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Country Diagnostic on Inclusive Insurance and Risk Finance for Thailand

April 2023

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United Nations Development Programme Thailand
14th Floor United Nations Building
Rajdamnern Nok Avenue
Bangkok 10200, Thailand
Email: undp.thailand@undp.org
Tel:+66 2 2883350

http://www.th.undp.org
UNDPThailand

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Foreword

The COVID-19 pandemic has highlighted how fragile the progress towards the Sustainable Development Goals (SDGs) is and how it can be undermined and reversed by multifaceted sources of risks. Furthermore, the climate crisis is underlining the vulnerability of countries and communities to disaster risks. Thailand and its high exposure to these risks is finding ways to address the threats to its development and to strengthen its resilience. It is crucial, therefore, that pathways to sustainability are risk-informed and that greater attention is given to how risk management is financed.

Around the world, UNDP through a flagship initiative entitled the Insurance and Risk Finance Facility (IRFF) is leveraging insurance industry expertise in managing and reducing risks and provides policy advice, tools, methodologies & partnerships to strengthen the resilience of both country and communities to socio-economic, health, climate and other shocks. The work includes legislative, regulatory framework and institutional capacity development matched by investments in advocacy, training and research. The strategic approach follows from a tripartite agreement between UNDP, the German government and the Insurance Development Forum (a public-private partnership platform led by the insurance industry) to build the financial resilience of climate vulnerable countries through risk finance solutions. The goal is to accelerate the implementation of risk management solutions to increase sub/sovereigns' resilience to climate risks, in alignment with the InsuResilience Vision 2025 goal to provide financial protection for 500 million individuals.

In Thailand, UNDP is focused on integrated development solutions implemented in cooperation with partners from government, civil society, and the business sector, to underscore the importance of financial risk management and risk protection for long-term development. As part of the IRFF, our commitment is to safeguard the progress towards the achievement of the SDGs and promote the development of innovative insurance products and services for vulnerable people and communities while also investing in the long-term transformation of insurance markets.

In 2022, UNDP conducted a Country Diagnostic on Inclusive Insurance and Risk Finance that sought to document and assess Thailand's risks and vulnerability and the capacities to manage and respond to them, considering the existing legal and regulatory environment and the available financial instruments. The study covers significant areas across the inter-related disciplines of insurance and risk financing. It articulates the gaps and opportunities in creating an enabling environment, government policy and support, and approach towards developing new market opportunities.

This diagnostic report not only highlights challenges and opportunities but also emphasizes the need to promote inclusive insurance and risk financing strategies in support of different phases of disaster risk management and highlight areas where UNDP can, together with partners, develop and deploy specific solutions relevant to the country context. We are grateful to the Ministry of Finance, the Office of the National Economic and Social Development Council, the Department of Disaster Prevention and Mitigation, the Office of Insurance Commission, the Thai General Insurance Association, and the members of the Insurance Development Forum including AXA Climate, AXA Insurance Public Company limited, Munich RE and Swiss RE for their collaboration as well as other stakeholders for their participation in this important initiative.

UNDP is committed to continuing our work with the Royal Thai Government and development partners to advance sustainable finance in Thailand, incorporating insurance and risk finance as part of Thailand's Integrated National Financing Framework (INFF) to enhance the country's resilience against future shocks and uphold the Leave No One Behind Principle. With this work, Thailand is becoming one of the pioneering UN member states to formulate a risk-informed integrated financing strategy for sustainable development.

Renaud Meyer
Resident Representative
UNDP in Thailand

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Lead authors:

Ms. Chutatong Charumilind, Ph.D., Director of Fiscal Policy Research Institute Foundation

Mr. Anantachoke Osangthammanont, Ph.D., Assistant Director of Fiscal Policy Research Institute Foundation

Coordination and review team:

Ms. Dadanee Vuthipadadorn, Ph.D., UNDP Thailand Senior Development Economist

Ms. Anuk Serechetapongse, Ph.D., UNDP Thailand Development Economist

Mr. Thanawat Wachiratongkum, UNDP Thailand Associate Researcher

Editing and peer review (UNDP IRFF):

Mr. Russell Leith, Institutional and Market Development Lead, UNDP Insurance and Risk Finance Facility

Ms. Diana Almoro, Regional Specialist for Asia Pacific, UNDP Insurance and Risk Finance Facility

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Executive Summary

This country diagnostic sets the groundwork for UNDP's growing work in inclusive insurance and risk finance in Thailand and aims to summarize the gaps and opportunities for collaboration with key stakeholders. Its scope includes a review of the underlying risks and hazards that impact the country's development, the market conditions and enabling legal and institutional environment for inclusive insurance and risk finance, and the extent to which insurance is integrated into national development frameworks.

Most of Thailand's climate-related disasters have been caused by floods, storms and droughts. From 1989 to 2018, floods caused up to THB 161 billion (USD 5.1 billion) in economic damages, the 2011 massive floods caused THB 23 billion (USD 0.7 billion) in damages, affecting 26 provinces and 13 million people. Droughts occur almost every year, affecting more than 10 million people, resulting in average economic damages of THB 0.6 billion (USD 20 million) annually with economic losses of up to 0.1% of GDP. In addition, the country incurs an average of THB 0.2 billion (USD 6 million) annually for damages from storms.

The impacts of climate-related disasters in Thailand are exacerbated by biological hazards and socio-demographic shifts. The COVID-19 pandemic had a worse effect on the economy than the 1997 Asian financial crisis, causing the economy to shrink by 6.2% in 2020. Pandemic restrictions severely affected the tourism sector which accounts for a fifth of the GDP and 20 percent of employment. More than 200,000 people fell into poverty and the poverty rate would have risen to more than 7 percent without the government's large-scale cash transfer programs to support the vulnerable groups.

The inclusive insurance market is still underdeveloped. A comprehensive regulatory framework setting out clear definitions, product features, or distribution requirements has not been developed. The insurance regulator has supported and enabled the insurance industry to offer microinsurance products with low premiums (anywhere from THB 7 to THB 200) and limited coverage. These microinsurance products, have mostly been sold on a seasonal basis, mainly to coincide with the New Year or Song Kran seasons when the occurrence of accidents and perilous incidents are high. Offering other needed products such as health microinsurance poses a low incentive for the insurance industry because existing government social protection schemes provide citizens with their health benefits they need. However, the financial protection needs of informal workers, ageing citizens and micro, small and medium enterprises are not met.

The Royal Thai Government has established the legal and policy foundations for national resilience-building. The Disaster Prevention and Mitigation Act enacted in 2007 is the legal framework for disaster risk management and response. This is supported by the National Disaster Prevention and Mitigation Plan (2015-2020) and by provincial and district disaster risk management plans.

A comprehensive national disaster risk financing strategy has not been developed to support the different phases of disaster risk management. Funding mechanisms currently in place allow for immediate response and longer-term rehabilitation and recovery. Financing for ex-ante preparations heavily relies on local and central government budgets and has not been institutionalized. A contingency fund that provides government agencies and local government with advances for immediate disaster relief and emergency assistance has been set up and comprises between 2 – 3.5 percent of the total annual budget. The use of the fund to respond to climate-related disasters has been decreasing since 2003 as government agencies tend to resort to accessing the central budget. As a response to the COVID-19 pandemic, the contingency fund was used only to prevent and mitigate the spread of disease in local communities, support diagnostic testing and building temporary isolation facilities, but bigger expenses required for vaccine procurement were sourced through a government loan. The views on the sufficiency of these funding mechanisms vary and require further inquiry, including as they relate to the need for a dedicated disaster fund.

Opportunities to integrate risk transfer instruments such as insurance into ex-ante financing requires further exploration. The scalability of the national crop insurance scheme as part of the government disaster relief program on agriculture is still unclear. While the mandate on public asset insurance emphasizes self-insurance by government agencies and the compliance and lessons from doing so are not systematically documented.

Key stakeholders, through the facilitation of UNDP, may want to consider the following recommendations:

- Develop a regulatory policy that would support inclusive insurance (microinsurance) market development as part of the broader goal of financial inclusion
- Convene collaborative platforms among government agencies and insurance industry to acknowledge the financial risk protection needs of the underserved and agree on concrete action plans for raising awareness and developing needs-based inclusive insurance products
- Leverage existing government schemes and institutional arrangements within social protection programs for outreach on insurance literacy as part of financial literacy education initiatives
- Support the capacity-building of insurance providers and distribution channels to facilitate tailored product development and delivery
- Facilitate the use of credit-linked insurance in MSMEs more widely to improve business resilience
- Expand crop insurance to cover more variety of agricultural products
- Create tailor-made insurance products for women to improve women's access to appropriate insurance services
- Develop a national disaster risk financing strategy to formalize planning, financing, and monitoring of priorities based on a risk layering approach
- Provide advice to develop appropriate financial mechanisms to ensure sustainability of a disaster fund.
- Develop recommendations on processes to improve the coordination between national and subnational governmental agencies on risk financing.
- Complete a feasibility study to scale up public asset insurance with greater participation by the private sector and by improving data systems
- Align inclusive insurance and risk finance promotion initiatives with medium-and long-term plan of Thailand

I. Introduction

In 2015, 193 United Nations Members States pledged to ensure that "no one will be left behind" and that "by 2030 all people will enjoy peace and prosperity" through the Sustainable Development Goals (SDGs). To achieve such noble goals, a large sum of financial resources and diverse sets of skills are needed to transform individual countries by 2030. Over the past five years, the collaboration between the insurance sector and the development sector has grown significantly with key initiatives such as Insurance Development Forum (IDF) and InsuResilience Global Partnership.

The financial impact of economic crises, disasters and health problems can derail the progress of the SDGs. After the 1997 financial crisis, Thailand had not experienced any major economic crisis until the COVID-19 pandemic hit in 2020, leading to a sharp economic contraction of 6.2%. The permanent closure of businesses and subsequent lay-offs turned unemployed persons into the informal sector, with less access to insurance protection. Aside from economic crises, a disaster has profound economic and social impacts on a country. Despite challenges from severe climate changes, Thailand is listed as moderate disaster-risk country[1] where it still occasionally suffers from droughts and floods as seen in the great flood in 2011 and is prone to more volatile and more severe disasters.

Inclusive insurance and risk finance have tremendous potential to help build Thailand's resilience against a rising number of catastrophes and disasters while promoting the advancement of the country's development agenda and the SDGs. Inclusive insurance provides access to and use of appropriate and affordable insurance products for the underserved (e.g., the poor and the vulnerable community groups, farmers and micro, small and medium enterprises (MSMEs)). Inclusive insurance can cover a wide range of products including; health insurance, personal accident insurance, simple asset insurance, life insurance, and credit-linked insurance.

Risk finance centers on disaster risks and how the government addresses its financial needs for disaster risk management. Disaster risks can stem from various sources, for instance, climate change, geophysical activities, and epidemics. Risk finance can evolve at all stages of a disaster, from preventive measures to recovery programs. A risk layering strategy helps to set a framework to analyze the government's requirements for risk finance to cover various types of risk, based on frequency and severity, and to clarify the purposes for the purposes for the financingwhether, for example, it would be for emergency relief or for longer-term reconstruction.

1 2019 Inform Risk Index from Climate Risk Country Profile: Thailand (2021): The World Bank Group and the Asian Development Bank

II. Underlying Risk and Development Information

A. Hazard Profile

Thailand is situated in the heart of Southeast Asia with four distinctive regions. Thailand, with an area of 513,115 square kilometers, is characterized by four geographical regions – Central Thailand, Northern Thailand, Northeastern Thailand and Southern Thailand.[2] The Northern part is mountainous and forested while the Northeast region is situated on a plateau (Korat Plateau). The Central part including Bangkok is in the basin of the Chao Phraya River, the most fertile area of the country. The Southern part is a peninsula connecting the Indian Ocean in the west and the Pacific Ocean in the east and it has the highest rainfall in the country. The coastline of Thailand totals 3,565 kilometers – 2,700 kilometers in the east along the Gulf of Thailand of the Pacific Ocean and 865 kilometers in the west in the Andaman Sea of the Indian Ocean.[3]

Thailand's tropical climate is characterized by two seasonal monsoons, causing a rainy season and a cold season.[4] The southwest monsoon brings warm and moist air across the Indian Ocean, and a rainy season from May, while the northeast monsoon carries dry and cold air from China to the Northern and Eastern regions and rain along the southeastern coast from October. Thailand is situated on 14 active fault lines.[5] The major climate-related disasters in Thailand include flooding, droughts, and storms.[6]

The risk of climate change must be closely monitored. Thailand has high risk of flooding due to a complex river system in the country, especially in the central region. Flooding has the greatest economic and human impacts as Thailand is one of the top 10 most flood-affected countries in the world.[7] Storms are another major disaster, stemming from the Northern storms taking place from April to October and the Southern ones between March to November. Landslides can follow after heavy precipitation in the hilly areas in the Northern and Southern parts.

Drought has become one of the major disasters due to the El Niño effect.[8] Thailand has two possible periods of dry spells: from June to September due to the occasional delayed rainy season and from October to May because of possible low precipitation. During the dry season, forest fires can occur in the Northern region. Lastly, Thailand's Northern part is a high-risk zone for earthquake due to active fault lines in the region.

2 Rerngnirunsathit, Phasita (2012). Thailand Country Profile 2011. Department of Disaster Prevention and Mitigation, Ministry of Interior.
3 Ibid.
4 Climate Risk Country Profile: Thailand (2021): The World Bank Group and the Asian Development Bank.
5 UNDRR (2020). Disaster Risk Reduction in Thailand: Status Report 2020. Bangkok, Thailand, United Nations Office for Disaster Risk Reduction (UNDRR), Regional Office for Asia and the Pacific
6 Climate Risk Country Profile: Thailand (2021): The World Bank Group and the Asian Development Bank.
7 2019 Inform Risk Index from Climate Risk Country Profile: Thailand (2021): The World Bank Group and the Asian Development Bank.
8 Climate Risk Country Profile: Thailand (2021): The World Bank Group and the Asian Development Bank.

Aside from climate-related disasters, the risk of diseases has become more noticeable and COVID-19 is not the only threat. Thailand, like the rest of the world, has been trying to cope with the impact of biological hazards, specifically, COVID-19. In addition to COVID-19, Thailand must be aware of vector-borne diseases (e.g. MERS, Zika), re-emerging communicable disease (Tuberculosis) and Malaria at the border areas.

Climate change and an aging society in Thailand will influence the hazard profile in the future. The sea level and temperature in Thailand has risen faster than the global average has. This could magnify the risk of climate change-induced floods, droughts, and storms in Thailand. World Bank data shows that the urban land area of Thailand where elevation is below 5 meters (from sea level) was 0.84 % of the total land area in 2010 (compared to the world average of 0.89%), while the urban population of Thailand living in the areas where elevation is below 5 meters (from sea level) was about 6.29% of the total population (compared to the world average of 6.82%). Although a small portion of urban areas have high risk of rising sea-level, these areas have very high density of population and this pattern coincides with the world average.

Climate change is likely to magnify the risk of flooding and droughts as the pattern of rainfall changes and the sea level rises at a faster rate than that of the global average.[9] It is likely climate change will hit the poor and most vulnerable populations the hardest — adding to the risks these people will face.[10]

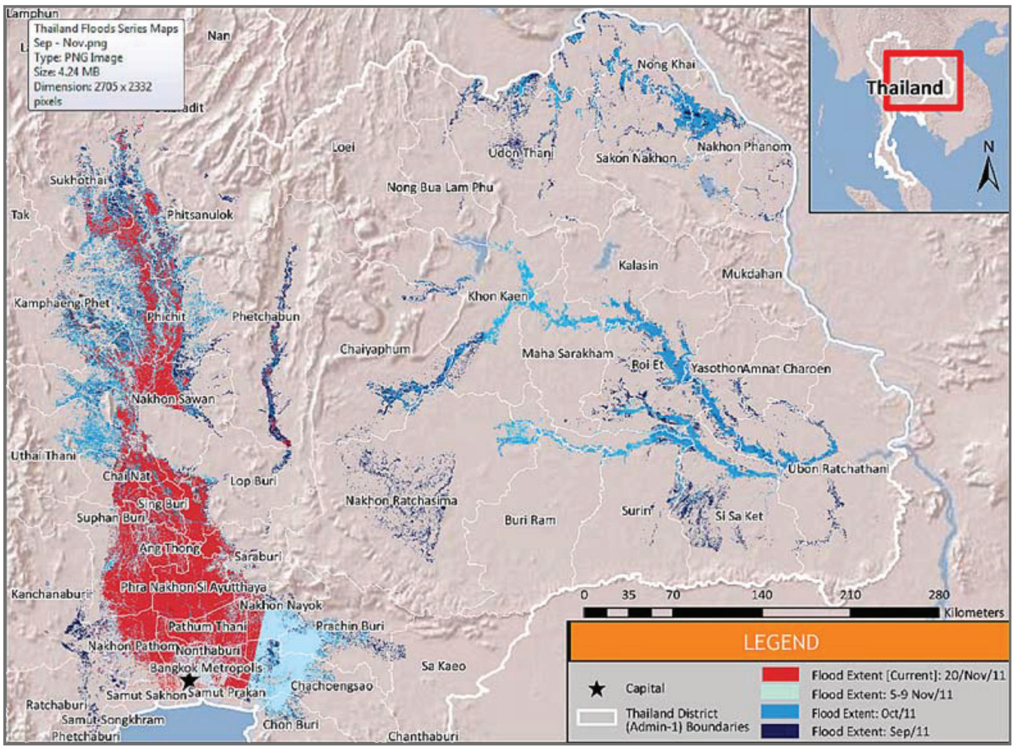
Thailand's aging society, characterized by low birth rate and increasing longevity of elder groups, poses higher risks as healthcare burden increases. Thailand became an aged society in 2022 as one in 5 people is 60 years old or older. Per-capita cost of healthcare of old people at 65-69 years old is approximately 2.7 times as much as that of people at 25-29 years old[11] and health care inflation in Thailand is about 5-8% a year.[12]

9 Ibid.
10 UNDP (2020) Global Human Development Report.
11 Steven Globerman (2021), Aging and Expenditures on Healthcare, Fraser Research Bulletin.
12 Department of Older People, https://www.dop.go.th/th/know/15/926

B. Crisis and Disaster History

The 2011 great flood led to huge losses across sectors, ranging from agriculture to industry and services. From the history of Thailand, most of the major disasters were associated with flooding, storms and droughts. The 2011 great flood alone led to damage and losses in the 26 provinces and affected more than 7.3 million rai[13] of crops, 6.2 million heads of livestock and 177.1 million rai of fishery.[14] Moreover, damage on buildings, equipment and machinery in the industry sector amounted to THB 513.9 billion (USD 14.89 billion).[15] The tourism sector, including those providing accommodation services and transport/tour operators suffered from damage and losses of THB 94.8 billion (USD 2.75 billion) and disaster impact on financial and insurance sector was estimated to be THB 115.3 billion (USD 3.34 billion).[16] Figure 1 shows the maximum affected area of floods in Thailand during the great flood.

Figure 1: The Map of Maximum Affected Area of the Floods (September – November 2011)



Layer Sources: Admin. Boundaries (DIVA-GIS), Flood Extent Layers (GISTDA).

Disclaimer: The borders and coutry names used are indicative and do not represent the views of The World Bank Group.

Source: The World Bank (2012)

13 1 rai is equivalent to 1,600 square meters or .16 hectares.
14 World Bank. 2012. Thai Flood 2011 : Rapid Assessment for Resilient Recovery and Reconstruction Planning. World Bank, Bangkok. © World Bank. https://openknowledge.worldbank.org/handle/10986/26862 License: CC BY 3.0 IGO
15 World Bank. 2012. Thai Flood 2011 : Rapid Assessment for Resilient Recovery and Reconstruction Planning. World Bank, Bangkok. © World Bank. https://openknowledge.worldbank.org/handle/10986/26862 License: CC BY 3.0 IGO
16 World Bank. 2012. Thai Flood 2011 : Rapid Assessment for Resilient Recovery and Reconstruction Planning. World Bank, Bangkok. © World Bank. https://openknowledge.worldbank.org/handle/10986/26862 License: CC BY 3.0 IGO

Droughts and storms have also inflicted severe damages on Thailand. From 1989 to 2017, droughts primarily caused damage for rice and sugarcane farms of more than THB 19.1 billion (USD 0.6 billion) and in 2005, the drought crisis damages and losses topped THB 7 billion (USD 0.203 billion).[17] Between 1989 and 2018, storms had inflicted more than THB 5.8 billion (USD 0.2 billion)[18] of damages to the Thai economy.

From 2016-2021, flooding affected the largest number of villages in Thailand. Data from the Department of Disaster Prevention and Mitigation (DDPM) in Table 1 shows that during 2016-2021 the number of villages declared as disaster-affected areas[19] were highest from flooding, followed by cold temperatures, drought and storm. Flooding is a major disaster that occurs every year during that period. Cold temperatures are disasters that had widespread impact on over 1,500 villages from 2019 to 2020, while forest fires and landslides/mudslides had limited impact.

Table 1: Number of Villages Declared as Disaster Areas by Type of Disaster (2016-2021)

Year	Number of Villages Declared as Disaster Areas by Type of Disaster (Villages)								
	Flooding	Drought	Storm	Cold Weather	Forest Fire	Fire	Earthquake	"Landslide/ Mudslide"	Other
2016	4,950	-	-	-	-	-	-	-	-
2017	445	-	1	-	-	-	-	-	-
2018	11	-	98	-	-	6	-	-	-
2019	161	620	227	736	-	2	-	-	-
2020	308	650	14	820	-	1	-	-	-
2021	806	8	449	-	-	1	-	1	-
Total	**6,681**	**1,278**	**789**	**1,556**	**-**	**10**	**-**	**1**	**-**

Source: Compiled by FPRI based on data from the Department of Disaster Prevention and Mitigation (DDPM)

According to the Thai Meteorological Department[20], in the past 20 years, Thailand was affected by 243 earthquakes that originated both in Thailand and other countries. 41 of these earthquakes were considered "Strong" (higher than the magnitude of 6) and only one was located in Thailand. 78% of earthquakes, originating in Thailand, were from the Northern region,[21] This region also accounted for 51% of total incidents of forest fire and 54% of total affected forest areas in Thailand on average from 2000-2020. [22]

The COVID-19 pandemic is a health crisis as well as a development crisis given its massive economic repercussion. The current COVID-19 pandemic has severely impacted the global economy. For Thailand, the total number of cases was just over 4 million cases (since 2020). The total death toll was 26,754 or about 0.7 % of total cases over the same period (April 2022). With the preventive government measures, the public healthcare system in Thailand adapted and managed to care for COVID-19 patients. Thailand's economy shrank by 6.2%[23] in 2020, this was worse than the 1997 Asian financial crisis. In 2021, Thailand

17 Ikeda and Palakhamarn (2020), Economic Damage from Natural Hazards and Local Disaster Management Plans in Japan and Thailand, ERIA Discussion Paper Series No. 346
18 Ibid.
19 Declaration is made by the Director General of Department of Disaster Protection and Mitigation for Bangkok and by Provincial Governor for other provinces for a sudden event that cause a lot of damages on life, injuries and properties.
20 Earthquake Observation Division, the Thai Meteorological Department (in Thai), https://earthquake.tmd.go.th/earthquakestat.html?pageNum_stat=20&totalRows_stat=420
21 Ibid.
22 the Department of National Park, Wildlife and Plant Conservation
23 NESDC

started to recover from this crisis at a low growth rate of around 1.6%, one of the lowest in the region.[24] The government has pledged a relief and stimulus package of THB 1.9 trillion (USD 55.06 billion) to absorb the adverse effects of the pandemic, such as the closure of businesses, and this package will have a long-term implication on the fiscal balance of Thailand in the future.

C. Political Economy

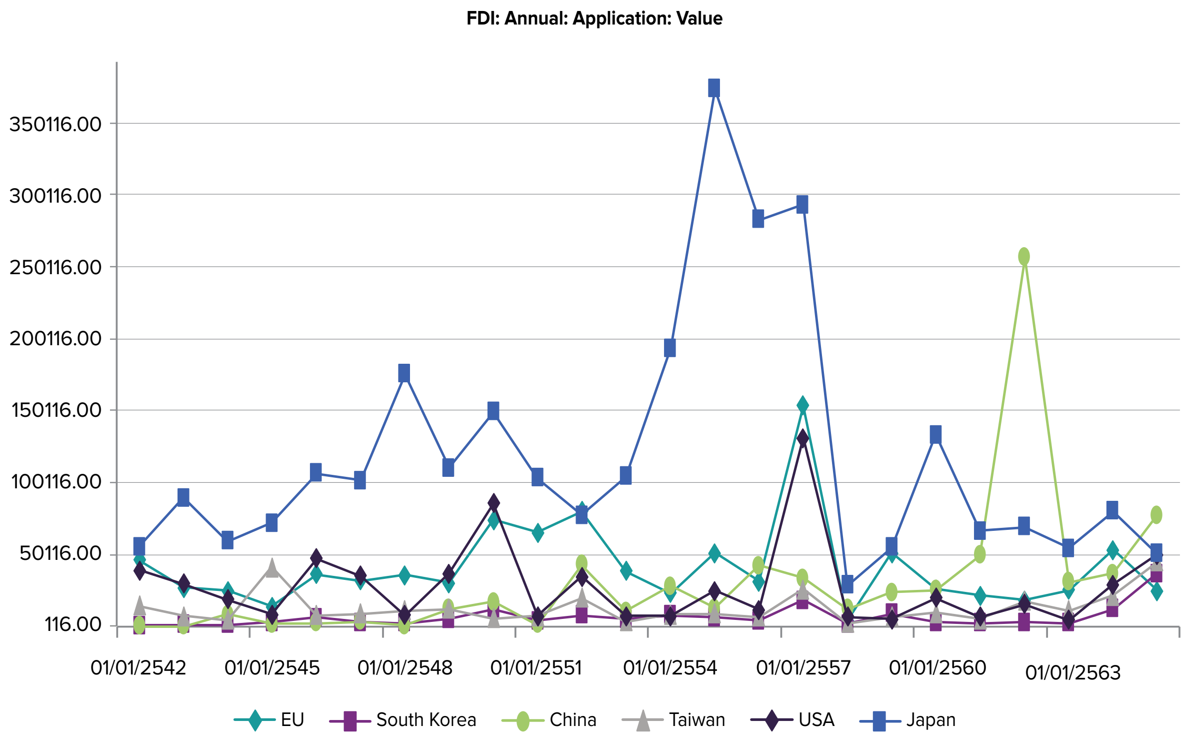
The conflict between the conservative and progressive sides is growing due to rising inequality in Thailand, but it does not jeopardize economic activities. Thailand is a parliamentary democracy with a constitutional monarchy. After the coup in 2014, the general election was held in 2019. The rift between conservative and progressive parties has become more apparent, but it still does not affect economic activities including the development of insurance market in Thailand. However, inequality is increasingly becoming a threat to social cohesion. Thailand's Human Development Index in 2021 declined by 14.3% from 0.800 to an index of 0.686, when adjusted for inequality. Inequality was worsened by the pandemic. This is a factor that has fueled the conflict between the conservative and progressive parties.

Thailand is a founding member of the ASEAN and ascribes to the Principle of Non-Interference upheld by the ASEAN to promote stability in the region. This means ASEAN member countries will not intervene in other member nations' internal affairs. However, ASEAN countries cooperate and compete on economic basis.

The emergence of China's political and economic influence in this region has been a positive force for Thai economic development. Japan had been the largest foreign investor during 1997-2015 and China's investment was able to surpass Japan's investment for the first time in 2019 (Figure 2). This means Japanese firms have been an integral part of the Thai economy. Thus far, Thailand is able to balance the interest of both countries as there have been no conflicts among Thailand, Japan and China.

24 Ibid.

Figure 2: Value of Foreign Direct Investment Based on BOI Applications 1997-2020 (Millions of THB)



Source: Board of Investment

Uncertainty looms as the Russia-Ukraine war continues and the impact of the war has been felt through high cost of raw materials and commodities**.** Despite no direct involvement in the Russia-Ukraine war, Thailand experienced a high inflation rate of 5.7% in February 2022 due to the increase in oil prices. This war has aggravated the impact of COVID-19 on Thailand's slow economic recovery. Recently, the projected economic growth of Thailand for 2022 was revised downward from 3.4% to 3.2% due to the impact of the Russia-Ukraine war.[25]

D. Development Dynamics

Thailand has made progress towards becoming an upper-middle income country and is currently striving to be a high income one.[26] The population of Thailand is 66,171,439 (2021) and gross national income per capita is USD 7,040 (2020). The poverty rate fell from 48.6% in 2000 to 6.2% in 2019.[27] The 20-year National Strategy aims to achieve the high-income status in 2036 and promote security, prosperity and sustainability of the country. In 2000, Gini Coefficient[28] of Thailand was 42.8, it reduced to 34.9 in 2020. About 51.43% of the Thai population were in urban areas in 2020, rising from 31.39% in 2000. The concentration of population in Bangkok, the largest city in Thailand, fell from 32.37% in 2000 to 29.36% in 2020.

25 Bank of Thailand. https://www.bot.or.th/English/MonetaryPolicy/MonetPolicyComittee/MPR/Pages/default.aspx
26 The World Bank Group. https://www.worldbank.org/en/country/thailand#:~:text=Thailand%20became%20an%20upper%2Dmiddle,in%20less%20than%20a%20generation.
27 Measured by the international poverty line for Upper Middle-Income Countries (UMICs) of USD 5.5 per person per day in 2011 Purchasing Power Parity (PPP) rate. World Bank Group. 2021. Thailand Economic Monitor: -. World Bank, Bangkok.
28 The Gini index, or Gini coefficient, measures income distribution across a population.

The service sector has been the main growth engine of Thailand and it was hit the hardest during the COVID-19 crisis. Data from the Office of the National Economic and Social Development Council (NESDC) indicates that tourism-related sectors (such as transport and storage, accommodation, and food services activities) have been the main contributors to the development of the economy since the beginning of the 21st century.[29] The 2011 great flood inflicted damage to the manufacturing sector most as many production facilities in the Central region were hit by flooding. By contrast, services sectors especially those related to tourism sector were most profoundly affected by the COVID-19 crisis that derailed both domestic and international travel for Thailand. As a result, the services sector contracted more sharply than agriculture and manufacturing did in 2020.

Thailand has made progress on gender equality with room for further improvement. The Credit Suiss Gender 3000 Report (2021) indicates that the percentage of women as a CEO in Thailand was 16% (12.5% in 2014), which is ranked fifth in the world and third in ASEAN after Vietnam (17%) and Singapore (16%). Thailand, however, has some challenges on gender inequality. From the Gender Inequality Index (GII), Thailand was ranked 80th out of 189 countries in 2019, compared to Vietnam (43rd) and Singapore (12th). The 2019 GII reflects that, in comparison to East Asia and the Pacific average, Thailand was worse off in adolescent birth rate (Thailand - 44.9 vs. East Asia and the Pacific average - 22.1 births per 1,000 women ages 15-19), female seats in parliament (Thailand - 14.1% vs. East Asia and the Pacific average - 20.2%) and population with at least some secondary education (Thailand - 43.5% vs. East Asia and the Pacific average - 69.4%).

The impact of the COVID-19 pandemic was profound and persistent; Thailand has not fully recovered from the impact as the economy sharply contracted by 6.2% in 2020. Exports in goods and services fell by 6.5% due to weak global demand. The number of foreign tourists dropped from its peak of 39.8 million persons to merely 6.7 million persons by the end of 2020. Private investment dived by 8.2%, while the government was essentially the last economic engine at that time. Unemployment rate jumped immediately to 1.95% in Q2 2020 from 1.03% in Q1 2021 and stayed near 2% until Q4 2021. We witnessed a sign of recovery in 2021 with a growth rate of 1.6%, Thailand's economy still has not reached pre-COVID-19 levels. Therefore, demand for insurance has and is likely to be weak for the next couple of years. To solve their liquidity problem, some households with insurance policies could resort to insurance redemption and hence lower their security. Moreover, women are affected more severely by the pandemic compared to men. Given the higher proportion of female workforce in tourism-related and services sectors, they have faced higher risks of job disruption during COVID-19.[30]

An aged society demands high healthcare expenditures. Thailand became an aged society in 2022, where the percentage of the population over 60 years exceeds 20% of the total population. This percentage in Thailand is expected to reach 24.20% in 2030.[31] Older people are prone to higher levels of health risk particularly for noncommunicable diseases (NCD)[32], which leads to high healthcare costs and decreases the quality of life for the elderly. Healthcare inflation is higher than overall inflation in Thailand. Therefore, higher costs of healthcare per head are expected. With low savings in the poor and vulnerable groups, inclusive insurance is needed to assist these people to minimise health needs costs.

29 See Annex 1: Growth of Thailand's Economy by Sector (2016 – 2021)
30 This is from the UN's socioeconomic impact assessment of COVID-19 on Thailand.
31 NESDC (2019) Report of the Population Projections for Thailand 2010-2040 (Revision)
32 WHO classified noncommunicable diseases (NCD) into groups such as cardiovascular diseases (such as heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes.

Almost all Thai households have access to financial services and Thailand should closely monitor the level of household debts**.** Access to finance is very important for businesses and individuals. The Bank of Thailand survey in 2020[33] indicated that 99.7% of Thai households had access to basic financial services, namely deposits, loans, money transfers and payments. 38.1% of households in the survey had access to non-life insurance, up from 17.2% in 2018, while 19.6% of households purchased life insurance policies, slightly down from 20.1% in 2018. Thai males and females had almost equal access to finance, 99.8% for males and 99.7% for females. The 36-60 years old group of the Thai population had high levels of household debts, while farmers and civil servants led other occupations with high levels of household debts. 68% of the survey correspondents stated that they would not be able to repay debts if their incomes declined by 20%. With the pandemic, the level of household debts also surged to THB 14.35 trillion (USD 415.8 billion) in Q3 2021 (89.3% of GDP) from THB 13.77 trillion (USD 399 billion) in Q3 2020 (86.6% of GDP). This is second highest household debt level in Asia behind South Korea.

E. Technology

Digital infrastructure is available for most of the Thai population. Technology is a crucial factor to assist with the development of the insurance market. Digital technology can create new demand for insurance and enable the supply side to offer new products. In 2019 the mobile penetration rate was 186.5%.[34] Smart phone penetration was 92% (2018) compared to 79% for the ASEAN and 61% for the World.[35] In 2020, 86.4% of active mobile phones were smart phones.[36] 88.8% of the Thai population used mobile internet and 14.5% of the population utilize fixed-line broadband internet (2019).[37] 79% of the male population have access to the internet, which is marginally larger than 76.8% for the female population.[38]

In the Speed Test Global Index (December 2021)[39], Thailand was ranked eighth globally in fixed-line broadband performance, third in Asia behind Singapore and Hong Kong (SAR). For mobile performance, Thailand ranking was down to 40th, seventh in Asia after South Korea, China, Singapore, Taiwan, Hong Kong and Japan.

Thailand is one of the world's leading users of mobile financial applications and is likely to easily adopt mobile insurance applications. Thai people have adopted digital technology well as a new channel for financial services. The 2021 digital report shows that Thailand was ranked first in the world for the third year in a row, for banking and financial service application use. 68.1% of internet users aged 16-64 years old stated that they engaged with these applications every month.[40] Users of mobile banking had grown rapidly from 13.9 million users in 2015 to 60.1 million in 2019 (Table 2). Thailand was ranked second in the world for mobile payments and second for mobile commerce adoption. The Bank of Thailand's survey shows that 21% of money transfers in Thailand was completed via internet and mobile banking. The 25-35 year old group made more e-payments than other age groups. The familiarity of using financial services via mobile phone applications should help the Thai population to easily adopt insurance service application and hence improve access to insurance.

33 Bank of Thailand (2021). Survey of Thai Household's Access to Financial Services 2020
34 EMIS (2021) Thailand ICT Sector 2021/2022 – An EMIS Insights Industry Report. Mobile penetration rate is defined as mobile subscription over total population.
35 GSM Association (2019) Mobile Economic Impact – Thailand, Definitive Data and Analysis for the Mobile Industry, GSMA Intelligence
36 NSO (2020) Survey of Thai Households' ICT Usage.
37 EMIS (2021) Thailand ICT Sector 2021/2022 – An EMIS Insights Industry Report.
38 NSO (2020) Survey of Thai Households' ICT Usage. Population is defined as those who are 6 years old and over.
39 https://www.speedtest.net/global-index
40 https://www.bangkokpost.com/tech/2062199/thai-internet-users-keep-up-top-banking-app-usage-streak

Table 2: Mobile Banking Indicators in Thailand

Year	2015	2016	2017	2018	2019
Value (billion Baht)	2,800	5,849	9,539	17,501	24,408
Users (Persons)	13,918,815	21,151,583	32,143,467	46,004,931	60,084,145

Source: Insurance Development Plan Vol 4 (2021-2025)

Overall, Thailand still has many challenges in digital competitiveness**.** IMD World Digital Competitiveness Ranking 2021 indicates that Thailand was ranked 38th overall, with relative strengths in the areas of regulatory framework (29th), capital (19th) and technological framework (22nd). Digital skill among population, one of the key indicators of the Skills pillar of the Global Competitiveness Index 4.0, compiled by the World Economic Forum (WEF), can be a good proxy for digital literacy. In 2019, Thailand scored 4.26 out of 7, where 7 indicates "to the great extent" or best digital skill and was ranked 66th in the world.[41]

F. Data Mapping

The historical data on disasters is available on the website of the Department of Disaster Prevention and Mitigation, but it is not easy to access and the data is not presented in a format that is easy to analyze. The data on the total costs of damage of disasters is fragmented and there is no single unified data source. Similarly, the data on total risk finance budget is not readily available, as not all parts of the risk finance budget are not clearly labeled. The data on microinsurance is limited as this market is tiny and at an early stage. Access to a complete list of microinsurance products from the Office of Insurance Commission (OIC) is not publicly available.

A listing of the kinds and sources of data relevant to inclusive insurance and risk finance can be found in Annex 2.

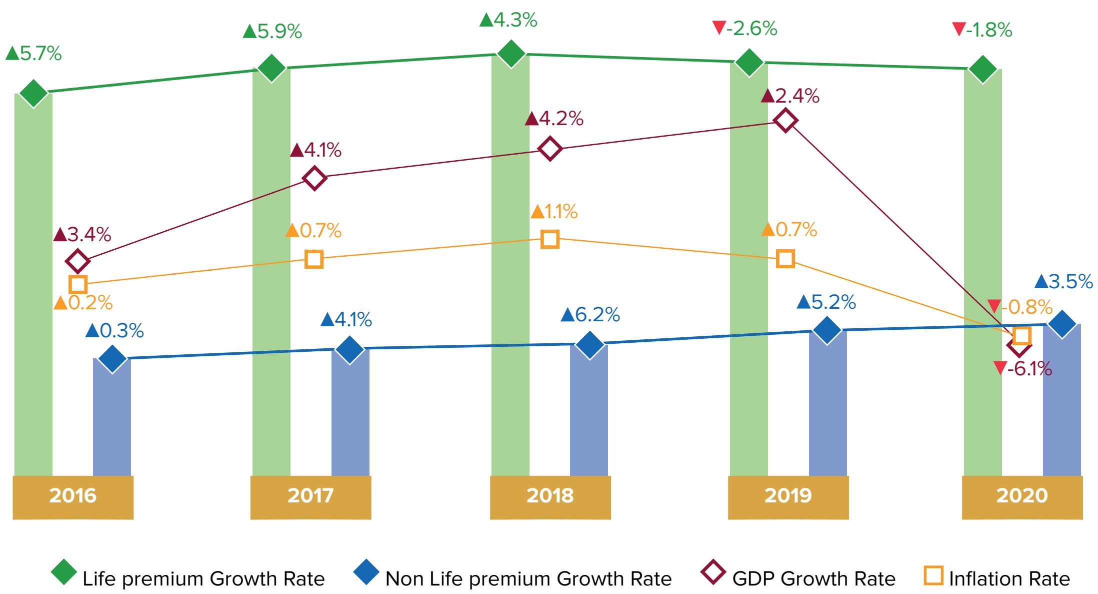
41 World Bank Group. https://tcdata360.worldbank.org/indicators/hb0649ed2?country=BRA&indicator=41400&viz=line_chart&years=2017,2019 and World Economic Forum (2019). The Global Competitiveness Report 2019.

III. Market Conditions for Inclusive Insurance

A. Overview of Current Market

The insurance market in Thailand has been experiencing modest growth in the past five years. The life insurance sector, representing 70% of the market based on gross premiums, has been slightly contracting since 2019. While the GDP contracted by 6.2% in 2020, Figure 3 shows that the Thai non-life insurance business grew by 3.5% in the same year. Inflation rate, which can increase the cost of insurance, is moving with economic growth. The recession due to the COVID-19 pandemic in 2020 led to deflation or negative growth of 0.8% during the same period. However, this temporary deflation should not have much effect on the cost of insurance.

Figure 3: Macro Perspectives of Thai Life and Non-Life Insurance Markets



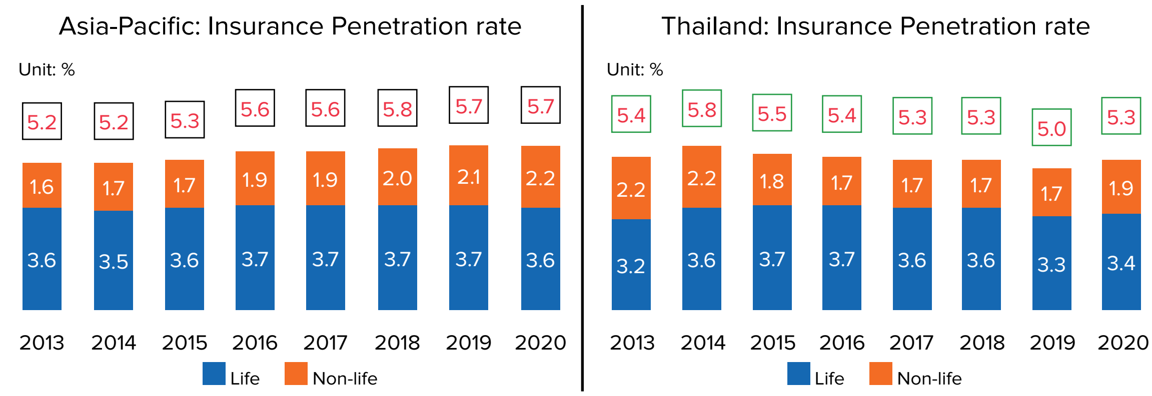
	2016	2017	2018	2019	2020
1. Life Insurance Gross Premium[1/] (Million Baht)	568,260	601,725	627,387	610,914	600,206
(Growth Rate)	5.7%	5.9%	4.3%	-2.6%	-1.8%
2. Non-Life Insurance Direct Premium[2/] (Million Baht)	209,743	218,434	231,990	244,055	252,618
(Growth Rate)	0.3%	4.1%	6.2%	5.2%	3.5%
3. Real GDP Growth Rate[3/]	3.4%	4.2%	4.2%	2.3%	-6.2
4. Inflation[4/]	0.2%	0.7%	1.1%	0.7%	-0.8%

Source: 1/ The Thai Life Assurance Association 2/ Thai General Insurance Association
3 and 4/ Office of the National Economic and Social Development Council

Remark: 1/ Life Insurance Gross Premium includes first year premium, renewal Premium and single premium

Thailand's insurance industry still has room to grow. Both life and non-life insurance markets showed low insurance penetration[42] and density[43] in Thailand. In 2020, insurance penetration for life and non-life insurance markets were 3.4% and 1.9% respectively. The average individual insurance contribution was USD 244 for life insurance and USD 139 for non-life insurance. Compared to the Asia-Pacific regional averages, insurance penetration rates and density in Thailand are slightly lower for both life and non-life businesses (Figures 4 and 5). In comparison with the global average, in 2020 the insurance penetration rate of Thailand was much lower (Thailand 5.3% vs. global average 7.4%), especially for non-life insurance (Thailand 1.9% vs. global average 4.1%). Similarly, the global average of insurance density was higher than that of Thailand (Thailand USD 383 vs. global average USD 809).

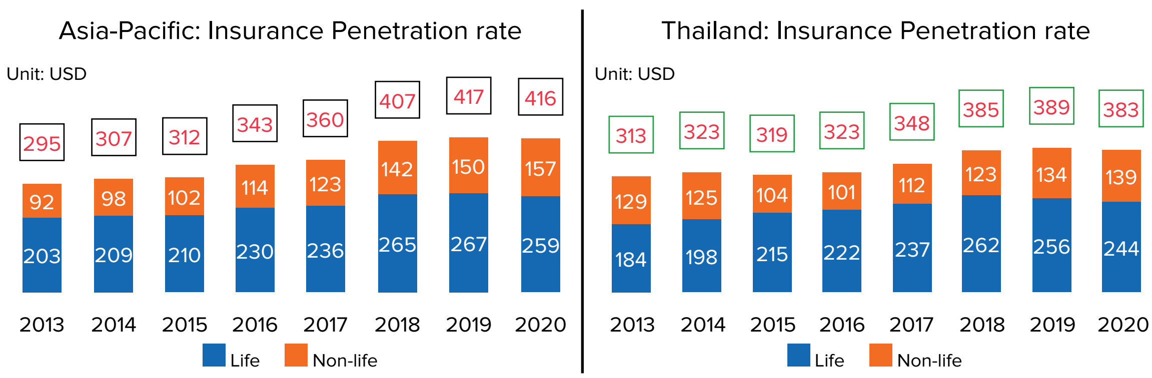
Figure 4: Life and Non-Life Insurance Penetration (%) from 2013-2020



Source: Sigma research, Swiss Re Institute

Remarks: Asia-Pacific includes Australia, Bangladesh, Hong Kong, India, Indonesia, Japan, Macao, Malaysia, New Zealand, Philippines, PR China, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, and Vietnam

Figure 5: Life and Non-Life Insurance Density (USD) from 2013-2020



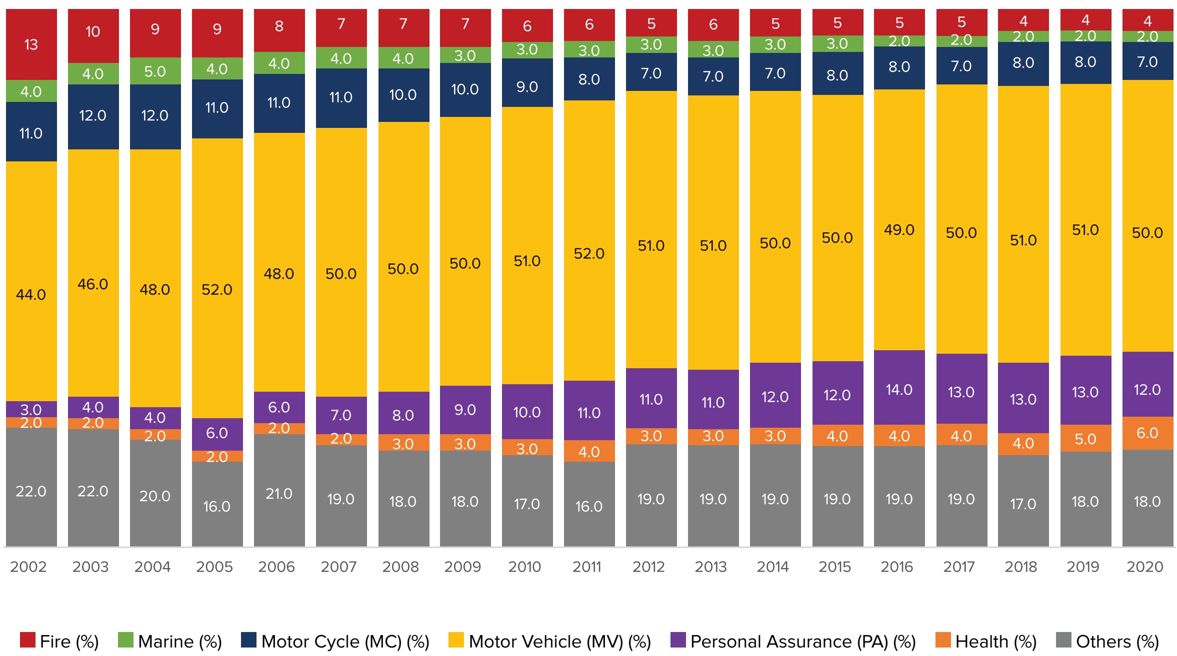
Source: Sigma research, Swiss Re Institute

Remarks: Asia-Pacific includes Australia, Bangladesh, Hong Kong, India, Indonesia, Japan, Macao, Malaysia, New Zealand, Philippines, PR China, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, and Vietnam

42 Insurance penetration is defined as direct premium as percentage of GDP.
43 Insurance density is defined as direct premium per capita.

The non-life insurance market has been dominated by motor vehicle insurance from 2002-2020. Personal accident and health insurance both have smaller market shares, but with modestly growing premiums (Figure 6).

Figure 6: Market Share of Insurance Products in Thailand by Business Line (2002-2020)



Source: Office of Insurance Commission Compiled by Insurance Premium Rating Bureau, Thai General Insurance Association

Inclusive Insurance is defined by the International Association of Insurance Supervisors (IAIS) as a broad concept that refers to "all insurance products aimed at the excluded or underserved market, rather than just those aimed at the poor or a narrow conception of the low-income market."[44] In this study, inclusive insurance will also cover the vulnerable group including older people, farmers, riders[45], MSMEs[46], youth and those suffering from gender inequality.

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44 IAIS (2015) Issues Paper on Conduct of Business in Inclusive Insurance.

45 Riders are defined as persons who ride motorcycles to provide services like carrying passengers and delivering goods such as foods, parcels and documents. The riders working under large food-delivery platforms or big delivering service companies are considered to be in the formal sector. By contrast, those freelance riders, who carries passengers, are considered part of the informal sector.

46 According to the Ministerial Regulations on the Designation of the Characteristics of Small and Medium Enterprises Promotion Act B.E. 2562 (2019), issued by the Prime Minister, the official definition of MSMEs is based on annual revenue, employment and sectors.

1. Micro enterprises in manufacturing, trade and services are defined as those enterprises with annual revenue of not more than 1.8 million baht or has not more than 5 employees.
2. Small enterprises in manufacturing are those enterprises with more than 1.8 million baht but not more than 100 million bath or has more than 5 employees but not more than 50 employees. Small enterprises in trade and service are defined as those enterprises with more than 1.8 million baht but not more than 50 million bath or has more than 5 employees but not more than 30 employees.
3. Medium enterprises in manufacturing are those enterprises with more than 100 million baht but not more than 500 million bath or has more than 50 employees but not more than 200 employees. Medium enterprises in trade and service are defined as those enterprises with more than 50 million baht but not more than 300 million bath or has more than 30 employees but not more than 100 employees.

The Thai inclusive insurance remains underdeveloped and micro insurance is introduced as part of inclusive insurance. To provide affordable insurance products for the poor and vulnerable groups, a new sub-category of insurance products, called microinsurance, was introduced to the market. Microinsurance – defined more specifically as "insurance that is accessed by the low-income population, provided by a variety of different entities, but operates in accordance with generally accepted insurance practices" There are five main types of microinsurance products available in the Thai market including; motorcyclist accident, personal accident, student accident, residential fire, and crop insurance. Crop insurance covers rice and maize farmers and is the only type of microinsurance products that the government has subsidized the premiums for since 2011. In 2020, the crop insurance premium was 3,062 million baht while accident insurance and fire insurance combined was only 507 million baht. Without crop insurance, the microinsurance products have shown small growth rate since 2012 and accounted for only an annual 0.2% of the overall market premium. The proportion of microinsurance of 0.2% has been quite stable since 2012 (Table 3 and Table 4).

Crop insurance grew rapidly over 2012-2020 with support from key stakeholders. With strong support and pro-active engagement from various stakeholders such as the Fiscal Policy Office, the Department of Agriculture and Agricultural Extension, the Bank of Agriculture and Agricultural Cooperatives, and the Thai General Insurance Association, crop insurance expanded tremendously. Premiums grew from 26 million baht in 2012 to 3,062 million baht in 2020. Therefore, the crop insurance premiums alone pushed total premium of microinsurance products from THB 507 million (USD 14.7 million) to THB 3,570 million (USD 103.5 million) in 2020 (Figures 7 and 8).

Table 3: Microinsurance Products Classified by Type (2012-2020)

Year	Motorcyclist Accident		Personal Accident		Student Accident		Residential Fire Insurance		Crop Insurance	
	Number of Policies	Direct Premiums (Thousand Baht)	Number of Policies	Direct Premiums (Thousand Baht)	Number of Policies	Direct Premiums (Thousand Baht)	Number of Policies	Direct Premiums (Thousand Baht)	Number of Policies	Direct Premiums (Thousand Baht)
2012	40	1,031	205,863	71,740	1,840	113,073	37,861	193,727	1,700	26,621
2013	11	81	531,682	164,381	2,076	117,101	62,123	177,619	55,430	512,851
2014	41	1,477	637,610	202,129	2,145	128,576	58,032	56,374	2,076	198,014
2015	15	75	783,927	255,979	1,917	131,436	63,017	65,243	44,539	280,987
2016	18	55	732,504	238,832	5,872	253,790	2,494	814	13,453	971,718
2017	1,687	5,883	496,275	155,495	57,310	602,048	7,575	28,689	4,794	1,298,566
2018	7	30	441,567	149,991	4,642	255,341	58,705	42,817	10,107	1,308,733
2019	6	21	438,776	163,643	7,311	265,804	12,961	34,897	9,712	1,389,673
2020	8	84	413,543	129,066	6,702	347,255	11,268	31,252	10,906	3,062,605

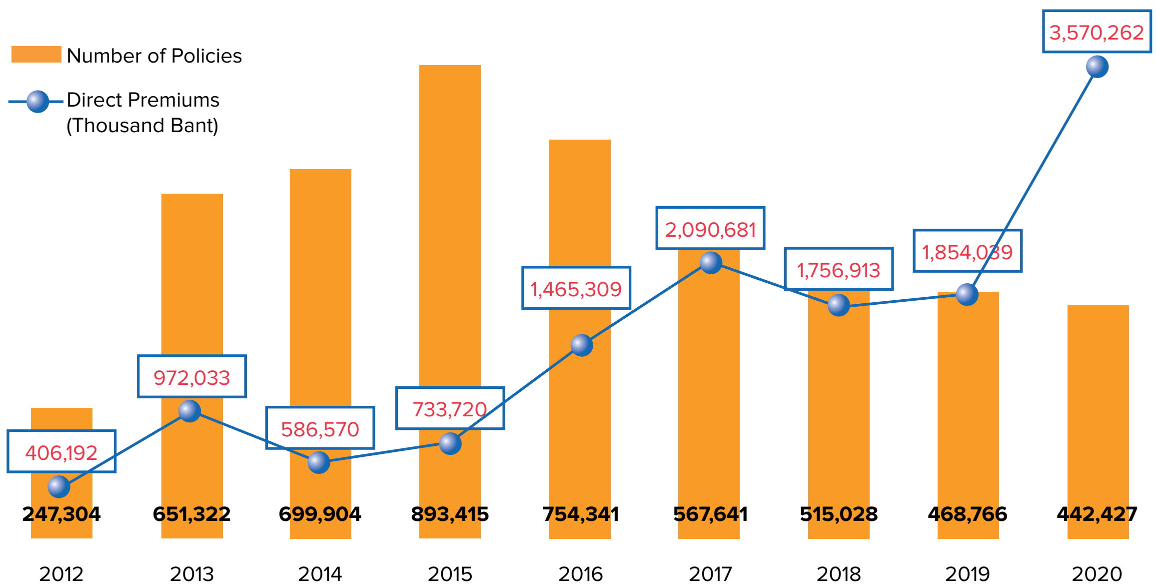
Source: Non - Life Insurance Distribution Channel Report from Statistics Division of Examination Planning and Development Department, Office of Insurance Commission

Table 4: Proportion of Microinsurance Products to Overall Non-life Insurance Products

Year	Total Microinsurance Products		Overall Non-life Insurance Products		% of total Microinsurance Products to Overall Market		Microinsurance Products (excluding crop insurance)		% of total Microinsurance Products (excluding crop insurance) to Overall Market	
	Total Number of Policies	Total Direct Premiums (Thousand Baht)	Total Number of Policies	Total Direct Premiums (Thousand Baht)	Number of Policies	Direct Premiums	Number of Policies	Direct Premiums (Thousand Baht)	Number of Policies	Direct Premiums (Thousand Baht)
2012	247,304	406,192	51,159,309	181,717,856	0.5%	0.2%	245,604	379,571	0.5%	0.2%
2013	651,322	972,033	69,253,546	203,665,202	0.9%	0.5%	595,892	459,182	0.9%	0.2%
2014	699,904	586,570	62,193,714	205,607,674	1.1%	0.3%	697,828	388,556	1.1%	0.2%
2015	893,415	733,720	63,854,404	210,502,971	1.4%	0.3%	848,876	452,733	1.3%	0.2%
2016	754,341	1,465,309	62,969,607	211,943,906	1.2%	0.7%	740,888	493,591	1.2%	0.2%
2017	567,641	2,090,681	61,385,851	218,883,586	0.9%	1.0%	562,847	792,115	0.9%	0.4%
2018	515,028	1,756,913	63,917,204	233,090,084	0.8%	0.8%	504,921	448,180	0.8%	0.2%
2019	468,766	1,854,039	66,521,149	245,499,634	0.7%	0.8%	459,054	464,366	0.7%	0.2%
2020	442,427	3,570,262	72,584,872	253,174,049	0.6%	1.4%	431,521	507,657	0.6%	0.2%

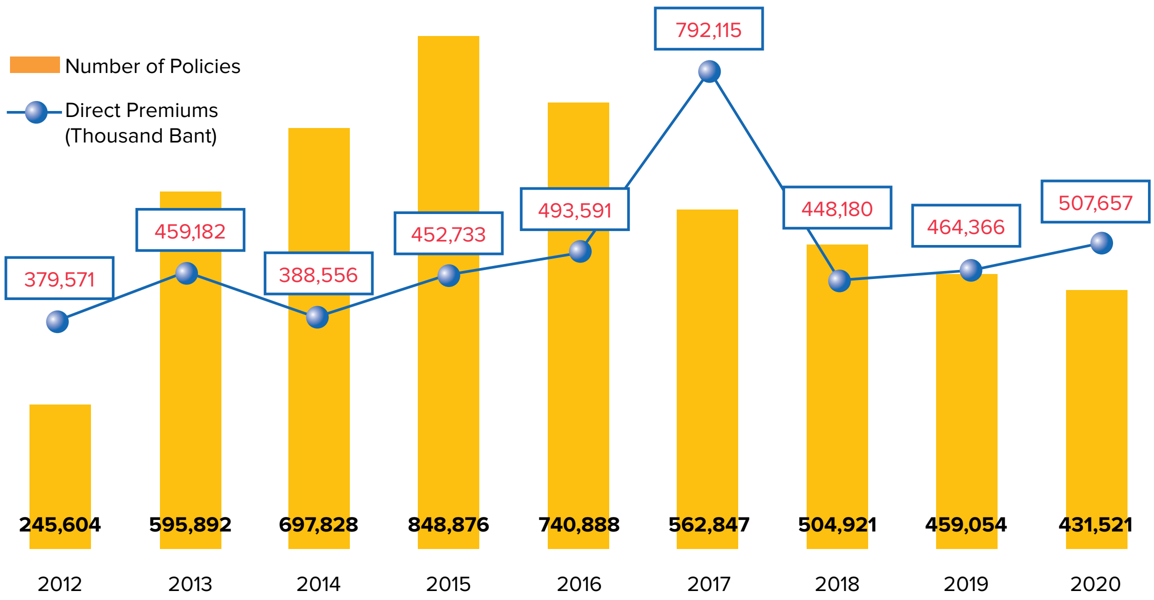
Source: Non - Life Insurance Distribution Channel Report from Statistics Division of Examination Planning and Development Department, Office of Insurance Commission

Figure 7: Number of Microinsurance Policies and Direct Premium (Including Crop Insurance) (2012-2020)



Source: Non - Life Insurance Distribution Channel Report, Statistics Division of Examination Planning and Development Department, Office of Insurance Commission

Figure 8: Number of Microinsurance Policies and Direct Premium (Excluding Crop Insurance) (2012-2020)



Source: Non - Life Insurance Distribution Channel Report, Statistics Division of Examination Planning and Development Department, Office of Insurance Commission

Unprecedented risk of new variants of the COVID-19 led to huge losses in the Thai COVID-19 insurance market. During the COVID-19 crisis, unexpected underwriting risk in bargain COVID-19 insurance led to huge losses for some Thai insurers. In 2020, Thai insurers issued new COVID-19 products without prior knowledge of new variants, such as Delta and Omicron, which were much more easily to spread. As both the number of new infection cases and the number of claims were rising, sixteen of Thai insurers were affected by these cheap COVID-19 policies. Ten of them were listed in the Stock Exchange of Thailand and reported a total combined loss of THB 5.8 billion (USD 176 million) in Q3 2021.[47] As of April 1, 2022, the Ministry of Finance revoked the business licenses of 4 Thai insurers, as they failed to pay outstanding claims of COVID-19 policies.[48]

B. Legislation, Regulation, Institutional Capacity (the Environment)

Thai insurance business is governed by two main Acts: The Life and the Non-Life Insurance Acts B.E. 2535 (1992). The Acts set out basic regulatory principles including: formation and licensing, restrictions on shareholders and directors, deposit, reserve and capital requirements, restrictions on investment of funds and approval of policy wordings by the regulator. The OIC was established by the enactment of the Insurance Commission Act B.E.2550 (2007) with a mission to regulate and develop insurance business, as well as to protect the insurance benefits and rights of the people. Under the two Insurance Acts, the regulator and Minister of Finance issue various notifications, declarations, and regulations to accomplish the mission. For premium pricing and policy wordings, the OIC adopts "File and Use" regime which applies to certain types of policies including 'microinsurance' which contain rating and wording different from OIC's pre-approved standard policies or which has never been approved by OIC.

47 https://asia.nikkei.com/Spotlight/Coronavirus/Thai-insurers-face-huge-losses-from-bargain-COVID-policies
48 https://www.prachachat.net/breaking-news/news-900092

In its fourth Insurance Development Plan (2021 – 2025), the OIC had indicated its commitment for the insurance industry to contribute to sustainable development and has planned to launch the following initiatives on disaster risk management:

- Support risk management and implementation of the public sector's policies, which focus on the use of insurance for managing the national risk and facilitate public sector policy development
- Promote financial stability of the insurance industry to improve capacities to absorb risks
- Encourage the insurance sector to contribute to Thailand's sustainable development in terms of the environment, social and governance (ESG) matters and use the insurance system as a driving force of the Thai economy and society.

No regulations or guidelines currently exist to oblige insurance companies to invest in SDG-linked portfolios. The Securities and Exchange Commission, however, requires all listed companies, including insurers, to disclose ESG initiatives as part of good corporate governance.

Presently, there is no specific legislation or regulation for inclusive insurance or microinsurance in Thailand. The OIC had issued guidelines for micro-insurance policies classified by types of life insurance and non-life insurance products. The guidelines for non-life micro-insurance policies include:

- No conditions for termination of the insurance policy
- In the event that there is coverage for funeral expenses, a waiting period of not more than 180 days needs to be specified (for death from illness)
- Insurance premium not exceeding 1,000 baht per year for the following policies: personal accident (including income compensation during hospitalization and funeral expenses), insurance for low-cost housing (coverage against fire, lightning, explosion and rent for temporary accommodation, insurance for retail shops (against fire, lightning, explosion). The premiums for other insurance policies are as specified by the registrar.

The guidelines for life micro-insurance, savings insurance and term insurance policies include:

- Use of one hundred percent mortality rate according to the Thai Mortality Table 2017, ordinary type or industrial type, separated by sex.
- An operating fee rate of no less than two percent per year shall be used to calculate the insurance premium rate with an assumption that the calculation of various benefits occurs at the end of the annual policy date.
- The expense rate for insurance premiums shall not exceed twenty five percent of the total annual premiums.
- The insurance premium rate shall not exceed 1000 baht/year, except for the savings insurance policy whose Insurance premium shall not exceeding 500 baht/month
- Application of premium rates shall be determined as follows:
  1. Monthly premium rate not more than nine percent of the annual premium rate
  2. Three-month insurance premium rate not more than twenty seven percent of the annual premium rate
  3. Six-month insurance premium rate not more than fifty-two percent of the annual premium rate

Specifically, the scope of microinsurance in this report is the product-driven by private insurers to support low-income earners in addition to government social welfare programs. Crop insurance is one type of microinsurance product for which the government and the Bank of Agriculture and Agricultural Cooperatives subsidize premiums. A microinsurance policy not only carries a low premium and limited coverage, but the policies have also simple wordings, a simplified claims process, and are available through convenient channels of sale including counter service or convenience stores. To buy a policy, only national identity card and mobile-phone number are required. Customers receive a confirmation message from the insurer via the phone number after premium receipt.

In collaboration with Thai Life Assurance Association and Thai General Insurance Association, the OIC has developed and promoted the microinsurance products including life insurance, residential fire insurance, and personal accident insurance. For example, “Microinsurance 200” was launched in 2013 for people 20 to 60 years old. The premium was 200 baht per year and provided coverage of up to 100,000 baht, depending on the type of loss as follows: (1) 100,000 baht for accidental death, loss of hand, foot, or eyesight, or permanent disability, (2) 50,000 baht for accidental death, loss of hand, foot, or eyesight, or permanent disability, due to motorcycle accident (whether as the driver or a rider of a motorcycle), or in the case of murder or assault, and (3) 10,000 baht for funeral expenses due to death from illness (after the first 120 days of the policy term).

Government’s tax incentives support insurance protection of taxpayers. To promote life and health security and long-term saving for Thai nationals, life insurance premiums for policies with at least a minimum of duration of at least 10 years, healthcare insurance premium paid and pension insurance premiums paid are deductible from their assessable income for taxation purpose.

C. Market Demand

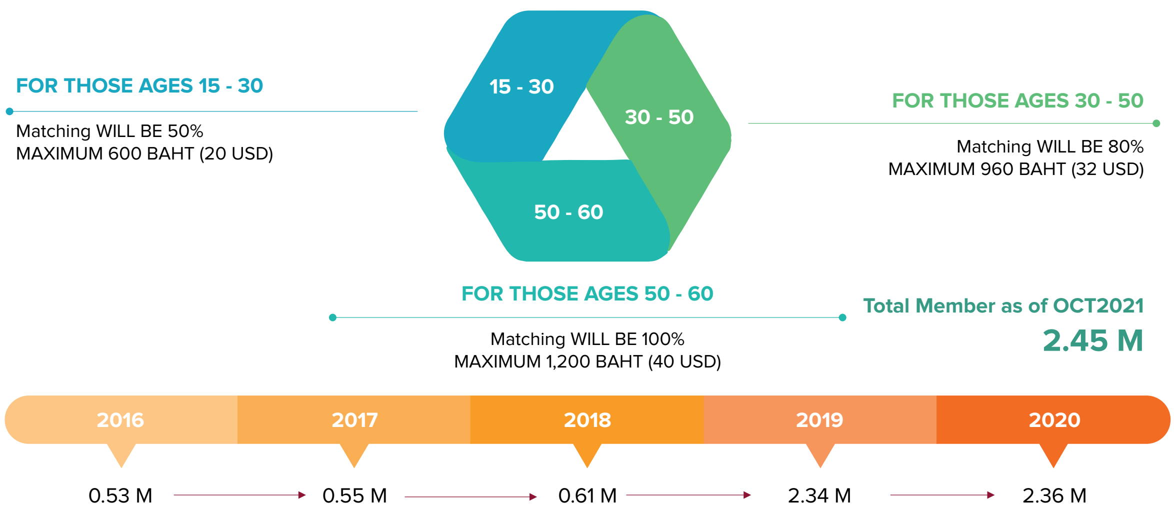
Lack of awareness and low levels of insurance literacy are two main reasons that hinder the demand for insurance in the poor and vulnerable groups. The development of the microinsurance market in Thailand has been challenging. With low incomes and lacking an awareness of managing their levels of risk, vulnerable groups place a low priority on financial planning especially insurance. The Insurance Development Plan Vol 4 (2021-2025), sets one of its key strategies as “ to cultivate a risk management culture for individuals and businesses.” OIC has also set a goal to promote and get courses on insurance into education system at all levels.

The government’s promotion of the national savings agenda has been recognized as progressing well. The National Savings Fund (NSF) has registered 2.45 million enrollees in 2021 from 400,000 in 2016. This represents 3.7% of the population. The size of NSF reached THB 7,194.92 million (USD 208.5 million). The largest group of members are farmers, (47.51%), self-employed (30.21%) and students (6.62%). All members contribute and these contributions are matched by the government at 50%-100% of member’s contribution (Figures 9 and 10). Participation in the NSF aims at promoting savings for retirement at an early age, however, it cannot adequately provide financial protection against such risks as loss of livelihood. The NSF allows for members to receive death benefits from the funeral welfare fund, but it does not provide basic income security cover. Financial protection against loss of income is a great need especially for informal workers, whose basic health risks are at least covered through the Universal Coverage Scheme (UCS).

The need for insurance literacy for their members is an integral part of an overarching financial literacy framework. Therefore, the adoption of a holistic policy on microinsurance as part of a broader goal of financial inclusion should be promoted. Collaborative efforts between government entities and private insurers through associations should be facilitated in creating microinsurance awareness and proper product designs to increase inclusive insurance demand and boost future market development

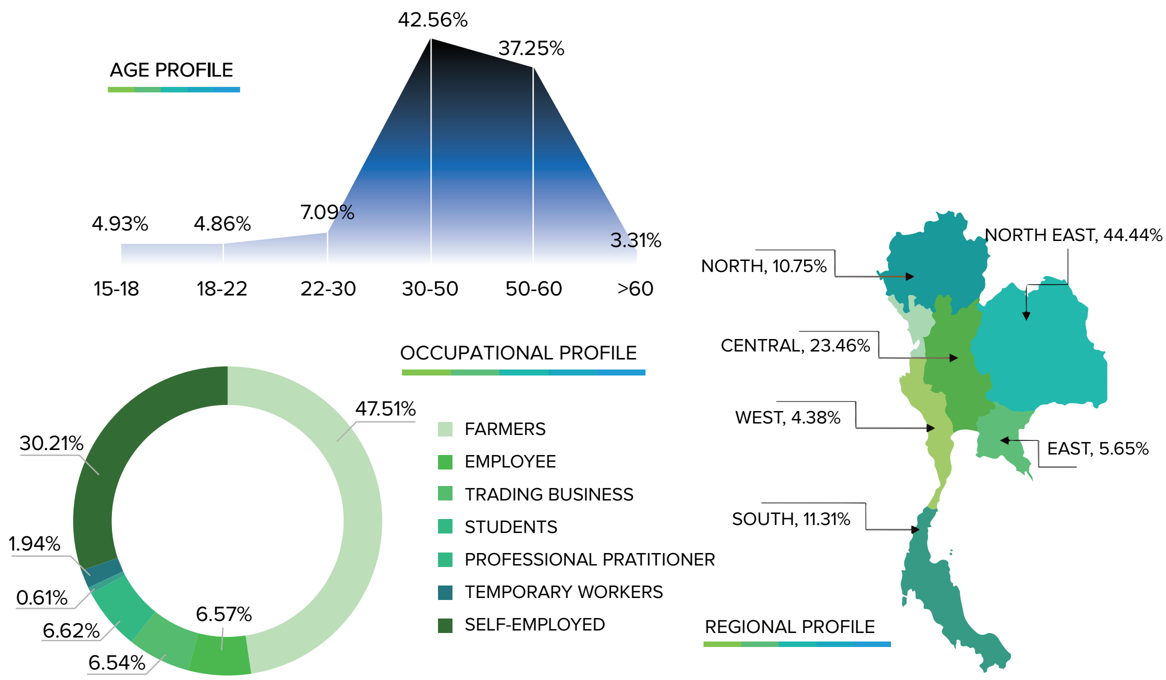
Figure 9: Total Number of National Savings Fund Members and Matching Fund

by Age of Member



Source: National Saving Fund

Figure 10: Profile of National Savings Fund Members by Age, Occupation and Region



Source: National Saving Fund

Digital technology is promising in transforming the microinsurance market. The advent of digital technology could change the landscape of microinsurance in Thailand. It can help reduce the operating costs for insurers and increase access for the poor and vulnerable groups to insurance services through the insurer's platform. Many of the stakeholders point out that a mobile-based platform is the most promising new deliverable channel for insurance industry. Thailand is a global leader in mobile banking usage and recent government support and relief measures are implemented through mobile applications. Many organizations share their success stories in training their clients to adopt their mobile applications. Currently, these applications provide many services such as premium payment, insurance policy information checking and hospital finder. However, some groups of the poor and the vulnerable groups still do not have access to reliable internet connection, do not have smart phones and have low levels of digital literacy.

D. Supply, Providers

The insurers in Thailand still hesitate to enter the microinsurance market. There are 55 general insurance companies in Thailand (October 31, 2021) comprising 50 non-life insurance, 4 healthcare and 1 Reinsurer. Four of the general insurance companies are foreign owned branches. The insurance companies are weighing up the potentially large untapped insurance market of the poor and vulnerable groups versus the viability of this business. Although insurers rely on "the law of large numbers" to manage their portfolio risk, low margins and relatively high operating costs of microinsurance products make the microinsurance market less attractive. The government could help support the initial development of the microinsurance market to aid the poor and vulnerable groups , and provide proper protection against risks to enhance their welfare. However, government resources are limited. Therefore, the private sector must take responsibility to help provide better access to tools to better manage financial risk.

The poor and vulnerable groups need tailor-made insurance products. Given a wide range of customers' demands for insurance products, the insurers should design products that fit the specific needs of the end users. The design of desirable products for the poor and vulnerable groups should have the following features: affordable price or premium, small size, simple contract, short-term, flexible payment options. The poor and vulnerable groups e.g. farmers need help to adopt insurance products from those whom they trust such as community leaders, familiar officers of specific financial institutions or cooperatives.

Heath Insurance

Thailand has a set of government programs that is aimed at creating health security for all Thai people.[49] Access to health insurance in Thailand is provided through social security programs and are available to all citizens at any income levels. These government programs are : 1) Universal Coverage Scheme (UCS) administered by the National Health Security Office (NHSO), 2) Social Security Scheme (SSS) administered by the Social Security Office, and 3) Civil Servant Medical Benefit Scheme (CSMBS)

49 Migrants in Thailand are provided health protection by different measures. Migrants can be largely divided into 2 groups which are (1) Stateless people, and (2) foreign labourers. Stateless peoples are provided health protection through cabinet approvals of Ministry of Public Health proposal which would be proposed regularly (Normally on annual basis) with benefits similar to those provided in the Universal Coverage Scheme. Health protections for foreign labours in Thailand are comprised of those employed formally and registered to the Social Security Scheme, and those registered to work in informal sector works such as maid or daily workers in construction sites. Those in Social Security system are eligible to get heath protections similar to those provided to Thai labours, while those in the informal section or employment are required to purchase health insurance to ensure health protection during their stay in Thailand. This scheme is also administrated by Ministry of Public Health of Thailand.

administered by the Comptroller General's Department. Each program has different structures and scopes and covers different groups of beneficiaries (Annex 3).

Thai government cannot meet all demand for microinsurance, while private insurers need more incentives to provide microinsurance products. In 2019, 99.9% of Thai people were covered by government healthcare-related programs.[50] Given the large role of government as an insurer for health-related risks, and with a large sector of the population not able to afford premiums and a low awareness of benefits of insurance, private insurers have less incentives to innovate and offer pure health microinsurance product that suits low-income segment and penetrate the market. As coverages under the basic income security for persons of active age and income compensation coverage for sickness are heavily concentrated among government employees and formal-sector workers, the informal workers needs are not being met by the government schemes.

Each government program provides healthcare services to specific groups of population and is funded differently. Refer to Annex 4 for a summary of details on the UCS scheme.

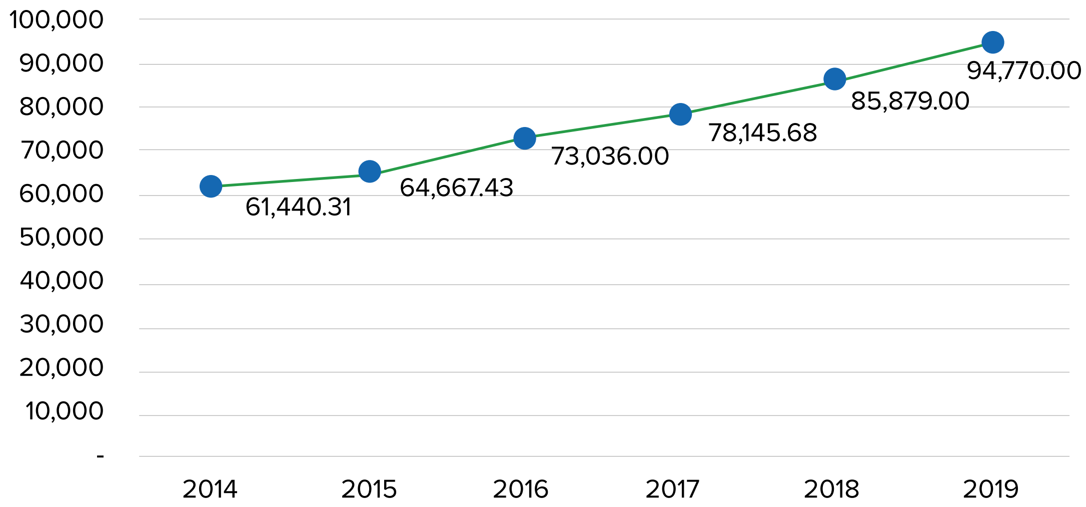
The three health protection programs are among the top highest government expenditures.[51] An Increasing aging population, emerging diseases, sharp increase in health care costs together with limited fiscal space are key factors that raise concern on sustainability of the government programs. The total compensation of SSS continues to grow with the compound annual growth rate (CAGR) of 9.05% a year (Figure 11), which can jeopardize the social security fund in the future. Meanwhile, CAGR of total expenditure for the UCS is at 2.87% a year as shown in Figure 12. Interestingly, we witness a slowdown in the rise of expenditures in the Civil Servant Medical Benefit Scheme implying the government's attempts to control this expenditure through various measures such as drug list for direct disbursement and budget cap to maintain sustainability of the CSMBS. (Figure 13). One way to maintain sustainability of the government program while keeping the same level of basic protection is to create areas for private participation in health insurance.

50 Thailand Social Protection Diagnostic Review, Social Protection Mapping and Vulnerability Analysis, ILO, UNICEF, IOM, UN Women 2021

51 The five social protection programs with the highest expenditures are: 1) CSMBS 2) UCS 3) SSS 4) Social Welfare Card, and 5) Old-Age Allowance. Thailand Social Protection Diagnostic Review, Social Protection Mapping and Vulnerability Analysis, ILO, UNICEF, IOM, UN Women 2021

Figure 11: Total Compensation of Social Security Scheme

Unit: Millions Thai Baht

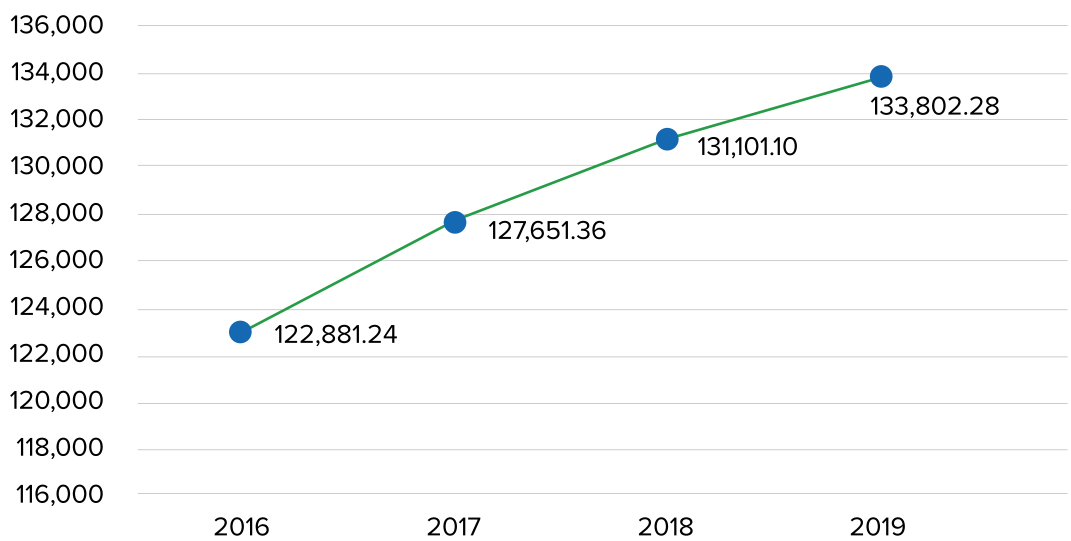


Source: Social Security Office

Remarks: Total compensation includes expenditures on 7 benefits covered by the Social Security Scheme namely sickness, pregnancy, invalidity, death, unemployment, child allowance, and old-age. It excludes administration cost, and other expenditures of the social security funds. Employers and employees contribute equally at 5% of salary and wages, but not exceeding 750 THB (21.74 USD) a month for each employee.

Figure 12: Total Expenditure for Universal Coverage Scheme

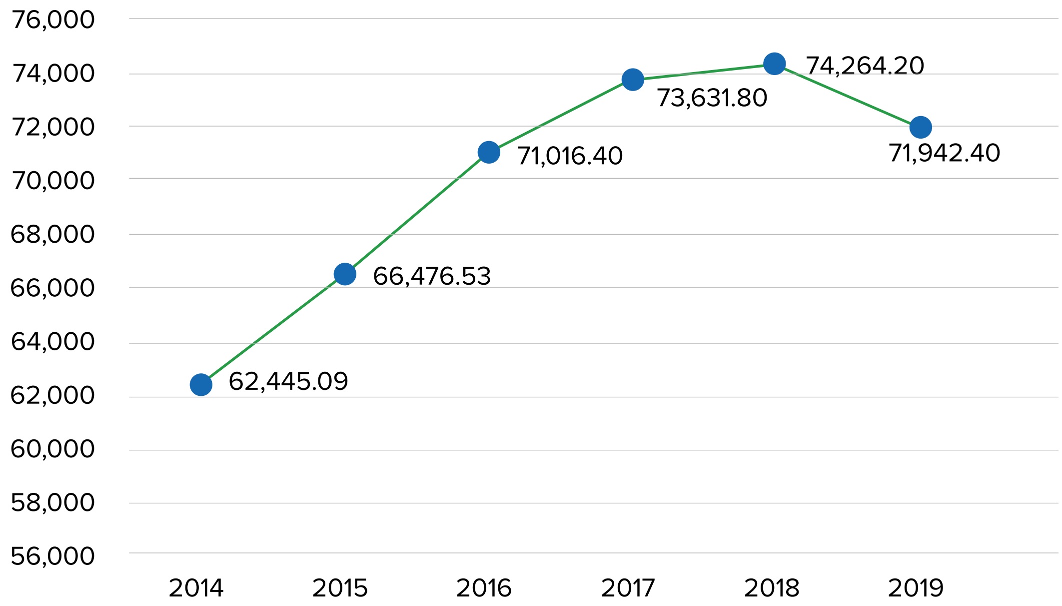
Unit: Millions Thai Baht



Source: National Health Security Office

Figure 13: Total Expenditure for Civil Servant Medical Benefit Scheme

Unit: Millions Thai Baht



Source: Budget Bureau

Microinsurance

There are five main microinsurance products available in the market including motorcyclist accident, personal accident (PA), student accident, residential fire, and crop insurance. Personal accident is the most popular microinsurance product with the highest number of policies sold. This section will focus on personal accident product.

PA microinsurance products are event-based and insurers have been voluntarily offering them since 2012 with support from the OIC. They are targeted towards lower income earners, usually have a one-year policy coverage and are distributed by insurance companies through agents, counter services, brokers, the Government Savings Bank and post offices. For example, Sukjai-Plus policy, launched in March, 2022, were offered by 18 non-life insurers and 1 life insurer.

Table 5 shows selected event-based microinsurance policies from 2016-2020, that covered death, dismemberment, eyesight, and total permanent disability from the accidents (except those incurred from riding or traveling by motorcycle). The sale period of these products correspond either to the New Year or the Songkran Festival (Thai New Year) and policy coverage varies between 30 days to 1 year. Microinsurance penetration significantly spiked in 2020 because products included COVID-19 and vaccine side effects coverage with a low premium (THB 10 / USD 0.29) and including a lump sum payment of THB 3,000 (USD 86.94), in addition to the sum insured limit of THB 100,000 (USD 2,897.96).

The characteristics and historical uptake of event-based microinsurance products reflect the limited understanding and prioritization of insurance as a risk transfer mechanism. It is well-known that incidences of traffic accidents increase during long holidays such as Songkran or the New Year which would presumably encourage the adoption of insurance as a risk protection tool. Data from the OIC (Table 4) show, however, that policies sold have been decreasing in the past five years although premiums have generally increased. It is inferred that the demand for such products has not increased and that it is of low priority for the target low-income and vulnerable consumers. Private insurers have expressed the perception that the microinsurance market is not profitable and suggest that the government should take a leading role in filling the gap in this market.[52]

Table 5: Selected Microinsurance Policies from 2016-2020

<table>
<tr><th>Year</th><th>Microinsurance Policy</th><th>Premium (Baht)</th><th>Sum Insured (Baht)</th><th>Coverage</th><th>Total Policy Sales (Unit)</th></tr>
<tr><td rowspan="2">2016</td><td>1. Songkran Sukjai
Sale Duration:
30/03/2016 - 30/04/2016
Insurance Period: 1 year</td><td>100</td><td>100,000</td><td rowspan="9">Death, Dismemberment/ Loss of Eyesight, and Total Permanent Disability from Accident

Excluding Murder/ Assault and Accidents from Riding or Traveling by Motorcycle</td><td>NA</td></tr>
<tr><td>2. Wan Prakanpai Sukjai
Sale Duration:
15/09/2016 - 15/10/2016
Insurance Period: 1 year</td><td>100</td><td>100,000</td><td>NA</td></tr>
<tr><td rowspan="2">2017</td><td>1. Songkran Sukjai
Sale Duration:
15/03/2017 - 30/04/2017
Insurance Period: 1 year</td><td>100</td><td>100,000</td><td>63,069</td></tr>
<tr><td>2. New Year Sukjai
Sale Duration:
15/12/2017 - 31/01/2018
Insurance Period: 1 year</td><td>222</td><td>100,000</td><td>14,006</td></tr>
<tr><td rowspan="2">2018</td><td>1. Songkran Unjai
Sale Duration:
01/04/2018 - 30/04/2018
Insurance Period: 30 days</td><td>10</td><td>100,000</td><td>1,327,193</td></tr>
<tr><td>2. New Year Unjai
Sale Duration:
15/12/2018 -31/01/2019
Insurance Period: 30 days</td><td>7</td><td>100,000</td><td>NA</td></tr>
<tr><td rowspan="2">2019</td><td>1. Songkran - Tukjai
Sale Duration:
01/04/2019 - 31/05/2019
Insurance Period: 30 days</td><td>7</td><td>100,000</td><td>724,506</td></tr>
<tr><td>2. Unjai New Year Plus
Sale Duration:
15/12/2019 - 31/01/2020
Insurance Period: 30 days</td><td>7</td><td>100,000</td><td>568,947</td></tr>
<tr><td>2020</td><td>Songkran – Unjai New Normal Super Plus & COVID-19
Sale Duration:
01/04/2020 – 31/05/2021
Insurance Period: 30 days</td><td>10</td><td>100,000 & Lump Sum Payment COVID-19: 3,000 & COVID-19 Vaccine Side Effects: 300 Baht per Day (Maximum 20 Days)</td><td>8,515,064</td></tr>
</table>

Source: Office of Insurance Commission

52 From interview with Thai insurers

Insurance for MSME

Micro, small and medium enterprises (MSMEs) are also considered as vulnerable groups. In 2020, MSMEs accounted for 99.5% of the total number of Thai enterprises and the sector comprised 71.2% of total employment. Furthermore, MSMEs generated approximately 34.2% of Thailand's GDP. Usually, they have limited access to finance and markets and suffer from shortage of labor. Compared to their large enterprise counterparts, they lag behind in adopting technology due to their limited ability to invest in R&D and innovation. They tend to have high costs of doing business. Since they are striving to survive especially during COVID-19 crisis, they put low priority on voluntary insurance.

The Thai government recognizes MSMEs as the foundation of the economy and provides a set of measures including insurance products to assist the sector during the pandemic crisis. The Office of Small and Medium Enterprises (OSMEP) had acknowledged the absence of insurance products that can protect MSMEs against such shocks as business interruption, which many have experienced due to the COVID-19 pandemic. Relevant insurance products for MSMEs should be considered that could include features on income or loan protection or could be tailor-made for women-owned MSMEs. Insurance literacy through digital platforms such as mobile phones should also be explored to support the risk management efforts of MSMEs.

A credit-linked insurance or credit-life insurance could be another option for MSMEs to protect their business and family of owners. Currently, this product is readily available at several commercial banks and financial institutions in Thailand, but it is not widely used among SMEs and mid-to-low income earners.[53] This product is designed to pay off borrower's outstanding debts if the borrower dies or is permanently disabled, so the business can continue, and the family members are not held responsible for any outstanding debts. Moreover, the remaining insurance payout after loan pay-off can be used by the family members. Credit life insurance can be applied to business credit, and mortgages.

Crop insurance

Thailand has made crop insurance scheme available for rice farmers who registered their plantations with the Department of Agricultural Extension since 2011. In 2011, the scheme provided the payment of claims for farmers who voluntarily buy insurance whose crops are totally destroyed by 6 perils including; flood, drought, cold weather, wind storm, hail, and fire. The insurers have now expanded perils to cover for pest and elephant invasion to suit needs of government and farmers. The crop insurance policies including policy wordings, premium rating and sum insured have been modified overtime based on needs of stakeholders and past claims experiences (Table 6). Insured areas of rice insurance scheme have increased from 1 million rais in 2011 to 43.5 million rais accounting for 72.3% of total plantation in 2021 (Table 7). The maize insurance scheme was developed by the same rationale of rice insurance scheme in 2019 (Table 8).

53 Based on our interview with some banks that serve SMEs and mid-to-low income clients, they still do not have this product to their clients.

The current crop insurance scheme is an extension of the Thai government relief program. The crop insurance scheme is called ‘top up scheme’ because it completely relies on the government disaster relief program under which farmers are paid a fixed allowance for compensation of their cost of cultivation (Figure 14). Rice farmers whose crops are totally destroyed by weather events or pests will be compensated from the government for THB 1,340 (USD 38.84) per rai or around 33 percent of total cost of production. As mentioned, crop insurance program established for rice and maize farmers provided a top-up payment for insured farmers by using the same loss assessment procedure of government disaster relief scheme. In 2021, the basic sum insured (Tier 1) was THB 1,260 (USD 36.52) per rai and additional sum insured (Tier 2) was THB 240 (USD 6.96) per rai (Figure 15). Costs of claims administration is borne internally by the Department of Agriculture and Agricultural Extension who acts as a loss adjustor of the government disaster relief scheme. Premiums are subsidized by government. In addition, farmers who are loan clients of with the Bank of Agriculture and Agricultural Co-operatives (BAAC) have further premium subsidy.

Table 6: Development of Rice Insurance Scheme in Thailand (2011-2021)

<table>
<tr><th>Year</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th><th>2021*</th></tr>
<tr><td>Peril Coverage</td><td>6 Perils : Flood, Drought, Cold, Wind Storm, Hail, Fire,</td><td colspan="7">7 Perils : Flood, Drought, Wind Storm, Hail, Fire, Cold and Pest</td><td colspan="3">8 Perils : Flood, Drought, Wind Storm, Hail, Fire, Cold, Pest, and Elephant Invasion</td></tr>
<tr><td rowspan="2">Premium Rate (USD/ Rai) (excluding Duty & VAT)</td><td rowspan="2" colspan="2">3.48</td><td colspan="2">3.48 – 13.76</td><td>3.48-13.04</td><td rowspan="2">2.90</td><td rowspan="2">2.61</td><td rowspan="2">2.61</td><td rowspan="2">2.46</td><td>1.68/ 6.09/ 6.66</td><td>1.59/ 6.09/ 6.66</td></tr>
<tr><td colspan="3">Based on 5 Risk Zones</td><td colspan="2">Based on 3 Risk Zones</td></tr>
<tr><td>Sum Insured</td><td>Below 60 days: 17.56 USD/Rai and Over 61 days: 40.57 USD/Rai</td><td colspan="5">USD 32.19 / Rai
Only Pest USD 16.08 /Rai</td><td colspan="5">USD 36.51 / Rai
Only Pest USD 18.26 /Rai</td></tr>
<tr><td>Net Premium (USD)</td><td>3,957,245</td><td>2,523,989</td><td>1,252</td><td>7,650,091</td><td>14,233,565</td><td>66,259,112</td><td>58,408,611</td><td>63,086,462</td><td>62,795,462</td><td>95,561,256</td><td>93,101,422</td></tr>
<tr><td>Loss Paid</td><td>22,038,448</td><td>7,436,627</td><td>901</td><td>3,711,231</td><td>4,427,321</td><td>23,832,285</td><td>60,776,330</td><td>52,068,632</td><td>139,842,278</td><td>15,083,675</td><td>44,344,616</td></tr>
<tr><td>Loss Ratio (%)</td><td>556.9%</td><td>294.6%</td><td>72.01%</td><td>46.7%</td><td>30.8%</td><td>35.5%</td><td>103.6%</td><td>82.1%</td><td>222.7%</td><td>15.8%</td><td>47.63%</td></tr>
</table>

Source: Thai General Insurance Association

Remarks: * refers to preliminary data

Table 7: Coverages of Rice Insurance Scheme in Thailand (2011-2021)

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021*
Total Plantation Areas (Rais)	62,696,040	64,990,047	62,079,904	63,211,788	49,481,505	56,505,471	56,659,833	53,863,069	61,119,256	58,088,725	60,175,321
Insured Areas (Rais)	1,059,131	872,440	120	830,696	1,512,072	27,176,735	26,117,855	27,600,571	30,859,069	44,362,517	43,503,613
Penetration Ratio (%)	1.7%	1.3%	0.0%	1.3%	3.1%	48.1%	46.1%	51.2%	50.5%	76.5%	72.3%
Insured Farmers (Persons)	NA	45,716	NA	54,775	90,377	1,571,857	1,756,933	1,917,720	2,024,480	3,301,111	3,406,840

Source: Thai General Insurance Association

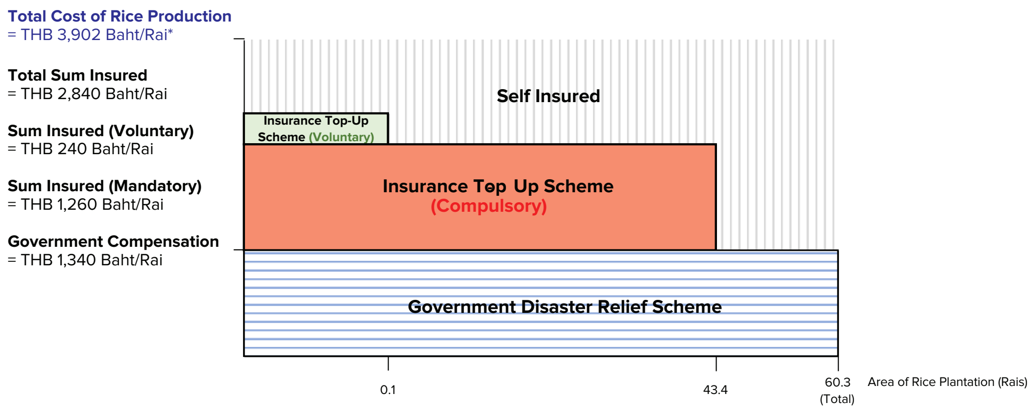
Remarks: NA means no data available; * refers to preliminary data

Table 8: Coverages of Maize Insurance Scheme in Thailand (2019-2021)

Year	2019 (Rainy Season)	2019 (Dry Season)	2020 (Rainy Season Only)	2021 (Rainy Season Only)
Plantation Areas (Rais)	2,834,640	664,195	5,341,487	5,285,506
Insured Areas (Rais)	1,402,975	461,162	2,139,244	1,488,068
Penetration Ratio (%)	49.5%	69.4%	40.4%	28.2%
Insured Farmers	89,192	53,249	111,858	82,194
Net Premium (USD)	1,880,684	327,562	6,628,597	4,928,209
Premium / Rai (USD)	1.71	1.71	4.64	4.53-15.94
Loss Paid (USD)	10,080,946	21,152	995,088	1,154,330
Loss Ratio (%)	536.0%	6.5%	15.0%	23.42%

Source: Thai General Insurance Association

Figure 14: The Structure of Total Sum Insured of Rice Insurance



*National (top-up) crop insurance scheme completely depends on government disaster scheme. When government increases amount of compensation to farmers, for example from 1,260 baht in 2020 to 1,340 baht in 2021, it will magnify the burden on government budget, and also signal less benefits for farmer who buy insurance voluntarily.

Source: Office of Agricultural Economics

Figure 15: Total Costs of Cultivation of Main Crops in Thailand

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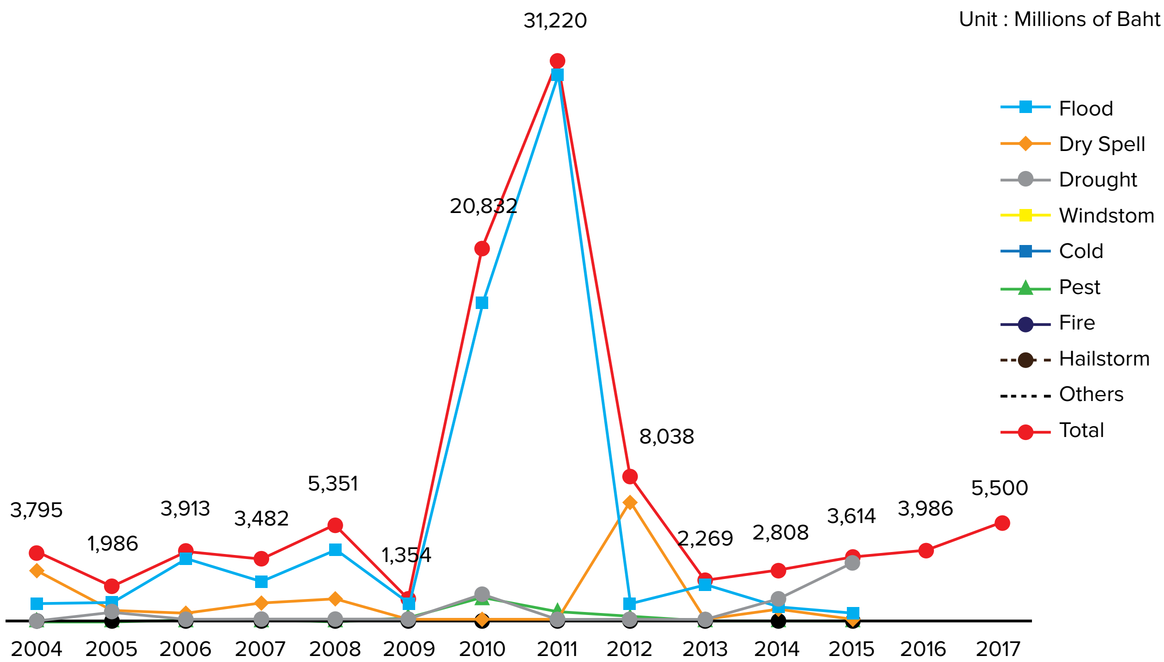
	Government Subsidy (THB/Rai)	Insurance Protection		Self Insured by Farmers	Total Costs of Cultivation (Baht/Rai)
		Tier 1	Tier 2		
Rice	1,113 (USD37.1/0.395 acres)	1,260 (USD 42/rai)	240 (USD 8/rai)	1,372.47 (USD 45.7/rai)	3,985.47 (USD 133)
Maize	1,148 (USD 38.2/rai)	1,500 (USD 50/rai)	240 (USD 8/rai)	1,759.47 (USD 58.6/rai)	4,647.47 (USD 155)
Cassava	1,148 (USD 38.2/rai)	-	-	5,467.79 (USD 182.3/rai)	6,615.79 (USD 221)
Sugar Cane	1,148 (USD 38.2/rai)	-	-	10,353.24 (USD 345.1/rai)	11,501.24 (USD 383)
Rubber Tree	1,690 (USD 56.3/rai)	-	-	11,719.39 (USD 390.6/rai)	13,409.39 (USD 447)

Source: Office of Agricultural Economics; Exchange rate at USD 1 = THB 30

Under this disaster relief program, the fiscal burden on crop sector compensating during 2004-2017 was at THB 98,148 million (around USD 3,262 million) as shown in Figure 16. To improve the crop insurance scheme, private insurers are willing to support this initiative but only with resource commitments from the government.

Figure 16: Total Disaster Relief Expenses on Crop 2004-2017



Source: Department of Agricultural Extension and Thai General Insurance Association

Insurance for women

There is no evidence of a gender-bias in common insurance products, however, anecdotal information indicate that gender equality is not a prominent agenda in insurance development and delivery and that there are opportunities to better cater to the unique financial risk protection needs and financial management roles of women. Disaggregated data on the insurance penetration across gender is not available. It is recommended that more specific insurance products be developed to promote gender equality and greater financial inclusion for all. Currently, there are few insurance products for women including health insurance products that will cover most common cancers in women.

IV. Market Conditions for Risk Finance

A. Existing Assessments of Disaster Risk

In Thailand, assessments of disaster risk are performed at national and sub-national levels. At the national level, the Department of Disaster Protection and Mitigation (DDPM) oversees the disaster risk assessment, while the Fiscal Policy Office (FPO) is responsible for fiscal risk assessments.[54] As part of the Disaster Risk Reduction Strategy, DDPM runs the Central Disaster Management Centre, which is responsible for conducting overall disaster risk assessment and supporting assessments at each level of Thailand's administrative structure as well as for relevant agencies. The guidelines of disaster risk assessment areas aim to: (1) encourage and support risk assessment process (2) strengthen the capacities of local districts and provinces in exposure and vulnerability assessment and (3) strengthen and improve national capacity for disaster risk assessment for risk management. The assessment looks into the status of disaster risks, hazards, exposure of populations and geographic areas, vulnerability, loss and impacts and cost effectiveness.

FPO analyzes the impact of disasters on the Thai economy and government's fiscal balance (e.g., revenues, expenditures, and fiscal debts). The impacts of these events are assessed for the government, off-budget funds, state-owned enterprises, and local administrations. FPO also determines the size of fiscal space using revenue sensitivity analysis, scenario analysis and fiscal early warning system. Foregone revenues are estimated from adverse effects of the disasters on businesses and people along with the consequences of the government's disaster relief programs. In addition, FPO is the secretariat of the Fiscal Discipline Committee, which determines the ratio of the Central Fund for Emergencies or Immediate Needs to the total budget. This ratio can influence the size of the budget available for disaster management.

At the sub-national level, Sub-district Administrative Organizations (SAO) conduct risk assessments as part of the process of developing disaster management plans. A set of guidelines[55] on the development of sub-district disaster management action plans has been set out for use by more than 5,300 SAOs. The SAO Chief Executive leads the Subdistrict Disaster Prevention and Mitigation Action Plan Drafting Committee which reviews the plans at the provincial level.

54 The Fiscal Policy Office (FPO) within the Ministry of Finance (MoF) is responsible for (1) recommending fiscal policies in the areas of revenues, expenditures, fiscal balance, asset management and public debts, (2) monitoring, evaluating and reporting fiscal situation and (3) giving advice on fiscal discipline and fiscal risk management. FPO conducts assessments of fiscal risks, stemming from various factors such as macroeconomic condition, financial system, government policies and performance of government agencies.

55 See Annex 6 for details of the guidelines.

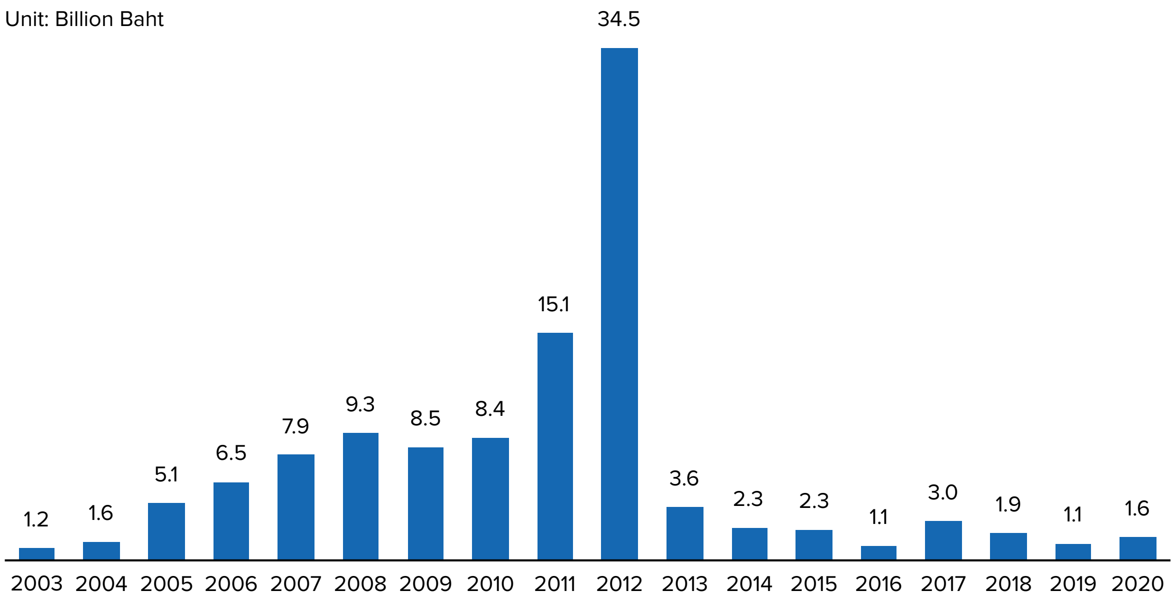
B. Fiscal Impact

The fiscal impact of disasters on Thailand has mainly been documented for flooding events, the worst of which was the 2011 great flood for which THB 34.5 billion (USD 999.99 million) of contingency fund was used for disaster relief. This comprised 1.4% of the total budget, which was below the annual earmark of between 2% and 3.5% for the Central Fund for Emergencies or Immediate Needs.

The allocations for contingency fund advances for disaster relief have generally decreased after the 2011 floods (Figure 17) from THB 34.5 billion (USD 999.99 million) in 2012 to THB 1.6 billion (USD 46.39 million) in 2020. The 2022 flooding has increased the allocation back up to as much as THB 23 billion (USD 666.79 million) and the government had set aside a total of THB 92.4 billion (USD 2.68 billion) for emergency responses in fiscal year 2023[56].

Data on the fiscal impact of other hazards are not widely available. The government, through the DDPM, has been working with different development partners to improve data collection on risks and vulnerabilities. One opportunity for collaboration is the use of analytic tools, such as risk modelling, to forecast potential impacts of disaster and catastrophic events on public financing.

Figure 17: The Size of Contingency Fund Advanced Used in 2003-2020



Source: Department of Disaster Prevention and Mitigation

56 Bangkok Post. Flood relief spending to hit B23bn. https://www.bangkokpost.com/business/2412368/flood-relief-spending-to-hit-b23bn

C. Existing Legal and Institutional Framework

Thailand has established the legal and policy frameworks for disaster risk management. The Disaster Prevention and Mitigation Act of 2007 sets the foundation for disaster risk management in the country and designated a National Disaster Prevention and Mitigation Committee (NDPMC) to direct and approve policymaking and ensure harmonization among national and local government and the private sector. The NDPMC also provides guidance on disaster prevention and mitigation operations and imposes regulations on post-disaster compensation and related expenditures jointly with the MOF.

The Department of Disaster Prevention and Management oversees disaster risk management in Thailand. It coordinates policy making at the national (chaired by the Prime Minister or Deputy Prime Minister), the provincial (chaired by the governor) and the Bangkok Metropolitan Administration (chaired by the Bangkok governor) levels so that relevant agencies can develop their respective action plans that align to the National Disaster Prevention and Mitigation Plan.

Under the DPMA Act 2007, disasters can be classified into 4 levels with an incident commander designated for each (Table 9).

Table 9: Disaster Management Levels and Key Incident Commanders in Thailand

Level	Disaster Scale	Definition	Key Incident Commander
1	Small	Disaster which can be controlled and mitigated by local administration alone	Local administration or district chief officers
2	Medium	Disaster which demands the help of Provincial Governor or Governor of Bangkok	Provincial Governor or Governor of Bangkok
3	Large	Disaster which has a strong impact on large areas or requires the presence of experts or special equipment	Minister of Interior
4	Catastrophic	Disaster which has highly severe effects on lives, properties and morale of all citizens or is beyond the control of national disaster prevention and mitigation commander	Prime Minister/Deputy Prime Minister

Sources: Ikeda and Palakhamarn (2020) based on Department of Disaster Prevention and Mitigation (2015)

Thailand does not currently have a disaster risk financing strategy that can guide the financial management of disaster risks and recommend the mix of financing instruments, including both risk retention and risk transfer solutions that would promote cost-effectiveness. The three main sources of funds for disaster risk management – Annual Budget, Central Fund and Contingency Fund Advances for Emergency Relief Assistance – are intended mainly for providing relief goods and health services, emergency and evacuation assistance, efforts to restore peace and order and procurement of supplies and equipment. None of the budget sources make any reference to ex-ante risk financing instruments such as insurance. The Ministry of Finance issues the Regulation on Official Advance Money for Aiding Victims of Disasters in Emergencies, B.E. 2562 (2019), which repeals the Regulations of the Ministry of Finance, Re: Official Advance Money for Aiding Victims of Disasters in Emergencies B.E.2556 (2013) and its Amendment (No.2) B.E.2559 (2016). Regarding the 2019 regulation, government agencies and local governments can access contingency fund advances to help victims of disasters in the immediate aftermath of a disaster event, before the regular budget for disaster relief is approved. When a disaster emergency takes place, the Ministry of Finance allows other government agencies that have access to the contingency fund to spend contingency fund advances with the approval of the relevant executive of each government agency.

The application of risk transfer principles is limited for the management of risks to public assets. The Public Asset Insurance Screening Committee's Resolution of 29 March 2021 (Annex 7) mandates government agencies to self-insure buildings and properties, essentially promoting risk retention for the financing of loss and damages. The Department of Treasury oversees the management of public assets, including immovable property and government land, which are mainly self-insured except for rental units whereby tenants are responsible for taking out fire insurance coverage. Insurance is not mandated for State Owned Enterprises but could potentially be included as one of the risk management tools within their disaster mitigation plans which the State Enterprise Policy Office (SEPO) had required for 2023-2027.[57] In Public and Private Partnership Projects (PPP), the private sector is responsible for necessary insurance over the concession period. After the asset is transferred to the public sector, the project owner will determine how to manage risks, including considering insurance.

At the sub-national level, local governments also follow the provisions of the Screening Committee's Resolution on self-insurance for public assets and additionally, can purchase insurance for public cars (such as ambulances and chemical trucks), durable goods (construction, medical, factory equipment) and buildings (except government offices and houses). Local governments, however, have more flexibility in utilizing their revenues and this could potentially allow for the ex-ante budgetary allocation for a variety of insurance solutions, provided that the premium and coverage are deemed of best value. Ex-post risk financing for local government is heavily reliant on allocations from the central government and those with small revenues are ill-equipped to adequately respond to emergency situations and recovery processes.

The Public Asset Insurance Screening Committee oversees the implementation of their resolution. This committee is chaired by the Permanent Secretary of the Minister of Finance and is comprised of six other committee members as follows:

1. A representative from the Budget Bureau
2. A representative from the Ministry of Digital Economy and Society
3. A representative from the Ministry of Foreign Affairs
4. A representative from the Office of the Attorney General
5. A representative from the Office of Insurance Commission
6. A representative from the Treasury Department, who also acts a secretary of the committee.

This committee can determine which public assets can be insured and to what extent through the cost-benefit study of risk transfer for public assets and long-term plan of public asset insurance. Also, the committee sets guidelines on public asset insurance requests for the government agencies in case the government agencies want to have insurance for new types of public assets. Therefore, public assets currently allowed for private insurance coverage can be expanded if necessary.

57 From our interview with SEPO, they did not mention any guidelines for SOE's mitigation plan for disaster risk. Therefore, we speculate that there is no specific guidance on risk transfer such as insurance.

Some of the challenges[58] facing the insurance of public assets in the country include the absence of data on historical losses, damage, and an inventory of assets that will enable assessments of value/ replacement costs. This information is crucial to understand the risks that are faced in relation to the management and maintenance of these assets, especially after disasters strike. Moreover, data sharing among government agencies and with the private sector will be necessary for accurate risk evaluation.

The acknowledgment of the role of insurance for disaster risk management has become more prominent in Thailand but this is similarly countered by the impression shared by some in government that insurance premiums would be too expensive and also that government budgets are sufficient for future disaster recovery expenses. These impressions, however, are based on past disaster-related data such as those from the 2011 floods. Forecast data are unavailable on the potential future fiscal impacts of disaster and on the possible cost-effectiveness of insurance for disaster risk management in Thailand. A cost benefit analysis could support and strengthen political will towards setting the necessary enabling policy framework for ex-ante risk financing.

In addition, the Personal Data Protection Act BE 2562 (PDPA) or Thailand's national data privacy law raises concern over data sharing. PDPA is designed to protect individual personal information, which is defined as "any data pertaining to a person that enables the identification of that person, whether directly or indirectly. Currently, this law prevents the government from sharing any personal risk data, without consent of data owners, to the private sector for purposes, for example, of risk analytics that could inform the design and development of insurance solutions.

D. Existing Disaster Risk Finance Mechanisms and Instruments

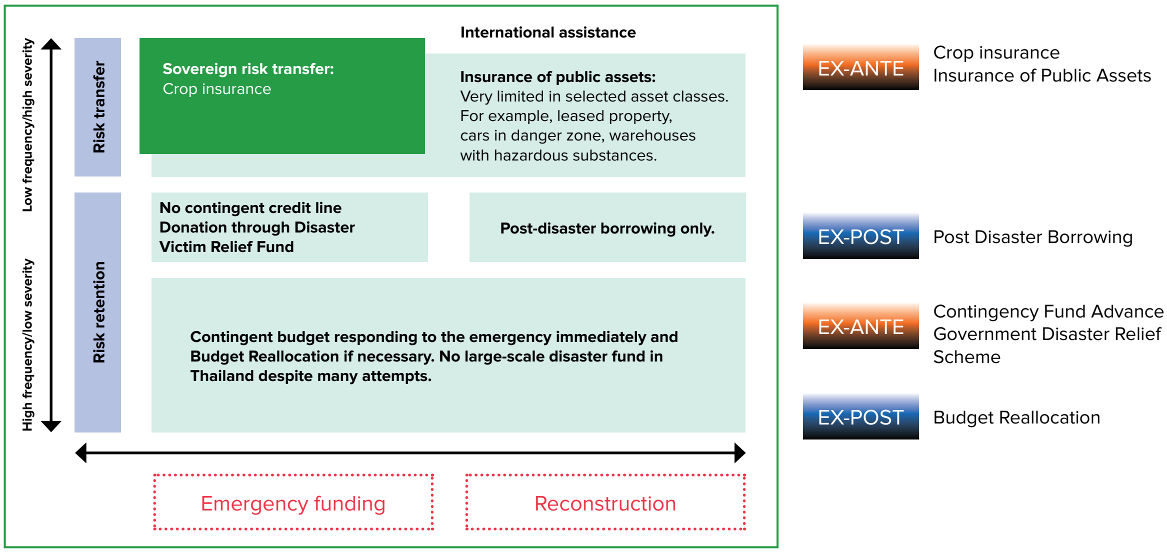
The Thai government relies on its budget and borrowings to deal with the impacts of disaster risks. Applying the risk layering strategy[59] to understand the existing disaster risk financing portfolio in Thailand, Figure 18 shows that for high frequency and low severity risks, the risk retention instruments used are the central government reserves and contingent funds complemented by post-disaster borrowing. For a crisis such as the COVID-19 pandemic, the government has had to borrow from the capital market as existing reserves proved to be insufficient.

For low frequency and high severity disasters, risk transfer instruments have been in place, including crop insurance and insurance of select public assets.

58 From interview with private insurers

59 The Risk Layering Strategy Framework encompasses a combination of different instruments to protect against disaster events of different frequency and severity. The bottom layer of risk includes high-frequency but low severity can be retained and managed through government's budgetary reserves and post-disaster budget reallocations or borrowing. The top layer of risk includes low-frequency but high severity can be transferred to insurance markets. This risk layering strategy ensures the optimal risk financing for governments.

Figure 18: Thailand's Disaster Risk Finance Mechanisms and Instruments



Source: Adapted World Bank Group, GFDRR (2017) by Fiscal Policy Research Institute Foundation

International aid has played a limited role in Thailand's risk financing portfolio as the country had only needed international assistance for extremely severe disasters such as the 2004 tsunami (USD 5 million grant from the Japanese government and World Bank) and the 2011 great flood (more than USD 20 million from various donors led by Japan).

Thailand had established a National Catastrophe Insurance Fund in 2011 following the great flood to fill the gap in an insurance/reinsurance market averse to providing coverage against disaster risks, especially flood risk. The fund served as both primary insurer and reinsurer and issued insurance coverages for flood, earthquake (at least magnitude of 7) and storm (from wind speed of 120 km/hour). The Fund was officially terminated in 2017, having been unable to demonstrate its utility since there was no other severe disasters had occurred since 2011. The DDPM had attempted to set up a new Disaster Risk Management Fund as part of its Strategy Plan for 2017-2021, but to no success as sustainability of financing could not be assured.

The Thai government also set up a Disaster Victim Relief Fund, administered by the Office of the Prime Minister, from the donations for the 1995 flooding and subsequent donations and therefore it does not rely on the government budget. The fund acts as a distributor of donations – gathering and channeling donations to disaster victims properly. The fund solicits donations in the event of disasters.

The suitability of other risk transfer instruments, such as catastrophe bonds, could be explored for Thailand to manage long-tail impacts of disaster events (as that experienced from the COVID-19 pandemic). The government could also look to international experiences and lessons from disaster risk financing funds of New Zealand, Turkey, Taiwan and the US and how these incorporated insurance schemes into their overall risk financing portfolios. Finally, the use of parametric insurance models could help enhance existing risk transfer instruments (i.e. crop insurance and public asset insurance) that subsequently make the case for investing into ex-ante risk financing and using of risk transfer instruments for disaster recovery.

E. Funding Gap Analysis

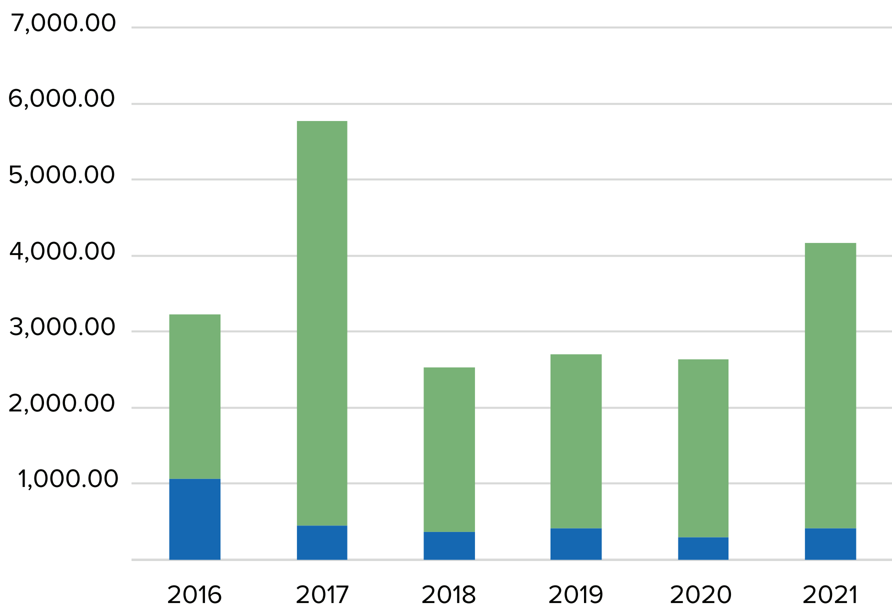
Thailand relies on the ex-post financing instruments such as budget allocations, contingency funds and borrowings to manage and respond to disaster risks. Ex-ante financing has not been mainstreamed even though there have been initial efforts in the form of the government's crop insurance program and policy for public asset insurance. The inclusion of risk transfer mechanisms and instruments within the comprehensive disaster risk financing approach of the government may not be receiving urgent prioritization because of the historically low utilization of the contingency fund advances for disaster relief and emergency assistance.

Figure 19 shows estimated funds available for disasters from 2016 to 2021. The government has allocated a direct budget for disaster management as well as for preventing and reducing the impact of climate change. On top of that, the government has set aside budget for attending to emergencies and management of disasters, which covers Thai people's peace, state security, disasters, and state's urgent necessities—this serves as potential budget for recovery from disaster. During 2016-2021, the direct budget ranged from THB 9,945.30 to THB 36,611.50 million (USD 288.3 million to USD 1.06 billion), while the budget for emergencies and management of disaster was between THB 91,923.5 and THB 200,785.50 million (USD 2.67 billion and USD 5.82 billion). Combining both items, the total potential fund for disaster risk management came in at THB 104,478.00 – 216,176.10 million (USD 3.03 – 6.27 billion) per year.

Insufficient data are available to analyze the extent of the funding gap in case of disaster. In terms of potential expenditures, historical data on disasters are available on the DDPM website, but they are not easy to access and are presented in a format that is not easy to analyze. Data on the total costs of disaster damage are fragmented and no single unified data source exists. Similarly, in terms of available financing sources, data on the total risk finance budget are not readily available, as not all parts of the risk finance budget are clearly labelled.

With heavy reliance on ex-post risk financing approach, the government's budget will continue to be challenged in addressing the impacts of higher frequency but lower impact events, such as the country's frequent floods (estimated at USD 2.6 billion annually[60]). For more catastrophic, less frequent events (such as the great flood of 2011, which caused an estimated USD 46 billion in costs and losses[61]), the Thai government will ultimately require additional sources of funds to cover the extent of the damages and losses.

Figure 19: Thailand's Budget Allocation Strategy for Disaster Management (2017-2021)



	2016	2017	2018	2019	2020	2021
Potential Budget for Disaster Management (Millions of THB)	3,158.48	5,818.18	2,663.68	2,883.22	2,841.48	4,158.11
Direct Budget for Disaster Management (Millions of THB)	1,060.90	445.98	363.79	409.24	288.19	409.24

Source: Budget Bureau

60 https://www.mdpi.com/2073-4441/14/10/1603#B7-water-14-01603
61 https://www.swissre.com/risk-knowledge/mitigating-climate-risk/decade-on-thailand-devastating-2011-floods.html#:~:text=In%20the%20end%2C%20the%20flooding,for%20the%20global%20insurance%20industry.

V. Insurance and Risk Finance Integration into Development

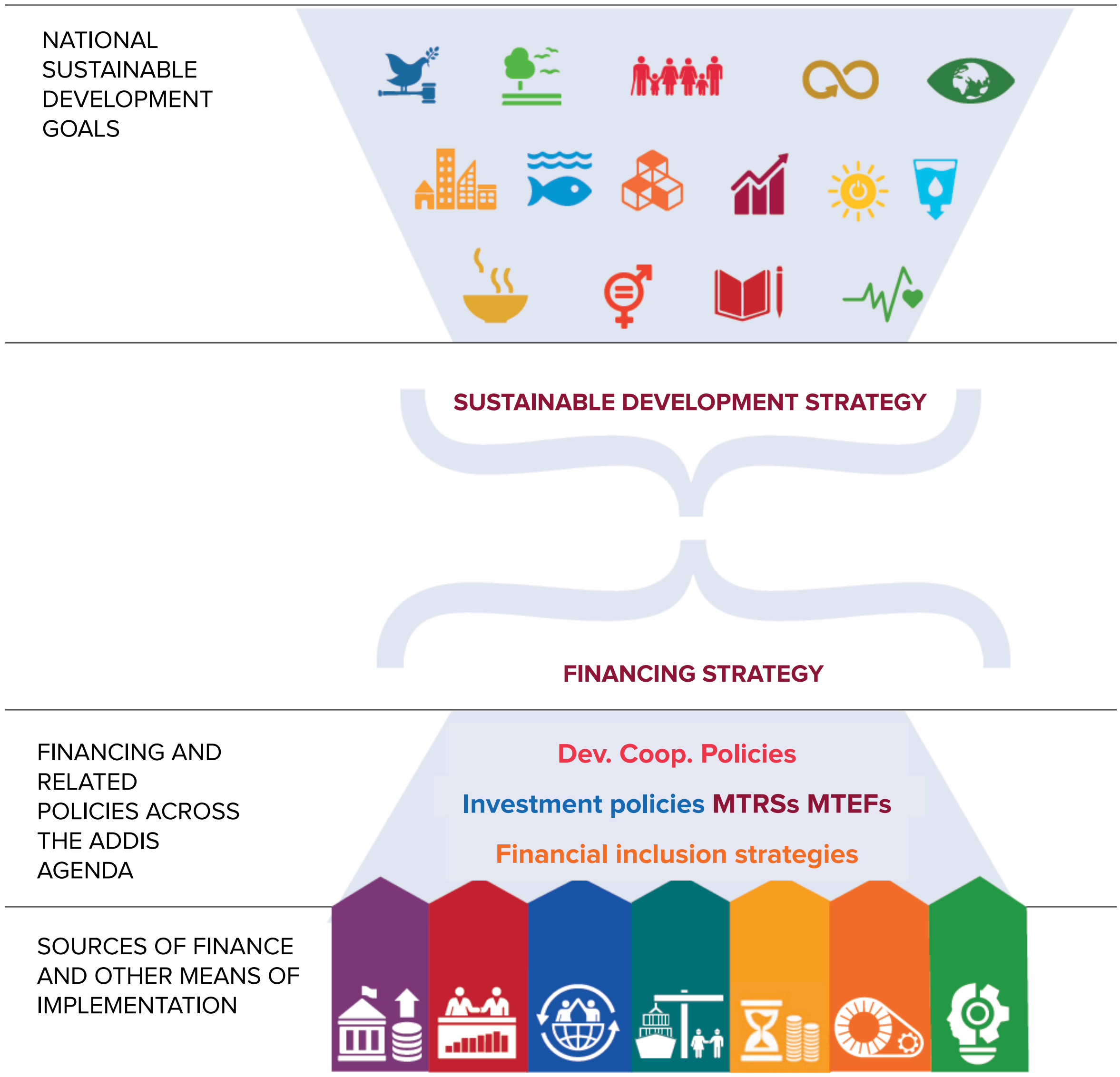
Inclusive insurance and risk finance can be integral parts of promoting sustainable development goals. To ensure financing for and implementation of inclusive insurance and risk finance measures, specific provisions must be included in national or local development frameworks and plans that emphasize the priority for relevant budget allocation.

The government of Thailand has established the policy agendas that present opportunities for the integration of inclusive insurance and risk financing into development frameworks that support international processes. To act on its commitments to the Kyoto Protocol and the Paris Agreement, Thailand had submitted its Nationally Determined Contributions (NDCs) in 2020 which do not explicitly reference insurance and risk financing but acknowledge the need for climate risk and disaster management and overall risk reduction for the country. Among the recommended climate change adaptation options in its National Adaptation Plan, insurance schemes such as disaster insurance and agriculture insurance were included as options for the water management, agriculture and food security and human settlement and security sectors.[62] This aligns with the strategies articulated in the Climate Change Master Plan 2015 – 2050 to develop and promote insurance systems for natural disasters in areas that are at risk; establish a climate risk insurance system for agriculture produce, livestock and fisheries, and encourage private sector to develop natural disaster insurance packages for areas deemed to be at risk at the national, sub-regional and regional level. The importance of providing access to agriculture insurance and to comprehensive social insurance were the only references to insurance and risk financing in the 20-Year National Strategy (2017-2036) and National Reform Plans. The 13th National Economic and Social Development Plan (2023-2027) include milestones on poverty eradication and social protection and on disaster risk management that are relevant for the development and delivery of inclusive insurance and risk financing. Coordination among the focal agencies implementing these policies is crucial to harmonize measures at the national and local levels.

It is also important that inclusive insurance and risk financing instruments are considered within the country's Integrated National Financing Framework (INFF) which is a holistic and fit-for-purpose financing strategy that aims to ensure availability of sufficient levels of funding for development. In both the 20-Year National Strategy and National Reform Plan, no budgetary appropriations for the goals on poverty eradication or social protection have been made for insurance development. Budget allocations for disaster risk financing, on the other hand, are limited to broader risk management measures and not linked to any ex-ante financing instruments such as insurance.

62 The six implementation sectors are Water Management, Public Health, Tourism, Agriculture and Food Security, Natural Resources Management, and Human Settlements and Security.

Figure 20: Integrated National Financing Framework (INFF)



Source: 2019 Financing for Sustainable Development Report, IATF on Ff

VI. Summary of findings and recommendations

A. Main Findings

- The inclusive insurance market in Thailand is underdeveloped. The financial risk protection schemes available for the poor and vulnerable are provided through the government's social security system. The opportunities for the private insurance sector to complement this system can be further explored, especially in the development of new or enhancement of existing insurance product that will cater to the needs of poor and vulnerable consumers. It is crucial to build "trust" with these consumers and some agencies such as the National Savings Fund, the Government Savings Bank, and the Bank of Agriculture and Agricultural Cooperatives can be the channels to increase insurance penetration.
- Insurance literacy embedded in broad financial literacy initiatives is necessary to create awareness of inclusive insurance. Reaching the poor and the vulnerable groups requires deepening the understanding of the role of insurance to mitigate risks and secure income during times of financial shocks.
- Digital technology opens up new opportunities for both insurers and the poor and vulnerable. Technology helps to reduce operating costs and can increase access to insurance for the poor and vulnerable groups. However, some groups of the poor and the vulnerable groups still do not have access to reliable internet connection, do not have smart phones and have a low level of digital literacy.
- The development of disaster prevention and mitigation plans required at both national and sub-national levels offers opportunities for insurance and risk financing to be integrated into policy priorities that can translate into funding.
- The risk financing approach in the country is highly reliant on risk retention where contingent budgets are the main financing resources for post-disaster relief and recovery. No dedicated disaster risk financing strategy has been issued that could guide how risk transfer mechanisms can be considered and added into a comprehensive financing mix.
- The importance of public asset insurance has been expressed in public policy, but further information on the status of implementation is needed. The insufficient historical data and lack of forecasting data prevents the consideration of insurance as an additional solution in disaster risk management and climate change adaptation. Questions about the cost-effectiveness of insurance and its value addition to budget spending can be allayed through further analysis. The Public Asset Insurance Screening Committee comprises of the stakeholders to engage if advocating for the expansion of public asset insurance scope for Thailand.

B. Recommendations for Technical Assistance for Inclusive Insurance

- Insurance literacy should be a key element of financial literacy. The concept of risk management is not widely understood. A better understanding of insurance as a risk transfer instrument that can help improve the welfare of the poor and the vulnerable is needed. The right channel and right approach to this group is required to ensure higher levels of insurance literacy. It is essential that Thailand leverages existing government schemes and institutional arrangements within social protection programs for outreach on insurance literacy as part of financial literacy education initiatives.

- Develop a regulatory policy to support the development of microinsurance as part of the broader goal of financial protection. The official definition of inclusive insurance and microinsurance needs to be developed. Regulations should incentivize the greater participation of private insurers in the market and serve low-income and vulnerable populations. Collaborative platforms among government agencies and insurance industry to acknowledge the financial risk protection needs of the underserved and to agree on concrete action plans for raising awareness and developing needs-based microinsurance products will help to develop the market.
- Enhance and diversify the current inclusive insurance products on offer in the market. Explore how characteristics of simplicity, affordability and relevance to risk profiles can be assured in the product designs. One product to explore could be credit-linked insurance for MSMEs that can help improve business resilience and ensure business continuity**.**
- Support the improvement of the data landscape for insurance solutions development and delivery. Access to the right data enables the not only innovative design and delivery of insurance solutions but can also facilitate, for example, faster loss and damage assessment and quicker payouts. Digital technology should also be leveraged to increase insurance penetration.
- Review and recommend improvements for crop insurance scheme. Crop insurance should expand to cover more types of agriculture products. The government should show strong commitment and work with the local and foreign insurers to improve the crop insurance scheme.
- Explore how inclusive insurance can promote gender equality and improve women's financial inclusion.

C. Recommendations for technical assistance for risk finance

- Develop a national disaster risk financing strategy to formalize planning, financing and monitoring of risk management that could include the use of risk transfer instruments. Develop a process to ensure the formulation of the budget employs a risk layering approach and takes into account differing levels of disaster risks. Currently, there is no formal procedure to estimate disaster risks and hence the level of budget needed, the arbitrary rule is for 2.5%-3% of the total budget be allocated for emergencies and management of disasters.
- Conduct a feasibility study on how a funding mechanism can be provided to ensure sustainability of a disaster fund. The key challenge to establishing and maintaining a disaster fund has been securing a source of fund. Some existing funding mechanisms could be looked at for inspiration, such as the use of an excise tax in alcohols to fund a Thai Health Promotion Foundation.
- Explore the feasibility of applying parametric insurance models and adding catastrophe bonds to the risk financing portfolio. The capacities of government in understanding and managing disaster risks need to be improved to enable the consideration for a broad range of risk transfer products that could suit the needs of Thailand.
- Assist the government construct a unified database for risk financing involving different stakeholders. Such a database could more accurately reflect the fiscal burden of different risks on the government and could help determine the cost and benefit of insurance as an additional risk management tool.
- Advise how the government can enhance the coordination between national and subnational governmental agencies on risk financing**.** This entails strengthening systematic assessment of disaster risks and utilization of risk financing instruments at subnational levels.
- Explore the feasibility of scaling up public asset insurance through greater participation by the private sector and improving data systems. Engaging the Public Asset Insurance Screening Committee would be key in this exploration.

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Annex 1: Growth of Thailand's Economy by Sector (2001-2021)

	2001	2006	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Agriculture	3.1%	3.9%	6.3%	2.7%	0.7%	-0.3%	-6.5%	-1.2%	4.8%	6.1%	-0.9%	-3.5%	1.4%
Agriculture, Forestry and Fishing	3.1%	3.9%	6.3%	2.7%	0.7%	-0.3%	-6.5%	-1.2%	4.8%	6.1%	-0.9%	-3.5%	1.4%
Non-Agriculture	3.5%	5.1%	0.2%	7.8%	2.9%	1.1%	4.2%	3.9%	4.1%	4.1%	2.4%	-6.4%	1.6%
Industrial	2.5%	5.6%	-4.1%	7.2%	1.7%	0.1%	1.9%	2.2%	2.1%	2.9%	-0.1%	-5.9%	3.4%
Mining and Quarrying	0.1%	8.9%	-1.6%	7.7%	2.2%	-1.6%	2.4%	0.8%	-6.0%	-2.9%	1.7%	-8.9%	-7.1%
Manufacturing	2.0%	5.7%	-4.9%	6.9%	1.9%	0.0%	1.5%	2.3%	2.9%	3.5%	-0.8%	-5.6%	4.9%
Electricity, Gas, Steam, and Air-Conditioning Supply	10.4%	3.3%	1.3%	10.3%	-1.9%	3.1%	4.9%	2.9%	1.8%	2.2%	4.5%	-8.0%	-2.5%
Water supply; Sewerage, Waste Management and Redemption Activities	7.9%	-4.8%	-1.4%	8.3%	7.2%	2.7%	9.0%	7.5%	6.6%	5.9%	5.6%	0.7%	1.5%
Services	4.0%	4.7%	3.3%	8.2%	3.7%	1.8%	5.6%	4.8%	5.2%	4.7%	3.8%	-6.7%	0.7%
Construction	0.6%	1.2%	-4.3%	7.9%	-0.3%	-2.4%	17.1%	8.0%	-3.0%	2.3%	1.6%	1.3%	2.7%
Wholesale and Retail Trade, Repair of Vehicles and Personal and Household Goods	2.8%	5.0%	0.0%	5.2%	0.8%	-0.8%	5.6%	6.2%	6.4%	6.4%	4.5%	-3.2%	1.7%
Transport, and Storage	3.3%	4.3%	1.6%	8.4%	5.2%	3.1%	4.0%	5.3%	8.0%	3.9%	2.8%	-22.9%	-2.9%
Accommodation and Food Service Activities	5.0%	9.5%	12.3%	14.1%	9.7%	2.5%	15.0%	9.3%	10.8%	8.0%	7.7%	-37.5%	-14.4%
Information and communication	25.8%	17.4%	8.4%	8.8%	9.6%	5.3%	10.1%	2.4%	3.9%	8.8%	11.4%	1.1%	5.7%
Financial and Insurance Activities	7.9%	-0.5%	6.1%	15.3%	12.3%	7.5%	8.4%	7.0%	6.7%	3.7%	1.9%	5.1%	5.7%
Real Estate Activities	-1.2%	8.5%	3.5%	2.9%	1.0%	2.2%	1.5%	7.0%	6.7%	5.4%	3.8%	1.5%	1.7%
Professional, Scientific and Technical Activities	-3.0%	6.7%	6.4%	17.2%	1.8%	-1.1%	-1.5%	-2.2%	6.3%	2.8%	1.9%	-4.9%	-2.9%
Administrative and Support Service Activities	19.0%	7.1%	6.1%	16.5%	1.2%	-2.8%	3.6%	1.5%	3.1%	3.5%	2.3%	-22.0%	-5.0%
Public Adminstration and Defence, Compulsory Social Security	3.2%	2.9%	3.8%	4.2%	0.5%	1.3%	1.1%	0.4%	0.8%	1.5%	1.4%	1.6%	0.6%
Education	1.0%	3.3%	2.7%	4.9%	1.9%	2.2%	0.2%	-0.2%	0.4%	1.0%	1.2%	1.3%	0.6%
Health and Social Work	6.7%	2.6%	4.8%	5.9%	3.7%	5.4%	3.2%	3.0%	4.1%	4.8%	3.7%	3.2%	3.8%
Arts, Entertainment, and Recreation	-3.9%	-1.2%	13.2%	18.3%	8.2%	0.3%	9.2%	21.3%	12.1%	12.2%	14.4%	-13.0%	4.8%
Other Service Activities	4.8%	2.9%	7.0%	12.0%	5.9%	2.2%	3.1%	3.9%	4.8%	4.2%	2.7%	-7.4%	-2.2%
Private Houshold with Employed Persons	1.9%	-8.3%	6.0%	2.3%	-7.2%	-4.4%	3.7%	-0.1%	-2.8%	-2.6%	-0.6%	2.8%	1.1%
Gross Domestic Project (GDP)	3.4%	5.0%	0.8%	7.2%	2.7%	1.0%	3.1%	3.4%	4.2%	4.2%	2.2%	-6.2%	1.6%

Source: Office of the National Economic and Social Development Council

Annex 2: Sources for data on inclusive insurance and risk financing in Thailand

Organization	Nature of Data
Supply Side of Inclusive Insurance and Risk Finance	
1. Primary Insurers	
Non-Life	
1.1 AXA General Insurance	Current market condition of motor and property insurance as well as microinsurance, Opportunities and challenges for inclusive insurance and risk finance
1.2 Thai Insurance	Current market condition of microinsurance, Opportunities and challenges for inclusive insurance and risk finance
Life	
1.3 Muang Thai Life Assurance	Current market condition of life insurance, Opportunities and challenges for inclusive insurance and risk finance
2. Reinsurance/Broker	
2.1 Aon	Development of insurance industry (both life and non-life), Best practices including agricultural insurance scheme, Opportunities and challenges in inclusive insurance and public asset insurance
3. Reinsurers	
3.1 Munich Re	Development of insurance industry (both life and non-life), Best practices including agricultural insurance scheme, Opportunities and challenges in inclusive insurance and public asset insurance
3.2 Swiss Re	Development of insurance industry (both life and non-life), Best practices including agricultural insurance scheme, Opportunities and challenges in inclusive insurance and public asset insurance
4. Industry Associations	
4.1 Thai General Insurance Association (TGIA)	Current market condition of non-life insurance industry, Access to insurance products of the poor and vulnerable groups and possible products for inclusive insurance, The role of digital technology
4.2 Thai Life Assurance Association (TLAA)	Current market condition of life insurance industry, Access to insurance products of the poor and vulnerable groups and possible products for inclusive insurance, The role of digital technology

Organization	Nature of Data
Demand Side of Inclusive Insurance and Risk Finance/ Regulators	
1. Ministry of Finance	
1.1 Fiscal Policy Office (FPO)	Policies on fiscal sustainablitity and risk finance, Future trend of fiscal burden, Current measures related to inclusive insurance, Crop insurance policy making (e.g. scheme Improvement, premium subsidies), overseeing non-financial institutions
1.2 Office of Insurance Commission (OIC)	Direction of Insurance Industry Development, Regulations and product approval process, Possibility of Disaster Fund, risk finance and inclusive insurance (including micro insurance), Incentives and support for inclusive insurance
1.3 Comptroller General's Department	Disaster relief budget regulation and data on Contingency Fund Advances for Disaster Relief and Emergency Assistance
1.4 Department of Treasury	Policy on public asset management and available risk finance for public assets
1.5 State Enterprise Policy Office	Public Private Partnership (PPP) Projects
1.6 Bank of Agriculture and Agricultural Cooperatives	Insurance distribution and insurance literacy channel, Financial resources for self-help groups and community-based institutions, Demand side of inclusive insurance information
1.7 Government Housing Bank	Insurance distribution and insurance literacy channel, Demand side of inclusive insurance information
1.8 National Saving Fund	Policy on promoting retirement savings starting at a young age, with a particular focus on freelance and informal workers, giving incentives for contributors such as microinsurance, Demand side of inclusive insurance information.
1.9 Government Saving Bank	Insurance distribution channel, financial resources for low-income earners, Demand side of inclusive insurance information
2. Ministry of Agriculture and Cooperatives	
2.1 Department of Agriculture and Agricultural Extension (DoAE)	Channel to reach out and help develop farmers, Demand side of inclusive insurance information
2.2 Cooperative Promotion Department	Channel to reach out and help develop farmers, Demand side of inclusive insurance information

Organization		Nature of Data
3.	**Ministry of Social Development and Human Security**	Policies to support the poor and vulnerable groups, Demand side of inclusive insurance information, Future trend of fiscal burden.
4.	**Ministry of Public Health**	Policies to support the poor and vulnerable groups, Demand side of inclusive insurance information, Future trend of fiscal burden
5.	**Ministry of Interior**	
	5.1 Department of Disaster Prevention and Mitigation	Policy on disaster risk management and financing and statistics
	5.2 Department of Local Administration	Current Situation and policy on disaster risk management and financing
6.	**Ministry of Industry**	
	6.1 SME Development Bank	Policy to support access to credits for MSMEs
7.	**Office of the National Economic and Social Development Council**	Macroeconomic Data of Thailand such as Gross Domestic Products Available on: https://www.nesdc.go.th/nesdb_en/more_news.php?cid=155
8.	**Bank of Thailand**	Survey of Thai Household's Access to Financial Services 2020 Available on: https://www.bot.or.th/Thai/FinancialInstitutions/Highlights/pages/financialaccess.aspx
9.	**Related Research & Technical Institutions**	
	9.1 Puay Ungpakorn Institute – Bank of Thailand	Overall views on inclusive insurance and risk financing

Annex 3: Overview of Health Insurance Schemes in Thailand

	Universal Coverage Scheme (UCS)	Social Security Scheme (SSS)	Civil Servant Medical Benefit Scheme (CSMBS)
Type1/	Non-contributory	Contributory	Civil servants
Established	2001 (B.E. 2544)	1990 (B.E. 2533)	1960 (B.E 2503)
Responsible Organization	National Health Security Office (NHSO)	Social Security Office, Ministry of Labour	Comptroller General Department, Ministry of Finance
Source of Fund	Government Budget (Capitation)	Contribution (Tripartite: Employer, Employee, and Government)	Government Budget
Beneficiaries	Thai citizens who are not covered by SSS, or CSMBS, or any other schemes specified by laws	Employees in private sector, ex-employees, non-employees	Civil servants, government employees, and their families
Numbers of Beneficiaries (Persons)	48.6 millions	11.03 millions	5 millions
Service Providers	Public and private hospitals contracted with NHSO (and their networks)	Public and private hospitals contracted with SSO (and their networks)	Mainly public hospitals. However, in case of emergency, private hospitals can be allowed
Benefits	Benefits package designed to cover health services, health protections, screening for selected diseases (condition applied) using drugs listed in the National List of Essential Medicines (NLEM)	Benefits package designed to cover selected health services using drugs listed in the National List of Essential Medicines (NLEM)	Cover almost all types of health expenditures, medical equipment, and drugs including using of special patient room and foods

Remarks: [1/] Thailand Social Protection Diagnostic Review, Social Protection Mapping and Vulnerability Analysis, ILO, UNICEF, IOM, UN Women 2021

Annex 4: Summary of the Universal Coverage Scheme

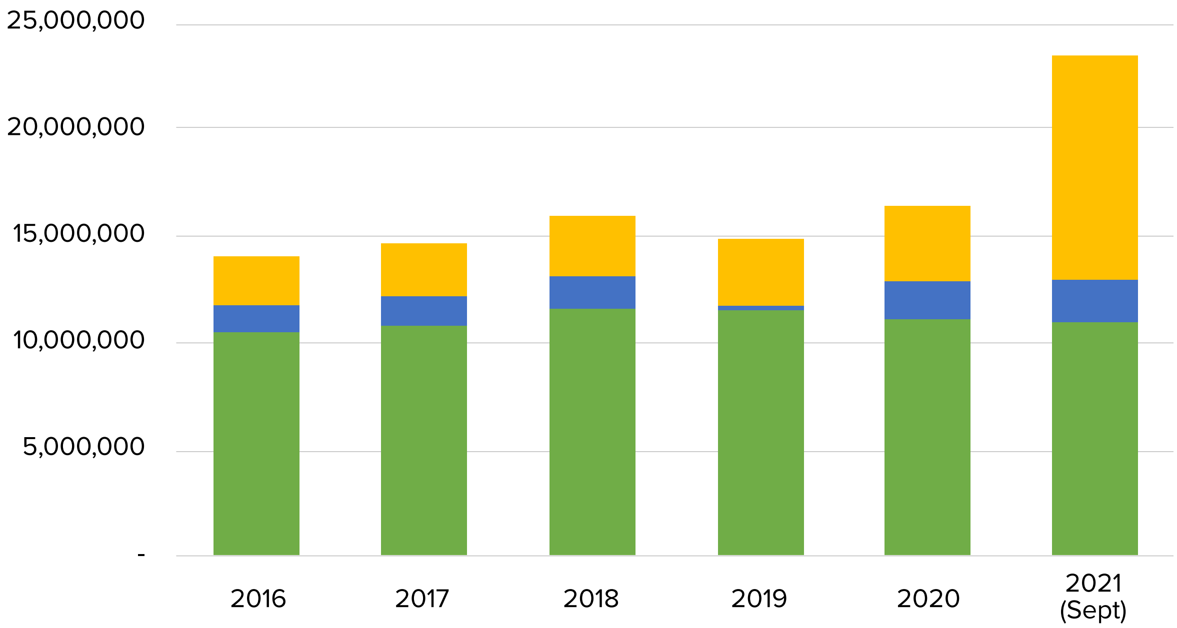
UCS has the mission to provide free basic healthcare for all Thai people of all ages. The scheme was established in 2001, after SSS and CSMBS. UCS therefore currently covers only Thai people who are not covered by the other two programs. The SSS covers both formal and informal workers. On a compulsory basis, the SSS is financed by tripartite system, government budget, employer and employee contributions, and offers benefits including sickness, pregnancy, invalidity, death, unemployment, child allowance and old age to formal sector private employees (section 33 of Social Security Act). The total formal workers covered in the section was about 11 million persons. On a voluntary basis, the SSS financed by bipartite system, government budget and individual, offers coverages through section 39 of the Social Security Act. Section 39 applies to ex-employees who used to be covered under section 33 of the Social Security Act. The coverages are the same as those of section 33, excluding unemployment benefits.

Informal workers are eligible to have access to healthcare through the Social Security Scheme. Informal workers can also voluntarily participate in the SSS and receive benefits under section 40 of the Social Security Act which is financed by the government budget and participated individual. Options of benefits include sickness, invalidity, death, child allowance, and old-age. Compared to sections 33 and 39, section 40 offers less comprehensive benefits. Section 40 can be divided into 3 groups by amount of monthly contribution: THB 70 (USD 2.03) /month for Section 40 (1), 100 THB (USD 2.90) /month for Section 40 (2) and THB 300 (USD 8.70) /month for Section 40 (3). All groups of Section 40 covers income compensation in case of sickness and invalidity and funeral expenses. However, Section 40 (1) does not provide pension and child allowance, while Section 40 (2) does not offer child allowance. Total informal workers of sections 39 and 40 are 1.96 million and 10.4 million respectively (Annex 5). It should be noted that the total members of section 40 rose sharply from 3.5 million in 2020 to 10.4 million in 2021 because eligible workers under this section can receive compensation from the government COVID-19 relief measure[63] announced in August 2021.

63 On 13th July 2021, the Cabinet approved relief measures for labours in Social Security Scheme. These measures have covered employers and employees under Section 33, 39 and 40 of Social Security Scheme in 9 businesses in 29 Maximum and Strict Controlled Areas. For those under Section 33, employees with Thai nationality would be eligible to receive 2,500 Baht cash transfer, while the employers would be eligible to receive cash transfer 3,000 Baht per head of employees with maximum 200 employees. On the other hand, those under Section 39 and 40 would be eligible to receive 5,000 Baht cash transfer by August 2021. This measure also encouraged those that were not in the system or do not have employers to apply to SSS within July 2021 to be able to be covered by this measure.
Source: http://www.thaigovt.go.th
(https://ofm.mof.go.th/th/view/attachment/file/3136303132/มติคณะรัฐมนตรีวันที่%2013%20กรกฎาคม%202564.pdf)

Annex 5: Growth of Social Security Scheme Membership Classified by Type

Unit: Persons



	2016	2017	2018	2019	2020	2021 (Sept)
Section 40	2,243,727	2,432,927	2,833,960	3,242,579	3,508,970	10,449,333
Section 39	1,286,133	1,373,595	1,561,293	148,118	1,799,786	1,955,743
Section 33	10,511,821	10,840,579	11,599,338	11,626,393	11,124,209	11,037,147

Source: Social Security Office

Annex 6: Details of disaster risk management at a local level[64]

Structure of the Local Disaster Prevention and Mitigation Action Plan

(I) Introduction

This section explains the rationale of the action plan and gives an overview of the plan as well as its objectives.

(II) General Information

The section presents geographical information of the subdistrict, population, economic profile, transportation infrastructure and river system. It also contains the record of past disasters in the subdistrict. For each type of disaster, there is information regarding the frequency of disaster, affected areas, impacts of the disasters in terms of number of affected households, deaths, losses, injured and cost of damage over the past 5 years. Moreover, the subdistrict ranks disaster risk and its possible impact and constructs a disaster calendar, describing seasonal pattern of disasters in the subdistrict.

(III) Disaster Management Framework

This section is pertaining to the structure of disaster management system and how the disaster management at the subdistrict level can be linked to the disaster management at the national level. It explains the role of each agency involving in the local disaster management system and chain of commands as well as sources of fund (e.g. from regular budget, central budget or budget reallocation).

(IV) Ex-Ante Disaster Action Plan

Regular disaster risk assessment is part of this section. Following UNDP's comprehensive risk assessment approach, the process of risk assessment starts are as follows: 1) Understanding of current situation, needs and gap 2) Hazard assessment 3) Exposure assessment 4) Vulnerability analysis 5) Loss/Impact analysis 6) Risk profiling and evaluation and 7) Formulation or revision of DRR strategy and action plans. It also outlines a disaster risk reduction action plan in general and for specific disaster risks in this area and establishes an early warning system.

(V) During Disaster Response

This section is related to the establishment of Local Emergency Operation Center, emergency management, communication during the crisis, temporary shelter, damage and need assessment, donation management and emergency termination.

64 Source: Compiled by Fiscal Policy Research Institute Foundation (FPRI) based on local administration's Disaster Prevention and Mitigation Action Plan.

(VI) Ex-Post Disaster Action Plan

This section is related to a recovery plan. Under the principle of “Build Back Better and Safer”, damage and need assessment at household level is recommended prior to the development of the recovery plan. There are both short-term and mid-to-long-term plans.

(VII) Action Plan Implementation

The section clearly elaborates the role and responsibility of each agency in the implementation of this action plan. It establishes a monitoring and evaluation mechanism, continuous learning and improvement process and regular review of the Disaster Prevention and Mitigation Action Plan.

The structures of the Local Disaster Prevention and Mitigation Action Plan follow the standard template of action plan development**.** The action plans provide general information on their subdistricts including the record of disasters in their areas and state their risk management framework. The action plans are divided into three stages: before-, during- and after-the disaster. The action plans also explain the process of implementation and the sources of funding used during the normal circumstances and emergencies. However, none of them attempts to estimate the required disaster management budget for their districts.

The action plan should allow for long-term risks such as climate change. In this action plan, we do not have instructions to assess long-term risk such as climate change, which is likely to induce more frequent and more severe disasters in the future. Usually, the action plan covers only past and existing disasters. This, in turn, could lead to a higher fiscal burden on the government. Therefore, the action plan should incorporate the monitoring of the development of climate change in the existing assessment of disaster risk in Thailand.

Source: Compiled by Fiscal Policy Research Institute Foundation (FPRI) based on local administration’s Disaster Prevention and Mitigation Action Plan

Annex 7: Scope of Insurance under The Public Asset Insurance Screening Committee's Resolution of 29 March 2021 on the Self-Insurance of Public Assets

Scope of Insurance

The arrangement of public asset insurance shall be as follows.

1. **Public assets that can be insured without the approval of the Public Asset Insurance Arrangement Screening Committee**

    1.1 Public assets under a legal provision

    If a legal provision prescribes that such public asset must be insured, insurance can be obtained in accordance with the law without having to obtain the approval of the Public Asset Insurance Arrangement Screening Committee.

    1.2 Public assets with approval by the cabinet's resolution

    1.2.1 Individual assets that the cabinet has already resolved to obtain insurance.

    1.2.2 Assets under the rules regarding public asset insurance pursuant to the cabinet's resolution on 3 May 2005.

    (1) Government venues in the country must have their own securities, except government venues with inventories or the government's general factories, which may be severely impacted by fire. Insurance may be obtained for the latter.

    (2) State enterprises with assets that may be severely damaged by fire shall obtain insurances for their factories or inventories.

    (3) Government venues in foreign countries which the government owns may obtain insurance pursuant to the opinion of the Ministry of Foreign Affairs.

    (4) Insurance for government vehicles in foreign countries.

    (4.1) Third-party insurance shall be obtained for the common vehicles of the offices and the cars provided for officers in certain positions or as stipulated by the laws of that country.

    (4.2) If a different type of insurance from (4.1) is needed for the common vehicles of the offices and the cars provided for officers in certain positions due to unsafe circumstances in that country, high rate of vehicle theft, weather, chaotic traffic, and problems about drivers employment, such insurance can be obtained pursuant to the opinion of the Ministry of Foreign Affairs.

    (4.3) Embassies and consulates in countries with land borders with Thailand can obtain motor insurance with a Thai insurance company, covering damages in the countries where the embassies and the consulates are located.

(5) Insurance may be obtained for other types of public assets, with the approval of the Public Asset Insurance Arrangement Screening Committee.

(6) Insurance for a public asset, such as government venues, vehicles, etc., is obtained to insure the asset before damage occurs. Therefore, insurance should be obtained to cover the government's other assets. However, in determining the insured value for the government's other assets, the Public Asset Insurance Arrangement Screening Committee should carefully consider whether the insurance premium rate is worth the coverage.

1.3 Public assets which the Public Asset Insurance Arrangement Screening Committee has already approved in principle

<u>Voluntary motor insurance for government vehicles</u>

Initial criteria for government vehicles to obtain voluntary motor insurance

1. The vehicle must be a government vehicle only used for the organization's tasks.
2. The usage of the vehicle for the organization's tasks has a high accident risk.
3. The organization requesting the insurance must have enough budget for the insurance without requesting for additional budget specifically for this matter.
4. If any organization has other reasons not specified by the Public Asset Insurance Arrangement Screening Committee, that organization shall obtain approval on a case by case basis.

Principles for obtaining voluntary motor insurance for government vehicles

Group 1 Approval is granted in principle to obtain voluntary motor insurance for government vehicles in the three southern border provinces: Yala, Pattani, and Narathiwat and the four districts of Songkhla: Saba Yoi, Thepha, Chana, and Na Thawi. The proposed vehicles must be used for normal tasks in the area. Documents and evidence are required to show that the vehicles are used for normal and regular tasks in the three southern border provinces: Yala, Pattani, and Narathiwat and the four districts of Songkhla: Saba Yoi, Thepha, Chana, and Na Thawi. In obtaining the insurance, the government agency that applies for the insurance shall also negotiate to obtain terrorism coverage. If the situations in the three southern border provinces and the four districts of Songkhla return to normal, the request for voluntary motor insurance shall adhere to the practice in Group 2 or Group 3, as applicable, or propose it to the Public Asset Insurance Arrangement Screening Committee for their consideration.

Group 2 Approval is granted in principle to obtain voluntary motor insurance for government vehicles that carry higher accident risk than other vehicles. If an accident occurs, it may widely cause severe damages to many people's lives and properties.

2.1 Vehicles used in emergencies or special circumstances with possibilities of accidents, such as ambulances, emergency vehicles, public disaster relief vehicles, fire trucks, vehicles used to follow and arrest offenders, vehicles and motorcycles used in the tasks and procession of the royal families and the ministers.

2.2 Vehicles used to transport dangerous materials and/or substances, such as oil trucks, chemical trucks, etc.

2.3 Passenger vehicles and buses with 20 seats or over.

Group 3 Approval may be granted in principle to obtain voluntary motor insurance for other government vehicles not in Group 1 and Group 2. The chief of the government agency shall approve the number of vehicles to be insured as necessary and appropriate within the allocated budget. No additional budget shall be requested for this particular purpose.

In obtaining voluntary motor insurance for the government vehicles in Group 1, Group 2, and Group 3, the chief of the government agency shall approve the number of vehicles that are currently registered and used as necessary and appropriate within the allocated budget. No additional budget shall be requested for this particular purpose.

Types of Voluntary Motor Insurance for Government Vehicles

The agency should ensure that the voluntary motor insurance for government vehicles is in accordance with the organization's needs and the insurance premiums are acceptable and do not cause unnecessary expenses. Moreover, regarding the liabilities of the government's drivers under the Act on Offenses Committed by Officials of State Organizations or Agencies B.E.2539 (1996), drivers are protected if they commit offenses against a third party. If such offense occurs from negligence, the agency shall be responsible for the damage. If such offense occurs by intention or gross negligence, the driver shall be responsible. This is to ensure that government officials are responsible for their duties. Moreover, obtaining motor insurance for government vehicles should aim at protecting people that might be affected.

Therefore, the Public Asset Insurance Arrangement Screening Committee determines the rules of obtaining voluntary motor insurance for government vehicles as follows.

1. For voluntary motor insurance in Group 1 and Group 2, the chief of the government agency shall consider the type of insurance as necessary and appropriate.

2. For voluntary motor insurance in Group 3, voluntary motor insurance type 3 shall be obtained with the coverage for liabilities and damages on lives, bodies, and hygiene of a third party within the minimum specified in the notification of the registrar regarding motor insurance policies that include motor vehicle victims and the motor insurance premium rates specified by the OIC.

2. Public asset insurance that requires the approval of the Public Asset Insurance Arrangement Screening Committee

The public asset insurance arrangement

The asset to be proposed must be the government's asset and/or asset that can be procured under the Public Procurement and Supplies Administration Act B.E. 2560 (2017).

Initial criteria for a public asset to be proposed for insurance

1. An asset that, if damaged, may cause impact or danger to lives, bodies, hygiene, and asset of other people, such as transmission towers, air quality monitoring towers, office signs on high buildings, satellite dishes installed in high places, and airplanes;

2. An asset used for public services that, if damaged, may cause troubles to the general public, such as dams, airports, and transport stations;

3. An asset of value at least 100 million baht, such as medical equipment, communication equipment, control or monitoring systems; or

4. It is not an asset under a contract or concession agreement that requires insurance because the insurance has to be obtained as a part of the contract.

The asset list under the Public Procurement and Supplies Administration. Act, B.E. 2560 (2017) consists of supplies, durable objects, lands and buildings. The Public Asset Insurance Arrangement Screening Committee believes that the list of supplies can be used up. Therefore, no insurance is needed. The Committee prescribes that only the following durable objects and buildings can be insured.

Durable objects

1. Durable objects at reasonable standard prices specified by the Budget Bureau and eligible to be proposed for insurance.

    - Construction materials
    - Agricultural materials
    - Medical materials
    - Advertising materials
    - Electricity and radio materials
    - Factory materials
    - Scientific materials

2. Durable objects for which the Budget Bureau has not specified the standard price.

Buildings

1. A building to be proposed for the approval of the Public Asset Insurance Arrangement Screening Committee shall not belong to the definition of government venue and not be a government venue with inventory or the government's general factory, which is already insured by the resolution of the cabinet.

2. A building/construction valued at least 100 million baht or a building/construction of which the engineering components or installations constitute at least 100 million baht in total value can be proposed for insurance, such as a building with distinctive architectural characteristics, exhibition centers, and laboratory buildings.

UNDP

Insurance & Risk Finance Facility

United Nations Development Programme Thailand
14th Floor United Nations Building
Rajdamnern Nok Avenue
Bangkok 10200, Thailand
Email: undp.thailand@undp.org
Tel:+66 2 2883350

http://www.th.undp.org

UNDPThailand