advocacy movement to have the National Savings Fund Act to provide an option for the younger population to create an independent retirement account (IRA), especially for the estimated 30 million Thai informal sector workers, and who are not covered by social security or other fund. The government will make counterpart contributions to the IRAs, varying by age of the insured, as follows:

**Age 15 or older but under 30 years:**

**50% of the accumulated amount but not more than 600 baht/year**

**Age 30 or older but under 50 years:**

**80% of the accumulated amount but not more than 960 baht/year**

**Age 50 or older but under 60 years:**

**100% of the accumulated amount but not more than 1,200 baht/year**

**The National Savings Fund** is the same model as the Social Security Fund which involves co-pays by the insured and the government. After reaching age 60, the insured receives an elderly pension. To help cover the informal sector workers, the National Savings Fund Act will assist those nearing retirement who have no other pension option so that they can enroll in the National Savings Fund. At the same time, the draft Article 40 of the Social Security Act is being reviewed to ensure appropriate application to the situation of Thai society at present and in the future, to ensure income or life security of the elderly.

These policy and legal initiatives reflect the awareness and concern of the relevant government agencies about the aging of the Thai population and the need to accelerate measures to ensure social safety net for the vulnerable and growing elderly segments of the population.

# Research on the Thai Aging Society, 2014

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# 4

## Research on e-Service for Supporting Quality of Life in an Aging Society

Wichian Chutimasakul  
Project Director

**Project partners:** Faculty of Information Technology, King Mongkut's University of Technology, Thonburi

Boworn Papatsarathorn

Nippon Jaroenkitjakan

Jonathan Hoyin Chan

Prasert Kantamanon

Wachirasak Wanitcha

Pornchai Mongkolnam

Chalamate Apanikanon

Montri Supattham

Wicharak Techatraiphum

Bandit Wattanapa

Narongrit Waraporn

Suri Funinkun

Withida Jongsupachaisit

Chakrida Nukulkit

Krianggrai Pokeo

Sayam Yaemsaengsang

Aphorn Chiaoachankaset

Paweena Mongkolpongsiri

**Project partner:** Faculty of Science and Technology, Thammasat University  
Saowalak Wattanapha

Financial support from:

National University Research Program, Office of the Higher Education Commission

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## Objective

The objective of this research was to establish a knowledge base and develop an electronic system to promote quality of life of the elderly. The research focused on health development through electronic communication with the elderly, creation of applications to promote healthy and constructive living, and development of software for smart phones and multi-media communication to enhance elderly lifestyles and safe living. In addition, the research aimed to build capacity of researchers and information technology to address needs of the community, especially for the elderly.

## Methodology

Data were collected by reviewing related literature and quantitative research, including a field survey to assess factors affecting e-health development services for the elderly. The sample for the survey was a selection of 220 key informants including persons age 60 years or older, physicians, nurses and other clinical staff who had used the e-service system.

To build capacity of researchers in hands-on experience with e-communication to promote elderly health, the project managers collaborated with the Heart Failure Clinic of the Cardiac Center of Chulalongkorn Hospital, and the Thai Red Cross in developing a tailored e-service system to improve care and treatment of chronic disease in Thailand. The project also received collaboration from the Primary Care Unit of Siriraj Hospital for development of a reminder system to prompt the elderly to take their medicine as prescribed.

## Results

The analysis of the e-service system considered five dimensions of performance: core health content of the e-system, relevant persons/policy, methods of developing the system, information technology used, and factors which impact on the e-service system. This project developed a prototype of the e-service called “EasyCare” through the development of an information system and communication which uses existing, basic technology, such as a mobile phone with electronic messaging. The target population of this prototype was cardiac care patients who had a history of heart failure (any level) to enable them to conveniently communicate with the care team, and help nurses to monitor the patient’s condition closely, from a remote location. EasyCare included a reminder system to prompt clients to take their medicines on schedule. This prompt could be used with regular cell phones and smart phones alike.

The researchers followed up the use of the EasyCare service and found that the cardiac patients who used the e-service were able to improve compliance with the guidance of their physicians and nurses, and better look after themselves at home.

The project also developed a multi-media prototype which the elderly participants could view on a TV screen, a more familiar medium for the older generation. This application was popular with the elderly as it included treatment reminders but did not interrupt the regular program which the elderly were watching.



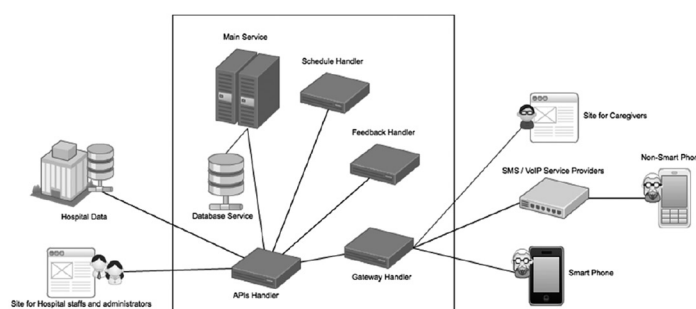
The project also developed a software package to help monitor the health status of the elderly through wireless technology such as video clips of falls and severity of falls of the elderly to improve the effectiveness of the elderly care providers.

## Recommendations

Health problems are an important challenge for the elderly. But these problems can be addressed by application of information technology. At present, many countries are exploring innovations to enhance health care through “e-health” applications and communication, but Thailand still lags behind in this area, especially for the elderly. Part of the reason could be the lack of development of the infrastructure for advanced electronic communication and the lack of quality standards for e-health interventions.

Also, reliance on electronic communication for the elderly needs to take into consideration about their physical limitations in use of the technology and must design it appropriately so that they can have equal access.

The findings from this research can be used to build the foundation of the electronic systems and develop them for using to improve and maintain health of the elderly over the long-term.



Architecture of the Reminder System for Treatment Compliance of the Elderly by Mobile Phone

## Savings, Income Security, and Old-Age Pension of Thai Households

Direk Patamasiriwat and Suwimon Hengpattana

National Institute of Development Administration (NIDA) and Srinakharinwirot University

Financial support from:

National Research Council of Thailand (through the Research Center, NIDA)

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## Objective

The objective of this research was to study Thai household savings behavior and accumulation of assets or income security and a social safety net (especially regarding retirement pension). This research examined these attributes by different level of wealth, occupation, education and social status.

## Methodology

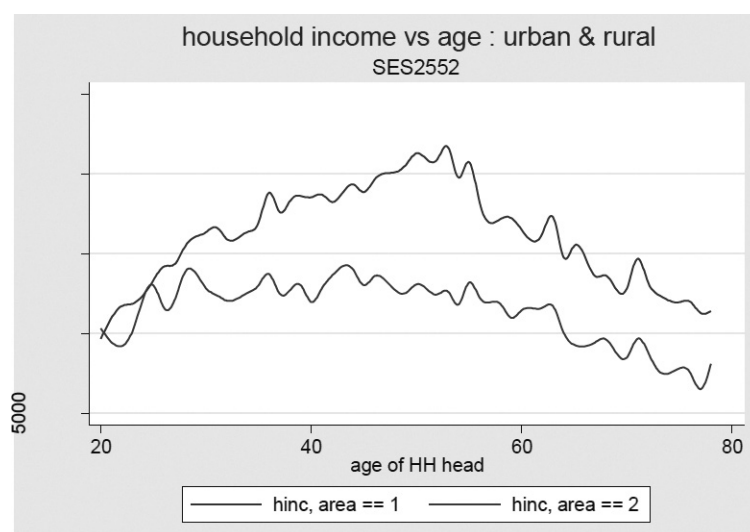
This research applied economic theory and the extended lifecycle model to shed light on differential savings behavior among Thai households. The researchers proposed a structural equation (including factors such as income, savings, and security) to process household data from the survey of the National Statistical Office (NSO) in 2009 and the 2013 baseline survey. This survey data is complemented by qualitative data collection on motivation to save, goodwill for their children, anticipation of leaving an inheritance, and participation in savings groups, which reflect social capital and group behavior toward savings.

## Results

- The rate of savings of Thai households fluctuates year to year but tend to decrease. It is postulated that this is due to increased consumerism driven by globalization, demand for new communication/information technology products, and expansion of consumer debt;
- On average, Thai households save 6,387 baht per month from monthly income of 22,396 baht;
- Risk from lack of adequate savings can be viewed in two ways: Households with negative savings, and households with savings in an amount less than 50% of that predicted by economic models.
  - 26% of Thai households have negative savings
  - 28% of households have insufficient savings, i.e., less than considered prudent (or 0 to 20% of income).
- The structural equation model included the variables of household income, savings, and property/assets of the household. The model tested the association of these factors with the independent variables of education, occupation, and household size. The dummy variables include region, urban/rural, etc. The model had a reasonable level of predictive power and can be applied to the analysis of the problem of inadequate savings of Thai households;
- 59% of households have goodwill for their children and expect to leave an inheritance to them at an appropriate time. This goodwill helps motivate them to save more in their families;
- Group behavior such as community savings groups or cremation funds help households to save more because of anticipation for benefits in the future.

## Recommendations

1. Government agencies should encourage and support communities to work together to promote household savings, especially in longer-term plans, while energizing the National Savings Fund to campaign through these community funds;
2. The relevant agencies should produce and disseminate documents of information about savings, investing in bonds, stocks, or other financial instruments to increase financial literacy in the general population;
3. There should be an expansion of issuing government municipal bonds offering good interest to raise funds for public works and give the public more investment opportunities besides savings accounts.



Household Income and Age by Urban/Rural

## Systematic Review on Effectiveness of Fall Prevention Program in the Elderly

Thanyarat Anothaisintawee, Saengsuli Thamakraisorn and Patsri Srisuwan  
Health Intervention and Technology Assessment Program (HITAP),  
Ministry of Public Health (MOPH)

Financial support from:  
The Foundation of Thai Gerontology Research and Development Institute (TGRI)

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## Objective

The objective of this research was to review the literature on measures to prevent falls among the elderly which were efficient and appropriate for the Thai context. The research focused on non-medication measure and the elderly and/or their care providers can implement by themselves. The research also reviewed the feature and steps of implementation in each measure which has confirmed evidence of effectiveness in the prevention of falls among the elderly. The goal was to apply this knowledge to guidelines for prevention of falls in the Thai setting.

## Methodology

This research reviewed published medical information from two sources: Medline and Scopus was its title or abstract with relevant content in March, 2014. Criteria for inclusion. The next step was to include and only those studies with a systematic research design among a population age 50 years or more who had no serious precondition (injury, illness). After collecting those studies, all relevant data were synthesized.

## Results

All of the selected studies involved research among the elderly residing in their home community. The studies included general-population elderly as well as those at high risk of falls. Risk of a fall was defined as someone: (1) aged over 75 years; (2) lived in residential home or nursing home for the elderly; (3) with balance disorders or muscular weakness. All of the studies included in the final analysis were the studies of general-population elderly.

Measures of reducing risk of falls include: (1) Exercise which improves walking and balance; (2) Exercise with 3 dimensions movement: forward-backward movement, sideways movement, and up and down movement; (3) Modifying the home environment in appropriate ways; (4) Discontinuing medications which affect the nervous system; (5) Using appropriate shoes and shoe liners; and (6) Using a variety of measures concurrently to prevent falls.

Mixed-method exercise is recommended, it comprises of exercise which improve walking, balance improving exercise, strengthening muscles exercise, and 3-dimensions exercise. This can significantly help reduce risk of injury or bone fracture from a fall.

The measures without evidence confirming that they can reduce risk of falling or injury from falls include carrying out everyday chores, psychotherapeutic treatment, visual assessment and providing glasses for the elderly.

## Recommendations

Accidental falls among the elderly is a serious problem since they may incapacitate the victims and reduce their quality of life. An injured elderly person places a burden on the other household members. Thus, it is very important to implement effective measures to reduce disability and maintain the elderly person's ability to be self-reliant. This will reduce the care burden on other family members. It is hoped that the findings of this study can be applied throughout Thailand to protect falls and promote elderly quality of life.



## An Analysis of Draft Law for Local Administrative Organizations to Allocate Budget for Elderly Welfare

Natapat Tawanpoh, Jumpon Srijongsirikul and Taweesak Meeyanyiam  
Office of the Council of State

Financial support from:

- The “Program of building knowledge to improve the system and mechanisms of quality social development for the elderly”
  - Foundation of Thai Gerontology Research and Development Institute
  - Thai Health Promotion Foundation
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## Objective

This research looked into problems and obstacles of local administrative organizations (LAO) in allocating more budget for elderly welfare in their area of jurisdiction. The challenges include unclear legal provisions about budget allocation and LAO authority. The hypothesis is that the elderly each area are not receiving an optimal level of welfare support. This research aimed to develop recommendations for resolving these obstacles to improve flexibility of LAO to augment welfare for the elderly in efficient ways.

## Methodology

This study employed documentary research to compile data from reviewing the related literature and then try to analyze the relevant laws. This information was then presented in an advocacy forum for policy makers and managers. The analysis focused on obstacles to LAO allocation of budget for elderly welfare, and explored various ways to overcome those obstacles through innovative approaches based on empirical evidence.

## Results

From reviewing of the related laws, it was found that some articles were not clear, and this obstructs action by the LAO. Thus, those laws should be clarified and amended, but it will take time. So, in the interim, subordinate legislation should be clarified which would allow more flexibility for LAO to allocate budget for elderly welfare.

## Recommendations

This research in details will be useful for drafting laws and procedures to improve the legislative environment regarding the authority of the LAO to support elderly welfare in their constituencies. This will encourage LAO to be more confident in allocating more budget for elderly welfare.

## Study of Improvements in the Retirement System of Government Officers or Civil Servants

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Financial support from:  
Office of the Civil Service Commission

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## Objective

The objective of this research was to study the feasibility of raising the age of retirement for civil servants in view of the emerging possibility that the population of retired civil servants will exceed the population of new civil servants in the future, or the number of new civil servants are not enough for replacing retired civil servants. The declining proportion of the population in the working ages and the advent of the ASEAN Economic Era are forces which will squeeze the labor pool of persons who seek positions in the civil service.

## Methodology

It was a quantitative study, using the data base of 369,079 civil servants from the Office of the Civil Service Commission to construct its age structure and estimated those retiring in the future. The number of civil servants being recruited to replace those retiring was also estimated. And the budget occurring from raising the age of retirement was calculated too.

## Results

Over half of the sample agreed with extending the mandatory age of retirement of civil servants, and this should be equal across the population of civil servants. An appropriate new age for retirement is 65 years. Males were more in agreement with this proposal than females, and those with higher education were more in favor. Those in favor of an older retirement age observed that, today, senior officers are healthier longer and can still perform effectively after age 60 years. That way, they could use their older years more productively. Those less in favor of increasing the retirement age were more likely to have a spouse and adequate income and savings, and were between age 40 and 49 years at the time of the survey. All respondents felt that there should be an adequate rest period for retirees.

Based on the findings, the following options are offered for consideration:

1. Extend the age of retirement to 65 years for all civil servants across the board;
2. Extend the age of retirement in steps to maintain a balance between the retired and recruitment of new officers;
3. Selectively extend the age of retirement for some occupations and set different ages of retirement among occupations.

In any event, extending the age of retirement will not solve the problem of the imbalance in the structure of civil servant ages in the future, just only delays this problem.

## Recommendations

1. Increasing the age of mandatory retirement for civil servants is the policy option for increasing working hours which will be necessary in the future. However, to avoid a reduction in recruitment of new civil servants, this policy should not be implemented all at once, but gradually, such as expanding for 1 year in every 2 years;
2. The government should start by informing all active and prospective civil servants about the policy and timing of phased implementation;
3. There should be a variety of ways to expand the duration of service and formats of employment to accommodate future labor shortages, and to reduce inequalities between the structure, personnel, new recruitment and for competing with the private sector.

## Learning from Being with Disaster, Living with Risk: Cultural Ecology, Media, State and Community Dynamics

Komatra Cheungsatiansup, Project Director

**Implementing partners:** Society and Health Research Institute

Sumonman Singha      Busabong Wisetpolchai

Tanawan Sararam      Kanisorn Tengrang

**Implementing partners:** Faculty of Sociology and Anthropology, Thammasat University

Porntip Netiparatanakul      Saipin Suputhamongkol

**Implementing partners:** Prince of Songkla University

Praneed Songwathana      Vorasit Sornsrivichai

**Implementing partner:** Bureau of Policy and Strategy, MOPH

Wirawan Satirakan

**Implementing partner:** Chiangmai Provincial Health Office

Kamalaporn Kongsukwiat

And regional researchers from 8 areas: Phitsanulok, Nakhon Sawan, Phichit, Nakorn Pathom, Phra Nakhon Si Ayutthaya, Songkhla, Nakorn Si Thammarat and Phuket

Financial support from:

- National Institute for Emergency Medicine (NIEM)
  - Bureau of Policy and Strategy, MOPH
  - Health Systems Research Institute (HSRI)
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## Objective

The objective of this research was to study the experience of communities in confronting and coping with flooding occurring in many provinces in order to understand custom, character, conditions, and outcomes of the response. This study used an eco-cultural framework for analyzing disaster and community disaster response.

## Methodology

It was a participatory action research and a qualitative research in four eco-cultural settings.

1. North Region: Upper Chao Phraya River Basin and Yom River Basin (Pitsanukoke, Nakornsawan and Pichit Provinces);
2. Central Region: Lower Chao Phraya River Basin, Noi River Basin Tributary (Ayutthaya Province) and Tha Jeen River Basin (Nakorn Pathom Province);
3. South Region: Tapi River Basin (Nakorn Si Tammarat Province) and Khlong Utapao River Basin (Songkhla Province);
4. South Region: Tsunami (Phuket Province).

## Results

Key findings of this research were as followings:

### 1. “Disaster” needs to be defined more precisely

A more precise definition of disaster would help identify the scope of the problem and delegation of roles and responsibilities of the various agencies. This would also help to ensure that the response is timely, accurately targeted and not wasteful or duplicative, as well as reducing unnecessary conflict.

### 2. Risk perception and capacity building of community

Those areas which have experienced and survived repeat disasters over time may have become inured and careless about the risk. Thus, warnings or need for preparedness may go unheeded. Nevertheless, it is important to conduct regular drills in these areas in order to create a mind-set of disaster preparedness.

### 3. Impact on the community

The type and nature of a disaster will inflict different levels of impact and loss depending on the local environment. In managing the response to a disaster, the community needs to accurately assess the precariousness of the situation and potential for adverse impact. Indeed, the benefit of having been exposed to disaster before (e.g., flooding) helps the community to adapt in ways that help them cope with future disaster over the long-term.

### 4. Community capacity and external assistance

External assistance can be very important for an affected area. But the ability of the community to mobilize its social capital and local resources should be the most important factor for a suitable response. The local community can also decide what kind of external assistance it needs, and ensure a fair and comprehensive distribution of assistance and supplies, and implement long-term rehabilitation of victims. This is an on-going learning process as the community builds capacity and preparedness for future events.



### **5. Uncontrolled factors of the affected community**

Government policy and marketing mechanism of capitalism are external factors which can affect the ability of a community to respond to a disaster. Indeed, these factors weaken limited capacity of the community to control, protest or negotiate any condition.

### **6. Action of the government and the mass media**

Government and media tend to portray the community as a victim of disaster instead of empowering the community to take matters into its own hands. Each of the case studies in this research show how the local administrative organizations (LAO) have a good knowledge of local problems and have a response network in place to mobilize the potential of the community to meet the challenge. The LAO have flexibility in budget allocation to tailor the support according to the degree of the disaster, this make it be more acceptable by the community.

### **7. Volunteerism, amelioration, and sanctuaries**

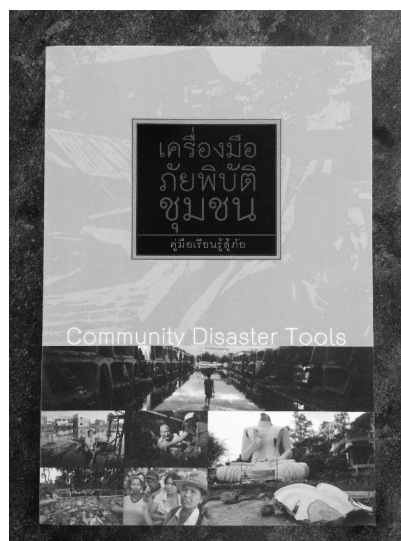
The cadre of village health volunteers (VHV) are a key force in responding to disaster at the community level. They are involved in planning the response from the outset, participating in drills, procuring equipment and essential supplies, conducting outreach assistance and monitoring outcomes. Sanctuaries and shelters are only necessary in certain situations requiring temporary evacuations such as severe flooding, and in urban areas. In rural areas, evacuees prefer to stay with relatives or acquaintance who are in safer locations.

### **8. Learning and adaptation in the community**

Over generations, communities have learned and adapted how to cope with disaster by building houses in ways that minimize damage, modifying crop cultivation for earning during floods.

## Recommendations

1. Define the term “disaster” more precisely;
2. Develop information system about disaster and cultural ecology which can be actually utilized by the community;
3. Support clear structures, mechanisms and process of systematic management at the local level;
4. Promote planning for disaster response and preparedness drills;
5. Create and support social networking among communities;
6. Build and expand the network of volunteers for disaster response while building capacity of the existing cadre of VHV;
7. Promote more local participation in the process of public policy formulation;
8. Promote the role of LAO in disaster management;
9. Promote creating community-based disaster funds;
10. Compile experiences and models of good practice in community response to disaster



## Research on Disasters at the Local Level in Thailand

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- Strengthening social safety net for the elderly program;
- Review of management plan & training curriculum development for health impact from disaster under the RTG-WHO Collaboration: Disaster Management;
- Preparedness to disaster for vulnerable populations;
- Community-centered disaster management by LAO: Case Study of the 2011 Great Floods

## Strengthening social safety net for the elderly program

Team of researchers: Srinakharinwirot University

Financial support from Ministry of Social Development and Human Security

The objective of this research was to study the impact of disasters on the elderly and develop guidelines for protecting the elderly from disaster including surveillance and warnings. This study also develops guidelines for helping the elderly during a disaster. It was both quantitative and qualitative research, focused on the agencies of the government with responsibility for disaster response and mitigation of impact on the elderly. Data were also collected from the elderly, and those who assist the elderly in three provinces: Phang Nga, Phatthalung, and Nakhon Si Thammarat.

This study resulted in recommendations for creation of a master plan for mitigation of disaster risk and impact, which unifies the plans of related agencies to align implementation and reduce duplication. There needs to be clear delineation of tasks and allocation of budget. In the longer-term, there should be measures for specific interventions for the elderly and other vulnerable populations as part of sub-plans of the relevant local agencies, with first priority.

## Review of management plan & training curriculum development for health impact from disaster under the RTG–WHO Collaboration: Disaster Management

Supatra Sriwanichakorn

ASEAN Institute for Health Development, Mahidol University

Financial support from National Institute for Emergency Medicine (NIEM)

The objective of this research were to review the plans and policies for disaster response in the aspect of public health, to analyze the role of executives and to extract lessons learned from the great floods in 2011. The goal were to produce guidelines for developing service system of hospitals and other clinical outlets in areas impacted by disaster, and to develop a training curriculum of disaster management for public health executives.

This study found that most of the involved agencies had preparedness systems in place and deployed clinical and public health response in the related areas of the plan. However, there was a lack of overall coordination among the implementing units, and some lack of prevention and preparedness in some locations. There was not enough practice drilling in collaboration with other agencies with similar missions.

This study recommends that the central authorities need to have a policy and plan which can be applied to peripheral agencies in the disaster zone, and have clear delegation of authority to lower levels. Clinical care outlets at all levels have to have a disaster response plan, and need to link the plan with the plans of related agencies in the locality. There should be a training curriculum in disaster response for provincial public health staff, including examples of best practice for exchanging among agencies.

## Preparedness to disaster for vulnerable populations

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Financial support from National Research Council of Thailand

The objective of this research was to collect data on the population age 60 or older and disabled persons in two subdistricts of Phuttamonthon District, Nakorn Pathom Province: Salaya Subdistrict Municipality and Mahasawat Subdistrict. This study also constructed a database which maps households by geographic coordinates with identifiers to show where the elderly and the disabled live in. GPS technology was used to plot the data. Qualitative research was also be done by collecting data on impact and adaptation of the elderly and the disabled in times of hardship.

This study found that most households with the elderly and/or disabled were not prepared to respond to flooding, despite the fact that they survived floods in the past. The terrain, having a chronic illness, and mobility status are factors which determine whether individuals will evacuate during a flood threat. Most of the elderly and the disabled remain in their primary household during a disaster since they have survived it before and feel they know how to cope. They also prefer to stay in a place of their own. This behavior also reflects the Thai norm to stay close to home, especially for the rural population who are very attached to their homestead and personal property. Thus, there need to be more preparations before disaster strikes. The database produced by this study maps the location of vulnerable households, and this data can inform plans for preparing to assist the vulnerable populations in the community in time and in appropriate ways.

## Community-centered disaster management by LAO: Case Study of the 2011 Great Floods

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Financial support from the Thailand Research Fund

The objective of this research was to synthesize data on the response to natural disaster with a focus on the community-based response supported by the LAO. In addition, this study explored the conditions and facilitating factors in the response to natural disaster, and provides policy recommendations for LAO based on lessons learned from the LAO response during the 2011 Great Floods. The research was run in 2 offices of good practices: Hadthanong Subdistrict Municipality and the Namsum Subdistrict Administrative Organization in Uthai Thani Province. Data were collected by in-depth interview and focus group discussion. This study found that these two LAO had a similar process for disaster management in terms of preparation, flexible response during the flooding, and rehabilitation after the flood water receded. However, in Hatanong, there was more focus on preparation before the floods arrived, relying on data, knowledge and traditional wisdom from within the community. This helped to speed the response systematically.

Based on the findings, the researchers recommend that the government and relevant agencies for disaster prevention and mitigation should support the LAO to develop locally-appropriate disaster management which is community-centered. This should be a national policy. In addition, there should be more attention to the pre-disaster period since, at present, preparedness is deficient. There should be more networking between LAO which are at risk of the same types of disaster.

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