



THAILAND

Disaster Management Reference Handbook

May 2018

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Welcome - Note from the Director

Thailand and the United States (U.S.) engage in a wide range of important bilateral and multilateral joint exercises. These joint exercises increase coordination and cooperation when responding to future humanitarian disasters. Cobra Gold, a large joint exercise in the Indo-Asia-Pacific region, brings the armed forces together from 27 countries including the U.S. and Thailand.¹ In addition, both countries participate in Tempest Express. This is a U.S. Pacific Command (USPACOM) multilateral exercise co-hosted by the Royal Thai Armed Forces (RTARF) and is designed to practice crisis action planning in Humanitarian Assistance and Disaster Relief (HADR) and Peacekeeping Operations.²

In recent years the U.S. has worked closely with Thailand in providing disaster response to other countries in the region.³ Both countries work together on broader regional engagements within the ASEAN region. Thailand is also a regional hub for HADR assistance, engagement, and training in the region.⁴

This Thailand Disaster Management Reference Handbook provides the reader a baseline of understanding of regional-specific factors, which influence disaster management. The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) provides education, training and research about disaster management and humanitarian assistance, particularly in international settings that require coordination between the DOD and civilian agencies.



Sincerely,

Joseph D. Martin, SES
Director

Information about the Center for Excellence in Disaster Management and Humanitarian Assistance

Overview

The Center for Excellence in Disaster Management & Humanitarian Assistance (CFE-DM) is a United States (U.S.) Department of Defense (DOD) organization that was established by U.S. Congress in 1994. The Center is a direct reporting unit to U.S. Pacific Command and is located on Ford Island, Joint Base Pearl Harbor-Hickam, Hawaii.

CFE-DM was founded as part of the late Senator Daniel K. Inouye's vision. The Senator had witnessed the effects of Hurricane Iniki that struck the Hawaiian Islands in 1992, and felt the civil-military coordination in the response could have been more effective. He set about to establish CFE-DM to help bridge understanding between civil and military responders, and to provide a DOD platform for building Disaster Management and Humanitarian Assistance (DMHA) awareness and expertise in U.S. forces, and with partner nations in the Asia-Pacific. While maintaining a global mandate, the Asia-Pacific region is our priority of effort and collaboration is the cornerstone of our operational practice.

Mission

The Center's mission is to advise U.S. Pacific Command leaders; enable focused engagements, education and training; and increase knowledge of best practices and information to enhance U.S. and international civil-military preparedness for disaster management and humanitarian assistance.

Vision

CFE-DM exists to save lives and alleviate human suffering by connecting people, improving coordination, and building capacity.

Contact Information

Center for Excellence in Disaster Management
and Humanitarian Assistance
456 Hornet Ave
JBPHH HI 96860-3503
Telephone: (808) 472-0518
<https://www.cfe-dmha.org>

Disaster Management Reference Handbook Series Overview

The Disaster Management Reference Handbook Series is intended to provide decision makers, planners, responders and disaster management practitioners with an overview of the disaster management structure, policies, laws, and plans for each country covered in the series. Natural and man-made threats most likely to affect the country are discussed. The handbooks also provide basic country background information, including cultural, demographic, geographic, infrastructure, and other relevant data.

Conditions such as poverty, water and sanitation, vulnerable groups, and other humanitarian issues are included. A basic overview of the health situation in the country and disease surveillance is also covered. The handbooks include information on key national entities involved in disaster management, disaster response and preparation, and the military's role in disaster relief. Information on United Nation agencies, international Non-Governmental Organizations (NGOs), major local NGOs, and key U.S. agencies and programs in the country, are also provided.

The overall aim is to offer a guide that brings together important information about disaster management and response for each country in an effort to provide a basic understanding for the reader. Information in the handbooks are compiled and based primarily on trusted, reliable, publicly available sources. Much of the information used is from open source websites including but not limited to ReliefWeb, PreventionWeb, the Central Intelligence Agency (CIA) Fact Book, the United Nations (UN), The World Bank, the Asian Development Bank (ADB), government sources, NGO websites, various media sources, U.S. Department of State (DOS), and foreign governments' web pages. Where possible, a link to the original electronic source is provided in the endnote (reference) section at the end of the document. Other resources are provided by subject matter experts (SMEs).

Each handbook is a working document and will be updated periodically as new, significant information becomes available. We hope that you find these handbooks informative, relevant, reliable, and useful in understanding disaster management and response for this country. We welcome and appreciate your feedback to improve this document and help fill any gaps to enhance its future utility. Feedback, comments, or questions can be emailed to cfe.dmha.fct@pacom.mil. You may also contact the Center at: (808) 472-0518. Please visit our website (<https://www.cfe-dmha.org>) to view the latest electronic versions available or to request a hard copy of a disaster management reference handbook.

This report has been prepared in good faith based primarily on information gathered from open-source material available at the date of publication. While making every attempt to ensure the information is relevant and accurate, CFE-DM does not guarantee or warrant the accuracy, reliability, completeness or currency of the information in this publication.

Executive Summary

In recent years, the Thai government has made it a priority to implement policy that will reduce poverty, which will make its citizens less vulnerable to the effects of a disaster. Thailand's economy is strong, with low inflation, low unemployment, and reasonable public and external debt levels.⁵ In 2017, Thailand's economic growth surged to a five-year high, and the GDP grew 3.9 percent, up from 3.3 percent.⁶

The country is affected by various disasters and climate change.⁷ Thailand is vulnerable to flooding and typhoons. Severe flooding across southern Thailand affected more than 1.2 million people, resulting in a disaster declaration and international assistance in January 2017.⁸ Drought, cyclones, landslides, earthquakes, and tsunamis have also caused damage to the country.⁹ Flooding is the most frequent disaster, as it occurs annually during the rainy (monsoon) season.¹⁰

One of the most catastrophic disasters to ever impact Thailand was the 2004 Indian Ocean earthquake and tsunami. A 9.0 magnitude earthquake in the Indian Ocean triggered a tsunami that slammed into the coastal regions in southern Thailand. Along the coast of Thailand, more than 5,000 people were killed by the tsunami, and over 2,000 were reported missing.¹¹ In 2004, Thailand did not have adequate Early Warning Systems (EWS) to alert people of a tsunami, but that since has changed. Considering that hours passed between the earthquake and the tsunami, given the opportunity to inform people in the coastal area of the tsunamis threat, thousands of lives could have been saved. Therefore the Thai government has taken measures to mediate this.¹²

The Disaster Management System based on the Disaster Prevention and Mitigation Act 2007 (DPM Act 2007), governs Thailand's approach to disaster management.¹³ The Department of Disaster Prevention and Mitigation (DDPM) is the primary agency responsible for ensuring integration of Disaster Risk Reduction (DRR) into sectoral plans for risk sensitive investment and strengthen coordinated emergency response as well as recovery efforts.¹⁴ In the event of a large-scale incident, the military may be requested by national authorities to assume a lead coordination and operational role. The Royal Thai Armed Forces (RTARF) play an important role as a supporting agency in a disaster

response. The DPM Act 2007 is implemented by the National Disaster Risk Management Plan 2015 (NDRM Plan 2015). Thailand also has the Ministry of Defence's National Protection Plan that adds to the National Preparedness Policy.¹⁵

The Royal Thai Government, private sector and Non-Governmental Organizations (NGOs), have worked together to restore and build back the country as a result of destruction cause by the natural disasters. The international communities, NGOs and United Nations (UN) mechanisms are also utilized for humanitarian assistance activities.¹⁶



THAILAND

Country Overview

Country Overview

A unified Thai kingdom was established in the mid-14th century. During the colonial empire, Thailand (known as Siam at the time) was a buffer between the British Empire in India (now Myanmar), Malaya (now Malaysia), and the French Empire in Indochina (now Cambodia, Laos, and Vietnam). Thailand has been primarily independent except for the invasion by the Burmese Empire (18th century), and Japanese occupation (during the Second World War). In 1932, a revolution led to the establishment of a constitutional monarchy in Thailand. In 1954, Thailand became a U.S. treaty ally and sent troops to Korea and later fought along the U.S. in Vietnam.¹⁷

Since 2005, Thailand has had political unrest. In 2006, the country went through a military coup, which ousted then Prime Minister Thaksin Shinawatra. This was followed by multiple large-scale street protests in 2008, 2009, and 2010 due to the opposing Thai political parties. In 2011, Yingluck Shinawatra, the younger sister of Thaksin Shinawatra, assumed power as the Prime Minister under the Puea Thai Party, but was removed from power in 2014 by the Constitutional Court after many large-scale anti-government protests in Bangkok. The Royal Thai Army led by General Prayut Chan-Ocha declared martial law and staged a coup which removed the government and named General Prayut as Prime Minister.

In October 2016, King Bhumibol passed away after ruling for 70 years. The King's passing made his only son, Wachiralongkon Bodinthrathepphayawarangkun, next in line for the throne. Wachiralongkon Bodinthrathepphayawarangkun ascended the throne in December 2016 and by April 2017, he signed the new constitution into place. The constitution signed in 2017, marks the 20th constitution the country has had since 1932. The April 2017 constitution limits the power of political parties during election time. It allows for a junta-appointed Upper House, which includes having six seats reserved for military members. Changes also include some to the Constitutional Court which will be strengthened in order to make it simpler to impeach a civilian leader.¹⁸

Thailand is a charter member of the Association of Southeast Asian Nations (ASEAN) and ranks second in Gross Domestic Product (GDP) among the ten ASEAN countries. Due

to the country's large population and increasing economic influence, Thailand is considered as a middle power in the region and worldwide.¹⁹ Thailand is also a partner in the Lower Mekong Initiative (LMI) which serves as a platform to address complex, transnational development and policy challenges in the LMI region.²⁰

Culture

Thailand has a cultural mixture of Indian influences, Chinese traditions, and elements that are uniquely Thai. Also known as the "Land of a Thousand Smiles" it is known for the friendliness of its people, diverse geography, and their food.

Buddhism is the most important influence on Thai culture. However, Hinduism has also made contributions to Thai culture, as well as the cultures of nearby Laos, Cambodia, Myanmar, and China. The influence of India can also be seen in art, literature, and other Thai customs.

Thailand has roughly 70 million people, and two thirds of them are from different Thai ethnic groups. Ethnic Thai people can be divided into dozens of different subgroups, of which their traditions, languages, and cultures differ slightly.

A third of the Thai population is made up primarily of Chinese and other various minorities including Vietnamese, Khmer, Hmong, and Mein. Thai language and Thai script are still widely spoken and understood within these ethnic groups.

The Thai government has made an effort to preserve and strengthen the sense of national culture and national identity. In the 1980s and 1990s, Thailand saw a rebirth of local culture and traditions. Although there still is a strong national identity, local food, dances, music, celebrations, and beliefs have begun to play a more important role in Thai life.

Since 95 percent of the country is Theravada Buddhist, religion plays a large part in Thai culture and in everyday life. Some of the most important values held by the Thais are respect, self-control, and a non-confrontational attitude. Losing face by showing anger or by telling a lie is a source of great shame for Thai people, therefore displaying emotions in public is viewed in a negative light.²¹

In Thailand, temples are very important symbols since religion is at the center of their lives. Temples, or wats, are very intricate and are a work of art. The Temple of the Golden Buddha in Bangkok (or Wat Traimit) is a famous Bangkok temple (Photo 1).²²



Photo 1: Temple of the Golden Buddha

Demographics

Ethnic Makeup

Ethnic groups in Thailand include Thai (97.5 percent), Burmese (1.3 percent), and other (1.2 percent).²³

Key Population Centers

According to the last census, the current population of Thailand is 68.9 million. In terms of total land area, Thailand is the 51st largest country in the world, and the 21st in population size. Thailand has 132.1 people per square kilometer (342 per square mile), ranking them 88th in the world in population density. The majority of the population can be found in Bangkok and the surrounding Bangkok Metropolitan Region. Bangkok is located in Central Thailand; it has a population of more than 9 million (or close to 13 percent of the country's population).²⁴

Language

The official language of Thailand is Thai, spoken by 90.7 percent of the population. Burmese is also spoken by 1.3 percent of the

population and other languages are spoken by 8 percent of the population.²⁵

Religion

The main religion practiced in Thailand is Buddhism which accounts for 94.6 percent of the total population. The remainder of the population is made up of Muslim (4.3 percent), Christian (1 percent), and other (less than 1 percent) (2015 est.).²⁶

Vulnerable Groups

Women, children, refugees, and trafficked persons are among the vulnerable populations in Thailand. According to the World Health Organization (WHO), vulnerability is “the degree to which a population, individual or organization is unable to anticipate, cope with, resist and recover from the impacts of disasters.”²⁷

Women

Thai women face some challenges when it comes to gender equality and the empowerment of women. Domestic violence and violence against women continue to be a problem in Thailand. Issues with attitudes and stereotypes against women are common, particularly

with low participation of women in politics, decision-making positions, discrimination and vulnerabilities of ethnic and rural women, as well as women in the informal sector, HIV prevalence, trafficking and exploitation.²⁸

Children

Thai law prohibits child labor, but it is not uncommon for children to work on the streets of Thailand. Children are affected by child labor when their poor families send them to participate in child prostitution in order to make money for the family. Children may work in the street or in brothels, where sexual tourism is common.

Children in Thailand are also victims of physical or sexual violence or abuse, which is typically not reported for fear of retaliation. The abuse to these children typically happens at home or at school. Arranged marriage is still a common occurrence in Thailand, where many child brides are married before the age of 18. The parents of the brides normally choose a man more well-off than them, and receive money from the groom marrying their daughter.

Refugees

As of February 2018, Thailand has 100,015 refugees living in nine different refugee camps. Most refugees are ethnic minorities from Myanmar, which live in the camps in four provinces along the Thai-Myanmar border. Refugees in Thailand have been fleeing conflict and crossing Myanmar's eastern border jungles for the safety of Thailand for nearly 30 years. Furthermore, immigrant children are also forced to work. They are commonly found in the street selling anything they can find. There are currently 20,000 children living on the streets in Thailand's main cities.²⁹

Trafficked Persons

The majority of trafficking victims in Thailand are Thai nationals, trafficked for sexual exploitation domestically and to a number of countries internationally. Migrants from surrounding countries, such as Cambodia, Lao PDR and Myanmar, also make a large proportion of identified trafficked persons in Thailand. The majority of victims have been forced, coerced, or deceived into labor or sexual exploitation. Sex tourism continues to fund the supply of trafficking victims for sexual exploitation, and at the same time corruption, limiting the progress of anti-trafficking efforts.³⁰

According to the U.S. Department of State's

2017 Trafficking in Persons report, Thailand is a source, destination, and transit country for men, women, and children subjected to forced labor and sex trafficking. Thailand is categorized as a Tier 2 Watch List by the U.S. Department of State, which indicates that the Government of Thailand does not fully meet the minimum standards for the elimination of trafficking; however, it is making significant efforts to do so.³¹

Economics

Thailand's economy is dependent on international trade, since their exports account to for two-thirds of the Gross Domestic Product (GDP). Thailand's exports include electronics, agricultural commodities, automobiles and parts, and processed foods. Thailand counts with a well-developed infrastructure, a free-enterprise economy, and generally pro-investment policies, which attract outside investors. The industry and service sectors produce about ninety percent of GDP, leaving the agricultural sector, which is made of mostly of small-scale farms, to contribute ten percent of the GDP.

In recent decades, Thailand has been able to reduce poverty. The Thai government has been actively making changes to reduce poverty by implementing different policies, such as a nationwide 300 baht (roughly US\$10) per day minimum wage policy and deployed new tax reforms designed to lower rates on middle-income earners. Thailand's economy is strong, with low inflation, low unemployment, and reasonable public and external debt levels, but it is still recovering from the slow growth during the 2014 coup.³²

In 2017, Thailand's economic growth surged to a five-year high. The GDP grew 3.9 percent, up from 3.3 percent.³³ Thailand's economy is made up of multiple industries, but the most prominent are tourism, textiles and garments, agricultural processing, beverages, tobacco, cement, light manufacturing such as jewelry and electric appliances, computers and parts, integrated circuits, furniture, plastics, automobiles and automotive parts, agricultural machinery, air conditioning and refrigeration, ceramics, aluminum, chemical, environmental management, glass, granite and marble, leather, machinery and metal work, petrochemical, petroleum refining, pharmaceuticals, printing, pulp and paper, rubber, sugar, rice, fishing, cassava, world's second-largest tungsten producer and third-largest tin producer.³⁴ Thailand moved

from a low-income country to an upper middle-income country, and aims to become a high-income status by 2032.³⁵

Government

The Thai government has executive, legislative, and judicial power. Executive power currently lies with the military junta, the National Council for Peace and Order (NCPO) led by General Prayut Chan-Ocha. The Senate has a term is five years, and the term or four for the lower house in the legislature. Administration of justice is organized through written legislation with all case proceedings, the execution of law, and the safeguarding of justice conforming to promulgated laws.

Thailand is divided into 76 provinces or *changwats*, and two special administrative areas, the capital Bangkok and the city of Pattaya. Provincial authorities have very limited powers. In Pattaya, the mayor is elected by popular vote. Provincial governors are appointed by the Ministry of Interior, except in Bangkok where the governor is elected by popular vote.

Democracy has been evolving since 1978 in Thailand. The process of free and fair multiparty elections began in 1992. In 1997 the people's constitution revised the electoral system, and created new democratic institutions. However, the constitution's provisions were undermined through political appointments that discredited the public agencies set up to monitor government activity and reform of key structures. As a result, a military coup suspended the constitution in 2006, and put in place an interim charter until the country's 18th constitution was adopted following a national referendum in August 2007.³⁶

Another constitution was signed in 2017 which limits the power of political parties during election time. Included in the constitution are changes that strengthen the Constitutional Court in order to make it simpler to impeach a civilian leader.³⁷ The constitution also declares that any future administration must adhere to the military's 20-year-plan for the country's future economic and social development. The date for the general election has been pushed back to February 2019, and there are risks of further delays.³⁸

The 2017 constitution endorses the continuance of the government to wield absolute power without oversight or accountability. In November 2017, the Thai government

announced the national human rights agenda, but did not end repression of civil and political liberties, imprisonment of dissidents, and impunity for torture and other abuses. Thailand's National Council for Peace and Order (NCPO) has a ban on public assembly of more than five people. Media outlets have been temporarily forced off the air due to raising issues that the NCPO considers to be sensitive or contain criticism of the Thai government and/or leaders. The government has been provided broad powers to restrict free speech and enforce censorship. People are being charged with *lese majeste* (article 112 of the penal code, insulting the monarchy) and are routinely denied bail and held in prison for months or years while awaiting trial. Under NCPO Orders 3/2015 and 13/2016, the military is given the power to secretly detain people for a wide range of offenses, and hold them for up to seven days without charge, access to lawyers, or any safeguards against mistreatment. In 2017, The NCPO rejected calls by human rights groups to disclose information about persons held in secret military detention, and dismissed allegations that detainees were being tortured and/or mistreated.³⁹

Environment

Geography

Thailand is a country in Southeast Asia. It has high mountains in the northern regions, a central plain or low-land area, and Khorat Plateau in the northeastern part of the country.⁴⁰ The country has a total area of 513, 120 sq km (198,116 sq mi).

Until the 1970s, the Thai economy was mainly based on agricultural production. Now, agricultural production employs more than twelve million people or approximately thirty percent of the workforce. Many small-scale family farms however have declined due to declining access to natural resources such as land.⁴¹

Borders

Thailand shares borders with Myanmar, Cambodia, Laos, and Malaysia. Thailand's southern region is bordered by the Andaman Sea. Figure 1 depicts the borders of Thailand.⁴²

Climate

Due to its close proximity to the equator, Thailand's climate is tropical, rainy, warm,



Figure 1: Map of Thailand

and cloudy. There are three official seasons in Thailand. It includes a rainy (monsoon), hot (summer) and cool (winter) season. The southern isthmus of Thailand always remains hot and humid.⁴³

Climate Change

Due to Thailand's geography, economy, and level of development, it is affected by climate change. According to the Thailand Meteorological Department, the average annual temperatures in Thailand have significantly risen by 0.95° C (33.71 degrees Fahrenheit) between 1955 and 2009, which is more than the average world temperature increase of 0.69° C. The annual highest, average and lowest temperatures have also been increasing by 0.86°, 0.95° and 1.45° respectively over the past 55 years. From 1993-2008, the sea level in the gulf of Thailand has risen 3-5 mm per year compared to the global average of 1.7 mm per year.

Thailand has also seen an increase in the number of warm days and nights. There has also been changing rainfall patterns. Between 2006-2010, Thailand had longer dry spells in the middle of the rainy season as well as more intense rain during the rainy season. As a result of climate change, Thailand has experienced long dry spells, more frequent and intense tropical storms and flash floods, and unpredictable cold spells.

Approximately 32 percent of Thailand's population relies on agriculture for their livelihood. Agricultural products are highly dependent on specific climate conditions, which are being affected by climate change. Drought and floods are a direct correlation to climate change in Thailand, and between 1989 and 2010 droughts and floods affected between two percent and 27 percent of total agriculture lands and resulted in crop losses.⁴⁴



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Disaster Overview

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Disaster Overview

Thailand is located in the Pacific Rim in a tropical belt which is vulnerable to the influences of monsoons and tropical systems which enhance their vulnerability to natural disaster impacts such as, flooding, typhoons, landslides, droughts and earthquakes. While Thailand is less susceptible to natural hazards than many of the countries in the Indo-Asia-Pacific region, it remains vulnerable and the frequency of natural disasters in the country is due to seasonal weather and climate change in the region.

Thailand has endured many major natural disasters. In 2004 the Indian Ocean Tsunami wreaked havoc on the nation and placed disaster preparedness at the forefront of the national agenda. Throughout history Thailand has experienced various natural disasters such as Typhoon Gay in 1989 which resulted in over 500 casualties. Landslides are also common in Thailand from seasonal monsoon precipitation and have resulted in loss of life and extensive damage to infrastructure and personal property. Thailand is most vulnerable to flooding and the majority of major disasters in Thailand have been a result of flooding. From 2002 to 2010 more than 1,000 persons perished from Thai floods which resulted in more than 40 billion Bhat in damages and economic loss.⁴⁵ In 2011, flooding which was triggered by heavy monsoon rains cost approximately US\$ 46.5 billion in economic damage and losses.⁴⁶

Hazards

Flooding

Flooding is the most serious and frequent hazard in Thailand. It is both common and destructive because the impact varies regionally, every part of Thailand struggles with flood-related damages annually. In particular, Songkhla and Nakorn Sri Thammarat provinces, in the southern region, have year round flash floods and experience heavy rainfall. Bangkok is sometimes called the “wet city” due to its prolonged inundation caused by overflowing of the Chao Phraya River, which usually occurs in the rainy season.⁴⁷

Typhoons

Typhoons are relatively rare in Thailand. When they do affect the country, they have often dissipated into tropical depressions by the time they reach land. These storms can cause a great deal of damage to homes and other structures,

and they can also have a considerable loss of life. The damage caused by storms will vary according to their wind flow velocity and intensity. If the storm is categorized as a depression, it will produce the torrential rains accompanied by floods, and incase a depression deepening into tropical cyclone or typhoon. It is also followed by torrential rains, floods, and storm surges. Tropical cyclones can inflict destructive impacts and may be followed by a high number of injuries and fatalities as well as tremendous material damage.⁴⁸

Landslides

Landslides are a hazard in Thailand and they are closely associated with monsoon and typhoon flooding. They occur concurrently with or following the flash floods generated by the continuous heavy downpours which have saturated and destabilized the land mass in such areas. Recently, Thailand has experience an increase in the intensity and the occurrence of landslides. This is mostly due to deforestation, cultivation of cash crops in a sloping area, and the destruction of a land's surface.⁴⁹

Droughts

Drought is a hazard in Thailand. The problem has aggravated because of water demands for agricultural and industrial purposes, this is due to the increase in population and economic development. The cause of droughts in Thailand is deforestation associated with soil characteristics and dry climate. The drought-stricken people suffer water shortage, especially water for drinking, cropping and livestock farming.⁵⁰

Earthquakes

A few moderate magnitude earthquakes occur in Thailand, particularly in the north.⁵¹ When Thailand experiences an earthquake, it is usually triggered by the active faults either in the country or in the neighboring countries, particularly the northern and western regions which sit directly above an active tectonic fault.⁵²

Tsunamis

It is relatively rare for Thailand to get hit by a tsunami. Nonetheless, the 2004 Indian Ocean Tsunami demonstrated, they are capable of landfall along Thailand's coastlines and can cause extreme damage. The tsunami generated by the 9.0 earthquake off Indonesia's Java coast inundated southern Thailand's Andaman coastal provinces. The catastrophic incident devastated six provinces: Phuket, Trang, Phang Nga, Krabi, Ranong and Satun.⁵³ The west side of Thailand's

southern region is bordered by the Andaman Sea. The Andaman has several active volcanoes and plate boundaries, thus increasing the risk of tsunami. Even with 90 minutes of warning, Thailand had severe damage and loss of life from the 2004 tsunami.⁵⁴

Recent History of Natural Disasters

Floods – May 2017

High amounts of rain caused floods and flash floods in the northern provinces of Thailand. A total of seven provinces and 61 villages were affected by the floods. Over 800 houses in the most affected village of Kamphaeng Pet were damaged. In Uttaradit province 2,000 families were urged to evacuate.⁵⁵

Floods – December 2016

The southern provinces of Surat Thani, Nakhon Si Thammarat Songkhla, Phattalung, Pattani, Chumphon, Krabi, Trang, Yala and Narathiwat were struck by floods that killed affected over 330,000 homes and 91 deaths were reported.⁵⁶

Fires – May 2016

Fires spread in the forested areas of Chiang Mai, Mae Hong Son, Tak and Nan provinces. The fires progressed to Doi Suthep Mountain in Chiang Mai.⁵⁷

Floods – October 2016

Floods that hit Nakhon Sawan province killed three people and inundated large areas of farmland as well as almost 30,000 homes. Across the country 14 provinces were affected, with Ayutthaya province particularly hard hit.⁵⁸

Drought – February 2016

The Government of Thailand reported that 28 provinces in Thailand were at risk of water shortages. Water was delivered by the government to all provinces affected.⁵⁹

Drought – July 2015

Thailand experienced one of the worst droughts in decades, with water rationing imposed in almost a third of the country. The Royal Irrigation Department said that the amount of usable water in dams across the country, except in the West, was below 10 percent of capacity. This made it impossible for rice farmers to plant in June or July as they usually would.⁶⁰

Landslides – July 2014

After three days of heavy rain, Chiang Rai province was struck by flash floods and landslides. Thousands of people in Malaysia and in eight districts in Thailand were affected, but no injuries were reported.⁶¹

Typhoon – July 2014

Typhoon Rammasun caused torrential rainfall in Northeastern Thailand, with Yasothorn province being the most affected. Water levels along several canals increased drastically, overflowing the banks and inundating 500 rais of rice fields.⁶²

Earthquake – May 2014

On May 5, a 6.3 on the Richter scale earthquake, with its epicenter 27km southwest of Chiang Rai, struck Thailand. Over 32 injuries were reported and one death confirmed. Damage occurred to 8509 houses, 99 temples, 46 schools, 33 government buildings, seven churches, six companies, five roads, four bridges, two community buildings, one university, and one hotel.⁶³

Floods – October 2013

From July to October northern Thailand experienced sporadic floods. Multiple tropical storms added to the heavy rainfall that led to flooding. A total of 45 provinces were affected and 62 people were reported dead due to the floods.⁶⁴

Floods of 2011

Flooding was triggered by heavy monsoon rains in July 2011 and provinces were affected over a three-month period (July-September). Over a third of the provinces were inundated with water.⁶⁵ The flooding cost approximately US\$ 46.5 billion in economic damage and losses, caused over 800 deaths, and displaced approximately 2.5 million people.⁶⁶

Country Risks

Deforestation

Thailand has problems with deforestation. Deforestation is also a contributing factor to landslides. Logging disturbs and destroys the land and adds to the issues the country is experiencing in regards to flooding. Deforestation, the declining efficiency of the flood management infrastructure, and the changes in land use patterns has made situations worse.⁶⁷

Coastal Erosion

The coastal problems have rapidly grown in the last two decades and have been both man-made and naturally occurring. Coastal erosion has occurred regularly in Thailand, but in the last decade, it has intensified. Thailand has lost 50 percent of its mangrove forest, which has attributed to the fast moving coastal erosion.⁶⁸

Sea Level Rise

The sea level in the Gulf of Thailand has risen about 3-5 mm per year, while the global average is 1.7 mm per year. When the sea level rises, it is overlaid with land subsidence, which means up to 25 mm per year of net sea level rise in some areas such as the larger Bangkok metropolitan area or the river mouths in the Gulf of Thailand.⁶⁹

Country Risk Profile

The exposure of hazards in a country, how vulnerable the country is, as well as the coping capacity of a country are important factors in Disaster Risk Management. Figure 2 shows INFORM's (Index for Risk Management) risk

profile for Thailand.⁷⁰ INFORM is a global, objective, and transparent tool for understanding the risk of humanitarian crises. INFORM is a composite indicator, developed by the Joint Research Center, combining 53 indicators into three dimensions of risk: hazards (events that could occur) and exposure to them, vulnerability (the susceptibility of communities to those hazards) and the lack of coping capacity (lack of resources that can alleviate the impact). The index results are published once every year. They give each country an overall risk score of 1-10 (1 being the lowest and 10 the highest) for each of the dimensions, categories, and components of risk. The higher the score the more vulnerable a country is. The purpose of INFORM is to provide an open, transparent, consensus-based methodology for analyzing crisis risk at global, regional or national level. Thailand has a 2018 Hazard and Exposure risk of 5.5/10; a Vulnerability score of 3.1/10; and a Lack of Coping Capacity score of 4.1/10. Physical exposure to tsunamis and floods are the two highest.⁷¹

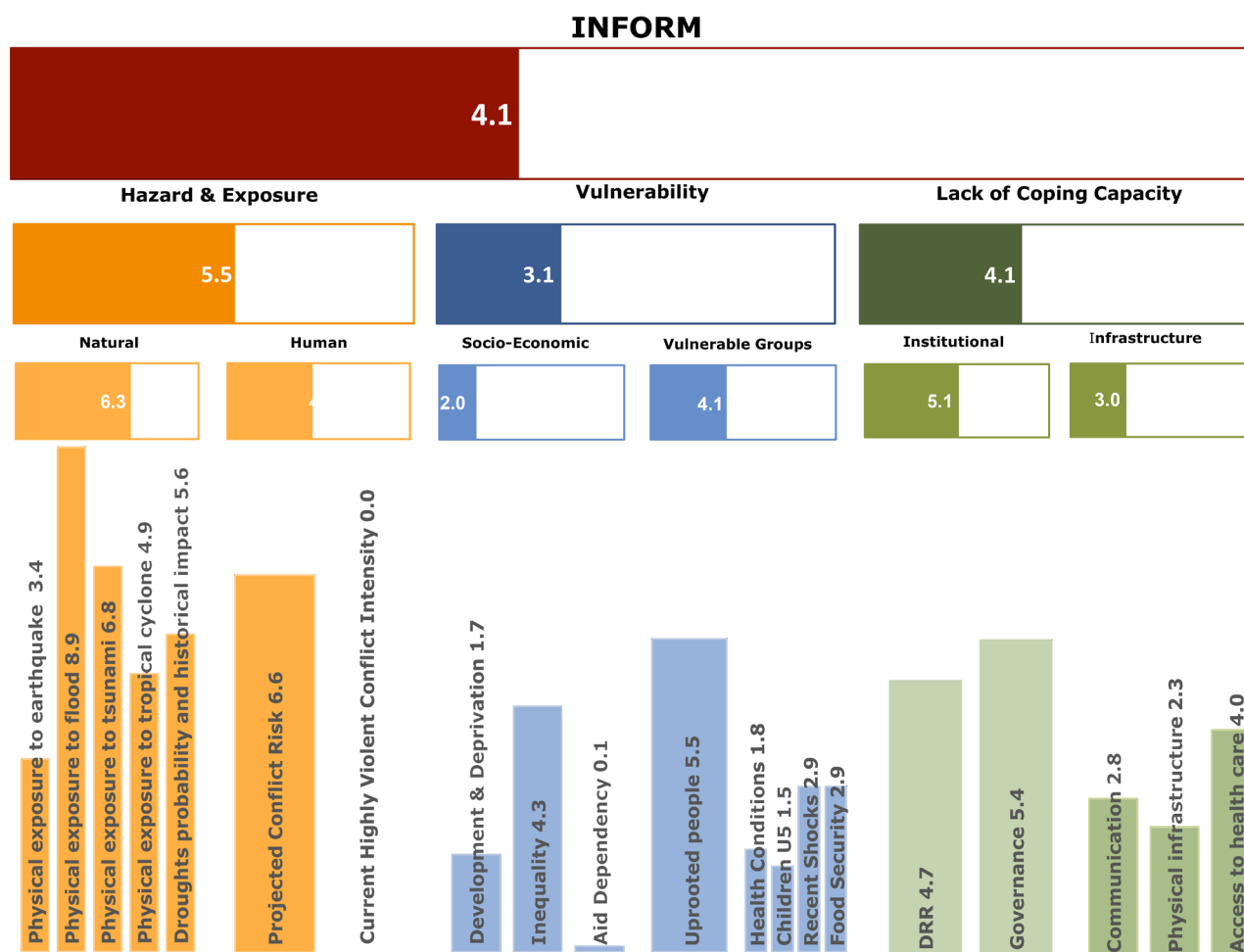


Figure 2: INFORM's Country Risk Profile for the Thailand



THAILAND

Organizational Structure

Organizational Structure for Disaster Management

The Disaster Management System based on the Disaster Prevention and Mitigation Act 2007 (DPM Act 2007), came into force on 6 November 2007 and implements Thailand's national Disaster Management (DM) Institutional arrangement. All disaster management activities are directed and controlled by the Commander/Directors at three levels; National, Provincial, and Local. Based on the DPM Act 2007, the National Disaster Prevention and Mitigation Committee (NDPMC) is a policy maker, chaired by the Prime Minister or designated Deputy Prime Minister and the Director General of the Department of Disaster Prevention and Mitigation (DDPM) is the Secretary. The

NDPMC consist of 34 members and various sub-committees. The Minister of the Interior is the National Incident Commander in large-scale disasters (level 3) and the Prime Minister or Deputy Prime Minister whom assigned by the Prime Minister serves this role in a Catastrophic Disaster (level 4).⁷² Figure 3 depicts the Thailand Disaster Management System.⁷³

Disaster Risk Management Platforms and Institutions

The central state agency in performing disaster risk management tasks of the country is the Department of Disaster Prevention and Mitigation (DDPM).⁷⁴ DDPM was created in 2002 as an agency the under Ministry of Interior (MOI) with the responsibility to oversee the administration of disaster management responsibilities in Thailand. The national disaster management system is made up of multiple agencies and committees to carry out disaster preparedness and response activities.⁷⁵

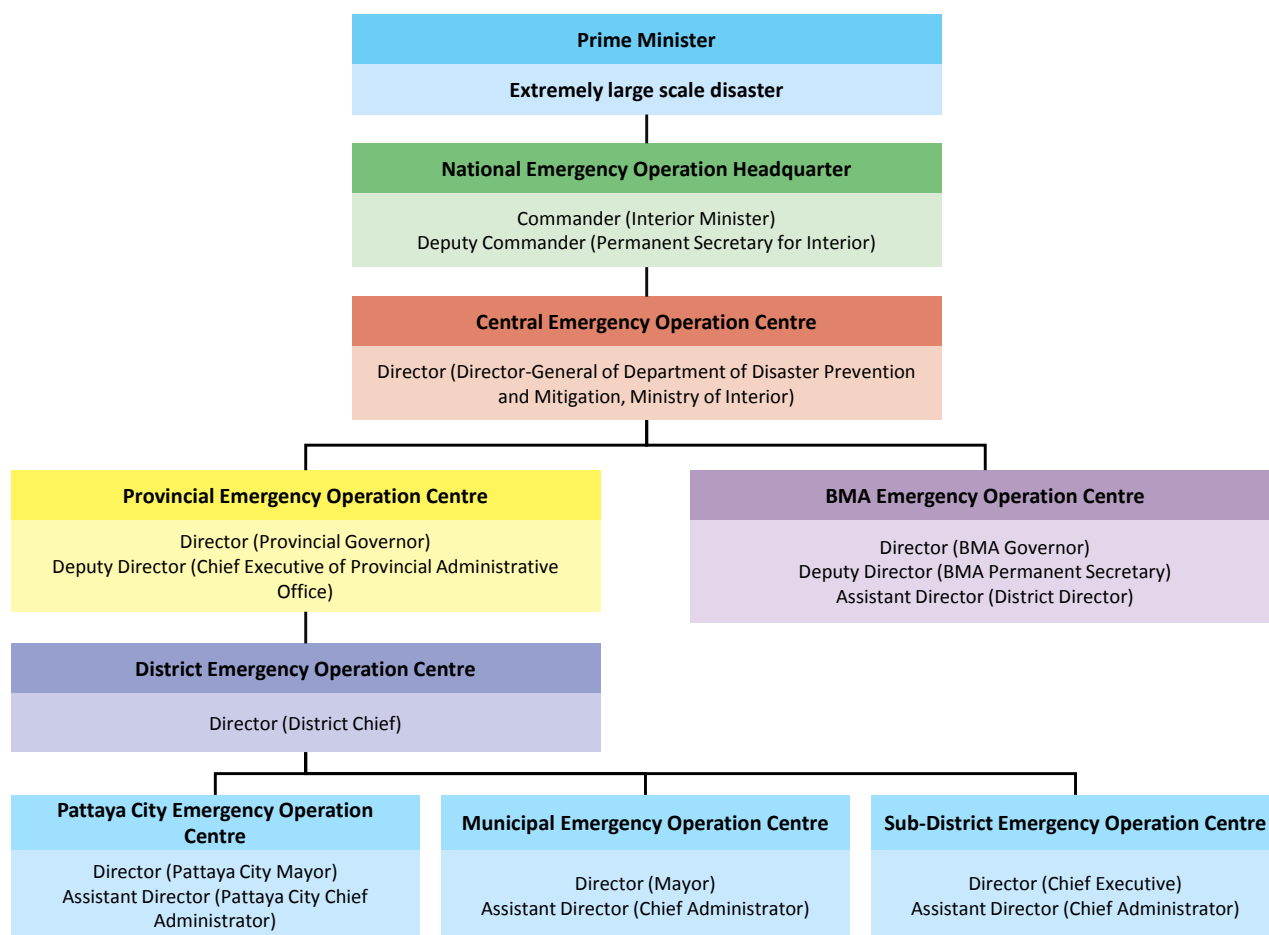


Figure 3: Organizational Structure for Disaster Management in the Thailand

National Disaster Prevention and Mitigation Committee (NDPMC)

The NDPMC members include the Prime Minister as the Chairperson, and two Vice Chairpersons- the Minister of the Interior and the Permanent Secretary of the Ministry of the Interior. The Permanent Secretary of the Ministry of Defense, Permanent Secretary of the Ministry of Social Development, Permanent Secretary of the Ministry of Agriculture, the Director General of the Department of Disaster Prevention and Mitigation (DDPM), along with experts and military commanders, which make up the remaining members of the NDPMC.⁷⁶

The responsibilities of the NDPMC include:⁷⁷

- Identifies the policy of the formulation of the National Disaster Prevention and Mitigation Plan;
- Contemplates to approve the National Disaster Prevention and Mitigation Plan under Section 11(1) prior to submitting to the cabinet;
- Integrates the development of the Disaster Prevention and Mitigation System among the relevant State agency, local administrative organization, and private sector for efficiency;
- Provides advice, consultation and support for the performance of the duties on disaster prevention and mitigation;
- Stipulates rule on remuneration, compensation, and expense due to the performance of duties on disaster prevention and mitigation; and
- Performs any other duties prescribed in this Act or in other law or as entrusted by the Cabinet.

Bureau of the National Safety Council of Thailand (BNSCT)

The BNSCT was created in 1982 and has the responsibility to focus their efforts on man-made and technological disaster management in Thailand. The primary functions of the BNSCT are to help mitigate traffic accidents, chemical and work-related accidents, accidents in private residents and public settings, and to mitigate fires in high-rise buildings. The BNSCT is chaired by the Prime Minister and the Director General of DDPM is a member and the Secretariat of the Council.⁷⁸

Department of Disaster Prevention and Mitigation (DDPM)

DDPM was established to enhance national mechanisms to reduce disaster-related damages

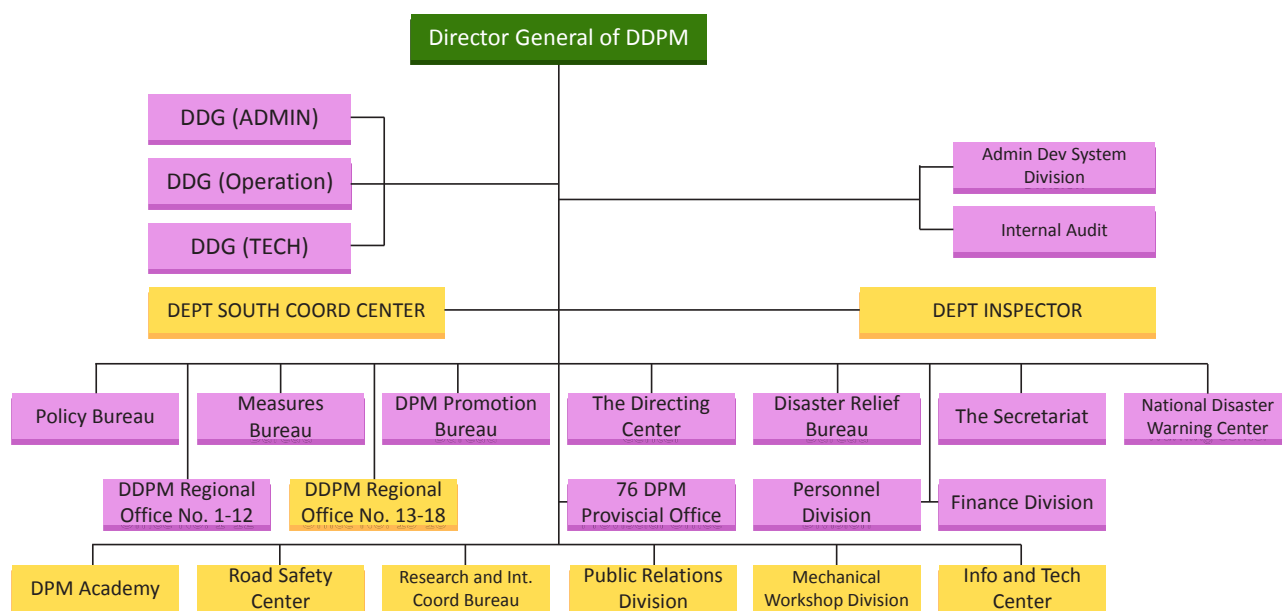
and losses and to mitigate the impacts of disasters. DDPM is the central government agency responsible for management of national DPM activities.⁷⁹

DDPM functions include:⁸⁰

- Formulate and proposes the National Disaster Prevention and Mitigation Plan to NDPC for furtherly pursuing the approval of the Cabinet;
- Organize the research to acquire the measures for the efficient disaster prevention and mitigation;
- Carry out the task of disaster prevention and mitigation, coordinates operational efforts with, provides support and assistance to a State agency, a local administrative organization, and an agency of the private sector in relation to disaster prevention and mitigation; as well as providing immediate relief to the person affected by disaster, harmful menace or the person suffered damage caused by disaster;
- Provide advice, a consultation, and training on disaster prevention and mitigation to a State agency, a local administrative organization, and an agency of the private sector;
- Follow up, inspect, and evaluate the implementation of the Disaster Prevention and Mitigation Plan at each level; and
- Perform any other duties as prescribed under this Act or under other law or as the Commander, the Prime Minister, NDPMC or the Cabinet entrusted.

The initial response procedures when a disaster occurs in Thailand requires that emergency personnel from the local government act as first responders with additional support from local volunteers such as Civil Defence Volunteers (CDVs) and One Tambon (Sub-District) One Search and Rescue Team (OTOS). In almost all cases of disaster response, the Thai Armed Forces are mobilized since they are located in almost every town and are often the only ones with equipment, vehicles, training, supplies, and manpower capable of responding. This level of response is typically executed in response to a large scale or catastrophic disaster in the country. DDPM also activates a 24/7 disaster Emergency Operation Center (EOC) in all provinces.⁸¹

Figure 4 depicts the Organizational Structure of DDPM.⁸²



HQ: 5 BUREAUS, 3 DIV, 2 GROUP, 12 CENTERS, (INT) 6 CENTERS PROV. 76 PROVINCES

Figure 4: Organizational Structure of DDPM

Roles of DDPM in response:^{83, 84}

- Provide training courses;
- Works with all provincial and local government officials and follows the disaster emergency plan;
- Support personnel and resources; and
- Functions as the coordination center in large-scale disasters.

Bangkok Metropolitan Administration (BMA) Disaster Prevention and Mitigation Committee

The BMA Governor serves as the Chairperson of the Committee. The Vice Chairperson is held by the BMA Permanent Secretary. The remaining committee members include government agency representatives, DDPM representatives, private sector and NGO's representatives, military representatives and educational institution representatives.

The responsibilities of the BMA's DMPC include:

- Formulate the Disaster Prevention and Mitigation Plan for Bangkok;
- Oversee and conduct training for volunteers in Bangkok;

- Maintain materials, equipment, tools, and vehicles; and
- Support and assist local administrations and in disaster prevention.⁸⁵

Provincial Disaster Prevention and Mitigation Committee (PDPMC)

The PDPMC is made up of the Governor who serves as the Chairperson, the Deputy Governor in the role of the Vice Chairperson, Military Commander as the Chairman of Provincial Administration Organization, Representatives from Provincial Government, Services, Local Administration Organization, and Private Sector and NGO's. The DDPM Provincial Chief serves as a member and the Secretary of the committee.

Responsibilities of the PDPMC include:

- Formulate the Provincial Disaster Prevention and Mitigation Plan;
- Oversee and provide training for volunteer;
- Oversee & investigate local admins. of preparing equipment; and
- Operate as government service unit at local administration level to assist the disaster affected and other activities.⁸⁶

Organizations in Thailand

Table 1 represents organizations in Thailand.

	<p>ADRA concentrates its efforts in vulnerable and marginalized groups within Thailand, while also cooperating with other governmental and non-governmental agencies and organizations in fulfilling this goal. Disaster preparedness activities include advocacy and training of local partners in disaster prevention, mitigation, and preparedness, as well as direct interventions in disaster rescue, relief, and rehabilitation. ADRA Thailand maintains a National Office in Chiang Mai.⁸⁷</p> <p>Website: http://adrathailand.org/</p>
	<p>ADB works closely with Thailand's government to ensure its economic growth remains strong. ADB's country partnership strategy (2013-2016) focused on three pillars: knowledge advancement and innovation; support for private sector development; and facilitation of regional cooperation and integration. Projects generally fall into one of three categories: infrastructure, finance sector, or environmentally sustainable development.⁸⁸</p> <p>Website: https://www.adb.org/countries/thailand/strategy</p>
	<p>ADPC disseminates disaster risk management information and systems to reduce risk across the Asia-Pacific region. Focus areas include the inclusion of science and technology, promoting awareness, and facilitating partnerships. Headquartered in Bangkok, there is a very substantial organizational presence in Thailand.⁸⁹</p> <p>Website: http://pakndmp.com/ADPC</p>
	<p>Currently, Australia collaborates with Thailand in regional efforts to improve responses to shared transboundary challenges in people trafficking, child sexual exploitation, labor migrant worker exploitation, Foot and Mouth Disease control, and malaria elimination.⁹⁰</p> <p>Website: http://thailand.embassy.gov.au/bkok/AusAID_Programs_Thailand.html</p>
	<p>Care delivers emergency relief and long-term international development projects. In emergencies, Care responds to save lives, with special attention to the needs of women and girls. Their humanitarian action includes preparedness and early action, emergency response and recovery, and encourages future resilience and development.⁹¹</p> <p>Website: http://www.care.org/country/thailand</p>
	<p>FAO is the regional hub for Asia-Pacific operations; the office oversees a large area of responsibility. With the key commitment to the eradication of hunger and poverty, this collaboration is focused on food and industrial crop development, food safety, and poverty alleviation. FAO assistance in Thailand is guided by six priority areas of work: (i) Poverty alleviation and reduction of social and economic inequalities; (ii) Adaptation and mitigation of negative impacts of climate change and natural disasters; (iii) Facilitating ASEAN integration, South-South Cooperation and other regional cooperation in the agricultural sector; (iv) Ensuring food safety and quality; (v) Empowering farmers' organizations, and promoting private-sector and rural youth involvement; (vi) Harmonization of food security and bioenergy policy development.⁹²</p> <p>Website: http://www.fao.org/countryprofiles/index/en/?iso3=THA</p>

Table 1: Organizations in Thailand


 <p>สภากาชาดไทย The Thai Red Cross Society</p>	<p>The Thai Red Cross Society (TRCS) delivers humanitarian assistance to populations affected by natural hazards or human-induced emergencies. The Thai Red Cross Society was officially recognized by the International Committee of the Red Cross on May 27, 1920, and was accepted as a member of the International Federation of Red Cross and Red Crescent Societies (the former League of Red Cross and Red Crescent Societies) on April 8, 1921.⁹³ Website: https://english.redcross.or.th/home</p>
 <p>GFDRR Global Facility for Disaster Reduction and Recovery</p>	<p>GFDRR provides analytical work, technical assistance, and capacity building to help vulnerable nations improve resilience and reduce risk. GFDRR supports activities to strengthen disaster and climate resilience in Thailand.⁹⁴ Website: https://www.gfdr.org/thailand</p>
	<p>ILO's work in Thailand, a middle-income country, has for many years been oriented more towards rights issues (in particular, freedom of association and collective bargaining, discrimination, child labor and trafficking, the rights of migrant workers) than to broader employment and development issues.⁹⁵ Website: http://www.ilo.org/asia/countries/thailand/lang--en/index.htm</p>
 <p>IOM • OIM</p>	<p>IOM began its operations in Thailand in 1975. With the Kingdom of Thailand joining IOM as a member state in 1986. IOM has a very strong presence in Thailand. IOM provides support in the areas of labor migrations, counter trafficking, emergency assistance, and resettlement, among others. Today, IOM has a strong presence in Thailand and is one of the largest country offices worldwide.⁹⁶ Website: http://thailand.iom.int/overview</p>
	<p>JICA in Thailand provides cooperation in economic growth, poverty reduction, disaster mitigation, other development issues such as health and governance.⁹⁷ Website: https://www.jica.go.jp/thailand/english/index.html</p>
 <p>OCHA</p>	<p>OCHA's regional office is located in Bangkok with dedicated focal points to ensure liaison with the Royal Thai Government. Projects and initiatives in Thailand relate to one of the three following areas: emergency preparedness, emergency response, and regional partnerships.⁹⁸ Website: http://www.un.or.th/our-work/</p>
 <p>Save the Children</p>	<p>Save the Children has worked in Thailand since 1984. Their work is focused on education, child protection, child rights governance, health and nutrition, livelihoods and humanitarian assistance. A major focus of STC in Thailand is refugee assistance along the Thai-Myanmar border.⁹⁹ Website: www.savethechildren.org</p>
	<p>UNICEF implements programs covering education, health and nutrition, disaster risk reduction and emergencies, HIV and AIDS prevention, child protection, communication, and local policy and institutional development.¹⁰⁰ Website: https://www.unicef.org/thailand/</p>
	<p>UNDP Thailand works to improve the lives of the people in Thailand through the broad thematic areas of democratic governance and social advocacy, inclusive green growth and sustainable development and gender equality. In Thailand, UNDP works with the Royal Thai Government, civil society, national partners and the private sector, to consolidate a participatory democracy and create an enabling environment for inclusive growth and sustainable use of natural resources.¹⁰¹ Website: http://www.th.undp.org/</p>

Table 1: Organizations in Thailand (cont.)

	<p>UNESCAP is the regional arm of the United Nations Secretariat for the Asian and Pacific regions, located in Bangkok, Thailand. UNESCAP is committed to materialize the visions of the United Nations Millennium Declaration, which was adopted by the UN General Assembly in September 2000.¹⁰²</p>
	<p>The UNHCR has been operating in Thailand for over 30 years. UNHCR's extensive presence focuses on the refugee situation along the Thai-Myanmar border. Today there are 100,015 refugees living in 9 refugee camps in Thailand (as of February 2018). The organization works on ensuring refugees have adequate accommodation, fair protections, and all basic needs are met.¹⁰³ Website: https://www.unhcr.or.th/en</p>
	<p>The UNISDR Regional office for Asia and the Pacific serves more than 27 countries and 16 territories. The regional office focuses on disaster risk reduction and the Hyogo Framework for Action. Moving the Asian Partnership on Disaster Reduction forward is a priority for the office.¹⁰⁴ Website: https://www.unisdr.org/asiapacific</p>
	<p>In Thailand, UNFPA's overall goal is to empower and improve the lives of underserved populations, especially women and young people including adolescents, enabled by an understanding of population dynamics, human rights and gender equality.¹⁰⁵ Website: http://thailand.unfpa.org/</p>
	<p>Thailand graduated from USAID assistance in 1995 and in 2003, USAID opened a regional mission in Bangkok that serves the Asia-Pacific. Drawing upon Thai expertise, USAID works on cross-border issues of concern to Thailand and the region. The bulk of USAID activities in Thailand address transnational challenges through regional programs, including support to the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation (APEC) forum, the Lower Mekong Initiative, and other regional forums. These efforts are leading to greater regional economic integration and cooperation on issues of mutual interest to the United States and Thailand.¹⁰⁶ Website: https://www.usaid.gov/thailand</p>
	<p>WFP Thailand supports national and local government efforts to effectively and efficiently prepare for and respond to natural disasters, as well as the impacts of climate change by implementing various projects in selected highly disaster-prone provinces. WFP also addresses the food security needs of vulnerable people in conflict-affected areas.¹⁰⁷ Website: http://www.un.or.th/staff/world-food-programme-wfp/</p>
	<p>For over 60 years, the WHO has contributed significantly to Thailand's national health development and capacity building particularly in the areas of communicable disease control, primary health care, maternal and child health, and health systems development.¹⁰⁸ Website: http://www.searo.who.int/thailand/en/</p>
	<p>World Vision helps communities affected by disasters by providing life-saving relief supplies and assist in disaster management activities.¹⁰⁹ Website: http://www.worldvision.or.th/index_eng.html</p>

Table 1: Organizations in Thailand (cont.)

The Thai Red Cross

The DDPM develops and carries out community-based disaster risk reduction interventions in disaster-prone communities across the country and coordinates with the Thai Red Cross, other government agencies and NGOs to implement community-based disaster risk reduction, public awareness, and early warning signals. The Thai Red Cross implements community-based initiatives through its Relief and Community Health Bureau.¹¹⁰

Thailand was greatly affected by the 2004 tsunami. The Thai Red Cross worked with International Federation of Red Cross and Red Crescent Societies (IFRC), the American Red Cross, the Canadian Red Cross and other partner National Societies to carry out disaster management through the Thailand-Tsunami Recovery Program, using the community-based disaster risk reduction approach.¹¹¹

The Thai Red Cross Society operates as the primary (in-country) humanitarian organization in Thailand. They provide services as part of the International Red Cross and Red Crescent Movement. The Society is headquartered in Bangkok, Thailand and was founded in 1893. They were formally established by the International Committee of the Red Cross in 1920, and was recognized as a member of the International Federation of Red Cross and Red Crescent Societies the following year, in 1921.¹¹²

It operates in 14 bureaus, 6 dedicated centers and 5 special affairs offices.¹¹³ The Thai Red Cross Society retains a distinctive rapport with the Thai national authorities. It is mandated in Thailand that national act as auxiliaries to the national authorities during national emergencies and disasters.¹¹⁴

The Thai Red Cross Society is designated as a primary responder in disaster management and the role and functions of the Thai Red Cross are included in the National Disaster Prevention and Mitigation Plan. Additionally, the national mandate requires that the Thai Red Cross maintain frequent contact with the Thai military through their active involvement in exercises, conferences and other events intended to enhance relationships and to promote understanding and discussions.¹¹⁵

It has supported community-based hazard, vulnerability and capacity assessments, conducted awareness-raising campaigns, established disaster early warning systems in communities, and has implemented a wide range of disaster risk reduction activities and projects in communities across Thailand. More than 26,000 community members have

been trained for disasters through drills and developing preparedness plans.¹¹⁶ Photo 2 shows the Thai Red Cross Society at work handing out supplies.¹¹⁷



Photo 2: Thai Red Cross Society

U.S. Government Agencies in Thailand

U.S. Embassy Bangkok

The U.S. and Thailand established relations in 1818 and signed a Treaty of Amity and Commerce in 1833, formalizing diplomatic relations. The Treaty of Amity and Commerce of 1833 began a partnership that has developed and strengthened over time. In 2012, the U.S. and Thailand signed a Joint Vision statement reaffirming their defense alliance. Today the U.S. and Thailand cooperate on a wide range of program across a vast range of issues, including education and culture, public health, business and trade, democracy, as well as security and military cooperation.¹¹⁸

The U.S. Embassy Bangkok office is listed below with contact information:

U.S. Embassy Bangkok
95 Wireless Road
Bangkok, Thailand 10330
Tel: +66-2-205-4000

U.S. Consulate General Chiang Mai

The U.S. Consulate General in Chiang Mai provides services to American citizens, assists with non-immigrant visa adjudication, and promotes educational and cultural exchanges, environmental partnerships, and efforts to combat trafficking in persons. Outside of Bangkok, the U.S. Consulate General in Chiang Mai is the sole U.S. consular presence. Staff from the Department of State, the Drug Enforcement Administration, and the U.S. Air Force's Technical Application Center are stationed in

Chiang Mai associated with the Consulate.

***U.S. Agency for International Development
Regional Development Mission for Asia
(USAID/RDMA)***

Thailand graduated from USAID assistance in 1995 and in 2003, USAID opened a regional mission in Bangkok that serves the Asia-Pacific. Drawing upon Thai expertise, USAID works on cross-border issues of concern to Thailand and the region. The bulk of USAID activities in Thailand address transnational challenges through regional programs, including support to the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation (APEC) forum, the Lower Mekong Initiative (LMI), and other regional forums. These efforts are leading to greater regional economic integration and cooperation on issues of mutual interest to the U.S. and Thailand.¹¹⁹

The USAID office in the Thailand is listed below with contact information:

USAID Regional Development Mission for Asia
(RDMA)
63 Wireless Rd.
Pathum Wan, Bangkok 10330
Tel: +02 257 3111

***Joint US Military Advisory Group Thailand
(JUSMAGTHAI)***

The Joint United States Military Advisory Group, Thailand was established on September 22nd, 1953. The Chief of JUSMAGTHAI also serves as the Senior Defense Official and Defense Attaché to Thailand. As a Security Cooperation Organization, JUSMAGTHAI supports a variety of missions to include a robust Joint Combined bilateral Exercise Program (averaging over 60 exercises a year), foreign military sales and humanitarian demining missions. JUSMAGTHAI is located on a Royal Thai Armed Forces military compound approximately two kilometers from the American Embassy, on Sathorn Tai Road.¹²⁰

***Armed Forces Research Institute of Medical
Sciences (AFRIMS)***

The mission of the U.S. Army Medical Directorate of the Armed Forces Research Institute of Medical Sciences (USAMD-AFRIMS) is to conduct state of the art medical research and disease surveillance to develop and evaluate medical products, vaccines, and diagnostics to protect DOD personnel from infectious disease threats—many of which also endanger the men, women and children of Southeast Asia. First

formed following the 1958 cholera epidemic as the Southeast Asia Treaty Organization (SEATO) Cholera Research Project, AFRIMS' scope was broadened in 1960 with a mandate to contribute to the eradication of other infectious diseases. USAMD-AFRIMS resides at the Royal Thai Army Medical Center in Bangkok and is a directorate of the Walter Reed Army Institute of Research (WRAIR) under the US Army Medical Research and Material Command (USAMRMC).¹²¹

Bureau of Diplomatic Security (DS)

The Bureau of Diplomatic Security (DS) is a unique organization that plays an essential role within the U.S. Department of State. The Bureau's personnel—who include special agents, engineers, diplomatic couriers, civil service specialists, and contractors—work together as a team to ensure that the State Department can carry out its foreign policy missions safely and securely. Diplomatic Security has a broad scope of global responsibilities, with protection of people, information, and property as its top priority. Overseas, DS develops and implements effective security programs to safeguard all personnel who work in every U.S. diplomatic mission around the world.¹²²

Centers for Disease Control (CDC)

CDC has worked closely with the Thailand Ministry of Public Health for more than 35 years, strengthening local capacity to detect, prevent and control diseases. HIV/AIDS, emerging infectious diseases, influenza, tuberculosis, malaria, non-communicable diseases, and refugee and migrant health are the main focus of its work in Thailand and the Southeast Asia region.

CDC programs also improve public health workforce skills in areas like laboratory, epidemiology and management science. The U.S. Agency for International Development is an important partner in HIV/AIDS, malaria, tuberculosis, and emerging infectious disease control.¹²³

Homeland Security Investigations (HSI)

HSI is a critical investigative arm of the Department of Homeland Security and is a vital U.S. asset in combating criminal organizations illegally exploiting America's travel, trade, financial and immigration systems. HSI's workforce includes special agents, analysts, auditors and support staff. Its men and women are assigned to cities throughout the United

States and to offices around the world. HSI's international force is the department's largest investigative presence abroad and gives HSI one of the largest international footprints in U.S. law enforcement.¹²⁴

Participation in International Organizations

Thailand participates in the following international organizations:

Asian Development Bank (ADB), Asia-Pacific Economic Cooperation (APEC), ASEAN Regional Forum (ARF), Association of Southeast Nations (ASEAN), Bay of Bengal Initiative (BIMSTEC), Bank for International Settlements (BIS), County of Democrats (CD), Conference on Interaction and Confidence Building Measures in Asia (CICA), Colombo Plan (CP), East Asia Summit (EAS), Food and Agriculture Organization of the United Nations (FAO), Group of 77 (G-77), International Atomic Energy Agency (IAEA), International Bank for Reconstruction and Development (IBRD), International Civil Aviation Organization (ICAO), International Chamber of Commerce (ICC) (national committees), Institute of Catastrophe Risk Management (ICRM), International Development Association (IDA), International Fund for Agricultural Development (IFAD), International Finance Corporation (IFC), International Federation of Red Cross and Red Crescent Societies (IFRCS), International Hydrographic Organization (IHO), International Labour Organization (ILO), International Monetary Fund (IMF), International Maritime Organization (IMO), International Mobil Satellite Organization (IMSO), Interpol, International Olympic Committee (IOC), International Organization for Migration (IOM), Inter-Parliamentary Union (IPU), International Organization for Standardization (ISO), International Telecommunications Satellite Organization (ITSO), International Telecommunication Union (ITU), International Trade Union Confederation (ITUC), Multilateral Investment Guarantee Agency (MIGA), Non-Aligned Movement (NAM), Organization of American States (OAS) (observer), Organization for the Prohibition of Chemical Weapons (OPCW), Prudential Corporation Asia (PCA), Pacific Islands Forum (PIF) (partner), United Nations (UN), United Nations-African Mission in Darfur (UNAMID), United Nations Conference on Trade and Development (UNCTAD), United Nations Educational, Scientific, and Cultural

Organization (UNESCO), United Nations High Commission on Refugees (UNHCR), United Nations Industrial Development Organization (UNIDO), United Nations Military Observer Group in India and Pakistan (UNMOGIP), United Nations Operation in Cote d'Ivoire (UNOCI), United Nations World Tourism Organization (UNWTO), Universal Postal Union (UPU), World Customs Organization (WCO), World Federation of Trade Unions (WFTU), World Health Organization (WHO), World Intellectual Property Organization (WIPO), World Meteorological Organization (WMO), World Trade Organization (WTO).¹²⁵

Foreign Disaster Relief and Emergency Response

It is not considered common practice for Thailand to make an official request for international assistance. The Thai culture and national politics are the primary reasons the country is hesitant to request international or external assistance. From a cultural perspective, values of sovereignty and non-intrusion are of the utmost importance. From a Political viewpoint, Thai authorities want to maintain control of response operations. Even though Thailand is reluctant to formally request international aid, Thailand does request technical assistance from international partners. International aid in Thailand is invited or accepted on bilateral basis, especially from ASEAN member countries. International military assistance is accepted on a bilateral basis and is managed by the military subsequent of arrangements with the Ministry of Foreign Affairs (MOFA) and the related embassy.

However, the notion that national response operations will at all times be administered internally and within the current disaster management (DM) structure has resulted in a deficiency in planning and management of large-scale disasters that call for international assistance. The Ministry of Foreign Affairs acknowledges that structures need to be in place to cope with the surge of personnel, supplies and equipment and to safeguard timely incorporation of international actors into current structures. The Ministry of Foreign Affairs is currently in the process of devising a plan to address this policy gap. The Ministry of Foreign Affairs handles requests for international assistance. Formal requests are centered on requirements for support recognized by the Department of Disaster Prevention and Mitigation (DDPM).¹²⁶

Traditionally, Thailand will not make an official request for international assistance during

a disaster, but when they accept assistance, the Ministry of Foreign Affairs handles those requests. Formal requests are centered on requirements for support recognized by the Department of Disaster Prevention and Mitigation (DDPM). The Thai culture and national politics are the primary reasons the country is hesitant to request international or external assistance. Culturally, values of sovereignty and non-intrusion are of the utmost importance for the Thai people, and politically, Thai authorities want to maintain control of response operations.

Requesting technical assistance from international partners, instead of aid, is a common practice for the Thai government. Thailand particularly counts on the support of other ASEAN member countries. International military assistance is accepted on a bilateral basis and is managed by the military subsequent of arrangements with the Ministry of Foreign Affairs (MOFA) and the related embassy.¹²⁷

Laws, Policies, and Plans on Disaster Management

Authorities at the national and provincial levels are enforced and encouraged to develop their own action plans as well as budget for plan implementation and exercises. According to Sustainable Development Goals (SDGs), Sendai Framework for DRR 2015 – 2030 and Paris Agreement, all line ministries, and relevant agencies from national to local levels are implementing their DRM plans in compliance to the National DRM plan 2015 and global frameworks.¹²⁸

In Thailand multiple agencies have a function and responsibility for disaster risk management. The Department of Disaster Prevention and Mitigation (DDPM), the National Safety Council of Thailand (NSCT) and the National Disaster Warning Centre (NDWC) have specific and individual plans on disaster and emergency management. Each of the individual plans is a collective part of the national plan.¹²⁹ The NDWC is included with the DDPM.

A list of the main disaster plans and acts in Thailand include the following:

Disaster Prevention and Mitigation Act 2007

The key legal document governing disaster management is the Disaster Prevention and Mitigation Act, B. E. 2550 (DPM Act 2007). The DPM Act governs Thailand's approach to disaster management. The DPM Act is executed by the National Disaster Prevention and Mitigation Plan

2010-2014 (NDPM Plan) that, together with the Ministry of Defence's National Protection Plan, comprise the National Preparedness Policy. Its major principles include:

- Broad definition of disaster to include any event, natural or human-induced;
- Emphasis on preparedness and mitigation;
- Designation of responsibilities and mandates, and establishment of disaster management structure around key roles of the Department of Disaster Prevention and Mitigation (DDPM) and National Disaster Prevention and Mitigation Committee; and
- Decentralization and transfer of responsibilities to the local level with accountability processes.¹³⁰

National Disaster Prevention and Mitigation Plan (2010-2014) (NDMP)

The National Disaster Prevention and Mitigation Plan 2010-2014 is the primary national disaster management plan, which focuses on minimizing disaster risks and loss of life and property. Guidelines are delivered for pre, during, and post disaster management activities for governmental and non-governmental agencies. The plan intends to structure the operations and preparedness process across the agencies for all phases of the disaster management cycle. Building capacities of the agencies involved in disaster preparation, prevention, response and mitigation and rehabilitation is the third key objective.¹³¹ The NDPM Plan establishes the procedures and responsibilities of various actors and levels of governance, and comprises all potential disasters from traffic accidents to tsunamis. The DPM Act also legislates for the creation of Provincial and District Disaster Prevention and Mitigation Plans, the Muang Pattaya Disaster Prevention and Mitigation Plan and the Bangkok Metropolitan Disaster Prevention and Mitigation Plan.¹³²

National Disaster Risk Management Plan 2015

The National Plan was approved by the Cabinet on 31 March, 2015. All appropriate agencies are expected to utilize the plan as a nationwide concept of operations to collectively implement disaster risk management activities in an integrated and systematic manner, and in the same direction.¹³³ The plan functions as the primary national disaster management plan and focus on reducing disaster risks and loss of life and property. The plan provides structure for the operations and preparedness process across all agencies for all phases of the disaster

management cycle. Guidelines are given for pre, during, and post disaster management activities for governmental and non-governmental agencies.¹³⁴

Strategic National Action Plan (SNAP) on Disaster Risk Reduction 2010-2019

The SNAP was endorsed on 24 March 2009. The plan identifies the Disaster Risk Reduction (DRR) vision, objectives, and strategies of Thailand. It directs the achievement of the Hyogo Framework for Action in Thailand. The SNAP adheres to the strategic authorities of the United Nations Partnership Framework developed by the Royal Government of Thailand and the United Nations Country Team. SNAP serves as a guideline for disaster reduction application at the national level.¹³⁵

Provincial and District Disaster Prevention and Mitigation Plans

The Provincial and District Disaster Prevention and Mitigation plan allows for the establishment and operation of a Special Command Center when disasters occur. The Special Command Center has the established order to command and oversee disaster prevention and mitigation operations. The command center has manages planning and procedures for local administrations for procuring resources in disaster prevention and mitigation operations; local administrations for procuring an early warning system; and develop a cooperation plan to other relevant public entities.¹³⁶

Eleventh National Economic and Social Development Plan 2012-2016

Thailand has also incorporated disaster management into its economic and social development plan. It includes a focus on resilience and preparedness, improving capacity for regional and international coordination and climate change and management of natural resources and the environment. The Office of the Prime Minister has responsibility for the Economic and Social Development Plan and implementation is intended to occur at the provincial level. Aligned to this plan is the United Nations Partnership Framework 2012-2016 that the UN Country Team has developed with the government of Thailand. Climate change adaptation and disaster risk reduction are key elements of this framework.¹³⁷ The act designates the Department of Disaster Prevention and Mitigation (DDPM) as the principal government department responsible for national disaster

management work. The act empowers local governments with the responsibility of disaster management consistent with provincial plans.¹³⁸

Education and Training

Designated by the National Disaster Risk Management Plan (2015), the Department of Disaster Prevention and Mitigation (DDPM) is the central national government agency responsible for disaster management. Its primary function is to increase disaster management education and knowledge. DDPM curricula consist of Community-Based Disaster Risk Management (CBDRM) which enhances community disaster risk knowledge and advances preparedness through community-based training.¹³⁹

The DDPM set up the Disaster Prevention and Mitigation Academy (DPMA) in 2004 to be the national training institution for disaster management. The DPMA delivers training for DPMA employees, government stakeholders and private organizations. DPMA has coordinated with agencies and international organizations to develop enhanced curricula, mobilize technology, and standardize training. The courses are developed for government officials, local administrative officers and community stakeholders who have a significant role in disaster management. DPMA is located on six campuses and the standard curricula include Fire Fighting, Building Collapse Search and Rescue, Hazmat Emergency Management, Civil Defense Volunteer and Disaster Management.¹⁴⁰

The DDPM has implemented a community-based volunteer training program. The programs focus on building a robust community disaster warning network for flashflood and mud slide prone villages. Additionally, the DDPM have created Emergency Response Teams (ERT) to response to large-scale hazards. The national Civil Defence Volunteer (CDV) program has approximately one million volunteers which have received training nation-wide. CDVs reside within their communities and respond upon request in the event of a disaster.¹⁴¹

Disaster Management Communications

The Thai Meteorological Department and National Disaster Warning Center will provide surveillance and warnings at the national level and will disseminate the information to the Department of Disaster Prevention and Mitigation (DDPM). The Department of Disaster

Prevention and Mitigation provides the warning information to the provincial government. The provincial and district governments are responsible for surveillance and distributing the warning information within their jurisdictions. Civil Defense volunteers will handle surveillance and information circulation at the community level.¹⁴²

There are also agencies which produce disaster risk reduction-related data and communications. For example, the Ministry of Agriculture reports on the loss of crops, fisheries, livestock, and aquaculture. The Ministry of Transportation reports on the loss of damage of the transportation system and facilities. The Ministry of Public Health reports on the loss and damage on structures services, and the number of ill and injured people. The Ministry of Commerce, Ministry of Industry, National Statistics Office reports on the loss and damage of structures services, and economic loss. Finally, the Ministry of Natural Resources and Environment reports the loss of forest areas, conservation areas, and wildlife.¹⁴³

Early Warning Systems

Thailand's National Disaster Warning Center (NDWC) has been under the umbrella of Department of Disaster Prevention and Mitigation, Ministry of Interior since September 2013.¹⁴⁴ Before the 2004 Indian Ocean Tsunami, Thailand did not have early warning systems in place for tsunami hazards, although the Thai Government started shifted its emphasis on relief and rehabilitation in 2002 to a more proactive approach of mitigation and disaster preparedness.¹⁴⁵ Few countries in the affected region had early warning and support tools at that time. Following the tsunami Thai officials created the NDWC to advance the national tsunami and earthquake warnings. NDWC, with funding from the United States Trade and Development Agency (USTDA), contracted the Pacific Disaster Center (PDC) to help automate the dissemination of disaster information in support of early warning. This resulted in the development of a multi-hazard early warning and decision support tool which is based on the DisasterAWARE platform.¹⁴⁶

Responsible Agencies for Flood and Storm Warning

The responsible agency for flood and storm warnings in Thailand is the Thai Meteorological Department (TMD). TMD was created and has been authorized to perform the following five

duties:

- To supply weather forecasts for the entire country and publicize disaster warnings to fulfill the requirement from administration and management in natural disaster mitigation;
- To build the people's awareness toward natural disasters; enable them to perform correct surviving practices; and reduce effects from natural disasters by using modern technologies together with IT services;
- To become the meteorological IT data and service center at the national level for users in any ventures;
- To improve and develop the TMD's research works; and
- To strengthen the TMD's roles in international cooperation concerning meteorology and environment with the purpose of profound comprehension on the changing world situation.¹⁴⁷

Disaster Messaging

The dissemination of disaster warning information is classified into four major categories aligned with the levels of government and provided to the public through the appropriate and available venues.

- **National Level:** Warning information is distributed through networks and communication systems utilizing mass media from the public and private sectors which include the TV Pool of Thailand, Thailand Radio Broadcast Stations, Public Relations Department, etc.
- **Provincial Level:** Warning information is distributed through networks and communication systems utilizing mass media from public and private sectors which include radio broadcast, radio communications, facsimile, and Provincial Public Relations.
- **District Level:** Warning information is distributed through networks and communication systems utilizing mass media from public and private sectors which include community radio broadcast, communication radios, facsimile, etc.
- **Village Level (Tambon):** Warning information is disseminated by community-based volunteers and surveillance and warning networks. Community communication systems are utilized which include close-circuit radio, radio communications, village news broadcast towers, manual sirens, loudspeakers, whistles, or designated audio signals.¹⁴⁸

Military

The Royal Thai Armed Forces (RTARF) is comprised of three branches, the Royal Thai Army (RTA), Royal Thai Navy (RTN) and Royal Thai Air Force (RTAF). The Thai Defence Ministry manages the administration of the RTARF. The Defense Ministry national expenditures are the largest among any ministry and account for a substantial percentage of the total national budget. The RTARF is administered by the Royal Thai Armed Forces Headquarters which is staffed by leaders of the Army, Navy and Air Force. Military obligation in Thailand mandates that males 20 years of age are required to serve two years of military service if selected during an annual lottery (draft) drawing. However, males enrolled in higher education programs are afforded a deferment until they graduate.¹⁴⁹

The Ministry of Defence manages two offices for disaster response, the Office of the Permanent Secretary for Defence Disaster Relief Centre and the RTARF Disaster Relief Centre. The RTARF Disaster Relief Center is comprised of one Relief Centre for each of the branches of the military and a Headquarters Disaster Relief Centre.¹⁵⁰

The Office of the Permanent Secretary for Defence Disaster Relief Centre (OPSD DRC) governs and is in charge of the policy and procedures associated with Thai military deployments for humanitarian assistance missions on behalf of the Ministry of Defence Disaster Relief Centre (MOD DRC). The OPSD DRC coordinates with multiple government agencies and civilian organizations to develop policies and guidelines; and it also oversees disaster activity, activates and integrates military assets into the disaster response, integrates of resources, implements the unification of disaster management and maintains effective command

and control. Figure 5 shows the structure of the MOD DRC.¹⁵¹

The National Disaster Prevention and Mitigation Plan establish the following responsibilities for national military forces under the Ministry of Defence:

- Direct disaster operations of the Ministry of Defence agencies nationwide;
- Coordinate with the Department of Disaster Prevention and Mitigation to identify the aspects of disaster operations affecting military personnel and equipment;
- Coordinate rear area operations as well as disaster operations exercises;
- Provide training for government officials, volunteers and the general public on military operations in relation to other incidents such as air threats, explosives disposal, and chemical, radiological or biological incidents; and
- Provide assistance to affected people according to the Ministry of Finance Regulation on Disaster Relief Contingency Fund for Affected People Assistance B.E. 2546 (2003).¹⁵²

The Royal Thai Police (RTP) is integrated into the disaster management system. However, the mandate for the Royal Thai Police during disasters does not extend beyond law enforcement and the public order. The Police fall under the direct command of the Prime Minister. The DPM Act states the RTP shall perform the following duties in a disaster response under the relevant Director:

- Manage traffic systems;
- Access control to affected areas;
- Security and prevent illegal doings; and
- Deliver aid to affected population including in the removal of property from affected or adjacent areas. This can also be done by an NGO according to the Act.¹⁵³

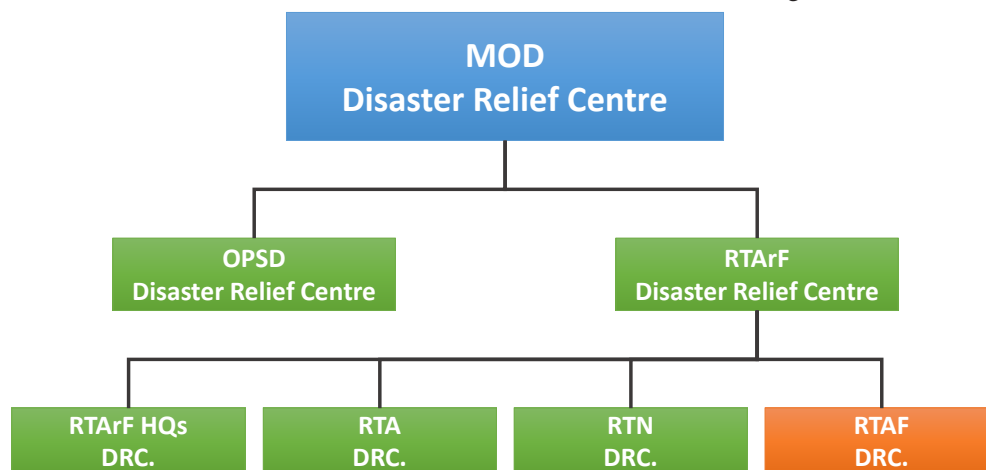


Figure 5: Ministry of Defense Disaster Relief Centre Structure



THAILAND

Infrastructure

Infrastructure

The Thai transportation infrastructure is primarily a network of road transportation. There are 462,133km (287,156 miles) of roadways in Thailand. Comparatively, there are less than 4,000km (2,485 miles) of railways in the country and water transportation is under-developed, encompassing a mere 5,000km (3,107 miles). Thailand ranks 41st overall for infrastructure under basic requirements rankings (WEF Global Competitive Report 2017-2018).¹⁵⁴ In 2014 Thailand's ruling military approved a US\$75 billion master plan (2014-2022) to advance the nation's transportation infrastructure over an eight year period. The eight year plan to upgrade Thailand's transportation infrastructure seeks to advance the nation as a key logistics hub in the ASEAN Economic Community (AEC) when the projects are completed by 2022.¹⁵⁵

The Thai Government has made the restructuring of the Thai transportation system a national priority through the acceleration, expansion, and improvement of the national railway network. The Thai Government seeks to decrease the disparities existing between the utilization of the rail network for transportation and the increasing reliance on the nation's road network for transportation. Additionally, the restructuring plans call for the construction of new roads as part of the plan to connect Thailand to a road network spanning the six countries of the Greater Mekong Sub-region (Southern China, Thailand, Myanmar, Laos, Cambodia and Vietnam).¹⁵⁶

Airports

Thailand has an adequate amount of both national and international airports (48 total), ensuring that the country is well-connected globally. Suvarnabhumi Airport (BKK), and Don Mueang International Airport (DMK) located in Bangkok, are the two main international airports of the country.

BKK is located in Racha Thewa in the Bang Phli district of Samut Prakan province, 30 kilometers east of Bangkok. The airport has two side-by-side runways that are 60 meters (196 feet) wide and 4,000 meters (2.48 miles) long and 60 meters (196 feet) wide and 3700 meters (2.29 miles) long. BKK has two side-by-side taxiways to provide for concurrent departures and arrivals. BKK has a capacity of operating 76 flights per hour; both international and domestic flights share the airport terminal, but are assigned to different parts of the terminal.¹⁵⁷

DMK located 24km (14.9 miles) north of Bangkok, Thailand has two terminals. On September 28, 2006 the airport was replaced by Suvarnabhumi Airport as the main Bangkok international airport. Don Mueang airport re-opened on March 25th, 2007 for some domestic flights.¹⁵⁸ DMK has two runways made of asphaltic concrete. Runway 21 R/03L is 3,700 meters long and 60 meters wide (12,139 feet/197 feet) and Runway 21 L/03R is 3,500 meters long and 45 meters wide (11,461 feet/147 feet). The flight capacity of DMK is 60 flights per hour.¹⁵⁹

Photo 3 depicts a vividly colored Thai Air Asia plane taxing at the Khon Kaen Airport in Thailand.¹⁶⁰



Photo 3: Thai AirAsia Plane at Kohn Kaen Airport in Thailand

Table 2 lists the 48 airports in Thailand and where they are located in the country.

Location	Airport
Ban Mak Khaen	Udorn Airport (BAO)
Bangkok	Don Muang International Airport (DMK)
Bangkok	Suvarnabhumi Airport (BKK)
Buriram	Buriram Airport (BFV)
Chiang Mai	Chiang Mai International Airport (CNX)
Chiang Rai	Chiang Rai Airport (CEI)
Chumphon	Chumphon Airport (CJM)
Hat Yai	Hat Yai Airport (HDY)
Hua Hin	Hua Hin Airport (HHQ)
Kamphangsae	Kamphangsae Airport (KDT)
Khon Kaen	Khon Kaen Airport (KKC)
Koh Samui	Koh Samui Airport (USM)
Krabi	Krabi Airport (KBV)
Lampang	Lampang Airport (LPT)
Loei	Loei Airport (LOE)
Lop Buri	Lop Buri Airport (KKM)
Mae Hong Son	Mae Hong Son Airport (HGN)
Mae Sot	Mae Sot Airport (MAQ)
Nakhon Phanom	Nakhon Phanom Airport (KOP)
Nakhon Ratchasima	Nakhon Ratchasima Airport (NAK)
Nakhon Si Thammarat	Nakhon Si Thammarat Airport (NST)
Nan	Nan Airport (NNT)

Location	Airport
Narathiwat	Narathiwat Airport (NAW)
Pai	Pai Airport (PYY)
Patong Beach	Patong Beach Airport (PBS)
Pattani	Pattani Airport (PAN)
Pattaya	Pattaya Airport (PYX)
Phanom Sarakham	Phanom Sarakham Airport (PMM)
Phetchabun	Phetchabun Airport (PHY)
Phi Phi Island	Phi Phi Island Airport (PHZ)
Phitsanulok	Phitsanulok Airport (PHS)
Phrae	Phrae Airport (PRH)
Phuket	Phuket International Airport (HKT)
Ranong	Ranong Airport (UNN)
Roi Et	Roi Et Airport (ROI)
Sakon Nakhon	Sakon Nakhon Airport (SNO)
Songkhla	Songkhla Airport (SGZ)
Sukhothai	Sukhothai Airport (THS)
Surat Thani	Surat Thani Airport (URT)
Surin	Surin Airport (PXR)
Tak	Tak Airport (TKT)
Takhli	Takhli Airport (TKH)
Trang	Trang Airport (TST)
Trat / Ko Chang	Trat Airport (TDX)
Ubon Ratchathani	Muang Ubon Airport (UBP)
Udon Thani	Udon Thani Airport (UTH)
Utapao	Utapao Airport (UTP)
Uttaradit	Uttaradit Airport (UTR)

Table 2: List of Airports in Thailand

Seaports

Thailand has a total coastline of 3,219 kilometers (2,000 miles) with over 4,000 kilometers (2,485 miles) of inland waterways. Main seaports in Thailand include:¹⁶¹

- Bangkok
- Laem Chabang
- Ranong
- Phuket
- Songkhla
- Sattahip
- Si Racha
- Thung Prong Pier

The Port Authority of Thailand (PAT) is the public utility state enterprise under the general oversight of the Ministry of Transport and Communications. It was established under the Port Authority of Thailand Act (1951) with the main purpose of conducting business concerning the port for the interest of the state and the public.¹⁶²

The PAT is responsible for the regulation, governance, development and management of all major deep seaports. Smaller ports fall under the responsibility of the Harbor Department. Thung Prong Pier is on Thai Navy property and in the event of any HADR response in the region that would involve on- or off-loading, the U.S. would use it. Since 2014 USPACOM has invested in its upgrades and repairs.¹⁶³

The primary functions of PAT are:

- The provision of services and facilities for ships and goods;
- The conduct of dredging and maintenance of canals and ponds;
- Supervise handling, movement, storage and delivery of goods;
- Co-operation and co-ordination with other government agencies and international ports; and
- The development of the organization to respond to economic changes.¹⁶⁴

Photo 4 depicts the Bangkok's Khlong Toei Port.¹⁶⁵

Land Routes

Roads

Transportation in Thailand is heavily reliant upon land transport via the national road network. The estimated total length of the roadways in Thailand is 462,133 km (287,143 miles) of which about 61,747 km (38,367 miles) are categorized as highways, 150,000 km (93,206 miles) as rural roads, and approximately 313 km (195 miles) as controlled-access expressways or motorways. The road network accounts for an estimated 98 percent of passenger traffic and 95 percent of freight traffic. More than 98 percent of the road network is paved and reaches more than 98.5 percent of the country's population.



Photo 4: Bangkok, Khlong Toei Port

The Government of Thailand has identified public-private partnerships (PPPs) as a significant source of financing for future development of priority sections of the country's expressway network. Additionally, the Thai government has set out address road safety. In 2011, approximately 68,000 traffic accidents were documented, causing 9,205 fatalities. The current fatality rate for motor vehicle-related deaths is 14.3 per 100,000 people. Thailand has adopted the National Road Safety Strategy, 2010–2020 and has set an objective to decrease the traffic accident fatality rate to below 10 per 100,000 people.¹⁶⁶ Photo 5 depicts a network of roads in Bangkok.¹⁶⁷

In 2009 the Asian Development Bank (ADB) approved the Greater Mekong Sub-region (GMS) Highway Expansion Project for US\$77.1 million to expand 178 km (110.6 miles) of national to four lanes roads. The expansion project was implemented along the GMS East–West Corridor and the Southern Economic Corridor to increase competitiveness of the local economy. The expansion project provides a reduction of travel time and cost, and improves road safety.¹⁶⁸

Railways

Railways are managed and operated by the state-owned State Railway of Thailand (SRT). The Thai railway has a small part in terms of passenger and freight services in the country. This is attributed to the current national railways

spanning roughly 4,000km (2,485 miles), and servicing merely 47 of the country's 77 provinces. The freight market share in Thailand is low at approximately two percent. About 47 percent of SRT revenue originates from passenger services, and 23.5 percent from cargo transport.

Insufficient management of SRT combined with low investments has resulted in rail operations with inadequate capacity, deficient service, and aging and obsolete facilities and infrastructure. Currently, one rail line connects Thailand and the Lao People's Democratic Republic within the Greater Mekong Sub-region (GMS).

In 2010 the Cabinet sanctioned an investment plan of B176 billion (Thai Baht) (US\$5.6 billion) to renovate the nation's railways, increase rail freight transportation, and reduce related logistics expenses.¹⁶⁹

Mass Rapid Transit

The Mass Rapid Transit Authority (MRTA) of Thailand is responsible for providing Bangkok and other provinces with a modern rapid transit system. There are mass transit systems in Bangkok, the Skytrain (Bangkok Mass Transit System Skytrain) and the subway (mass rapid transit [MRT]). The insufficient public transportation system in Bangkok endures to be a matter of national significance when taking into consideration the increase of people and economic on-goings in the metropolitan



Photo 5: Road Network in Bangkok, Thailand

region. A mere 40 percent of all daily person-trips in Bangkok use public transport, and only four percent of trips employ the mass rapid transit (MRT). Currently, the MRT in Bangkok comprises four lines totaling 84.9 km (52.7 miles). Two private corporations operate the system under separate concession contracts. Bangkok Mass Transit System or Skytrain is the raised metro system operated by Bangkok Mass Transit System Public Company. The structure encompasses two lines with a collective distance of 36.3 km (22.5 miles) and 30 stations. Bangkok Metro Public Company operates the underground blue line with a distance of 20 km (12.4 miles) and 18 stations. SRT operates the airport rail link, totaling 28.5 km (17.7 miles) and 8 stations.¹⁷⁰ Photo 6 depicts the Skytrain in Bangkok.¹⁷¹

Waterways

Thailand has 4,000 kilometers (2,485 miles) of waterways which are essential to transportation in the country.¹⁷² The Chao Phraya River is the major river in Thailand. The Chao Phraya River flows through Bangkok and into the Gulf of Thailand. The Chao Phraya River is the main waterway in Bangkok and is provides for the operation of more than 15 boat lines which navigate the rivers and canals of the

city, providing passenger transportation.¹⁷³ The Chao Phraya watershed is the main watershed in Thailand, spanning approximately 35 percent of the country's total land area, and draining an area of 157,924 square kilometers (60,975 square miles).¹⁷⁴ Peninsular Thailand has no major river systems, however a few smaller rivers flow from the western mountains into the Andaman Sea. Predominately, four south-flowing rivers, the Chao Phraya, Mae Klong, Bang Pa Kong and Chin, account for draining approximately two-thirds of the nation. The Mekong River and its western tributaries, primarily the Pak River, drain the northeast.¹⁷⁵

Schools

Public Schools

Public education in Thailand is free for Thai nationals up to the age of thirteen. In order to be recognized as a Thai national, a child must have a minimum of one Thai parent and the birth must be registered in Thailand. Public schools require proof of Thai nationality in the form of a birth certificate. Children residing in Thailand who do not meet the Thai national requirements are not eligible for free public education. At age thirteen students must begin work to satisfy academic entrance requirements for universities. Students



Photo 6: Skytrain, Bangkok, Thailand

who meet the university entrance requirements and who are at least sixteen may begin their university education.¹⁷⁶

Private Schools (Bilingual)

Private, bilingual schools are an option for non-Thai nationals and for those who cannot afford the high tuition rates to attend international schools. The standards of private institutions have greatly improved over the past decade. Many of the private schools in Thailand have religious affiliations, and the curriculum will consist of a value-based learning system that aligns with the institution's chosen faith.¹⁷⁷

International Schools

A large number of international schools are available in larger metropolitan areas, such as Bangkok and Pattaya, however international schools are limited in rural areas. Many parents in rural areas elect to send their children to boarding schools or homeschool. International schools teach in a language familiar to children, and allow for continuity in education by providing Western curricula. International schools are accredited by external organizations, and the standards for both learning and the criteria for hiring teachers are strict. It is common for affluent Thai parents to send their children to international schools and therefore, it is common for the majority of students to be locals. International schools tend to be well-financed; have modern facilities, a smaller teacher to class sizes ratio, and extensive extramural activities.¹⁷⁸

Disaster Risk Reduction in the Education Sector

Schools located near the coastal areas sustained damaged or complete destruction during the 2004 Indian Ocean Tsunami. Five schools were destroyed and over 50 schools were severely damaged. Schools located near the coast that endured damages lost most of the school's resources such as; furniture, equipment and educational materials.¹⁷⁹ In the aftermath of the 2004 Indian Ocean earthquake and tsunami, the Government of Thailand shifted its focused towards promoting school-age children's involvement in developing school preparedness plans, evacuation plans and have advocated for Disaster Risk Reduction (DRR) to be a fundamental part of primary and secondary education curriculum.

Disaster Risk Reduction in school curriculum

is now present in national policy, and student-led DRR ideologies have been combined into core subjects for students in primary schools. Additionally, Save the Children (STC) developed a series of children's storybooks with animal characters "Alert Rabbit" and "Alert Little Mole" in an effort to communicate essential Disaster Risk Reductions fundamentals to young children. Burmese and Karen versions of the storybooks and trainings were created for populations along the Thailand-Myanmar border and a braille version was also created for blind children.¹⁸⁰

Communications

Telecommunications in Thailand are considered high quality, especially in urban areas such as Bangkok.¹⁸¹ In recent years, there has been a decline in fixed telephone subscription from 7.5 million in 2007 to 5.1 million in 2016¹⁸² and then down to 4.7 million in 2018.¹⁸³ There are approximately 116 million mobile phone users and there are almost 33 million internet users.¹⁸⁴

As of 2017, Thailand had 26 digital TV stations in Bangkok that broadcast nationally, and six terrestrial TV stations in Bangkok that broadcast nationally via relay stations. There are cable TV subscription services and multi-channel satellite services. In addition, small community radio stations operate with low-power transmitters.¹⁸⁵

Thailand has the National Broadcasting and Telecommunications Commission (NBTC) which is the independent state broadcasting and telecommunications regulator. Its duties and responsibilities are to regulate all broadcasting and telecommunication services for the country and the public.¹⁸⁶

Utilities

Power

Thailand has a good mix of natural resources, which support many industries. Thailand's liquids and natural gas production mainly comes from offshore fields, liquids and natural gas production grew between 2005 and 2010. The Thai government remains concerned about the longevity of the hydrocarbon reserve base in the country, which is driving additional acreage opportunities via the 21st licensing round which was scheduled for the first quarter of 2012.¹⁸⁷ Thailand faces a rise in energy demand by almost

80 percent in the next two decades, driven by population growth and continued economic growth. More than half of the energy in Thailand is imported and that is likely to increase reserves of oil and gas are depleted, as anticipated in less than a decade, unless other indigenous energy sources are exploited. Thailand has a renewable energy target of 30 percent of total final energy consumption by 2036, according to the Alternative Energy Development Plan (AEDP) of 2015. As depicted in Figure 6, Thailand's main electricity generator is natural gas.¹⁸⁸

Water and Sanitation

Thailand has achieved both the sanitation and drinking water Millennium Development Goals (MDGs) targets. Currently, about 93 percent of the population in Thailand has access to improved sanitation and 96 percent to improved drinking-water. The government is

working on reaching the population that fails to receive those services, as well as ensuring that the high percentage of coverage is maintained and sustained. This is done through various government and non-governmental agencies at national, regional, and local levels. Thailand has different laws, policies, and plans supporting the provision of water and sanitation services, but local governments or municipalities are the most important agency in providing safe drinking-water and basic sanitation services. Thailand has an established drinking-water quality monitoring system in the Ministry of Health where regular testing of water samples from both rural and urban areas are carried out. The country also has national standards for drinking-water quality. The main challenge is resource allocation for drinking-water and hygiene, while adequate funds are provided for sanitation.¹⁸⁹

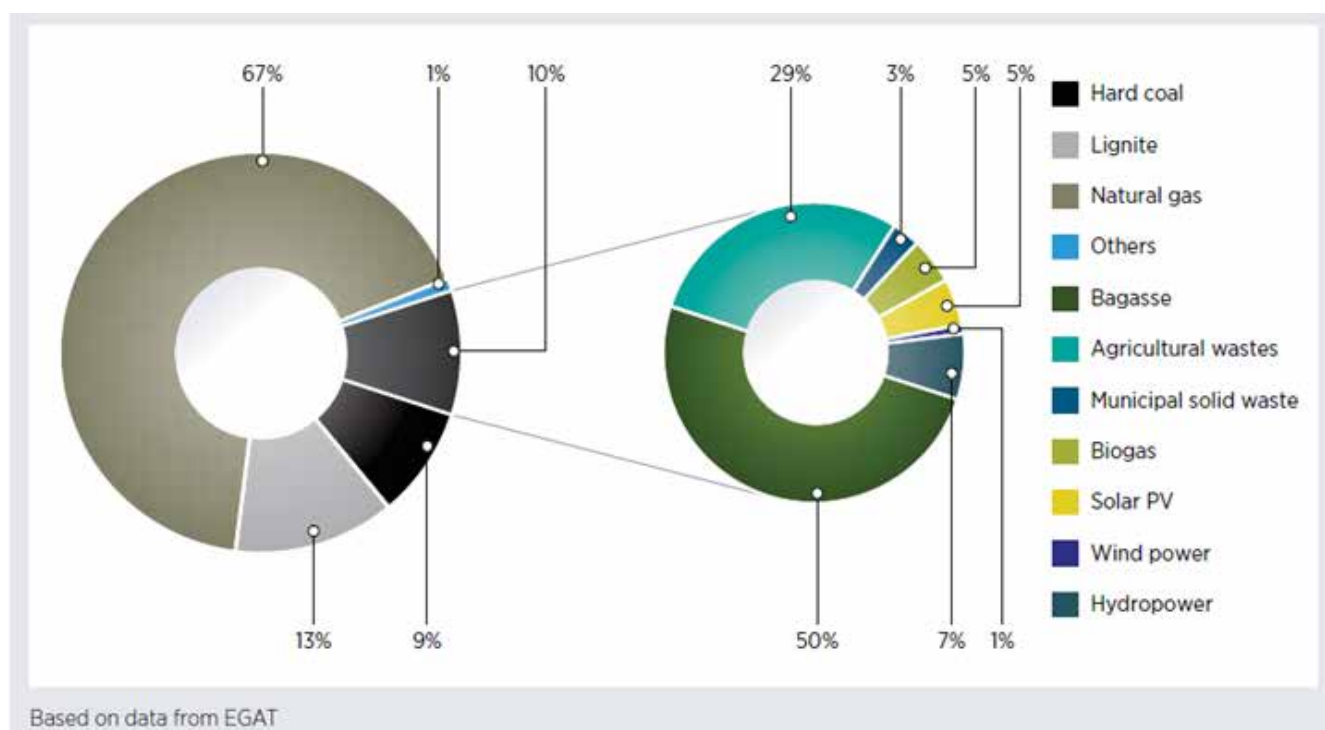


Figure 6: Thailand's Electricity Generation by Fuel in 2016



คณะพยาบาลศาสตร์ FACULTY OF NURSING

คณะพยาบาลศาสตร์ มหาวิทยาลัยมหิดล



THAILAND
Health

Health

Health Overview

The Ministry of Public Health reported that Thailand has faced several problems that affect the country's health system. These include changes to demographics, health hazards resulting from accidents and disasters, the management of health personnel, financial management in public health, insufficient health knowledge among the people, in addition to and other factors.¹⁹⁰

Thailand has invested in both infrastructure and human services in recent decades and the country have seen significant improvements in health outcomes as a result; virtually everyone is now covered by health insurance.¹⁹¹

Thailand has ongoing health challenges, but has shown significant progress on overall population health indicators.¹⁹² The Thai population is aging rapidly. As of 2016, 7.5 million people or 11 percent of the population is 65 years or older compared to just five percent in 1995. It is projected that by 2040, 17 million Thais will be 65 years or older.¹⁹³

Healthcare System Structure

Thai citizens have access to Universal Health Care (UHC). It was introduced in 2002. A migrant health insurance scheme has also been added.¹⁹⁴

The healthcare system in Thailand is publicly dominated; public hospitals account for 78 percent of all hospitals and hospitals serving under the Ministry of Health (MoH) account for approximately 67 percent of all public and private hospitals. Community hospitals, or rural health facilities, are located at the district level providing secondary health services.¹⁹⁵

Challenges in the Healthcare System

Thailand has an estimated 3-4 million migrants of which Thailand needs to provision healthcare services to through universal health coverage. In addition, teenage pregnancy rates in Thailand are the highest in South-East Asia. Eighty percent of teenage mothers have unintended pregnancies with one third leading to abortion.¹⁹⁶

Health Cooperation

Thailand's National Health Development Plan is important for health related policies in the country. It is in its 12th version (2017-2021). Thailand's 12th National Health Development Plan (2017-2021) includes four strategies:¹⁹⁷

- The first strategy seeks to launch a proactive campaign to promote health among the Thai people;
- The second strategy seeks to ensure fairness and reduce disparities in the country's health system;
- In the third strategy, a mechanism will be developed in order to enhance the efficiency of health personnel management; and
- The fourth strategy seeks to develop and strengthen good governance in public health.

Many health-related targets are contained in Goal 3 of the Sustainable Development Goals (SDGs) "Ensure Healthy Lives and Promote Well-Being for All at All Ages". To combat Non-communicable Diseases (NCDs) and risk factors for NCDs, the country has adopted nine national targets that are in line with global targets. The Ministry of Public Health and Ministry of Foreign Affairs have issued directives on health frameworks in order to sustain and further strengthen global health capacity in Thailand.

Thailand has identified key issues and focus areas in regards to the prevention and control of NCDs. They include:

Key Issues

- Suboptimal coordination within the health sector and limited cooperation from non-health sectors;
- Knowledge gaps for guiding policies and programs;
- Limited human resource capacity to tackle NCDs;
- Fragmented surveillance and monitoring systems;
- Inadequate enforcement of existing policies; and
- Missed opportunities to address NCDs effectively within healthcare services.

Focus Areas

- Tobacco control;
- Early detection, prevention and control of cardiovascular disease (hypertension and diabetes); and
- Reduce childhood obesity.

Thailand is active in the global health policy dialogue. It has developed capacity on health issues of international importance and contributes health systems development knowledge to other countries and international agencies.¹⁹⁸

Communicable Diseases

Although Thailand has become an upper middle-income country, it has its challenges with communicable diseases.

HIV/AIDS

Thailand has a high prevalence of HIV and AIDS in specific populations.¹⁹⁹ An estimated 440,000 people were living with HIV in Thailand in 2015. However, in June 2016, Thailand received World Health Organization (WHO) validation for eliminating the transmission of HIV and syphilis from mothers to children.²⁰⁰

Antimicrobial Resistance (AMR)

Thailand has been fighting AMR threats. It is reaching crisis proportions in Thailand and the country has developed a plan to combat it. The Thai National Strategic Plan on Antimicrobial Resistance (2017–2021), aims to reduce the impact of AMR and increase public knowledge and awareness.²⁰¹

Malaria

The incidence of Malaria has declined over the years, but it still remains a serious threat to the population. A 10-year National Strategic Plan for Malaria Elimination (2017–2026) with a 5-year accompanying Operational Plan (2017–2021) was recently endorsed by the government.²⁰²

Tuberculosis (TB)

Thailand is burdened by tuberculosis. Incidence is declining at a very slow pace and it is estimated that there will be 176,000 new cases annually. Another major concern is the issues related to the HIV-TB co-infection.²⁰³

Non-Communicable Diseases

NCDs are a public health issue for Thailand. NCD deaths accounted for 71 percent of the total deaths in 2014. Figure 7 shows the causes of death in Thailand in 2014 due to NCDs. The highest burden of NCDs is cancer, cardiovascular

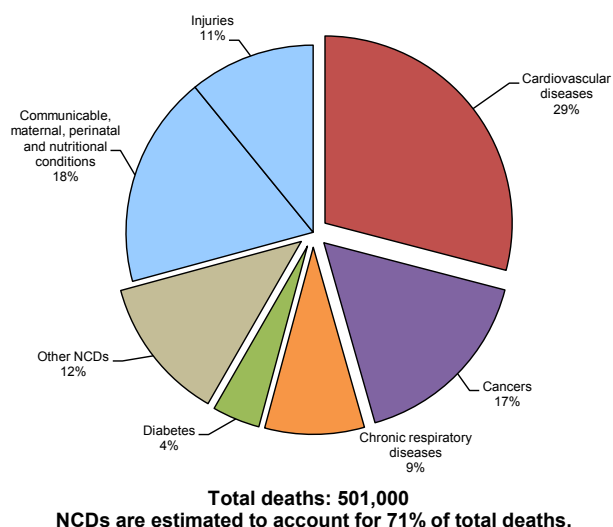
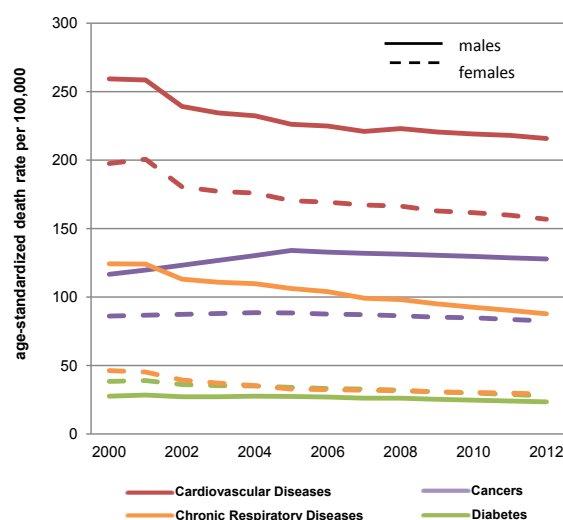
diseases, chronic respiratory diseases and stroke. Cardiovascular diseases caused almost one-third of the number of deaths. NCD risk factors are common in Thailand. For example, 25 percent of Thai adults have high blood pressure; ten percent have raised blood sugar; 40 percent of adult males smoke; salt and sugar consumption exceed recommended limits; and adult and childhood obesity rates have increased dramatically in the last twelve years. In addition, there are many road traffic fatalities in Thailand. Injuries account for more than 11 percent of deaths.²⁰⁴

Training for Health Professionals

Thailand has adequate capacity for in-country training of doctors and nurses. Maintaining a stable number of doctors to meet country's health needs can be a challenge; however, Thailand has neither a shortage nor a surplus of health personnel. The density of physicians and nurses was 2.47 per 1000 in 2015.²⁰⁵

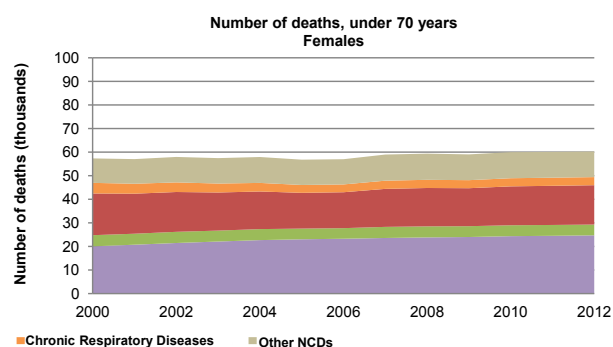
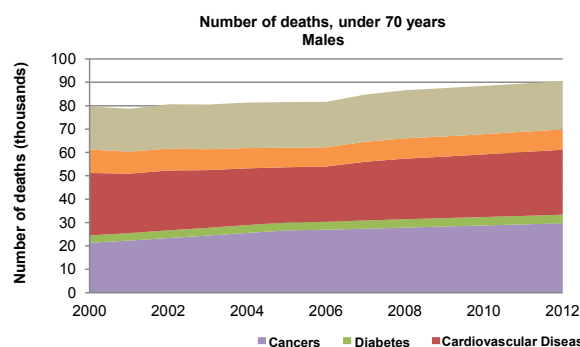
In the country, there has historically been an unequal distribution of doctors between rural and urban areas which has major impacts on access to healthcare for those living in rural communities. The Collaborative Project to Increase Rural Doctors (CPIRD) was implemented in 1994. The government has implemented several other strategies over the past forty years including introducing a three-year mandate where new graduates must work in the MoH public service (rural hospitals) for the first three years of their careers. Financial incentives and career advancement was also offered for rural district posts.²⁰⁶ There have been improvements in the rural retention of doctors in Thailand as a result of government-led initiatives.²⁰⁷

In Thailand, healthcare professionals have to sit and pass the national examination for license to practice issued by the Medical or Nursing and Midwifery councils and conducted by the Center for Medical Competency Assessment and Accreditation. Work permits for employment visas, and professional practice are granted after the medical or nursing council approval in each country once candidates fulfill the required license examination. Nurses that graduate from Thai schools or schools elsewhere that are recognized by the Council, and who pass the national license examination are granted licenses to practice from the Nursing and Midwifery Council.²⁰⁸



Premature mortality due to NCDs*

The probability of dying between ages 30 and 70 years from the 4 main NCDs is **16%**.



Adult risk factors

	males	females	total
Current tobacco smoking (2011)	46%	3%	24%
Total alcohol per capita consumption, in litres of pure alcohol (2010)	13.8	0.8	7.1
Raised blood pressure (2008)	24.1%	20.7%	22.3%
Obesity (2008)	5.0%	12.2%	8.8%

National systems response to NCDs

Has an operational NCD unit/branch or department within the Ministry of Health, or equivalent	Yes
Has an operational multisectoral national policy, strategy or action plan that integrates several NCDs and shared risk factors	No
Has an operational policy, strategy or action plan to reduce the harmful use of alcohol	Yes
Has an operational policy, strategy or action plan to reduce physical inactivity and/or promote physical activity	Yes
Has an operational policy, strategy or action plan to reduce the burden of tobacco use	Yes
Has an operational policy, strategy or action plan to reduce unhealthy diet and/or promote healthy diets	Yes
Has evidence-based national guidelines/protocols/standards for the management of major NCDs through a primary care approach	Yes
Has an NCD surveillance and monitoring system in place to enable reporting against the nine global NCD targets	Yes
Has a national, population-based cancer registry	No

Figure 7: Non-Communicable Diseases, Thailand 2014



THAILAND

Women, Peace and Security

Disaster Management Reference Handbook | May 2018

Women, Peace, and Security

The United Nations Security Council Resolution 1325 (UNSCR 1325), adopted in 2000 reaffirmed the need to implement fully international humanitarian and human rights law that protects the rights of women and girls during and after conflicts.²⁰⁹ UNSCR 1325 affirms the role of women in the prevention and resolution of conflicts and peacebuilding, and stresses their equal participation and full involvement in all efforts for the promotion of peace and security.²¹⁰

Thailand has recently promoted gender equality and women's development with the enactment of the 2015 Gender Equality Act which protects from gender-based discrimination. In 2015, the Thai cabinet approved the proposal to improve the mechanism of Chief Gender Equality Officer, and also approve the code of conduct to prevent and address sexual harassment in the workplace. Thailand also chaired the 59th Session of the Commission on the Status of Women further supporting the Beijing Declaration and Platform for Action.

As of 2015, Thailand has joined other UN members in the progression and promotion of women in regards to peacekeeping missions, has appointed women as officers to join the mission in Haiti, Dafur, and Kashmir. Further, Thailand has made significant contribution towards UNSCR 1325, most recently with the International Peace Keeping Institute (IPI) in a collaborative project known as, *Reimagining Peacemaking: Women's Roles in Peace Processes*.

Thailand stands firm on their national agenda on the advancement of women and commits to promoting the empowerment of both women and girls at the national and international levels. Additionally, Thailand holds high regards towards

the UN agencies efforts in the advancement of women and girls and has increased their yearly contribution to UN Women to US\$ 20,000.²¹¹

Women are significantly underrepresented in public decision-making roles in Thailand. As of 2016, Thailand had only five percent of parliament seats. However, women in Thailand have an employment rate of 66 percent. Thai women have a average of eight years of education. Violence against Thai women endures to be a national issue with approximately 44 percent of women experiencing lifetime intimate partner violence and having a low perception of safety in their communities. Figure 8 depicts the gender disparities for Thai women as compared to other countries.²¹²

The National Women's Development Plan (2012–2016) does set goals to try to address this issue.²¹³ Women's empowerment and the promotion of gender equality are paramount to achieving sustainable development globally. Giving women access to equal opportunities allows them to emerge as social and economic actors, influencing and shaping more inclusive policies. In addition, improving women's status also leads to more investment in their children's education, health, and overall wellbeing.²¹⁴

The Committee on the Elimination of Discrimination against Women (CEDAW) welcomes the progress of the revised Constitution, which came into effect in April 2017, prohibiting discrimination on various grounds, including sex, and guarantees the principle of equality between men and women which is positive. The committee also welcomes the Gender Equality Act (2015). However, the committee expresses concern that the prohibition of gender-based discrimination in the Constitution and the Gender Equality Act do not apply in the southern border provinces. They suggest revision that ensures that there are no exceptions against gender-based discrimination. Secondly, they suggest that women and girls who live in areas with exceptions be non-discriminated even during times of armed conflict and states of emergency.²¹⁵

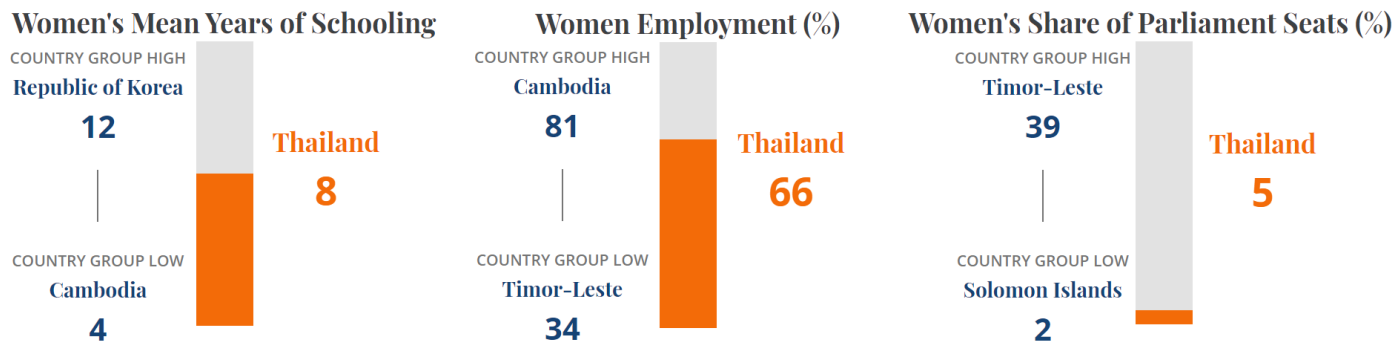


Figure 8: Georgetown Institute for Women, Peace and Security, Thailand Country Profile



THAILAND Conclusion

Disaster Management Reference Handbook | May 2018

Conclusion

In recent decades, Thailand has seen significant improvements in health outcomes by investing in infrastructure and human services resulting in almost all of its citizens now covered by health insurance.²¹⁶ However, Thailand still faces ongoing health challenges and the government has problems which affect the Thailand's health system, including demographic changes, accident and disaster related health hazards, health personnel management, public health financial management, and poor health knowledge among Thailand's residents.²¹⁷ Despite these challenges, Thailand has shown significant progress on overall population health indicators.²¹⁸

Thailand also faces challenges caused by various disasters and climate change. Climate change can lead to changes in rainfall and seasonal patterns. The country will be widely affected by the consequences of climate change, and disaster vulnerability and exposure will increase. It is expected that Thailand will continue to encounter more frequent disasters such as flooding and flash flooding due to intensified monsoon wind and rainfall patterns.²¹⁹ Thailand is particularly vulnerable to flooding and typhoons. In January, 2017 severe flooding across southern Thailand affected more than 1.2 million people, resulting in a disaster declaration and international assistance.²²⁰ Thailand is also affected by drought, cyclones, landslides, earthquakes, and tsunamis; however, tsunamis are not frequent.²²¹

Due to the frequency and intensity of disasters, a strong systematic disaster management structure is essential for the country. Thailand's Disaster Management System based on the Disaster Prevention and Mitigation Act (2007), the National Disaster Prevention and Mitigation Plan (2010-2014), and the National Civil Defence Plan (2005).²²² The DDPM is responsible for disaster management responsibilities.²²³

Thailand has greatly strengthened the disaster management structure since the 2004 Tsunami devastated the country. Thailand has a legal framework on disaster risk reduction as well as implementation of efforts at both the community and national level. Thailand has integrated sustainable development goals and targets of the Sendai Framework into their 20-year National Strategy, their National Economic

Development Plan, and their National Mitigation Plan. Thailand has required integrated efforts from all sectors. The country is using the concept of "Build, Back, Better" to effectively manage disaster response. The government has instructed all relevant agencies to develop short-term relief and long-term recovery plans.²²⁴

In an official statement made by the Ministry of the Interior at the fifth session of the Global Platform for Disaster Risk Reduction in May 2017, Thailand experiences challenges in making decisions on disaster risk reduction methods without detailed information and baseline data on the risks the country and region are facing. There is a gap of an information sharing database and sharing platform. It will be difficult for Thailand to achieve their goals set forth by the Sendai Framework effectively without assistance.²²⁵

Local level governments are collecting DRR data, but they are not yet properly equipped with collecting DRR information in a systematic manner. They are currently under the process of building capacity for local authorities to be able to develop and implement their DRM plans. Thailand has indicated that they need capacity assistance, financial aid, and technology transfer assistance when collecting data regarding early warning information through local governments. The DDPM is in the process of this discussion with concerned and related agencies.²²⁶



THAILAND Appendices

Appendices

DOD DMHA Engagements in the Past Five Years (2013-2018)

DMHA education and training has become increasingly important because it provides military staff a forum to enhance skills needed for future relief operations. Engagements provide an opportunity to learn together and respond together for improved effectiveness.

Cobra Gold-February 2018

Cobra Gold was held from 13-23 February, 2018 with seven participating nations. Cobra Gold is an annual exercise conducted in Thailand that improves the interoperability and strengthens relationships among participating nations. Activities have included disaster response coordination, diving operations, and a number of civic projects.²²⁷ The U.S., Republic of Korea, and Royal Thai Armed Forces worked together on this exercise. During Cobra Gold 2018, the exercise featured U.S.-Thai-Republic of Korea amphibious assault vehicles with coordinated air cover overhead from attack aircraft. Marines from all three nations consolidated their positions on Hat Yao Beach.²²⁸

Lower Mekong Initiative Disaster Response Exercise & Exchange (LMI DREE)-December 2017

The LMI DREE is an annual U.S. Pacific Command sponsored, multi-national exercise intended to enhance cooperation between the governments of Thailand, Cambodia, Lao PDR, Myanmar, Vietnam, and the U.S. in the areas of connectivity, education, energy security, environment, water, food security, agriculture and health. The December 2017 LMI DREE was a humanitarian assistance and disaster relief exercise that brought together more than 100 disaster management experts.²²⁹

Tempest Express-August 2017

Tempest Express is a USPACOM multilateral exercise co-hosted by the Royal Thai Armed Forces (RTARF) and is designed to create skilled multinational military planners. Tempest Express opening ceremonies began on 22 August, 2017 in Bangkok, Thailand. The exercise is also the largest event in the USAPCOM's Multinational

Planning Augmentation Team program and this event included over 120 participants from 21 countries.²³⁰

Multinational Force Standard Operating Procedures (MNF SOP) Workshop-August 2017

The MNF SOP Workshop took place from 21-31 August, 2017 at the Royal Thai Armed Forces Centre for Strategic Studies in Bang Saen, Chonburi Province Thailand. The Workshop was collocated with the Tempest Express 2017 exercise. Participants received academic instruction on Multinational Force Standing Operating Procedures (MNF SOP), and practice crisis action planning in scenarios focusing on HADR and Peacekeeping Operations. CFE-DM personnel gave presentations during the Tempest Express' academic portion, as well as facilitated working groups supporting the MNF SOP.

Disaster Response Regional Architecture Workshop-July 2017

The Asia-Pacific Center for Security Studies (APCSS) and the S. Rajaratnam School of International Studies (RSIS) at the Nanyang Technological University in Singapore (RSIS) cohosted a workshop on "Disaster Response Regional Architectures: Assessing Future Possibilities" in Bangkok, Thailand from 18-20, July 2017. The co-hosts convened 33 humanitarian assistance and disaster response (HADR) professionals, which included serving military and civilian government officials, educators and civil society representatives (including CFE-DM and PACOM).

Cooperation Afloat Readiness and Training (CARAT)-May 2017

The 23rd annual Cooperation Afloat Readiness and Training (CARAT) exercise series between the U.S. Navy and the U.S. Marine Corps and the armed forces of nine partner nations. CARAT provides a training venue to address shared maritime security priorities, enhance interoperability among participating forces, and develop sustained naval partnerships with nations in the region. The annual training events ensures forces are ready to operate together and respond effectively to any crisis. Humanitarian assistance and disaster response is just one feature of the training. CARAT 2017 exercise included the Royal Thai Navy and the U.S. Navy and Marine Corps; it took place in Thailand in May 2017.²³¹

ASEAN Civil-Military Coordination Workshop-April 2017

The ASEAN Civil-Military Coordination workshop was conducted from 4-6 April 2017. It consisted of HADR lectures and two separate breakout groups discussing scenarios in the ASEAN Joint Disaster Response Plan (AJDRP). CFE-DM facilitated working groups discussing national disaster response mechanisms focused on scenarios in the AJDRP. This event served as foundation for an enhanced partnership with the Thailand MOD, including the establishment of a formal partnership agreement, and an expanded role in the 2018 ASEAN Civil-Military Coordination Workshop.

Cobra Gold-February 2017

Cobra Gold began its 36th iteration on 14 February, 2017. The focus of the exercise in 2017 was to advance regional security and ensure effective responses to regional crises by bringing together a multinational force in the Indo-Asia-Pacific region to address shared goals and security commitments.

ASEAN Exercise 16-3-September 2016

Association of Southeast Asian Nations (ASEAN) Exercise 16-3 took place in September 2016 in Chonburi Province, Thailand. This humanitarian assistance and disaster relief exercise brings together forces from 18 nations' military and government organizations to apply and hone common standard operating procedures and diversify each other's capabilities to prepare for disasters in the Indo-Asia-Pacific region. The 2016 exercise scenarios included an earthquake induced collapsed building Search and Rescue operation.²³²

Hanuman Guardian-June 2016

Hanuman Guardian is a joint U.S. – Thai exercise focused on military interoperability while providing disaster relief. The exercise provided the Royal Thai and U.S. Armies with challenging training scenarios, improve military readiness to respond to crisis and enhance relations. Hanuman Guardian took place at Fort Adisorn, Thailand in June 2016.²³³

Cooperation Afloat Readiness and Training (CARAT)-June 2016

CARAT exercise began on June 1, 2016 in Malaysia. CARAT 2016 took place on the ground in Sandakan and in the waters and airspace of the Sulu Sea. While the exercise series remains

bilateral, elements of CARAT 2016 included multi-lateral cooperation ranging from observers to training activities. Additional bilateral phases of CARAT occurred from June through November 2016 with Thailand, Bangladesh, Brunei, Cambodia, Indonesia, Philippines, Singapore, Timor-Leste.

ASEAN Civil-Military Coordination Workshop-March 2016

This was the first ASEAN Civil-Military Coordination (CMCOORD) Workshop organized by the Ministry of Defence from the Kingdom of Thailand. The three-day workshop emphasized civil-military partnerships in humanitarian assistance and disaster relief. The workshop was organized and managed by the Thailand Ministry of Defence with the intent of making it an actual ASEAN event in the future. The goals of the workshop were to build partnerships and an extended network of disaster management professionals from the public and private sector.

Cobra Gold-February 2016

Thailand and the U.S. co-hosted this large multinational military exercise in Thailand in February 2016. Approximately 1,500 U.S. Marines, 1,000 U.S. Soldiers, 450 U.S. Sailors, 275 U.S. Airmen, and another 300 from small units and commands came together with Royal Thai service members to participate in Cobra Gold 2016.²³⁴

Cope Tiger-March 2015

Aviation and ground units from the U.S., the Kingdom of Thailand and the Republic of Singapore participated in the annual multilateral aerial exercise. The exercise took place from 9-20, March 2015. The exercise was aimed at increasing readiness, cooperation and interoperability among security forces, contributing to maritime security, counterterrorism, search and rescue and humanitarian disaster relief efforts in the region.

Cobra Gold-February 2015

Cobra Gold took place in numerous locations throughout Thailand from 9-20 February, 2015. The focus for Cobra Gold 2015 was on humanitarian civic action, community engagement, and medical activities to support the needs and humanitarian interests of civilian populations in the region. The Combined Joint Civil-Military Operation Task Force led the mission focus, and was responsible for

constructing multipurpose buildings for several local schools in different districts in Thailand.

Cope Tiger-March 2014

U.S., Thai and Singapore Air Force members with Multilateral Exercise Cope Tiger 2014 participated in a community engagement activities at Dan Kwian Wittaya School in a small village near Korat, Thailand. U.S. doctors and medical technicians also provided basic services to underprivileged rural Thais.

Cobra Gold-February 2014

Cobra Gold 2014 included Field Training Exercises, live-fire events, and Humanitarian Civic Assistance Projects. This exercise is designed to advance regional security and ensure effective responses to crises in the area.

Hanuman Guardian-June 2013

Hanuman Guardian 2013 is an exercise that provides the Royal Thai and U.S. Armies with realistic training, improve military readiness and enhance relations between the two forces. The exercise took place 17-27 June, 2013. During the course of the 10-day training exercise, the Royal Thai Army provided humanitarian assistance to several communities and increased their disaster response capabilities. They also trained on improving aviation maintenance procedures, small unit mounted and dismounted infantry tactics, counter-improvised explosive devices techniques, as well as expand on lifesaving medical skills. Units from the Washington National Guard trained with the Royal Thai Army Soldiers in search and rescue capabilities.

Cope Tiger-March 2013

Cope Tiger 13 Field Training Exercise concluded on 22 March, 2013. The event took place at Korat Royal Thai air force base, Thailand. The 2013 exercise comprised of aviation and ground units and was designed to enhance interoperability and relations amongst each U.S., Thailand, and Singapore's air forces. More than 300 U.S. service members participated in the exercise which provided an opportunity to conduct a wide spectrum of large force employment air operations and strengthen military-to-military ties with Thailand and Singapore.

Cobra Gold-February 2013

U.S. Marines and sailors with the 31st Marine Expeditionary Unit executed an amphibious assault demonstration alongside Royal Thai

Marines as part of Cobra Gold 2013. The exercise helped improve Thai and U.S. Marines capability to plan and conduct combined-joint operations in a diverse terrain setting.

International/Foreign Relations

Thailand is an important U.S. security ally in Southeast Asia and has a bilateral partnership that continues to increase interoperability among both countries' militaries. In 2003, the U.S. designated Thailand a Major Non-NATO ally. The U.S. has ongoing support efforts to Thailand focused on humanitarian assistance for displaced persons, control and prevention of infectious diseases and emerging pandemic threats, reforming the criminal justice system, and promoting good democratic governance.²³⁵ The U.S. is a key source of foreign investment for Thailand and is the third largest trading partner after Japan and China. The relationship between the U.S. and Thailand have been strained in the past following the May 2014 coup staged by the Thai military against civilian administration of Yingluck Shinawatra. As a result, the U.S. blocked US\$ 4.7 million in security-related aid. The U.S. has been pushing for democracy and improved human rights in the country which can create tension. Since then the Thai and U.S. governments have restored bilateral ties; however, Thailand has adopted stronger defense ties with China and Russia after the 2014 coup and after the U.S. suspension of arms sales during recent years.²³⁶

China has not criticized Thailand's coup like Western nations including the U.S. have and as a result have built closer relations with China, who is Thailand's main trade partner. The Royal Thai Navy has placed US\$1 billion in submarines from China and has plans to set up a joint weapons manufacturing facility with China in July 2018 in Thailand. Chinese and Thai militaries participate in overseas joint exercises and joint counter-terrorism exercises. At the same time, Thailand has been neutral in the ongoing conflict between some ASEAN members (Philippines and Vietnam) and China over conflicting maritime claims in the South China Sea.²³⁷

Thailand as a Regional Hub

Thailand has the optimal location to function as the regional hub for HADR training, engagement, and response. It shares borders with Cambodia, Laos, Malaysia, and Myanmar.

This greatly benefits countries in Asia due to the high frequency occurrence of natural disasters. In addition to other training and engagements in the country, the first session of the Regional Consultative Group (RCG) took place in Bangkok, Thailand in 2015. The RCG gathered humanitarian personnel, disaster member states and regional organizations in the Asia-Pacific region with the intent to discuss preparedness planning, civil-military coordination, establish linkages between relative frameworks, strengthen regional organizations, and identify and review policy issues.²³⁸

Regional cooperation is playing an increasingly important role in the region. In Southeast Asia, the primary intergovernmental forum is ASEAN.²³⁹ Thailand is an ASEAN member State. ASEAN shares a regional approach that no single nation or organization has the capability to address all challenges connected to large-scale disasters and therefore response is a collective effort. In 2016, the Ministry of Defense of the Kingdom of Thailand conducted the first ASEAN Civil-Military Coordination Workshop in Bangkok, Thailand. The workshop was an example of continued international coordination set out to enhance ASEAN member states and partner countries that are able to provide response capabilities.²⁴⁰ The ASEAN Civil-Military Coordination Meeting in 2017, was organized as a preparation of ASEAN in responding to severe and frequent disasters. It was hosted by Thailand's Ministry of Defense.²⁴¹

Another training and engagement event in Thailand, was Tempest Express in 2017. Tempest Express is a multilateral exercise co-hosted by USPACOM and the Royal Thai Armed Forces (RTARF). Exercise participants received academic instruction on Multinational Force Standard Operating Procedures (MNF SOP). The MNF SOP workshop aimed to improve and practice crisis action planning in scenarios focused on HADR and peacekeeping operations. Building relationships and using the MNF SOP helps speed DMHA response, which translates to saving lives.²⁴²

Thailand is a regional hub for prepositioned emergency supplies. Prepositioning relief supplies speeds up the disbursement of aid to victims after large-scale disasters. ASEAN has prepositioned hubs in Thailand, Malaysia, and the Philippines. This helps to prevent delays in aid disbursement and results in a collective ASEAN regional response.²⁴³ As the second

largest exporter in ASEAN, Thailand is an important player in the regional supply chain, especially with the rising demand for cross-border logistics services.²⁴⁴

Among other hubs or centers, Thailand is also a Regional Hub for UNDP. The Regional Bureau for Asia and the Pacific established the Bangkok Regional Hub. The priorities of the regional hub is to provide UNDP Country Offices in Asia and the Pacific with easy access to knowledge and advisory services, as well to promote regional capacity building initiatives and partnerships. This allows UNDP, governments and other development partners to identify, create and share knowledge relevant to solving urgent development challenges.²⁴⁵

Bangkok, Thailand is also the location for UNOCHA's Regional Office for Asia and the Pacific (OCHA ROAP). The Office was established in 2005 to reinforce response and preparedness activities in the region and to support humanitarian efforts undertaken by UN Country Teams, IASC Members, governments, and other stakeholders.²⁴⁶

Force Protection/Pre-Deployment Information

The following information is provided for pre-deployment planning and preparations. Visit www.travel.state.gov prior to deployments for further up-to-date information.²⁴⁷

Passport/Visa

Before entering Thailand, you must ensure that your passport has at least six months validity remaining. U.S. citizens entering Thailand for less than 30 days do not require a visa. However, it is strongly recommended that you carry a copy of your U.S. passport identification page and current Thai Visa if you have a visa. Immigration authorities may ask to see your return/onward ticket.

Emergency Contact Information

Report crimes to the local police by calling 191 or the Tourist Police at 1155 and contact the U.S. Embassy at +66 (0) 2-205-4000 or Consulate at +(66) (53) 107-777. Remember that only local officials have the authority to investigate and to prosecute a crime.

Below is emergency information for the U.S. Embassy and Consulate in Thailand:

U.S. Embassy Bangkok

95 Wireless Road
Bangkok 10330, Thailand
Telephone: + (66) (2) 205-4049, 02-205-4049
(within Thailand)
Emergency After-Hours Telephone: +(66) (2)
205-4000, 02-205-4000 (within Thailand)
Fax: + (66) (2) 205-4103, 02-205-4103 (within
Thailand)
Email: acsbkk@state.gov

U.S. Consulate General Chiang Mai

387 Wichayanond Road
Chiang Mai 50300, Thailand
Telephone: + (66) (53) 107-777, 053-107-777
(within Thailand)
Emergency After-Hours Telephone: +(66) 81-
881-1878, 081-881-1878 (within Thailand)
Fax: + (66) (53) 252-633, 053-252-633 (within
Thailand)
Email: acschn@state.gov

Currency Information

The currency of Thailand is the Thai Baht.²⁴⁸

Travel Health Information

Vaccination and Prescriptions

Before arriving in Thailand, make sure you are up-to-date on all vaccinations recommended by the U.S. Centers for Disease Control and Prevention (CDC). It is advised that you check the vaccines and medicines list and visit your doctor at least 4-6 weeks before your trip to get the vaccines and medicines you may need. If traveling with prescription medication, check with the government of Thailand to ensure the medication is legal in the Thailand and to obtain clearance to enter the country with it. Always carry your prescription medication in original packaging with your doctor's prescription.²⁴⁹

The CDC provides the following recommendations for travel to Thailand. The information in Table 3 is taken directly from the CDC website.²⁵⁰

Medical Care

In Thailand, medical treatment is adequate in urban areas. Good facilities exist for routine, long-term, and emergency health care in Bangkok, Chiang Mai, and Pattaya. Basic medical care is available but limited in rural areas, and English-speaking providers are rare. Healthcare is available in major cities, but standards of

medical care, sanitation, and facilities may be different of that provided in the U.S. In addition, the traffic pattern in Bangkok often slows down ambulances and other first responders from reaching persons in need. Make sure your health insurance plan provides coverage overseas. Most care providers overseas only accept upfront payments.²⁵¹

Eat and Drink Safely

Unclean food and water can cause travelers' diarrhea and other diseases. Reduce your risk by sticking to safe food and water habits.²⁵²

Eat

- Food that is cooked and served hot
- Hard-cooked eggs
- Fruits and vegetables you have washed in clean water or peeled yourself
- Pasteurized dairy products

Don't Eat

- Food served at room temperature
- Food from street vendors
- Raw or soft-cooked (runny) eggs
- Raw or undercooked (rare) meat or fish
- Unwashed or unpeeled raw fruits and vegetables
- Unpasteurized dairy products
- "Bushmeat" (monkeys, bats, or other wild game)

Drink

- Bottled water that is sealed
- Water that has been disinfected
- Ice made with bottled or disinfected water
- Carbonated drinks
- Hot coffee or tea
- Pasteurized milk

Don't Drink

- Tap or well water
- Ice made with tap or well water
- Drinks made with tap or well water (such as reconstituted juice)
- Unpasteurized milk

Prevent bug bites

Bugs (like mosquitoes, ticks, and fleas) can spread a number of diseases in Thailand. Many of these diseases cannot be prevented with a vaccine or medicine. You can reduce your risk by taking steps to prevent bug bites.

Routine vaccines (for all travelers)	Make sure you are up-to-date on routine vaccines before every trip. These vaccines include Measles-Mumps-Rubella (MMR) vaccine, diphtheria-tetanus-pertussis vaccine, varicella (chickenpox) vaccine, polio vaccine, and your yearly flu shot.
Hepatitis A (for most travelers)	The CDC recommends this vaccine because you can get hepatitis A through contaminated food or water in Thailand, regardless of where you are eating or staying.
Typhoid (for most travelers)	You can get typhoid through contaminated food or water in Thailand. CDC recommends this vaccine for most travelers, especially if you are staying with friends or relatives, visiting smaller cities or rural areas, or if you are an adventurous eater.
Hepatitis B (for some travelers)	You can get hepatitis B through sexual contact, contaminated needles, and blood products, so the CDC recommends this vaccine if you might have sex with a new partner, get a tattoo or piercing, or have any medical procedures.
Japanese Encephalitis (for some travelers)	You may need this vaccine if your trip will last more than a month, depending on where you are going in Thailand and what time of year you are traveling. You should also consider this vaccine if you plan to visit rural areas in Thailand or will be spending a lot of time outdoors, even for trips shorter than a month. Your doctor can help you decide if this vaccine is right for you based on your travel plans.
Rabies (for some travelers)	Although rabies can be found in dogs, bats, and other mammals in Thailand, it is not a major risk to most travelers. The CDC recommends this vaccine for the following groups: <ul style="list-style-type: none"> -Travelers involved in outdoor and other activities that put them at risk for animal bites. -People who will be working with or around animals. -People who are taking long trips or moving to Thailand. -Children, because they tend to play with animals, might not report bites, and are more likely to have animal bites on their head and neck.
Yellow Fever	There is no risk of yellow fever in Thailand. The Government of Thailand requires proof of yellow fever vaccination only if you are arriving from a country with risk of yellow fever. This does not include the U.S. If you are traveling from a country other than the U.S, check this list to see if you may be required to get the yellow fever vaccine.
Malaria (some travelers)	When traveling in Thailand, you should avoid mosquito bites to prevent malaria. You may need to take prescription medicine before, during, and after your trip to prevent malaria, depending on your travel plans, such as where you are going, when you are traveling, and if you are spending a lot of time outdoors or sleeping outside. Talk to your doctor about how you can prevent malaria while traveling.

Table 3: Travel Health Information for Thailand

To prevent bug bites:

- Cover exposed skin by wearing long-sleeved shirts, long pants, and hats;
- Use an appropriate insect repellent (see below);
- Use permethrin-treated clothing and gear (such as boots, pants, socks, and tents). Do not use permethrin directly on skin;
- Stay and sleep in air-conditioned or screened rooms; and
- Use a bed net if the area where you are sleeping is exposed to the outdoors.

For protection against ticks and mosquitos:

Use a repellent that contains 20 percent or more DEET for protection that lasts up to several hours.

For protection against mosquitos only:

Products with one of the following active ingredients can also help prevent mosquito bites. Higher percentages of active ingredient provide longer protection.

- DEET
- Picaridin (also known as KBR 3023, Bayrepel, and icaridin)
- Oil of lemon eucalyptus (OLE) or PMD
- IR3535

Note: The Zika Virus is a risk in Thailand.

Safety and Security

U.S. citizens traveling to Thailand should review the Travel Advisory and carefully consider the risks to their safety and security while there, including small-scale bombings. In August 2016, several small-scale bombings occurred near some tourist locations in the Southern provinces. In August 2015, an explosion near the Erawan Shrine in Bangkok killed at least 20 people and injured more than 100.²⁵³

In Southern provinces of Thailand (Yala, Pattani, Narathiwat, and Songkhla), U.S. citizens are at risk of death or injury due to the possibility of indiscriminate attacks in public places. Martial law is in force in this region.²⁵⁴

Sendai Framework

The Sendai Framework is the global blueprint and fifteen-year plan to build the world's resilience to natural disasters.²⁵⁵ The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks:

The Seven Global Targets:²⁵⁶

- Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality rates in the decade 2020-2030 compared to the period 2005-2015;
- Substantially reduce the number of affected people globally by 2030, aiming to lower average global figure per 100,000 in the decade 2020 -2030 compared to the period 2005-2015;
- Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030;
- Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;
- Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;
- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030; and
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

The Four Priorities of Action:

- Understanding disaster risk;
- Strengthening disaster risk governance to manage disaster risk;
- Investing in disaster reduction for resilience; and
- Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

The Sendai Framework aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries over the next 15 years. It was adopted at the Third United Nations World Conference on Disaster Risk Reduction in Sendai, Japan in 2015.²⁵⁷ The Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.²⁵⁸ Figure 9 shows the Sendai DRR Framework.²⁵⁹

Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors

Expected outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality figure per 2020-2030 compared to 2005-2015	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015	Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030
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Priorities for Action

There is a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas.

Priority 1 Understanding disaster risk	Priority 2 Strengthening disaster risk governance to manage disaster risk	Priority 3 Investing in disaster risk reduction for resilience	Priority 4 Enhancing disaster preparedness for effective response, and to «Build Back Better» in recovery, rehabilitation and reconstruction
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Figure 9: UN Sendai Framework for Disaster Risk Reduction 2015-2030

Hyogo Framework for Action Country Progress Report

The Hyogo Framework for Action (HFA) was adopted as a guideline to reduce vulnerabilities to natural hazards. The HFA assists participating countries to become more resilient and to better manage the hazards that threaten their development. The levels of progress of the 2013-2015 results of the HFA for Thailand are represented in Figure 10 and Table 4. Table 5 provides an overview of the overall challenges and the future outlook statement from the HFA report. The 2013-2015 is the most recent HFA report available for Thailand.²⁶⁰

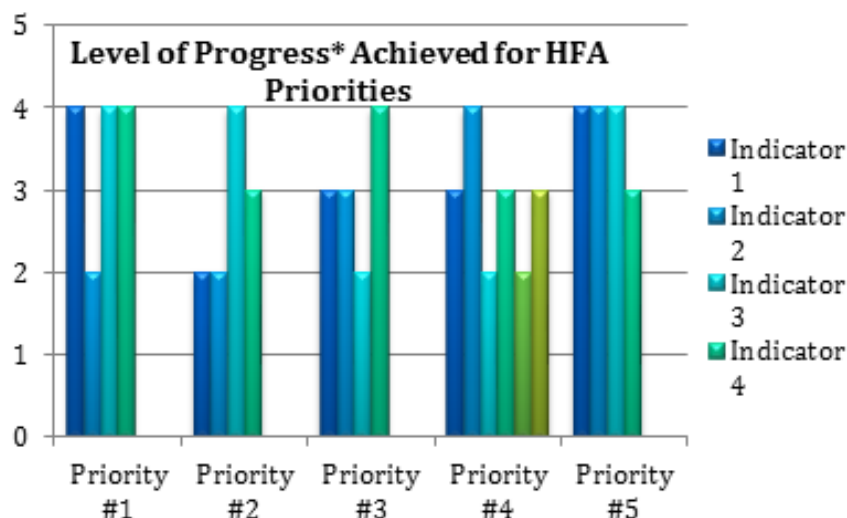


Figure 10: HFA Level of Progress Achieved

Priority for Action #1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.		
Core Indicator*	Indicator Description	Level of Progress Achieved
1	National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels.	4
2	Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels.	2
3	Community Participation and decentralization is ensured through the delegation of authority and resources to local levels.	4
4	A national multi sectoral platform for disaster risk reduction is functioning.	4

Priority #2: Identify, assess and monitor disaster risks and enhance early warning		
Core Indicator*	Indicator Description	Level of Progress Achieved
1	National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.	2
2	Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.	2
3	Early warning systems are in place for all major hazards, with outreach to communities.	4
4	National and local risk assessments take account of regional / trans-boundary risks, with a view to regional cooperation on risk reduction.	3

Table 4: National Progress Report on the Implementation of the HFA

Priority #3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels

Core Indicator*	Indicator Description	Level of Progress Achieved
1	Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems, etc.).	3
2	School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.	3
3	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.	2
4	Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.	4

Priority #4: Reduce the underlying risk factors

Core Indicator*	Indicator Description	Level of Progress Achieved
1	Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.	3
2	Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.	4
3	Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities.	2
4	Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.	3
5	Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes.	2
6	Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.	3

Priority #5: Strengthen disaster preparedness for effective response at all levels

Core Indicator*	Indicator Description	Level of Progress Achieved
1	Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.	4
2	Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programs.	4
3	Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.	4
4	Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews.	2

Table Notes:

*Level of Progress:

1 – Minor progress with few signs of forward action in plans or policy

2 – Some progress, but without systematic policy and/ or institutional commitment

3 – Institutional commitment attained, but achievements are neither comprehensive nor substantial

4 – Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities

5 – Comprehensive achievement with sustained commitment and capacities at all levels

Table 4: National Progress Report on the Implementation of the HFA (cont.)

Future Outlook Area 1: The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.	
Challenges:	Disaster Risk Reduction (DRR) mainstreaming in the development plan and sector's plan.
Future Outlook Priorities:	DRR is mainstreamed into development and sectors' development plan at national, regional, provincial and local level. Existing mechanisms mandated by law (disaster prevention and mitigation committee) are strengthened. Budget is secured on DRR programs.
Future Outlook Area 2: The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.	
Challenges:	All sectors and stakeholders should share common understanding on DRR to ensure the seamless linkage between global, national and local framework for action in DRR.
Future Outlook Priorities:	A shared understanding on DRR is promoted through an agreed strategic communication scheme, including sets of contextualized and user-friendly toolkits and learning kits for each sectors and stakeholder groups.
Future Outlook Area 3: The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programs in the reconstruction of affected communities.	
Challenges:	The systematic and participatory monitoring and evaluation mechanism and tools for DRR in the country in all phases of disaster risk management.
Future Outlook Priorities:	A systematic DRR monitoring and evaluation mechanism and tools are developed in a participatory manner to ensure the effectiveness of DRR mainstreaming and DRR implementation in Thailand at all levels.

Table 5: HFA Country Progress Report Future Outlook Areas, Thailand

Country Profile

The information in the Country Profile section is sourced directly from the CIA World Fact book. Additional numbers on country comparison to the world can be found by going directly to the CIA website.²⁶¹

Background:

A unified Thai kingdom was established in the mid-14th century. Known as Siam until 1939, Thailand is the only Southeast Asian country never to have been colonized by a European power. A bloodless revolution in 1932 led to the establishment of a constitutional monarchy. In alliance with Japan during World War II, Thailand became a US treaty ally in 1954 after sending troops to Korea and later fighting alongside the US in Vietnam. Thailand since 2005 has experienced several rounds of political turmoil including a military coup in 2006 that ousted then Prime Minister Thaksin Shinawatra, followed by large-scale street protests by competing political factions in 2008, 2009, and 2010. Thaksin's youngest sister, Yingluck Shinawatra, in 2011 led the Puea Thai Party to an electoral win and assumed control of the government. A blanket amnesty bill for individuals involved in street protests, altered at the last minute to include all political crimes - including all convictions against Thaksin - triggered months of large-scale anti-government protests in Bangkok beginning in November 2013.

In early May 2014, Yingluck was removed from office by the Constitutional Court and in late May 2014 the Royal Thai Army, led by Royal Thai Army Gen. Prayut Chan-ocha, staged a coup against the caretaker government. Prayut was appointed prime minister in August 2014. The interim military government created several interim institutions to promote reform and draft a new constitution, which was passed in a national referendum in August 2016. Elections are tentatively set for late-2018. King Bhumibol Adunyatet passed away in October 2016 after 70 years on the throne; his only son, Wachiralongkon Bodinthrathepphayawarangkun, ascended the throne in December 2016. He signed the new constitution in April 2017. Thailand has also experienced violence associated with the ethno-nationalist insurgency in its southern Malay-Muslim majority provinces. Since January 2004,

thousands have been killed and wounded in the insurgency

Location:

Southeastern Asia, bordering the Andaman Sea and the Gulf of Thailand, southeast of Burma

Geographic coordinates:

15 00 N, 100 00 E

Map references:

Southeast Asia

Area:

Total: 513,120 sq km

Land: 510,890 sq km

Water: 2,230 sq km

Country comparison to the world: 52

Area - comparative:

About three times the size of Florida; slightly more than twice the size of Wyoming

Land boundaries:

Total: 5,673 km

Border countries (4): Burma 2,416 km, Cambodia 817 km, Laos 1,845 km, Malaysia 595 km

Coastline:

3,219 km

Maritime claims:

Territorial sea: 12 nm

Exclusive economic zone: 200 nm

Continental shelf: 200-m depth or to the depth of exploitation

Climate:

Tropical; rainy, warm, cloudy southwest monsoon (mid-May to September); dry, cool northeast monsoon (November to mid-March); southern isthmus always hot and humid

Terrain:

Central plain; Khorat Plateau in the east; mountains elsewhere

Elevation:

Mean elevation: 287 m

Elevation extremes: lowest point: Gulf of Thailand 0 m

Highest point: Doi Inthanon 2,565 m

Natural resources:

Tin, rubber, natural gas, tungsten, tantalum, timber, lead, fish, gypsum, lignite, fluorite, arable land

Land use:

Agricultural land: 41.2 percent

Arable land 30.8 percent; permanent crops 8.8 percent; permanent pasture 1.6 percent

Forest: 37.2 percent

Other: 21.6 percent (2011 est.)

Irrigated land:

64,150 sq km (2012)

Population - distribution:

Highest population density is found in and around Bangkok; significant population clusters found throughout large parts of the country, particularly north and northeast of Bangkok and in the extreme southern region of the country

Natural hazards:

Land subsidence in Bangkok area resulting from the depletion of the water table; droughts

Environment - current issues:

Air pollution from vehicle emissions; water pollution from organic and factory wastes; deforestation; soil erosion; wildlife populations threatened by illegal hunting

Environment - international agreements:

Party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Marine Life Conservation, Ozone Layer Protection, Tropical Timber 83, Tropical Timber 94, Wetlands
Signed, but not ratified: Law of the Sea

Geography - note:

Controls only land route from Asia to Malaysia and Singapore; ideas for the construction of a canal across the Kra Isthmus that would create a bypass to the Strait of Malacca and shorten shipping times around Asia continue to be discussed

Population:

68,414,135

Note: estimates for this country explicitly take into account the effects of excess mortality due to AIDS; this can result in lower life expectancy, higher infant mortality, higher death rates, lower population growth rates, and changes in the distribution of population by age and sex than would otherwise be expected (July 2017 est.)
Country comparison to the world: 20

Nationality:

Noun: Thai (singular and plural)

Adjective: Thai

Ethnic groups:

Thai 97.5 percent, Burmese 1.3 percent, other 1.1 percent, unspecified <.1 percent (2015 est.)

Languages:

Thai (official) 90.7 percent, Burmese 1.3 percent, other 8 percent

Note: English is a secondary language of the elite (2010 est.)

Religions:

Buddhist 94.6 percent, Muslim 4.3 percent, Christian 1 percent, other <.1 percent, none <.1 percent (2015 est.)

Age structure:

0-14 years: 16.93 percent (male 5,933,269/female 5,649,864)

15-24 years: 14.17 percent (male 4,943,583/female 4,752,038)

25-54 years: 46.32 percent (male 15,677,322/female 16,009,399)

55-64 years: 12 percent (male 3,851,575/female 4,358,837)

65 years and over: 10.58 percent (male 3,165,799/female 4,072,449) (2017 est.)

Dependency ratios:

Total dependency ratio: 40

Youth dependency ratio: 25.2

Elderly dependency ratio: 14.8

Potential support ratio: 6.8 (2015 est.)

Median age:

Total: 37.7 years

Male: 36.6 years

Female: 38.7 years (2017 est.)

Country comparison to the world: 65

Population growth rate:

0.3 percent (2017 est.)

Country comparison to the world: 171

Birth rate:

11 births/1,000 population (2017 est.)

Country comparison to the world: 179

Death rate:

8 deaths/1,000 population (2017 est.)

Country comparison to the world: 91

Net migration rate:

0 migrant(s)/1,000 population (2017 est.)

Country comparison to the world: 98

Population distribution:

Highest population density is found in and around Bangkok; significant population clusters found throughout large parts of the country, particularly north and northeast of Bangkok and in the extreme southern region of the country

Urbanization:

Urban population: 52.7 percent of total population (2017)

Rate of urbanization: 2.2 percent annual rate of change (2015-20 est.)

Major urban areas - population:

Bangkok (capital) 9.27 million; Samut Prakan 1.814 million (2015)

Sex ratio:

At birth: 1.05 male(s)/female

0-14 years: 1.05 male(s)/female

15-24 years: 1.04 male(s)/female

25-54 years: 0.98 male(s)/female

55-64 years: 0.89 male(s)/female

65 years and over: 0.78 male(s)/female

Total population: 0.97 male(s)/female (2017 est.)

Mother's mean age at first birth:

23.3 years (2009 est.)

Maternal mortality ratio:

20 deaths/100,000 live births (2015 est.)

Country comparison to the world: 129

Infant mortality rate:

Total: 9.2 deaths/1,000 live births

Male: 10.1 deaths/1,000 live births

Female: 8.2 deaths/1,000 live births (2017 est.)

Country comparison to the world: 146

Life expectancy at birth:

Total population: 74.9 years

Male: 71.7 years

Female: 78.3 years (2017 est.)

Country comparison to the world: 116

Total fertility rate:

1.52 children born/woman (2017 est.)

Country comparison to the world: 194

Contraceptive prevalence rate:

79.3 percent (2012)

Health expenditures:

6.5 percent of GDP (2014)

Country comparison to the world: 92

Physicians density:

0.39 physicians/1,000 population (2010)

Hospital bed density:

2.1 beds/1,000 population (2010)

Drinking water source:

Improved:

Urban: 97.6 percent of population

Rural: 98 percent of population

Total: 97.8 percent of population

Unimproved:

Urban: 2.4 percent of population

Rural: 2 percent of population

Total: 2.2 percent of population (2015 est.)

Sanitation facility access:

Improved:

Urban: 89.9 percent of population

Rural: 96.1 percent of population

Total: 93 percent of population

Unimproved:

Urban: 10.1 percent of population

Rural: 3.9 percent of population

Total: 7 percent of population (2015 est.)

HIV/AIDS - adult prevalence rate:

1.1 percent (2016 est.)

Country comparison to the world: 40

HIV/AIDS - people living with HIV/AIDS:

450,000 (2016 est.)

Country comparison to the world: 16

HIV/AIDS - deaths:

16,000 (2016 est.)

Country comparison to the world: 16

Major infectious diseases:

Degree of risk: very high

Food or waterborne diseases: bacterial diarrhea

Vectorborne diseases: dengue fever, Japanese encephalitis, and malaria (2016)

Obesity - adult prevalence rate:

10 percent (2016)

Country comparison to the world: 140

Children under the age of 5 years underweight:

9.2 percent (2012)

Country comparison to the world: 71

Education expenditures:

4.1 percent of GDP (2013)

Country comparison to the world: 47

Literacy:

Definition: age 15 and over can read and write

Total population: 92.9 percent

Male: 94.7 percent

Female: 91.2 percent (2015 est.)

School life expectancy (primary to tertiary education):

Total: 16 years

Male: 16 years

Female: 16 years (2015)

Unemployment, youth ages 15-24:

Total: 0.9 percent

Male: 0.8 percent

Female: 1.1 percent (2015 est.)

Country comparison to the world: 159

Country name:

Conventional long form: Kingdom of Thailand

Conventional short form: Thailand

Local long form: Ratcha Anachak Thai

Local short form: Prathet Thai

Former: Siam

Etymology: "Land of the Tai [People]"; the meaning of "tai" is uncertain, but may originally have meant "human beings," "people," or "free people"

Government type:

Constitutional monarchy; note - interim military-affiliated government since May 2014

Capital:

Name: Bangkok

Geographic coordinates: 13 45 N, 100 31 E

Time difference: UTC+7 (12 hours ahead of Washington, DC, during Standard Time)

Administrative divisions:

76 provinces (changwat, singular and plural) and 1 municipality* (maha nakhon); Amnat Charoen, Ang Thong, Bueng Kan, Buri Ram, Chachoengsao, Chai Nat, Chaiyaphum, Chanthaburi, Chiang Mai, Chiang Rai, Chon Buri, Chumphon, Kalasin, Kamphaeng Phet, Kanchanaburi, Khon Kaen, Krabi, Krung Thep* (Bangkok), Lampang, Lamphun, Loei, Lop Buri, Mae Hong Son, Maha Sarakham, Mukdahan, Nakhon Nayok, Nakhon Pathom, Nakhon Phanom, Nakhon Ratchasima, Nakhon Sawan, Nakhon Si Thammarat, Nan, Narathiwat, Nong Bua Lamphu, Nong Khai, Nonthaburi, Pathum Thani, Pattani, Phangnga, Phatthalung, Phayao, Phetchabun, Phetchaburi, Phichit, Phitsanulok, Phra Nakhon Si Ayutthaya, Phrae, Phuket, Prachin Buri, Prachuap Khiri Khan, Ranong, Ratchaburi, Rayong, Roi Et, Sa Kaeo, Sakon Nakhon, Samut Prakan, Samut Sakhon, Samut Songkhram, Saraburi, Satun, Sing Buri, Si Sa Ket, Songkhla, Sukhothai, Suphan Buri, Surat Thani, Surin, Tak, Trang, Trat, Ubon Ratchathani,

Udon Thani, Uthai Thani, Uttaradit, Yala, Yasothon

Independence:

1238 (traditional founding date; never colonized)

National holiday:

Birthday of King Maha VAJIRALONGKORN, 28 July (1952)

Constitution:

Many previous; draft of latest completed 29 March 2016, approved by referendum 7 August 2016, signed by the king 6 April 2017; note - the final version has several changes not reflected in the one passed by referendum (2016)

Legal system:

Civil law system with common law influences
International law organization participation:
Has not submitted an ICJ jurisdiction declaration; non-party state to the ICCT

Citizenship:

Citizenship by birth: no

Citizenship by descent only: at least one parent must be a citizen of Thailand
Dual citizenship recognized: no
Residency requirement for naturalization: 5 years

Suffrage:

18 years of age; universal and compulsory

Executive branch:

Chief of state: King Wachiralongkon Bodinrathapheyyawarangkun, also spelled Vajiralongkorn Bodindradebayavarangkun (since 1 December 2016); note - King Bhumibol Adunyadet, also spelled Bhumibol Adulyadej (since 9 June 1946) died 13 October 2016

Head of government: Interim Prime Minister Gen. Prayut Chan-ocha (since 25 August 2014); Deputy Prime Ministers Prawit Wongsuwan, Gen. (since 31 August 2014), Wissanu Krueangnam (since 31 August 2014), Somkhit Chatusiphithak (since 20 August 2015),

Prachin Chantong, Air Chief Mar. (since 20 August 2015), Chatchai Sarikan, Gen. (since 23 November 2017)

Cabinet: Council of Ministers nominated by the prime minister, appointed by the king; a Privy Council advises the king

Elections/appointments: the monarchy is hereditary; the House of Representatives approves a person for Prime Minister who must then be appointed by the King (as stated in the transitory provision of the 2017 constitution); the office of prime minister can be held for up to a total of 8 years

Note: Gen. Prayut Chan-ocha was appointed interim prime minister in August 2014, three months after he staged the coup that removed the previously elected government of Prime Minister Yingluck Shinawatra, also spelled Yingluck Shinawatra

Legislative branch:

Description: in transition; following the May 2014 military coup, a National Legislative Assembly or Sapha Nitibanyat Haeng Chat of no more than 220 members replaced the bicameral National Assembly; expanded to 250 members in September 2016; elections for a permanent legislative body are scheduled for November 2018; the 2017 constitution calls for a 250-member military-appointed Senate with 5-year terms and a 500-member elected House of Representatives with 4-year terms

Elections: Senate - last held on 30 March 2014 but invalidated by the coup (in future, members will be appointed); House of Representatives - last held on 2 February 2014 but later declared invalid by the Constitutional Court (next to be held in November 2018)

Election results: Senate - percent of vote by party - NA; seats by party - NA; House of Representatives - percent of vote by party - NA; seats by party - NA

Judicial branch:

Highest court(s): Supreme Court of Justice (consists of court president, 6 vice-presidents, and 60-70 judges, and organized into 10 divisions); Constitutional Court (consists of court president and 8 judges); Supreme

Administrative Court (number of judges determined by Judicial Commission of the Administrative Courts)

Judge selection and term of office: Supreme Court judges selected by the Judicial Commission of the Courts of Justice and approved by the monarch; judge term determined by the monarch; Constitutional Court justices - 3 judges drawn from the Supreme Court, 2 judges drawn from the Administrative Court, and 4 judge candidates selected by the Selective Committee for Judges of the Constitutional Court and confirmed by the Senate; judges appointed by the monarch to serve single 9-year terms; Supreme Administrative Court judges selected by the Judicial Commission of the Administrative Courts and appointed by the monarch; judges appointed for life

Subordinate courts: courts of first instance and appeals courts within both the judicial and administrative systems; military courts

Political parties and leaders:

Chat Thai Phatthana Party or CTP (Thai Nation Development Party)

Phumchai (Bhumjai) Thai Party or PJT (Thai Pride) [Anuthin Chanwirakun]

Prachathipat Party or DP (Democrat Party) [Abhisit Wechachiwa, also spelled Abhisit Vejjajiva]

Puea Thai Party (For Thais Party) or PTP [acting leader Wirot Paoin]

Political pressure groups and leaders:

New Democracy Movement

People's Democratic Reform Committee or PDRC

United Front for Democracy Against Dictatorship or UDD

International organization participation:

ADB, APEC, ARF, ASEAN, BIMSTEC, BIS, CD, CICA, CP, EAS, FAO, G-77, IAEA, IBRD, ICAO, ICC (national committees), ICRM, IDA, IFAD, IFC, IFRCs, IHO, ILO, IMF, IMO, IMSO, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, OAS (observer), OIC (observer), OIF (observer), OPCW, OSCE (partner), PCA, PIF (partner), UN, UNAMID, UNCTAD, UNESCO, UNHCR, UNIDO, UNMOGIP, UNOCI, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO

Diplomatic representation in the US:

Chief of mission: Ambassador (vacant); Charge d'Affaires Phattharawan Wetchasat (since 27 October 2017)

Chancery: 1024 Wisconsin Avenue NW, Suite 401, Washington, DC 20007

Telephone: [1] (202) 944-3600

FAX: [1] (202) 944-3611

Consulate(s) general: Chicago, Los Angeles, New York

Diplomatic representation from the US:

Chief of mission: Ambassador Glyn T. Davies (since 28 November 2015)

Embassy: 95 Wireless Road, Bangkok 10330

Mailing address: APO AP 96546

Telephone: [66] (2) 205-4000

FAX: [66] (2) 254-2990, 205-4131

Consulate(s) general: Chiang Mai

Flag description:

Five horizontal bands of red (top), white, blue (double width), white, and red; the red color symbolizes the nation and the blood of life; white represents religion and the purity of Buddhism; blue stands for the monarchy
Note: similar to the flag of Costa Rica but with the blue and red colors reversed

National symbol(s):

Garuda (mythical half-man, half-bird figure), elephant; national colors: red, white, blue

National anthem:

Name: "Phleng Chat Thai" (National Anthem of Thailand)

Lyrics/music: Luang Saranuprapan/Phra Jenduriyang

Note: music adopted 1932, lyrics adopted 1939; by law, people are required to stand for the national anthem at 0800 and 1800 every day; the anthem is played in schools, offices, theaters, and on television and radio during this time; "Phleng Sanlasoen Phra Barami" (A Salute to the Monarch) serves as the royal anthem and is played in the presence of the royal family and during certain state ceremonies

Economy - overview:

With a relatively well-developed infrastructure, a free-enterprise economy, and generally pro-investment policies, Thailand is highly dependent on international trade, with exports accounting for about two-thirds of GDP. Thailand's exports include electronics, agricultural commodities, automobiles and parts, and processed foods. The industry and service sectors produce about 90 percent of GDP. The agricultural sector, comprised mostly of small-scale farms, contributes only 10 percent of GDP but employs about one-third of the labor force. Thailand has attracted an estimated 3.0-4.5 million migrant workers, mostly from neighboring countries.

Over the last few decades, Thailand has reduced poverty substantially. In 2013, the Thai Government implemented a nationwide 300 baht (roughly \$10) per day minimum wage policy and deployed new tax reforms designed to lower rates on middle-income earners.

Thailand's economy is recovering from slow growth during the years since the 2014 coup. Thailand's economic fundamentals are sound, with low inflation, low unemployment, and reasonable public and external debt levels. Tourism and government spending - mostly on infrastructure and short-term stimulus measures

- have helped to boost the economy, and The Bank of Thailand has been supportive, with several interest rate reductions.

Over the longer-term, household debt levels, political uncertainty, and an aging population pose risks to growth.

GDP (purchasing power parity):

\$1.229 trillion (2017 est.)

\$1.185 trillion (2016 est.)

\$1.148 trillion (2015 est.)

Note: data are in 2017 dollars

Country comparison to the world: 21

GDP (official exchange rate):

\$437.8 billion (2017 est.)

GDP - real growth rate:

3.7 percent (2017 est.)

3.2 percent (2016 est.)

2.9 percent (2015 est.)

Country comparison to the world: 84

GDP - per capita (PPP):

\$17,800 (2017 est.)

\$17,200 (2016 est.)

\$16,700 (2015 est.)

Note: data are in 2017 dollars

Country comparison to the world: 97

Gross national saving:

32.8 percent of GDP (2017 est.)

33.5 percent of GDP (2016 est.)

30.3 percent of GDP (2015 est.)

Country comparison to the world: 19

GDP - composition, by end use:

Household consumption: 50.1 percent
 Government consumption: 17 percent
 Investment in fixed capital: 24.2 percent
 Investment in inventories: -7 percent
 Exports of goods and services: 70.4 percent
 Imports of goods and services: -54.7 percent (2017 est.)

GDP - composition, by sector of origin:

Agriculture: 8.2 percent
 Industry: 36.2 percent
 Services: 55.6 percent (2017 est.)

Agriculture - products:

Rice, cassava (manioc, tapioca), rubber, corn, sugarcane, coconuts, palm oil, pineapple, livestock, fish products

Industries:

Tourism, textiles and garments, agricultural processing, beverages, tobacco, cement, light manufacturing such as jewelry and electric appliances, computers and parts, integrated circuits, furniture, plastics, automobiles and automotive parts, agricultural machinery, air conditioning and refrigeration, ceramics, aluminum, chemical, environmental management, glass, granite and marble, leather, machinery and metal work, petrochemical, petroleum refining, pharmaceuticals, printing, pulp and paper, rubber, sugar, rice, fishing, cassava, world's second-largest tungsten producer and third-largest tin producer
 Industrial production growth rate: 3.6 percent (2017 est.)

Country comparison to the world: 79

Labor force:

38.37 million (2017 est.)
 Country comparison to the world: 17

Labor force - by occupation:

Agriculture: 31.8 percent
 Industry: 16.7 percent
 Services: 51.5 percent (2015 est.)

Unemployment rate:

0.7 percent (2017 est.)
 0.8 percent (2016 est.)
 Country comparison to the world: 4

Population below poverty line:

7.2 percent (2015 est.)

Household income or consumption by percentage share:

Lowest 10 percent: 2.8 percent
 Highest 10 percent: 31.5 percent (2009 est.)
 Distribution of family income - Gini index: 44.5 (2015 est.)
 48.4 (2011 est.)

Country comparison to the world: 44

Budget:

Revenues: \$79.6 billion
 Expenditures: \$90.56 billion (2017 est.)

Taxes and other revenues:

18.2 percent of GDP (2017 est.)
 Country comparison to the world: 166

Budget surplus (+) or deficit (-):

-2.5 percent of GDP (2017 est.)

Country comparison to the world: 99

Public debt:

44.1 percent of GDP (2017 est.)

41.2 percent of GDP (2016 est.)

Note: data cover general government debt, and includes debt instruments issued (or owned) by government entities other than the treasury; the data include treasury debt held by foreign entities; the data include debt issued by subnational entities, as well as intra-governmental debt; intra-governmental debt consists of treasury borrowings from surpluses in the social funds, such as for retirement, medical care, and unemployment; debt instruments for the social funds are sold at public auctions
Country comparison to the world: 121

Fiscal year:

1 October - 30 September

Inflation rate (consumer prices):

0.6 percent (2017 est.)

0.2 percent (2016 est.)

Country comparison to the world: 21

Central bank discount rate:

1.5 percent (31 December 2016 est.)

1.5 percent (31 December 2015 est.)

Country comparison to the world: 121

Commercial bank prime lending rate:

6.2 percent (31 December 2017 est.)

6.31 percent (31 December 2016 est.)

Country comparison to the world: 125

Stock of narrow money:

\$56.36 billion (31 December 2017 est.)

\$52.03 billion (31 December 2016 est.)

Country comparison to the world: 51

Stock of broad money:

\$546.1 billion (31 December 2017 est.)

\$510.4 billion (31 December 2016 est.)

Country comparison to the world: 22

Stock of domestic credit:

\$537.2 billion (31 December 2017 est.)

\$507.5 billion (31 December 2016 est.)

Country comparison to the world: 26

Market value of publicly traded shares:

\$348.8 billion (31 December 2015 est.)

\$430.4 billion (31 December 2014 est.)

\$354.4 billion (31 December 2013 est.)

Country comparison to the world: 28

Current account balance:

\$44 billion (2017 est.)

\$46.83 billion (2016 est.)

Country comparison to the world: 11

Exports:

\$228.2 billion (2017 est.)

\$214.3 billion (2016 est.)

Country comparison to the world: 23

Exports - commodities:

Automobiles and parts, computer and parts, jewelry and precious stones, polymers of ethylene in primary forms, refined fuels, electronic integrated circuits, chemical products, rice, fish products, rubber products, sugar, cassava, poultry, machinery and parts, iron and steel and their products

Exports - partners:

US 11.4 percent, China 11.1 percent, Japan 9.6 percent, Hong Kong 5.3 percent, Australia 4.8 percent, Malaysia 4.5 percent, Vietnam 4.4 percent (2016)

Imports:

\$190 billion (2017 est.)

\$177.7 billion (2016 est.)

Country comparison to the world: 26

Imports - commodities:

Machinery and parts, crude oil, electrical machinery and parts, chemicals, iron & steel and product, electronic integrated circuit, automobile's parts, jewelry including silver bars and gold, computers and parts, electrical household appliances, soybean, soybean meal, wheat, cotton, dairy products

Imports - partners:

China 21.6 percent, Japan 15.8 percent, US 6.2 percent, Malaysia 5.6 percent (2016)

Reserves of foreign exchange and gold:

\$193.5 billion (31 December 2017 est.)

\$171.9 billion (31 December 2016 est.)

Country comparison to the world: 13

Debt - external:

\$135.5 billion (31 December 2017 est.)

\$130.6 billion (31 December 2016 est.)

Country comparison to the world: 44

Stock of direct foreign investment - at home:

\$205.5 billion (31 December 2017 est.)

\$193.5 billion (31 December 2016 est.)

Country comparison to the world: 30

Stock of direct foreign investment - abroad:

\$112.3 billion (31 December 2017 est.)

\$96.27 billion (31 December 2016 est.)

Country comparison to the world: 34

Exchange rates:

Baht per US dollar -

34.34 (2017 est.)

35.296 (2016 est.)

35.296 (2015 est.)

34.248 (2014 est.)

32.48 (2013 est.)

Electricity access:

Population without electricity: 700,000

Electrification - total population: 99 percent

Electrification - urban areas: 99.7 percent

Electrification - rural areas: 98.3 percent (2013)

Electricity - production:

167.9 billion kWh (2015 est.)

Country comparison to the world: 24

Electricity - consumption:

168.3 billion kWh (2015 est.)

Country comparison to the world: 23

Electricity - exports:

2.267 billion kWh (2015 est.)

Country comparison to the world: 43

Electricity - imports:

14.41 billion kWh (2015 est.)

Country comparison to the world: 16

Electricity - installed generating capacity:

40.97 million kW (2015 est.)

Country comparison to the world: 24

Electricity - from fossil fuels:

76.7 percent of total installed capacity (2015 est.)

Country comparison to the world: 94

Electricity - from nuclear fuels:

0 percent of total installed capacity (2015 est.)

Country comparison to the world: 188

Electricity - from hydroelectric plants:

8.9 percent of total installed capacity (2015 est.)

Country comparison to the world: 121

Electricity - from other renewable sources:

14.2 percent of total installed capacity (2015 est.)

Country comparison to the world: 51

Crude oil - production:

257,500 bbl/day (2016 est.)

Country comparison to the world: 34

Crude oil - exports:

12,200 bbl/day (2014 est.)

Country comparison to the world: 57

Crude oil - imports:

830,500 bbl/day (2014 est.)

Country comparison to the world: 14

Crude oil - proved reserves:

396.4 million bbl (1 January 2017 es)

Country comparison to the world: 52

Refined petroleum products - production:

1.213 million bbl/day (2014 est.)

Country comparison to the world: 18

Refined petroleum products - consumption:

1.272 million bbl/day (2015 est.)

Country comparison to the world: 19

Refined petroleum products - exports:

238,800 bbl/day (2014 est.)

Country comparison to the world: 31

Refined petroleum products - imports:

162,800 bbl/day (2014 est.)

Country comparison to the world: 42

Natural gas - production:

39.82 billion cu m (2015 est.)

Country comparison to the world: 22

Natural gas - consumption:

114.8 billion cu m (2015 est.)

Country comparison to the world: 11

Natural gas - exports:

0 cu m (2013 est.)

Country comparison to the world: 190

Natural gas - imports:

13.33 billion cu m (2015 est.)

Country comparison to the world: 23

Natural gas - proved reserves:

206.8 billion cu m (1 January 2017 es)

Country comparison to the world: 44

Carbon dioxide emissions from consumption of energy:

301 million Mt (2013 est.)

Country comparison to the world: 21

Telephones - fixed lines:

Total subscriptions: 4.706 million

Subscriptions per 100 inhabitants: 7 (July 2016 est.)

Country comparison to the world: 31

Telephones - mobile cellular:

Total: 116.606 million

Subscriptions per 100 inhabitants: 171 (July 2016 est.)

Country comparison to the world: 13

Telephone system:

General assessment: high quality system, especially in urban areas like Bangkok
Domestic: fixed-line system provided by both a government-owned and commercial provider; wireless service expanding rapidly
International: country code - 66; connected to major submarine cable systems providing links throughout Asia, Australia, Middle East, Europe, and US; satellite earth stations - 2 Intelsat (1 Indian Ocean, 1 Pacific Ocean) (2016)

Broadcast media:

26 digital TV stations in Bangkok broadcast nationally, 6 terrestrial TV stations in Bangkok broadcast nationally via relay stations - 2 of the stations are owned by the military, the other 4 are government-owned or controlled, leased to private enterprise, and all are required to broadcast government-produced news programs twice a day; multi-channel satellite and cable TV subscription services are available; radio frequencies have been allotted for more than 500 government and commercial radio stations; many small community radio stations operate with low-power transmitters (2017)

Internet country code:

.th

Internet users:

Total: 32,398,778

Percent of population: 47.5 percent (July 2016 est.)

Country comparison to the world: 22

National air transport system:

Number of registered air carriers: 19

Inventory of registered aircraft operated by air carriers: 276

Annual passenger traffic on registered air carriers: 54,259,629

Annual freight traffic on registered air carriers: 2,134,149,001 mt-km (2015)

Civil aircraft registration country code prefix:

HS (2016)

Airports:

101 (2013)

Country comparison to the world: 56

Airports - with paved runways:

Total: 63

Over 3,047 m: 8

2,438 to 3,047 m: 12

1,524 to 2,437 m: 23

914 to 1,523 m: 14

Under 914 m: 6 (2013)

Airports - with unpaved runways:

Total: 38

2,438 to 3,047 m: 1

1,524 to 2,437 m: 1

914 to 1,523 m: 10

Under 914 m: 26 (2013)

Heliports:

7 (2013)

Pipelines:

Condensate 2 km; gas 5,900 km; liquid petroleum gas 85 km; oil 1 km; refined products 1,097 km (2013)

Railways:

Total: 4,127 km

Standard gauge: 84 km 1.435-m gauge (84 km electrified)

Narrow gauge: 4,043 km 1.000-m gauge (2017)

Country comparison to the world: 45

Roadways:

Total: 180,053 km (includes 450 km of expressways) (2006)

Country comparison to the world: 30

Waterways:

4,000 km (3,701 km navigable by boats with drafts up to 0.9 m) (2011)

Country comparison to the world: 26

Merchant marine:

Total: 781

By type: bulk carrier 25, container ship 23, general cargo 94, oil tanker 240, other 399 (2017)

Country comparison to the world: 27

Ports and terminals:

Major seaport(s): Bangkok, Laem Chabang, Map Ta Phut, Prachuap Port, Si Racha

Container port(s) (TEUs): Bangkok (1,559,000), Laem Chabang (6,780,000) (2015)
LNG terminal(s) (import): Map Ta Phut

Military expenditures:

1.5 percent of GDP (2017)

1.45 percent of GDP (2016)

1.44 percent of GDP (2015)

1.41 percent of GDP (2014)

1.4 percent of GDP (2013)

Country comparison to the world: 73

Military branches:

Royal Thai Armed Forces (Kongthap Thai, RTARF): Royal Thai Army (Kongthap Bok Thai, RTA), Royal Thai Navy (Kongthap Ruea Thai, RTN, includes Royal Thai Marine Corps), Royal Thai Air Force (Kongthap Agard Thai, RTAF) (2017)

Military service age and obligation:

21 years of age for compulsory military service; 18 years of age for voluntary military service; males register at 18 years of age; 2-year conscript service obligation (2012)

Disputes - international:

Separatist violence in Thailand's predominantly Malay-Muslim southern provinces prompt border closures and controls with Malaysia to stem insurgent activities; Southeast Asian states have enhanced border surveillance to check the spread of avian flu; talks continue on completion of demarcation with Laos but disputes remain over several islands in the Mekong River; despite continuing border committee talks, Thailand must deal with Karen and other ethnic rebels, refugees, and illegal cross-border activities; Cambodia and Thailand dispute sections of boundary; in 2011, Thailand and Cambodia resorted to arms in the dispute over the location of the boundary on the precipice surmounted by Preah Vihear temple ruins, awarded to Cambodia by ICJ decision in 1962 and part of a planned UN World Heritage site; Thailand is studying the feasibility of jointly constructing the Hatgyi Dam on the Salween river near the border with Burma; in 2004, international environmentalist pressure prompted China to halt construction of 13 dams on the Salween River that flows through China, Burma, and Thailand; approximately 105,000 mostly Karen refugees fleeing civil strife, political upheaval and economic stagnation in Burma live in remote camps in Thailand near the border

Refugees and internally displaced persons:

Refugees (country of origin): 102,633 (Burma) (2016)

IDPs: 35,000 (resurgence in ethno-nationalist violence in south of country since 2004) (2016)

Stateless persons: 487,741 (2016); note - about half of Thailand's northern hill tribe people do not have citizenship and make up the bulk of Thailand's stateless population; most lack documentation showing they or one of their parents were born in Thailand; children born to Burmese refugees are not eligible for Burmese or Thai citizenship and are stateless; most Chao Lay, maritime nomadic peoples, who travel from island to island in the Andaman Sea west of Thailand are also stateless; stateless Rohingya refugees from Burma are considered illegal migrants by Thai authorities and are detained in inhumane conditions or expelled; stateless persons are denied access to voting, property, education, employment, healthcare, and driving

Note: Thai nationality was granted to more than 18,000 stateless persons in the last 3 years (2015)

Trafficking in persons:

Current situation: Thailand is a source, transit, and destination country for men, women, and children subjected to forced labor and sex trafficking; victims from Burma, Cambodia, Laos, China, Vietnam, Uzbekistan, and India, migrate to Thailand in search of jobs but are forced, coerced, or defrauded into labor in commercial fishing, fishing-related industries, factories, domestic work, street begging, or the sex trade; some Thai, Burmese, Cambodian, and Indonesian men forced to work on fishing boats are kept at sea for years; sex trafficking of adults and children from Thailand, Laos, Vietnam, and Burma remains a significant problem; Thailand is a transit country for victims from China, Vietnam, Bangladesh, and Burma subjected to sex trafficking and forced labor in Malaysia, Indonesia, Singapore, Russia, South Korea, the US, and countries in Western Europe; Thai victims are also trafficked in North America, Europe, Africa, Asia, and the Middle East

Tier rating: Tier 2 Watch List - Thailand does not fully comply with the minimum standards for the elimination of trafficking, and is not making significant efforts to do so; in 2014, authorities investigated, prosecuted, and convicted fewer traffickers and identified fewer victims; some cases of official complicity were investigated and prosecuted, but trafficking-related corruption continues to hinder progress in combatting trafficking; authorities' efforts to screen for victims among vulnerable populations remained inadequate due to a poor understanding of trafficking indicators, a failure to recognize non-physical forms of coercion, and a shortage of language interpreters; the government passed new labor laws increasing the minimum age in the fishing industry to 18 years old, guaranteeing the minimum wage, and requiring work contracts, but weak law enforcement and poor coordination among regulatory agencies enabled exploitive labor practices to continue; the government increased efforts to raise public awareness to the dangers of human trafficking and to deny entry to foreign sex tourists (2015)

Illicit drugs:

A minor producer of opium, heroin, and marijuana; transit point for illicit heroin in route to the international drug market from Burma and Laos; eradication efforts have reduced the area of cannabis cultivation and shifted some production to neighboring countries; opium poppy cultivation has been reduced by eradication efforts; also a drug money-laundering center; minor role in methamphetamine production for regional consumption; major consumer of methamphetamine since the 1990s despite a series of government crackdowns

Acronyms and Abbreviations

Acronym	Definition
ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Center
ADRA	Adventist Development and Relief Agency
AEC	ASEAN Economic Community
AMR	Antimicrobial Resistance
APEC	Asia-Pacific Economic Cooperation
ARF	ASEAN Regional Forum
ASEAN	Association of Southeast Asian Nations
BIMSTEC	Bay of Bengal Initiative
BIS	Bank for International Settlements
BKK	Suvarnabhumi Airport
BMA	Bangkok Metropolitan Administration
BNSCT	Bureau of the National Safety Council of Thailand
BTS	Bangkok Skytrain
CARAT	Cooperation Afloat Readiness and Training
CBDRM	Community-Based Disaster Risk Management
CD	County of Democrats
CDC	U.S. Centers for Disease Control and Prevention
CDV	Civil Defence Volunteers
CEDAW	Committee on the Elimination of Discrimination against Women
CIA	Central Intelligence Agency
CICA	Conference on Interaction and Confidence Building Measures in Asia
CP	Colombo Plan
CPIRD	Collaborative Project to Increase Rural Doctors
DDPM	Department of Disaster Prevention and Mitigation
DM	Disaster Management
DMK	Don Mueang International Airport
DPM Act	Disaster Prevention and Mitigation Act, B. E. 2550
DPMA	Disaster Prevention and Mitigation Academy
DRR	Disaster Risk Reduction
EAS	East Asia Summit
EOC	Emergency Operation Center
ERT	Emergency Response Teams
FAO	Food and Agriculture Organization
G-77	Group of 77
GDP	Global Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GMS	Greater Mekong Sub-Region
HADR	Humanitarian Assistance and Disaster Relief
HFA	Hyogo Framework for Action
HFA	Hyogo Framework for Action
IAEA	International Atomic Energy Agency

Acronym	Definition
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ICC	International Chamber of Commerce
ICRM	Institute of Catastrophe Risk Management
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFRCS	International Federation of Red Cross and Red Crescent Societies
IHO	International Hydrographic Organization
ILO	International Labour Organization
IMF	International Monetary Fund
IMO	International Maritime Organization
IMSO	International Mobil Satellite Organization
IOC	Interpol, International Olympic Committee
IOM	International Organization for Migration
IPU	Inter-Parliamentary Union
ISO	International Organization for Standardization
ITSO	International Telecommunications Satellite Organization
ITU	International Telecommunication Union
ITUC	International Trade Union Confederation
JICA	Japan International Cooperation Agency
LMI DREE	Lower Mekong Initiative Disaster Response Exercise & Exchange
MIG	Multilateral Investment Guarantee Agency
MMR	Measles-Mumps-Rubella
MOD DRC	Ministry of Defence Disaster Relief Centre
MOFA	Ministry of Foreign Affairs
MoH	Ministry of Health
MRT	Mass Rapid Transit
MRTA	Mass Rapid Transit Authority
NAM	Non-Aligned Movement
NBTC	National Broadcasting and Telecommunications Commission
NCDs	Non-communicable Diseases
NCST	National Safety Council of Thailand
NDMP	National Disaster Prevention and Mitigation Plan
NDPMC	National Disaster Prevention and Mitigation Committee
NDRM	National Disaster Risk Management
NDWC	National Disaster Warning Center
OAS	Organization of American States
OCHA	Office for the Coordination of Humanitarian Affairs
OPSD DRC	Office of the Permanent Secretary for Defence Disaster Relief Centre
OPCW	Organization for the Prohibition of Chemical Weapons
OTOS	One Search and Rescue Team
PAT	Port Authority of Thailand
PCA	Prudential Corporation Asia

Acronym	Definition
PDC	Pacific Disaster Center
PDPCM	Provincial Disaster Prevention and Mitigation Committee
PIF	Pacific Islands Forum
PPPs	Public–Private Partnerships
RTA	Royal Thai Army
RTAF	Royal Thai Air Force
RTN	Royal Thai Navy
RTP	Royal Thai Police
SDGs	Sustainable Development Goals
SNAP	Strategic National Action Plan
SRT	State Railway of Thailand
STC	Save the Children
TB	Tuberculosis
TMD	Thai Meteorological Department
TRC	Thai Red Cross
UN	United Nations
UNAMID	United Nations-African Mission in Darfur
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children’s Fund
UNIDO	United Nations Industrial Development Organization
UNISDR	United Nations Office for Disaster Risk Reduction
UNMOGIP	United Nations Military Observer Group in India and Pakistan
UNOCI	United Nations Operation in Cote d’Ivoire
UNWTO	United Nations World Tourism Organization
UPU	Universal Postal Union
U.S.	United States
USAID	United States Agency for International Development
USAID RDMA	USAID Regional Development Mission for Asia
USPACOM	United States Pacific Command
USTDA	United States Trade and Development Agency
WCO	World Customs Organization
WFP	World Food Programme
WFTU	World Federation of Trade Unions
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WTO	World Trade Organization

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Center for Excellence in Disaster Management & Humanitarian Assistance
456 Hornet Avenue, Joint Base Pearl Harbor - Hickam, Hawaii 96860-3503
Telephone: (808) 472-0518
<https://www.cfe-dmha.org>