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Welcome - Note from the Director

Dear Reader,

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) has a mandate to provide and facilitate education, training, and research in civil-military operations, particularly operations that require international disaster management and humanitarian assistance and operations that require coordination between the Department of Defense and other agencies. In line with that mandate, CFE-DM has conducted research to create reference books on disaster management roles, processes, capabilities and vulnerabilities.

This Disaster Management Reference Handbook Series is designed to provide decision makers, planners and responders a comprehensive understanding of in-country disaster management plans and structures, including information on key domestic disaster response entities, basic country background, and local and international humanitarian organizations present in the country. CFE-DM produces country reference books to provide a commonly available baseline of information regarding disaster management environments. Many places in the Pacific Basin are subject to a variety of disasters including floods, droughts, and landslides, and these handbooks provide a context for country-specific factors that influence disaster management.

This reference book has been compiled by CFE-DM from publicly available sources. It is a working document and will be periodically updated to reflect changes in information. We request your feedback to improve this document and help fill any gaps to enhance its future utility. Please send any feedback or questions to cfe-dmha.fct@pacom.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph D. Martin". The signature is fluid and cursive, with a large initial "J" and "M".

Col Joseph D. Martin
Director

About the Center for Excellence in Disaster Management and Humanitarian Assistance

Overview

The Center for Excellence in Disaster Management and Humanitarian Assistance is a U.S. Department of Defense organization that was established by U.S. Congress in 1994 and is a direct reporting unit to U.S. Pacific Command. The Center is located on Ford Island, Joint Base Pearl Harbor-Hickam, Hawaii. The Asia-Pacific region is our priority of effort and collaboration is the cornerstone of our operational practice.

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.

Our Mission

The Center for Excellence advises U.S. Pacific Command leaders; enables focused engagements, education and training; and increases 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 capability.

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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. Overviews of 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 basic country data. Endemic conditions such as poverty, water and sanitation, food security 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 is discussed. Information on UN 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 provide 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 U.S. or other government sources, UN sources, NGO websites, scholarly references, foreign government websites, and various media sources.

Whenever further information available may be relevant, a link to the original internet source is provided. Each handbook is a working document and will be updated periodically as new, significant information becomes available. Constructive feedback is requested to further refine this document.

We hope that you find these handbooks informative, reliable and useful in understanding disaster management and response for this country. For comments, questions or to request additional printed copies of our Disaster Management Reference Handbooks please contact the Center for Excellence at: (808) 472-0518.

Please visit our website (<http://www.cfe-dmha.org>) to view the latest electronic versions available.

Executive Summary

This country book focusing on the Thailand is intended to be a reference for individuals deploying to conduct disaster preparedness engagements or disaster response operations in the Thailand, but it is not meant to be a checklist or manual for all disaster response operations. The research team conducted extensive research and analysis on existing Thai plans, policies, and capabilities related to disaster management and risk reduction. The team also reached out to United States Government (USG) stakeholders and open source research to compile this book.

Thailand is less vulnerable to natural hazards than many countries in the Asia-Pacific region. Flooding is the most severe hazard in the country and is frequent and destructive. Impacts from flooding vary throughout the country, but the entire country experiences flood damage each year. In 2004, the Indian Ocean earthquake off the Java coast in Indonesia generated a tsunami which impacted six of Thailand's Andaman coastal provinces in the south. Although tsunamis are rare in Thailand, this incident shows they are capable of landfall and causing damage to the country. The country experienced severe flooding in 2011 due to the monsoon season with rainfall over 140 percent of its normal levels. Floodwater inundated parts of the capital city of Bangkok, 65 of Thailand's 77 provinces were declared flood disaster zones. This flooding was considered the worst in terms of the amount of water and people affected. The increased severity of hazards is being attributed to climate change and the government is addressing this issue through plans and policies.

The country has reinforced their disaster management structure with the proclamation of the Disaster Prevention and Mitigation Act (DPMA) 2007. Disaster risk management is executed at the national and local levels of government. The military has an integral role in the disaster management planning structure as deemed by the DPMA. The government approved the Thai military to provide disaster assistance to their neighbors in the region such as Bangladesh, Burma, and Laos. Thailand has the opportunity to increase its regional role in HA/DR due to their ideal location to function as the hub for disaster assistance, drills, and training. This role would significantly benefit Asia due to the frequency of natural disasters.

For the past 25 years, the Thai-Burma border has been home to nine official camps which house 150,000 Burmese refugees. Many of these people have fled over the northern Thailand border from Burma with the hopes of obtaining political refugee status, but they have been denied and confined to live in districts with very little rights. Refugee groups are considered a vulnerable population with limited government support and services, and in a disaster, this situation would be exacerbated.

After the May 2014 coup, the newly installed military government appointed a committee to draft a new constitution. The impacts of the government change and new constitution have yet to be determined. The country still faces developmental challenges but has made notable progress. In the past two decades, the economy has grown and poverty has been greatly reduced. Thailand is strengthening its renewable energy market and making efforts to promote it in the heating, power, and transport sector. Now that economic activity is slowly returning to normal, growth is expected over the coming years.



THAILAND

Country Overview

Thailand Disaster Management Reference Handbook | 2015

Country Overview

Thailand, officially called the Kingdom of Thailand and formerly known as Siam is a country in Southeast Asia. Thailand is often referred to as the “land of smiles” because of its friendly people and captivating culture. It is the 51st largest country in the world, and is adorned with rugged mountains in the north and famous tropical beaches in the south. The country is also a top tourist destination due to its unique culture and history, food, and pristine beaches.¹ In the 2014 Global Destination Cities Index, Bangkok ranked 2nd with 16.42 million visitors.²

Thailand has made notable progress but still faces developmental challenges. The country has seen economic growth the past two decades and poverty has been reduced by more than half. Coverage of social services has been extended to almost the entire population, which also includes healthcare and education.³ Thailand has implemented many renewable energy initiatives such as tariffs and promotion efforts. Most of the country’s electricity comes from hydropower plants located mostly in the north and from its neighbor Laos. Climate change will affect Thailand by hindering economic and social development, deteriorating ecosystems, and increasing their disaster vulnerability and exposure. The country is expected to see more flooding and flash floods due to increased monsoon winds and changing rainfall patterns. Thailand places great emphasis on climate change and has many plans and policies to address this topic.⁴

Religion, the monarchy and the military have helped shape Thailand’s society and politics.⁵ Nearly the entire population practices Buddhism which is an essential part of daily life for Thai people. The king, H.M. King Bhumibol Adulyadej’s portrait appears all over the country, and is seen as a symbol of love, respect, and loyalty of how Thai’s feel towards their king. He represents more than Thailand as he is the principal figure in most of the country’s interaction with the world.⁶ The country has gone through 17 coups and 17 constitutions since adopting a constitutional system, where power has been passed back and forth between leaders of the military and an elite government.⁷

Thailand is a charter member of the Association of Southeast Asian Nations (ASEAN) and ranks second for quality of life 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.⁸ 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.⁹

Culture

The culture in Thailand is a mix of Indian influences, Chinese traditions, and elements which are uniquely Thai. The many cultures of neighboring countries have played an important role in creating the traditions of the country. In the 1950s, the government made efforts to preserve and reinforce the sense of national culture and national identity. And in the 1980s and 1990s, Thailand had a revival in local cultures and traditions. Though there is still a strong national identity, food, music, celebrations, and beliefs have started to play a more significant role in Thai life.¹⁰

Religion plays an important role in Thai life as it is considered an essential pillar of society. It is the major moral power of the Thai family and community, and has contributed to the shaping of the Thai people for centuries. Buddhism is one of the most important influences on the Thai culture, as many traditions and beliefs of the Thai people come from Buddhist principles.¹¹ Theravada or Hinayana Buddhism is the national religion of Thailand, but religious freedom and all religions are practiced in Thailand. Buddhism accounts for 95 percent of the population, 4 percent Muslim, 0.5 percent Christian, and the remaining are Hindu, Sikhs, and others. Muslims are the largest religious minority in Thailand and are located mainly in the southern provinces of Narathiwat, Pattani, Yala, and Satun. The roughly 20,000 Indian living in Thailand are equally divided between Hindu and Sikh and are concentrated in the Bangkok area.¹²



Image: Wat Phra Kaew Temple, Bangkok

Temples are an essential role in everyday life for Thai people and are a cultural feature in Thailand. People go to temples for merit making, to seek advice from monks, or pray to the Buddha for things such as health, fortune, and wealth. There are thousands of temples in Thailand and more than 200 of them have been given the status of Royal Temple which is divided by importance into first, second, and third class. The most sacred temple in Thailand is Wat Phra Kaew located on the grounds of the Grand Palace in Bangkok. This temple contains the emerald Buddha which is the most sacred and revered Buddha image in Thailand.¹³

The King and the Royal Family are well respected by the Thai people for their commitment to the welfare of its people. In Thailand, respect for the Royal Family is beyond custom and is protected by law. It is unacceptable to criticize the Royal Family or their portraits, and is punishable under lese majeste (crime of violating majesty).¹⁴ The Thai government is based on a constitutional monarchy where a Prime Minister serves as the head of the parliamentary government and the King functions as the Head of State. H.M. King Bhumibol Adulyadej (Rama IX) is the current reigning king, the longest reigning king in Thai history, and the longest reigning head of state in the world.

The Prime Minister is General Prayut Chan-ocha, who was elected by the National Assembly of Thailand on August 21, 2014. A coup in 1932 generated a constitutional monarchy and Thailand's first constitution. However, since the establishment of a constitutional system, the monarchy and military have intervened periodically. Since 1932, there have been almost 20 attempted coups with only a dozen actual coups. The most recent in May 2014, the Thai Army declared martial law and two days later announced it was a coup and took control of the country and suspended the constitution. The

country is currently on their 19th constitution, The Constitution of the Kingdom of Thailand (Interim) 2014.¹⁵

Corruption in Thailand is present and remains a challenge as they rank 102 out of 177 countries on Transparency International's Corruption Perception Index (CPI) for 2013 with a score of 35 out of 100.¹⁶ Access to justice is limited for poor and vulnerable people.¹⁷

Demographics

Understanding the demographic context of the Thailand provides insight into socio-cultural factors that will affect disaster management effectiveness, disaster vulnerabilities, and resident capabilities. It is important to reflect gender, ethnicity, economics, and vulnerable groups in the planning and implementation of disaster preparedness, mitigation, and response activities to address gaps and risks.

Ethnic Makeup

Ethnic Makeup	
Thai	75%
Chinese	14%
Malays	4%
Khmer	1%
Other	6%

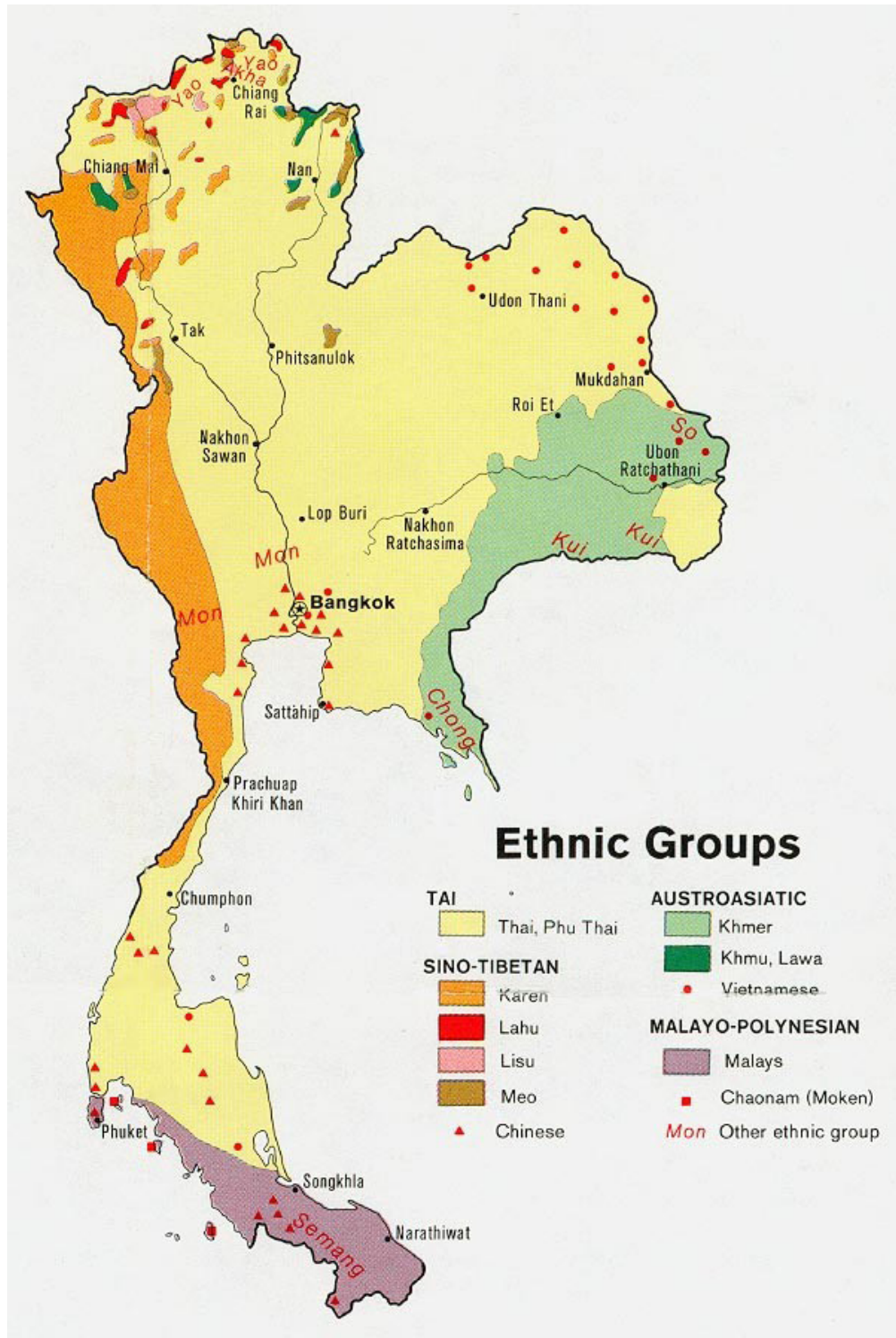
Thailand is comprised of a large number of immigrants and their descendants, mainly from China and South Asia. Most members of the indigenous and immigrant communities in Thailand can identify strongly with the Thai national culture and speak Thai.¹⁸ The national language of Thailand is Thai. There are four major language families spoken in country: Tai, Mon-Khmer, Austronesian, and Sino-Tibetan. The English language is also used for many commercial and official purposes.¹⁹ Thailand has over 30 ethnic groups that vary in history, language, religion, appearance and livelihood.

The Thai comprise of roughly 75 percent of the total population and are divided into major and minor groups. The major groups are: the Central Thai (Central Valley), Eastern Thai (Northeast – Khorat), Northern Thai (North Thailand), and the Southern Thai (Thailand Peninsula). The minor groups are: the Phuthai (Northeast Khorat), Shan (Northwestern corner of North Thailand), and the

COUNTRY OVERVIEW

Lue (Northwestern section of North Thailand). The largest minority group is the Chinese which make up roughly 14 percent and other various ethnic groups make up the remaining 11 percent of the population.²⁰ The Thai (Tai) brought cultural characteristics shaped by China when settling in Thailand.

The largest group of immigrants comes from China making them a significant minority in Thailand. The Chinese operate in both large and small commercial businesses, and work as middlemen and storekeepers mainly in the commercial centers of Bangkok and other cities. The Chinese, also known as Sino-Thai have



Ethnic Groups in Thailand (Source: Only Chaam)

integrated into the Thai culture by assuming Thai as their primary language and even becoming Theravada Buddhists.²¹

The Malay population mainly lives in the southernmost provinces and they have a distinct linguistic and religious heritage. Many have supported movements seeking self-government or independence from the Buddhist and Thai speaking majority of the country. The Mon-Khmers are remnants of the autochthonous communities of present-day Thailand, live mainly in the northeastern region, and are closely related to the Khmer of Cambodia. They make up the largest percentage of Mon-Khmer speakers in Thailand. Most of the Mon-Khmers follow the same Buddhist traditions as others in Thailand and are well integrated into the country. A small number of people from the United States, Europe, and India live mainly in urban areas.

Tribal groups known as hill tribes have their own distinctive traditions that set them apart from the rest the majority. The main groups are: the Kui and Kaleung (northeast), the Mons (peninsula along Burma border), and the Karen (northern Burma border). There are also twenty other minority groups which include: the Akha, Musso, Meo, Kamuk, Tin, Lawa, and the So. These minorities are small in number and live by shifting agriculture in rugged, isolated mountain or dense forest terrain.²²

Key Population Centers

Thailand is seeing increased urbanization as the country continues to serve as a major global exporter and a new industrialized nation. In 2012, Thailand had an urbanization rate of 38 percent.²³ Urbanization in Thailand started to rapidly increase since World War II. Bangkok is the dominant and only major urban center in the country. Internal migration from the countryside has produced many changes to society.

Urban Population ²⁴	34.1% of total population (2011)
Rate of Urbanization	1.6% annual rate of change (2010-15 est.)

Thailand is divided into 76 political provinces with one special administrative area representing the capital Bangkok, which serves as the political, commercial, industrial, educational, and entertainment capital of the country.²⁵ Pattaya City located in Chonburi province has its own special

local government office which is responsible for public hospitals, health, education, sewage, sports and tourism for the city of Pattaya.²⁶ Each province is divided into districts (amphur) which are then subdivided into tambons. Thailand divides it municipalities (thesaban) into three levels: city municipality (thesaban nakhon), town municipality (thesaban mueang) and subdistrict municipality (thesaban tambon).

Region	Area	Population (2010)
Bangkok Metropolitan	7,762 km	14,626,225
Eastern	36,503 km	5,175,345
Northeastern (Isan)	168,855 km	18,966,091
Northern	169,644 km	11,656,043
Southern	70,715 km	8,871,003
Sub-Central	16,594 km	3,117,511
Western	43,047 km	3,569,447

Bangkok, known as Krung Thep in Thai, is the capital of Thailand and the only diverse city in the entire country which is mainly made up of small towns and villages. The population of the capital city is 6,355,144. Located on the delta of the Chao Phraya River roughly 25 miles from the Gulf of Thailand, the city is divided into 50 districts (khet) which are then subdivided into 169 sub-districts (khwaeng). The city was formerly divided into two municipalities, Krung Thep on the east and Thon Buri on the west. The two were merged as a city-province in 1971 and in 1972, the city and two surrounding provinces were combined into one province named Krung Thep Maha Nakhon also known as Bangkok to most foreigners. The city is crowded with temples, factories, shops and homes along roads and canals. Bangkok is the economic hub of the country and is home to major commercial banks, financial institutions, and large companies. Starting in the mid-1960's, the city started seeing more houses being built and by the mid-1980's, more than 100,000 new homes were built. Many government agencies provide homes for their employees and private real estate developers provide homes for middle-income groups. Some homes are crowded on small lots with basic sanitation facilities, many of these are spread out randomly on the edges of the city.²⁷ Bangkok is an urbanizing city with a

growing population and lots of traffic congestion. Although the city has seen an increase in high-rise developments, traditional temples have remained a strong sense of custom. This growth has led to a hectic cityscape and inadequate infrastructure systems due to vague urban planning and regulations.²⁸

The Bangkok Metropolitan Administration (BMA) is structured according to the Bangkok Metropolitan Administration Act (1985). The BMA is comprised of two branches: the executive which includes the Governor of Bangkok and the legislative or Bangkok Metropolitan Council. The role of the BMA is to implement policies concerning the management of Bangkok which include: transport services, urban planning, waste management, housing, roads and highways, security services and the environment. The Governor is the head of the local government and the chief executive of the BMA.²⁹

Major Cities of Thailand (National Statistics Office 2010)	
City	Population
Bangkok (Krung Thep)	6,355,144
Samut Prakan	378,741
Nonthaburi	291,555
Udon Thani	222,425
Nakhon Ratchasima	204,641
Hat Yai	187,920
Chon Buri	183,317
Chiang Mai	174,438
Pattaya	117,044
Phuket	52,796

Samut Prakan and Nonthaburi have the largest populations after Bangkok, and are both considered suburbs of the capital city and part of Greater Bangkok. Nonthaburi, is located north of the capital city near the opening of the Chao Phraya River and faces the Gulf of Thailand. Nonthaburi is divided into six districts and covers an area of 622 square kilometers. It is a fast-growing suburb of the capital city and is connected to Bangkok by roads and riverboats.³⁰ Samut Prakan is roughly 25 kilometers from Bangkok and north of the Gulf of Thailand. The city experiences seasonal flooded plains crisscrossed by canals.

Udon Thani is one of four major cities in northeast Isan region of Thailand. The city is a major commercial center and a gateway to neighboring countries such as Laos, Vietnam and China. Chon Buri is located on the eastern coast of the Gulf of Thailand, and is the nearest seaside town from Bangkok. It is the largest city in the east with a population of 183,317 people.

Hat Yai, located in the Songkhla province is the largest city in southern Thailand with a population of 187,920 people. Due to its southern location near the Malaysian border, Hat Yai has a high percentage of Malay-Muslims and ethnic Chinese people. Hat Yai is the center for commerce, tourism, shopping, entertainment and education in the south. The city is also a transportation hub for the southern region. Hat Yai International Airport is located 9 kilometers from downtown and is the fifth busiest airport serving almost 2 million people. There have been occasional bomb attacks from terror groups at a market, hotel, and the airport.³¹ Urbanization, new construction and newer agricultural methods have blocked waterways and made seasonal flooding issues worse due to insufficient drainage which then impact people.³²

Chiang Mai is a city and province located in northern Thailand and is known for their jungles and mountains. It is the third largest city in Thailand and the largest city in the north. It's located on the Ping River which is a tributary of the Chao Phraya River. The city functions as the religious, economic, cultural, education and transportation center for northern Thailand and also Burma. Chiang Mai is well-known for their Thai handicrafts and small villages specializing in crafts such as: silverwork, wood carving, pottery and lacquerware.³³

Vulnerable Groups

According to the United Nations High Commission for Refugees (UNHCR), the main groups of people of concern in Thailand are Burmese (Myanmar) refugees (mostly ethnic Kayin and Kayah origin), urban refugees and asylum-seekers mainly residing in Bangkok, and a small group of stateless people fleeing the violence in Rakhine State, Burma.³⁴

The Thai-Burma border is home to nine official camps in which an estimated 150,000 Burmese refugees have lived for over 25 years. There are over 2 million Burmese migrants living in urban areas of Thailand. According to the law in Thailand, undocumented Burmese found

UNHCR Statistics

	Residing in Thailand	Originating from Thailand
Refugees	136,499	222
Asylum Seekers	4,712	174
Stateless Persons	506,197	N/A
Various	216	N/A
Total Population of Concern	647,624	396

outside of these camps are subject to arrest and deportation. The law also states that refugees do not have the legal right to gain employment. A UNHCR, NGO, and donor-proposed “Framework for Durable Solutions” assistance is under discussion and it aims to promote self-reliance opportunities for the Burmese. This discussion amongst the organizations along with the Royal Thai Government is a big step towards finding a solution. This framework would provide the United States Government an opportunity for higher engagement in the prolonged refugee situation. The United States Government will continue funding these refugee camps and will work with other donors to ensure ongoing support to this vulnerable population. After the framework is complete, the U.S. will campaign for implementation of the framework within the larger context of Thai development strategies such as implementing camp health systems into the Thai health system and expanding livelihood projects.³⁵

Many people have fled over the northern Thailand borders from Burma (Myanmar) hoping to gain political refugee status, but have been denied and forced to live in districts with very little rights. These individuals have no tie with any country and are therefore considered stateless. In Thailand, stateless individuals cannot vote, travel, own property, work legally, or have access to education and healthcare. Children are denied access to formal education so many parents enroll children in free schools operated by non-governmental organizations. The children receive schooling until about the third grade, when their parents remove them to have them work or sell them. Young stateless girls are targeted by traffickers who exploit them. Over 200,000 women and children in East Asia are trafficked each year. The Government of Thailand estimates around twenty to thirty thousand children under the age of eighteen are in the commercial sex industry in Thailand.³⁶

Corruption is present in human trafficking on each side of the border, officials on both sides assist in the smuggling of undocumented migrants between Thailand and neighboring countries such as Laos, Cambodia, and Burma (Myanmar). There have also been reports of Thai civilian and military officials profiting from the smuggling of Rohingya asylum seekers from Burma (Myanmar) and Bangladesh who are using Thailand as a transit to Malaysia or Indonesia. Corruption is also seen with Thai navy, marines, and police officials.³⁷

In July 2014, the Thai military government reported they were sending home 100,000 refugees on the Burma border who have been living in camps for nearly two decades. The government needed to verify the nationalities of the people in the camps before any deportations began. The junta first reported they would arrest and deport undocumented migrant which generated over 200,000 Cambodians to depart the country. The government then reversed the mass departure by opening service centers to assist migrant workers secure work permits. The largest group of migrant workers in Thailand is the Burmese at roughly 2 million.³⁸

According to the U.S. Department of State, Thailand is considered a source, destination, and transit country for men, women, and children subjected to forced labor and sex trafficking. The country currently has a tier 3 rating in the department’s 2014 Trafficking in Persons (TIP) report which means the country’s government does not fully comply with the minimum standards and are not making significant efforts to do so. The majority of trafficking victims in Thailand, which are tens of thousands, are migrants from neighboring countries forced or exploited into the sex trade. A large portion of labor trafficking victims are exploited in commercial fishing, the garment industry, or domestic work.³⁹

Thailand’s Anti-Trafficking Law (2008) criminally prohibits all forms of trafficking and prescribes penalties ranging from 4 to 10 years

of prison. The government has improved its anti-trafficking data collection which allows more precise reporting on prosecutions and convictions. In 2013, the Ministry of Social Development and Human Security (MSDHS) provided assistance to 681 victims at government shelters, including 305 Thai victims, 373 foreign nationals, and 3 unknown foreigners. In October 2013, the country ratified the 2000 UN TIP Protocol. The government has also allotted roughly US \$6 million dollars towards conducting anti-trafficking efforts. Radio, television, billboards and handouts have been conducted throughout the country to raise public awareness on the dangers of human trafficking.⁴⁰

Individuals who are at the greatest risk of being trafficked in Thailand are foreign migrants, ethnic minorities and stateless people. Undocumented migrants are very vulnerable to trafficking because they do not have legal status and they are fearful of reporting any issues to the government. Children from Thailand are sometimes forced by their parents or brokers to sell items, beg, or do domestic service in urban areas. Women from Thailand and neighboring countries are subjected to sex trafficking, some intentionally seeking work in this industry. Children are also subjected to sex trafficking and recently has become covert, taking place in massage parlors, bars, hotels and private residences.⁴¹

Women still have minimal representation in electoral politics. In 2013, just 16 percent of seats in the national parliament were held by women.⁴² UN Women Asia says women's participation in the political process and leadership remains at a low level. This number is low due to biased practices and political cultures that devalue women's value and hinder their contributions. Women are also reluctant to join politics because they expect gender-based abuse and disrespect.⁴³

Economics

Thailand became an upper-middle income economy in 2011 making them the second largest economy in Southeast Asia behind Indonesia.⁴⁴ Thailand's economic growth was affected in 2009 due to global economic conditions and political uncertainty. Then in 2011, the country experienced devastating floods affecting the economy once again. The World Bank is projecting growth in 2014 to be around 4 percent.⁴⁵

The United Nations Development Programme (UNDP) 2013 Human Development Index (HDI) value for Thailand is 0.690, putting them in the medium human development category, and

placing 103 out of 187 countries and territories. In the Gender Inequality Index (GII) which reflects gender-based inequalities (reproductive health, empowerment, and economic activity), Thailand ranked 66 out of 148 countries in the 2012 index.⁴⁶

GDP (PPP):	\$602.1 billion
	0.1% growth
	2.6% 5 yr annual growth
	\$9,396 per capita
Unemployment:	0.7%
Inflation (CPI):	3.8%
FDI Inflow:	\$9.6 billion

Poverty in Thailand is mainly contained to rural areas, with 88 percent of the country's 5.4 million poor living in rural areas.⁴⁷ The north and northeast regions, and a few ethnic groups are behind others. The benefits of economic success in urban areas, especially Bangkok are not equally shared throughout the country.⁴⁸

Thailand's economic freedom score is 64.1, ranking its economy the 61st freest in the 2013 index. The score slipped 0.8 from the prior year, resulting in declines in four of the 10 economic freedoms. Out of the 41 countries in the Asia-Pacific region, the country ranked 10th, higher than world and regional averages. There have been noteworthy reforms over the past years such as enhanced regulatory framework which has gradually become more efficient and transparent. Obstacles remain, political instability continues to destabilize the investment climate, and systemic corruption weakens the rule of law and hinders stable long-term economic development.⁴⁹

The country is known for its free and open economy and transparency in dealing with foreign investors. In a 2009 report by the World Bank, Thailand was ranked 13th from 181 countries on the ease of doing business. Restrictions are in place on certain businesses and exemptions are given to businesses given investment incentives, but overall foreign investment is welcomed in Thailand. The main legislation in Thailand which governs foreign investment is the Foreign Business Act (FBA) passed in 1999. This act limits the rights of foreigners to engage in certain business activities.⁵⁰ According to the Asia-Pacific Trade and Investment Report 2014, foreign direct

investment (FDI) in Thailand increased 20.9 percent to US \$13 billion in 2013. This surge was driven mainly by mergers and acquisitions (M&A). Future FDI trends remain uncertain for the country after the political turmoil which led to a military coup in 2014.⁵¹

The Thailand economy is dependent on exports, accounting for over 60 percent. In 2014, the central bank in Thailand reported the country's key exports would not grow but assured the economy will still grow 1.5 percent if the government rose spending in the last quarter.⁵² The Bank of Thailand (BOT) also does not see export playing a big role in helping with economic growth rather they are hoping domestic demand and government spending with help growth. The bank dropped its 3 percent projection to zero due to weak global demand. The forecast for next year also dropped to 4.8, down a percent from the original forecasted number.⁵³

The industrial and service sectors are the main sectors in the Thai GDP. Thailand's agriculture sector produces 8.4 percent of the GDP. Rice is one of Thailand's primary agriculture export and the main staple crop. Thailand regained the number one spot as the world's top exporter of rice in 2014, reaching 10 million metric tonnes. This top spot was due to a monsoon in India (who held number one) and the fading impact of Thailand's failed rice subsidy arrangement which allowed the country to sell cheaper grain.⁵⁴ The main areas of Thailand which produce rice are surrounding the Chao Phraya basin and the Khorat Plateau. Other crops produced in Thailand are: cassava, corn, kenaf, longans, mangoes, pineapples, durians, cashews, and flowers. Cash crops such as rubber, coffee, and sugarcane are produced mostly on large holdings owned by agriculture businesses.

Environment

Environmental considerations influence disaster management in profound ways, from the types of risks that are prevalent to natural protections that mitigate disasters. This section outlines some of the key environmental factors that contribute to Thailand's disaster hazards and affect potential response operations.

Borders

Thailand is bordered by Burma (Myanmar) to the west, Cambodia to the southeast, Laos to the east and Malaysia to the south. Malaysia and Thailand have both a land boundary across the

Malay Peninsula and maritime boundaries in the Straits of Malacca and the Gulf of Thailand/South China Sea. Both countries have a territorial sea boundary agreement for the Straits of Malacca since 1979.

There are two types of border crossings in Thailand – international and local. There are over 20 international crossings which are open to all foreigners who have a valid passport and visa. Local crossings are open only to locals (on each side of the border) who may cross back and forth using a border pass.⁵⁵




Geography



Thailand is located in Southeast Asia and is considered the heart of the region. The country has many natural borders with its neighboring countries: a mountainous border with Burma (Myanmar) located to the north and west; the Mekong River separates them from Laos to the north and east; and the Mekong River and the Dongrak Mountains defining the border with Cambodia to the east. The country spans a total area of roughly 514,000 square kilometers and is located 15 degrees north of the equator resulting in a tropical climate.⁵⁶

The country is broken down into five geographical regions: Northern Region, Northeast Region, Central Region, Eastern Region and the Southern Region.



COUNTRY OVERVIEW

Regions of Thailand ⁵⁷		
Region	Description	
Northern	<ul style="list-style-type: none"> Mountainous Forest covered hills which stretch to Burma and Laos Many of the areas are designated as national parks with logging ban and wildlife sanctuaries Chiang Mai, home to 13th century temples and sculptures Far north is home to many hill tribe villages 	
Northeastern	<ul style="list-style-type: none"> Known as Isan, region covers one third of the country Region not favored for agriculture due to its poor soil. However, sticky rice which is the staple of the region requires poorly flooded paddy fields and thrives where fields are flooded from streams and rivers. Two harvests are normally yielded every year. Silk production is an important industry and contributes to the economy. The dry Khorat Plateau is located here and is very flat; mountains surround the plateau to the east and the south while the Mekong River outlines the northern and eastern edge. The short monsoon season brings heavy flooding in the river valleys. The northeast region experiences a long dry season making most of the land very sparse. 	
Central	<ul style="list-style-type: none"> Self-sufficient basin referred as “the rice bowl of Asia” The terrain in this region is dominated by the Chao Phraya River and its tributaries along with the many cultivated paddy field. 	

<p>Eastern</p>	<ul style="list-style-type: none"> • Short mountain ranges which alternate with small basins of short rivers which drain into the Mekong River • Located between the Sankamphaeng Range which makes up the border of the northeastern plateau in the north and the Gulf of Thailand in the south; the western end of the Cardamom Mountains 	
<p>Southern</p>	<ul style="list-style-type: none"> • Long narrow strip of land is known as the Kra Isthmus which provides an extensive coastline with tropical islands and beaches on both sides • Andaman Sea is located to the left with the Gulf of Thailand to the right • Far south is agriculturally rich with inland forests 	

Along the border to the west with Burma (Myanmar) are forested mountains, which rise as they expand north with the highest peak being Doi Inthanon at 8,415 feet. These mountain peaks are full of wildlife and experience cool winters. The Khorat Plateau begins in northeastern Thailand and extends south towards the Cambodian border. The Isan region of northeastern Thailand is the most populous region besides Bangkok. The interior geography of Thailand is dominated by the Central Plains where the Chao Phraya River feeds sprawling rice fields then moves to Bangkok before entering the Gulf of Thailand.⁵⁸

The Khorat Plateau is located in northeastern Thailand and is roughly 300-650 feet above sea level. The plateau is shaped like a saucer and tilts to the south. The Chi and Mun Rivers drain the plateau and it is confined to the Mekong River, north and east of the Laos border. The water-resistant soils are flooded during the rainy season and dehydrated during the dry season.⁵⁹ Located in eastern Thailand, the Sankamphaeng Range separates the east from the northeast. The northern part of the range merges with the southern end of the Dong Phraya Yen Mountains, which run in a north-south direction at the southwest border of the Korat Plateau. The range connects with the Dangrek Mountains to the east which stretches into Laos. The highest point of the Sankamphaeng is the Khao Rom at 1,351 meters high.

The Chao Phraya River is the main river in Thailand located in the center of the country and flows through Bangkok before heading to the

Gulf of Thailand. The 231 mile river is considered a major transportation route for river buses in Bangkok.⁶⁰ The Gulf of Thailand, formerly called the Gulf of Siam is an inlet of the South China Sea which borders Thailand, Cambodia, and Vietnam. The main ports in Thailand are located along the gulf. The water along the gulf's coast provides important fishing grounds because they are shallow.⁶¹ The Mekong River is the longest river in Southeast Asia with a length of 2,700 miles. It begins in China and forms part of the international border between Burma and Laos, along with Laos and Thailand. The river flows through Laos, Cambodia, and Vietnam before reaching the South China Sea.⁶² Off the west coast of Thailand is the Andaman Sea, an area home to many Thai beach resort towns. The sea is often used for fishery and transportation of goods between the coastal countries.⁶³

Climate

Thailand's climate is tropical due to its close proximity to the equator. Climate is controlled by tropical monsoons and the temperatures are usually hot and humid across the entire country most of the year. Thailand's seasons are divided by hot season, cool season, and rainy season. However, the southern coastal region only experiences two regions – rainy season and dry season.⁶⁴

The effects of climate change such as high surface temperatures, floods, droughts, storms

and sea level rise have put Thailand's crops at risk and could potentially submerge Bangkok within two decades. These impacts of climate change will have vast economic, cultural and environmental consequences on the country.⁶⁶ Thailand puts great importance on preparedness, solution, coping and adaptation to the impacts of climate change mainly for sectors which are at high risk such as agriculture and fishing.

The Office of Natural Resources and Environmental Policy and Planning's (ONEP's) Office of Climate Change Coordination (OCCC) is the national lead for coordination for the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol. The office is responsible for climate change coordination at both the national and international level.

The country has many plans and policies to address this topic since great emphasis is placed on this topic. The National Strategy on Climate Change (2008-2012) / National Strategy on Climate Change – Draft (2013-2017) framework provides a comprehensive guideline of national responses to climate change challenges through its six outlined strategies. The Thailand Climate Change Master Plan (2012-2050) is a framework of integrated policies and action plans relating to climate change.⁶⁷ The plan aims to provide a framework and mechanism for effective response and preparedness to manage climate change challenges in adaptation, mitigation, and capacity building and institutional readiness issues. The draft plan specifies actions to be taken in short, medium, and long terms with assigned key responsible agencies.⁶⁸

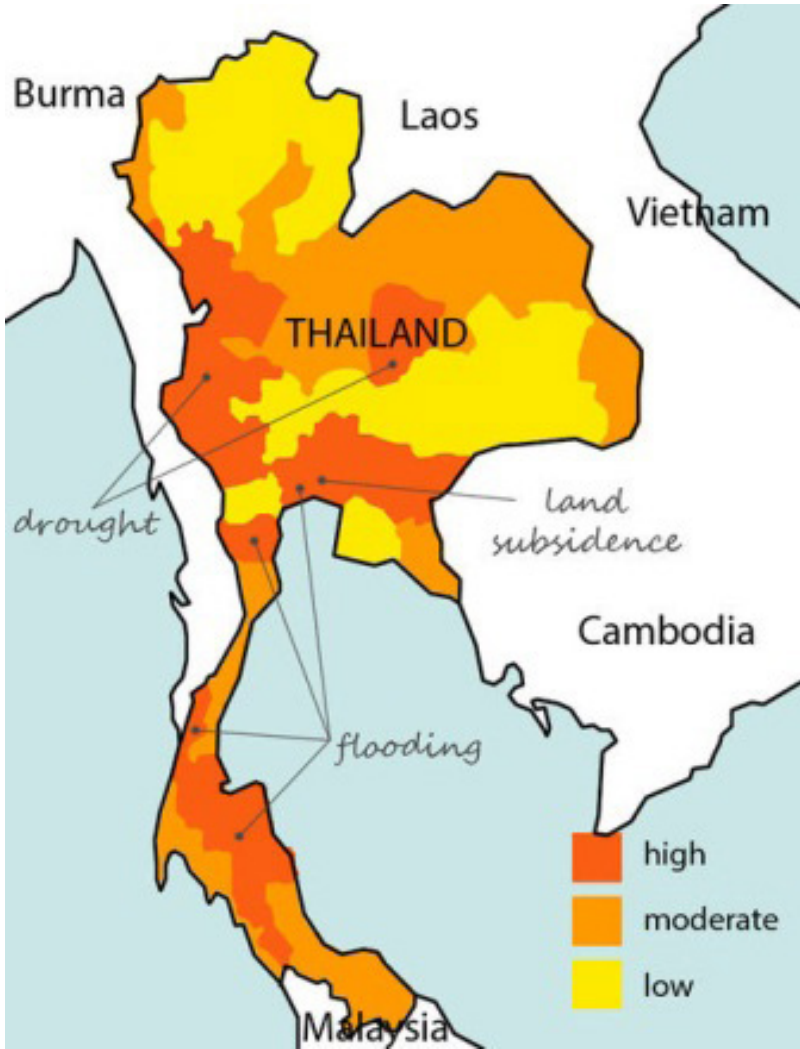
Weather patterns in Thailand have varied over the past decade such as severe droughts and flooding which have resulted in agricultural areas hurting. In 1999, HM King Bhumibol learned of a new way to gain more cloud density to increase the amount and extent of rainfall. A few years later when the country was faced with severe drought, the King sought a patent for his “cloud-firing” technique to make artificial rain. The process involved firing iodide particles into the clouds so that water vapor would gather around the particles and fall as rain. This rain method is expensive and does not replace natural rain, but it does treat the symptoms of climate change rather than the causes.⁶⁹

As mentioned earlier, Bangkok has the potential of being submerged in water in the coming decades. The Bangkok Metropolitan Administration (BMA) signed the Bangkok Declaration on Mitigation of Climate Change

in 2007 along with 23 public and private organizations. The capital city has a target of delivering 3.5 percent of its energy from renewable sources in 2020. The majority of the city's greenhouse gas emissions come from energy use and transportation. The declaration is aimed to reduce Bangkok's impact to climate change through five measures. To reduce emissions from vehicles, the city is encouraging commuters to use the mass transit system instead, ride bicycles, and they are also implementing a surcharge on gasoline.⁷⁰

The future of Thailand remains unclear in regards to climate change. The country will need to make adjustments to agriculture methods and disaster prevention strategies which will support the country in sustaining its economy and culture. Thailand will also benefit from the changing climate if the world reduces greenhouse emissions.⁷¹

Thailand Climate Seasons ⁶⁵	
Cool Season (November – February)	<ul style="list-style-type: none"> • Weather is mostly cool and dry, making it the most popular months to visit Thailand
Hot Season (March – June)	<ul style="list-style-type: none"> • Higher relative temperatures and occasional rain storms are normal • Inland areas such as Bangkok experience punishing heat and high humidity • Least popular season for travelers to visit except for the coastal regions which experience more pleasurable weather
Rainy Season (July – October)	<ul style="list-style-type: none"> • The rainy season is dominated by the southwest monsoon • During this time, rainfall is at its heaviest in Thailand • West Coast: southwest monsoon bring heavy storms from April to October; steady continual rain • Gulf of Thailand or East Coast: most rain falls between September and December • East Coast: storms are similar to the North, generally sunny days with occasional heavy downpours



Climate Change Vulnerability in Thailand



THAILAND

Disaster Overview

Thailand Disaster Management Reference Handbook | 2015

Disaster Overview

Hazards

Thailand is less susceptible to natural hazards than many of the countries in the Asia-Pacific region. The country is largely protected from typhoons due to land masses in the east and does not lie on a tectonic plate boundary. These two aspects of its geography help insulate Thailand from many of the impacts of meteorological and geophysical natural disasters. However, Thailand is not immune to natural hazards. Many hazards become disasters because of the complex relationship between people and nature. In particular, Thailand is susceptible to flooding, drought, and landslides.

Sources tend to disagree about degrees of relative risk for other hazards like earthquakes, tsunamis, typhoons, and fires. Some rank these as significant threats and others point out that they almost never reach 'disaster' scale. Instead, these hazards are just local emergencies. For example, an independent researcher found floods, landslides, and accidents to be Thailand's greatest source of risk. The Thai Department of Disaster Prevention and Mitigation (DDPM) determined floods, accidents, and explosions to be the greatest source of risk. The U.S. Agency for International Development Office of Foreign Disaster Assistance (USAID-OFDA) noted floods, storms, and droughts to be the greatest source of risk (see charts and tables below). It is likely that when aggregated, fires and accidents account for a significant portion of damage in Thailand annually. However, each incident is limited enough that the national disaster management structure is not needed.

Disaster	Severity	Vulnerability	Management	Tendency
Flood	High	Medium	Medium	High
Landslide/Mudflow	High	Medium	Poor	High
Windstorm	Medium	Medium	Medium	Medium
Drought	High	Medium	Medium	Medium
Fire	High	Medium	Medium	Medium
Explosive	High	Medium	Medium	Medium
Earthquake	Low	Low	Poor	Medium
Accident	High	Medium	Poor	High
Tsunami	High	Medium	Medium	Medium

Source: UNDP in 2002, DDPM Adjust in 2010

Type of Disasters	Subjective Rank	Numeric Weight
Flood	high	2.39
Accident	high	2.37
Explosive	high	2.34
Typhoon	moderate	2.31
Drought	moderate	2.24
Fire	moderate	2.20
Land slide	moderate	2.15
Earthquake	moderate	1.97
Civil Unrest/Refugee Influx	moderate	1.87
Pests	moderate	1.77
Epidemic	low	1.63

DDPM Ranking⁷²

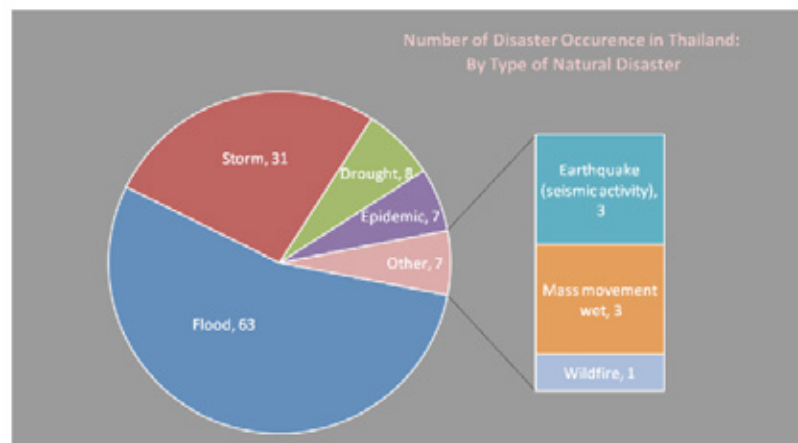


Figure 6: Decomposition of Disaster Occurrence in Thailand during 1970-2011

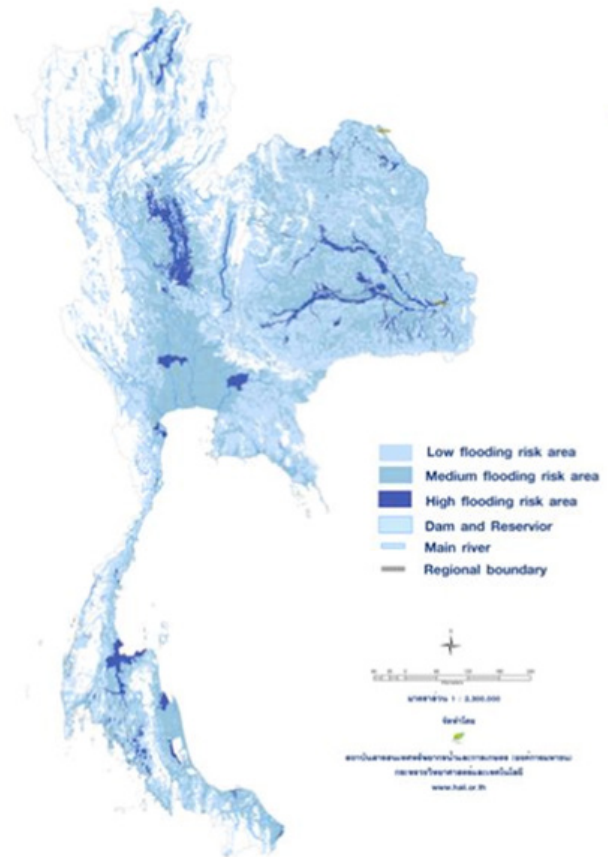
Source: EM-DAT: The OFDA/CRED International Disaster Database

Natural

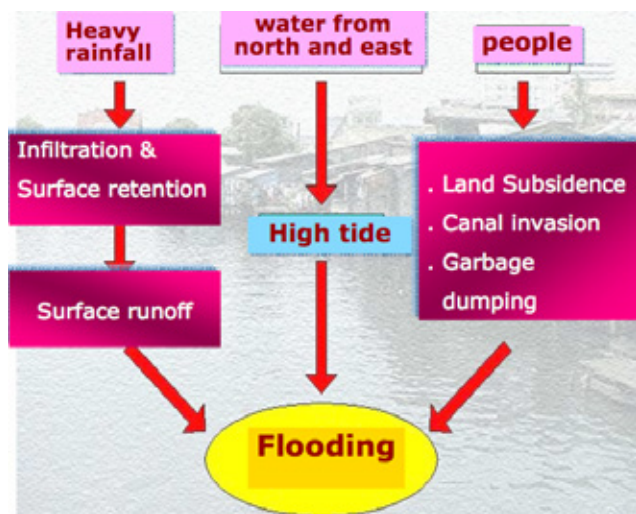
Thailand's most common and most devastating disasters come from natural hazards. The country's agricultural industry and highly developed urban areas leave large portions of the population and the economy vulnerable to natural disasters. Agricultural areas are vulnerable because they tend to be poorer and have less of a social safety net. The density of people in urban areas increases the country's vulnerability as well. Thai responders face the dual challenge of preparing populations with varying needs.

Flooding

Flooding is the most serious hazard in Thailand. It is both common and destructive. While the impacts vary regionally, every part of Thailand struggles with flood-related damages annually. The southern region has year-round flash flooding due to unstable weather systems above the bodies of water nearby. In particular, Songkhla and Nakorn Sri Thammarat provinces experience heavy rainfall. Thailand's central region is essentially a lowland river delta, and it experiences both flash floods and riverine overflow. Between June and November, central and northeast monsoons and southwest monsoons over the Andaman Sea and the Gulf of Thailand, create slow-moving, moisture-heavy systems that can dump upwards of 10 inches of rain in 24 hours. Finally, the mountainous northern and eastern regions are susceptible to flooding due to 1) dry seasons that make water absorption by the ground difficult, 2) communities that are situated near river banks, and 3) the effect of the mountains on weather systems. See the map at the end of this section for specific flooding risks.



Severe flooding occurred during the 2010 and 2011 monsoon seasons in Thailand. In 2010, the country was hit by a tropical storm in August followed by heavy monsoon rains in October. Together, the two systems affected approximately 5 million people and caused 79 fatalities. Additionally, the storms damaged 118,500 properties and flooded 6,400 sq. km of agricultural land. Total damages exceed USD \$1 billion.⁷³ In 2011, an unusually long and severe monsoon season was followed by two tropical storms- Nock-Ten and Muifa. The La Nina weather phenomenon contributed to Thailand's severe flooding that year, and the DPPM estimated that rainfall was 143 percent of its normal level in 2011.⁷⁴ The World Bank estimated the economic damages of 2011's flooding at USD \$46.5 billion.⁷⁵ This very large number is attributable to severe flooding in areas that host industrial and manufacturing facilities. In total, 2.5 million people were directly affected, 813 people died, and 17,578 sq. km of agricultural land was flooded.⁷⁶



A graphic (see adjacent) from the Bangkok Metropolitan Administration shows how flooding is a complex interaction of human and natural factors in Thailand's urban areas.⁷⁷ Heavy local rainfall is not absorbed into the ground due to

paving and development, so it turns into runoff which flows into rivers and canals. Water from the mountainous region also fills the rivers and canals. During high tide, the water level rises even higher. Finally, land subsidence due to over-development and canal blockages exacerbate the problem. After the devastating floods of 2011, the Thai government proposed five steps to mitigating flood risk in the country:⁷⁸

1. Issue clear regulations for land use in flood plain areas
2. Update government information management systems that monitor real-time water levels in rivers and canals
3. Further develop the canal system and plan for large areas that can temporarily hold water
4. Continue to enforce deforestation and pollution laws in order to keep the drainage systems functional
5. Centralize authority to improve communication and cooperation

Typhoon

Typhoons are relatively rare in Thailand. When they do affect the country, they have often dissipated into tropical depressions or remnants by the time they reach land. Scientists attribute this to the presence of land masses to the country's east. For example, Vietnam sits to the east of Thailand and the country is much more likely to experience damaging typhoons. Additionally, strong summer typhoons tend to travel north along the line formed by the Philippines, China, and Japan. Fall and winter typhoons are more likely to pass over Vietnam and Laos towards Northeastern Thailand, but the land mass generally breaks them up before they reach Thailand. Scientists studied the likely maximum impact from a typhoon making landfall from the Gulf of Thailand, and found that the storm was likely to be a category 1 with associated storm surge of maximum wave height of 2.3-2.5 m and maximum storm surge height of 1.2 m.⁷⁹

However, rainfall associated with typhoons can cause widespread flooding, particularly if the system acts in conjunction with Monsoon rains. The low-lying central region of Thailand is most susceptible to this flooding due to its geographic features and man-made infrastructure. In particular, the dam and canal system is vulnerable. See the flooding section for a more detailed description of these hazards.

One example of a typhoon colliding with a more typical monsoon occurred in 2010. Tropical Storm Mindulle affected Thailand between 22 and 28 August, saturating the ground so that the monsoon rains that followed caused severe flooding. All aspects of the economy were affected, particularly in the agriculture, manufacturing, and tourism sectors. According to the Thai government, "more than 8.9 million people and 2.6 households had been affected by flooding since the flood hit on October 10, 2010. The death toll has reached 258 in 29 provinces and the economic loss was estimated to be more than USD \$1.5 Billion."⁸⁰

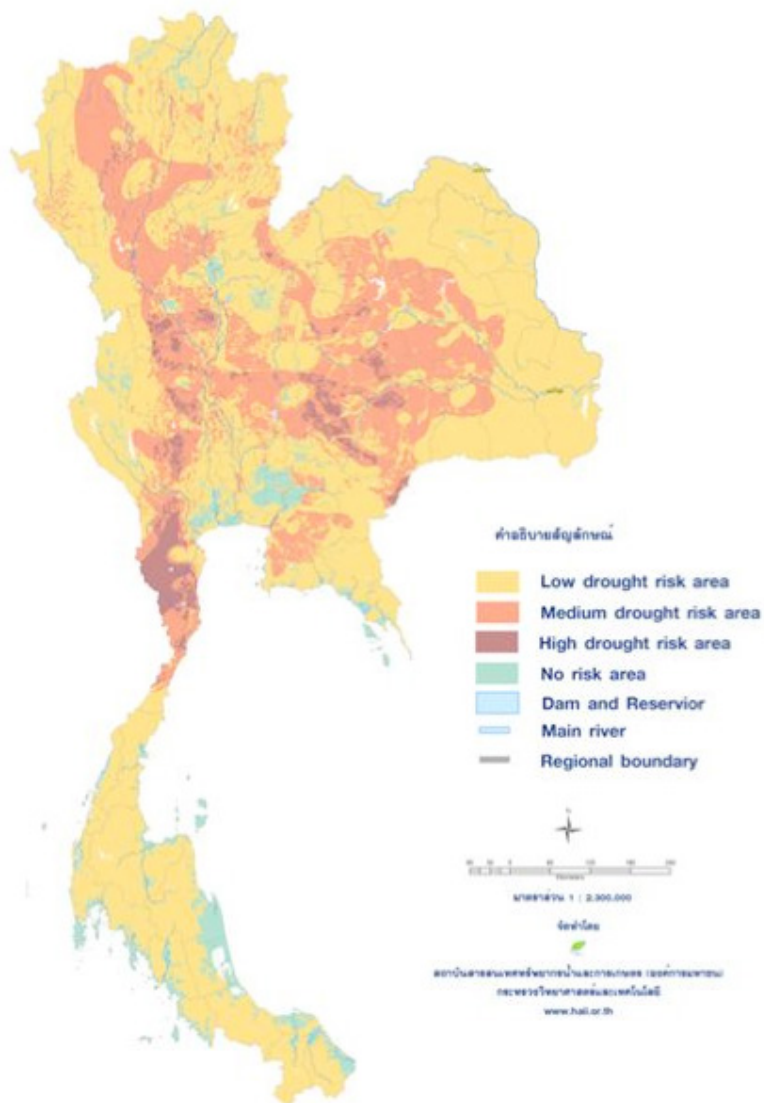
Landslide

Landslides are a hazard in Thailand and are closely associated with monsoon and typhoon flooding. They often occur in the mountainous northern and eastern provinces, where heavy rainfall can cause ground liquefaction and slope failure. When heavy rainfall combines with poor building practices in Thailand's more remote villages and deforestation, landslides can occur. Communities affected generally do not have warning. The people most likely to be affected are generally rural, poor, and more vulnerable than those living in the central and southern provinces.

The most recent landslide to inflict major damage in Thailand accompanied the 2011 monsoon rains (see flooding section). A village in southern Thailand was buried under a sudden mudflow. The landslide killed 100 people and injured 42 others.⁸¹ Since 2006, the Thai government has undertaken a nationwide landslide hazard study and mapping project to determine high-risk areas and mitigation measures.⁸² The results from the study are not yet available.

Drought

Drought is an increasingly serious hazard for parts of central and eastern Thailand. Drought conditions are most common from January through May and are generally alleviated by the onset of monsoon season. Still, droughts can drastically affect the agricultural industries and cause millions of dollars in economic losses. In 2014, Thailand experienced particularly bad droughts in the north. As of May 2014, more than half of Thailand's provinces were experiencing drought conditions due to a strong El Nino effect. Over 20,000 villages were lacking adequate water for human consumption and irrigation.⁸³ The entire country is expected to produce below average rice, sugar, and rubber crops because of the drought.



Drought risk areas in Thailand⁸⁵

Year	Number of province	Loss of damage		
		Victim (person)	Damaged agriculture area (Rai)	Value (Million Baht)
2002	66	12,841,110	2,071,560	508.78
2003	63	5,939,282	484,189	174.32
2004	64	8,388,728	1,480,209	190.66
2005	71	11,147,627	13,736,660	7,565.86
2006	61	11,862,358	578,753	495.27
2007	66	16,754,980	1,350,118	198.30
2008	61	3,531,570	524,999	103.90
2009	62	17,353,358	594,434	108.34

Effects of Drought on Thailand, 2002-2009⁸⁴

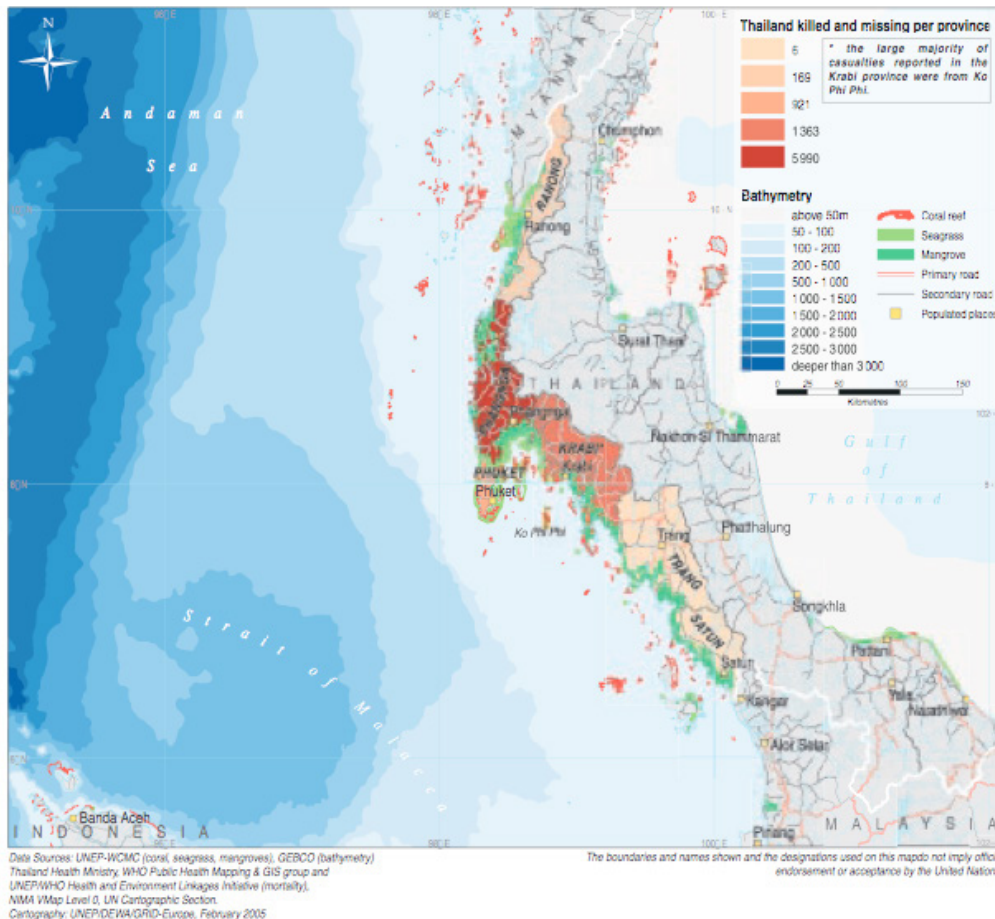
Earthquake

Thailand's earthquake risk is limited. Major earthquakes are unlikely because the country is located in a region that has relatively little tectonic activity and there are no plate boundaries within the country's borders. However, smaller earthquakes occur regularly. Earthquakes with a magnitude of greater than 5.0 on the Richter scale occur on average every five years.⁸⁶ Most activity is in the northwestern corner of the country. Faults of interest include the Mae Chan fault, which goes through the provinces of Chiang Rai and Chiang Mai, and the Khlong Marui and Ranong faults which go through southern Thailand.

The Mae Chan fault is the largest and the most historically active, but the southern faults have recently demonstrated more earthquake activity.⁸⁷ Interestingly, authorities identified dam failure as an associated earthquake hazard in Thailand. While the magnitude of earthquakes in Thailand is small compared to more seismically active regions, some scientists believe that the dams are particularly susceptible to earthquake related failure.⁸⁸

Tsunami

Tsunamis in Thailand are relatively rare. However, as the 2004 Indian Ocean tsunami demonstrated, they are capable of landfall along Thailand's coastlines and can cause severe 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 6 provinces: Phuket, Trang, Phang Nga, Krabi, Ranong and Satun.⁸⁹ The west side of Thailand's southern region is bordered by the Andaman Sea (a part of the Indian Ocean). The Andaman is host to several active volcanoes and plate boundaries, thus increasing the risk of tsunami. Even with 90 minutes of warning, Thailand experienced severe damage and loss of life from the 2004 tsunami. Government officials identified the lack of public awareness and a tsunami warning system as key factors in the disaster, and have since worked to institute an educational campaign and an early warning system to prevent the same loss of life should another tsunami occur.⁹⁰



Fatalities in Thailand After 2004 Indian Ocean Tsunami.⁹¹

Infectious Disease

While there are endemic infectious diseases in Thailand, they tend to be less prevalent than in neighboring countries and Thailand's health care system is generally well equipped to handle them. In fact, controlling infectious diseases is not a key part of the World Health Organization's (WHO) Country Cooperation Strategy even though disease control is often a key factor in these country specific plans. This likely indicates that Thailand's health system is very advanced. There are two groups of endemic infectious diseases that can be prevalent in Thailand's more remote northern regions- those transmitted via vectors, and those transmitted from person to person.

Endemic Conditions

Communicable and Infectious Diseases

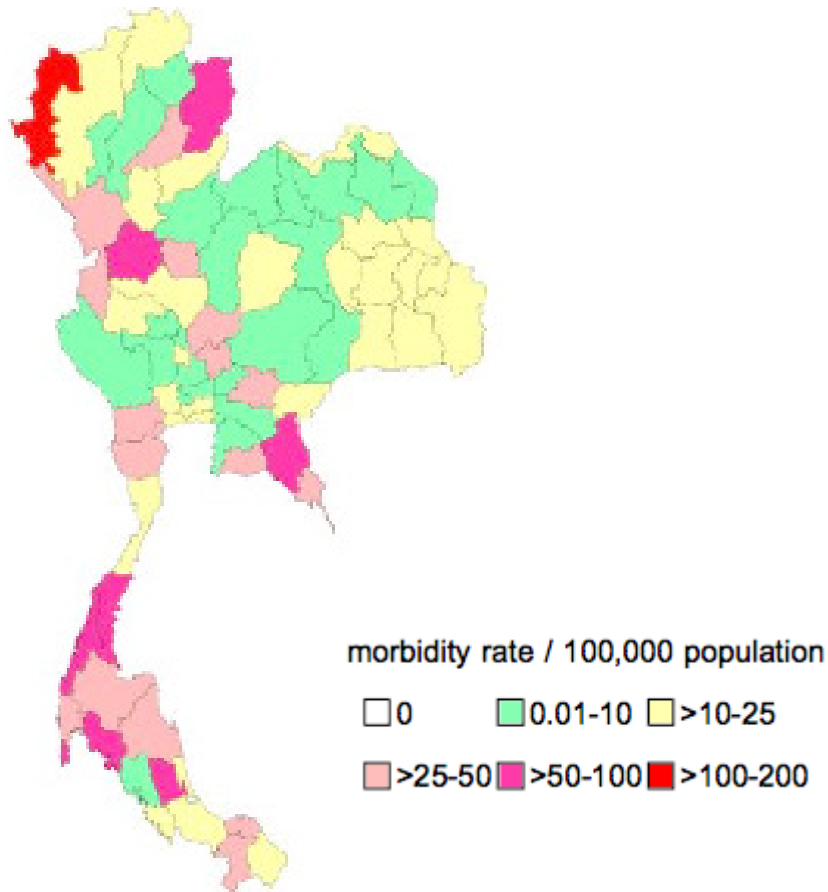
Malaria, dengue, and Japanese encephalitis (JE) are all endemic to Thailand and are all transmitted by mosquitoes. Malaria and dengue are not considered common, but they are most prevalent in the provinces bordering Burma (Myanmar). Generally affecting those who spend large amounts of time outdoors, they can be problematic if they spread in refugee camps. Both diseases are scarce in the more developed areas

as shown in the maps below. The health system is well-equipped to respond to any outbreaks, and disease surveillance is robust. JE, however, is endemic across Thailand with seasonal epidemics in the Northern provinces. The highest rates of human disease are reported in the Chiang Mai Valley; however, sporadic human cases have been reported in the Bangkok suburbs.⁹²

Cholera and tuberculosis (TB) are endemic diseases that are transmitted from person to person. Thailand is considered a tuberculosis high burden country by the WHO. TB is most prevalent among HIV infected patients and those in the Northern provinces. The disease is transmitted through the air via suspended droplets of infected bodily fluids. However, the risk to travelers is small. In recent years Thailand has struggled with the emergence of multi-drug resistant TB, but overall mortality rates have dropped sharply due to advances in medical interventions and better monitoring practices. Cholera remains endemic, but widespread outbreaks are rare and infection control procedures in hospitals tend to keep the disease under control. Transmitted via contaminated water, cholera outbreaks are more likely during flooding conditions and after disasters when normal sanitation infrastructure is not operational. The table on the page following provides recent recorded incidents of the disease reaching epidemic proportions.



WHO Malaria Outlook⁹³



Dengue in Thailand (2014)⁹⁴

Reports	Setting* region	Setting	Period of epidemic**	Number of cases
(5)	Central	Community	Mar 1982 - Jun 1983	70
(6)	Southern	A tertiary hospital	Oct - Dec 1984	11
(7)	Northeastern	Community	Mar - May 1987	122
(8)	Central	A home for mentally handicapped	Jun - Jul 1987	74
(9)	Southern	A tertiary hospital	Oct - Dec 1987	11
(10)	Nothern	Community	Oct 1987	59
(11)	Northern	Community	Oct 1987	264
(12)	Northeastern	Community	Feb - Apr 1988	124
(13)	Northern	Community	Jul 1988	71
(14)	Central	A home for mentally handicapped	Jul - Aug 1992	36
(15)	Central	A tertiary hospital	Mar 1995	18

*The setting is classified according to the corresponding region in Thailand (there are 5 main regions in Thailand: Northern, central, eastern, southern and northeastern); **In Thailand, there are 3 seasons: Summer (February to May), rainy (June to September) and winter (October to January).

Reported Cholera Outbreaks in Thailand Between 1982 and 2007⁹⁵



THAILAND

Government

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Government Structure for Disaster Management

The Kingdom of Thailand strengthened the country's disaster management structure with the proclamation of the Disaster Prevention and Mitigation Act 2007. The Act stipulates the essential legal framework, designates the key government entities, and sanctions the roles and responsibilities of the local government in disaster management. Disaster risk management is executed at the national and local levels of government. The National Disaster Prevention and Mitigation Committee (NDPMC) is chaired by the Prime Minister or the designated Deputy Prime Minister. The NDPMC is responsible for policy-making at the national level while the local committee counterparts reside with the Provincial Disaster Prevention and Mitigation Committees and the Bangkok Metropolitan Committee. The Department of Disaster Prevention and Mitigation under the Ministry of Interior is the primary agency coordinating all disaster management activities with the relevant organizations.

The National Disaster Prevention and Mitigation Plan (NDPMP) 2010-2014 and the Strategic National Action Plan (SNAP) are the critical national level plans focused on disaster risk reduction. Within the NDPMP, responsibilities for the government agencies are delineated through the standing orders, and the disaster management process is described in detail through the different administrative levels and with the pertinent stakeholders. The government is drafting a new plan for the future which will be released after the completion of the official approval process.

National

Standing Orders on Disaster⁹⁶

Standing Orders on Disaster exist to detail the duties and responsibilities of the designated agencies and sectors to facilitate coordination in joint operations and mobilize resources to support disaster management. The plan describes the disaster management roles for 28 agencies/organizations from the government and private sectors. Highlights from some of the key agencies are provided and the organizations are listed as written in the plan.

Department of Disaster Prevention and Mitigation

The Department of Disaster Prevention and Mitigation (DDPM) is the primary State agency authorized by the Disaster Prevention and Mitigation Act 2007 to execute disaster management activities for the country. Principal responsibilities include development of the Disaster Prevention and Mitigation Plan, creation of databases with the risk and safety areas and disaster statistics, coordination of disaster operations and support government agencies, local administration and private sectors in disaster management. The department is tasked to provide disaster relief assistance to the affected population, organize disaster management training courses, and monitor the performance of agencies according to the national plan.

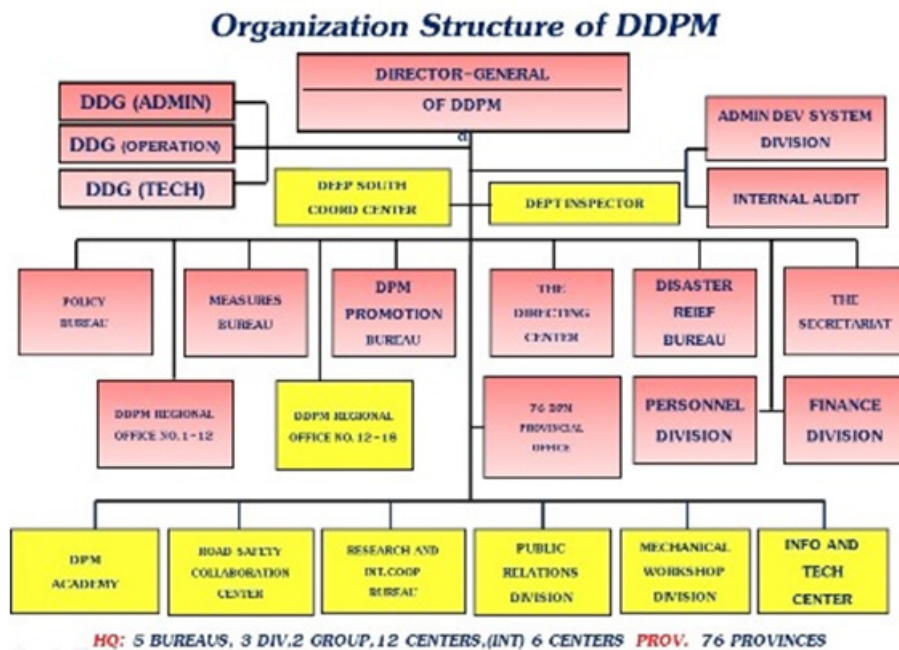
The DDPM Vision: *“DDPM is the central national government agency responsible for disaster management that meets international standard to give benefits and safety to the people in a sustainable manner.”*

The 2002 Royal Decree on Government New Structure and the Ministerial Order of Ministry of Interior details the roles and responsibilities of DDPM as:

- Formulate policy, guideline and measures on disaster prevention and mitigation
- Study, analyze, research and develop systems on disaster prevention, disaster warning and disaster mitigation
- Develop information technology on disaster prevention and mitigation
- Promote participation of citizens in disaster management activities
- Build disaster risk awareness
- Provide training to build capacity and improve skills on disaster management and disaster relief
- Promote, support and implement programs for assisting disaster victims and disaster recovery
- Direct and coordinate operations to assist disaster victims in large-scale disasters; and
- Coordinate with domestic and international agencies/organizations⁹⁷

Organization Structure

The organization structure of DDPM is illustrated in the chart below.



Organizational Structure Posted on DDPM Website

Ministry of Defence

The Ministry of Defence (MOD) is responsible for operationally preparing the military staff and property for disasters, educating the people on military response to specific threats, and commanding military resources to provide disaster assistance according to government guidelines. The MOD coordinates with the Department of Disaster Prevention and Mitigation to determine disaster operations measures for the military personnel, property, and facilities. The ministry is responsible for educating and training government officials, general public, and volunteers on military practices regarding air threat, explosives disposal, protection against and disposal of chemicals, radiological, biological materials, etc. In the event of a disaster, the MOD will coordinate and command disaster operations of the military and conduct the rehabilitation process. The ministry will provide assistance to the affected people according to the Ministry Finance Regulation on Disaster Relief Contingency Fund for Affected People Assistance 2003 and addendum.

Ministry of Foreign Affairs

The Ministry of Foreign Affairs (MOFA) is the key coordinating agency for international assistance. MOFA coordinates and contacts the

foreign missions (embassy and consul general) and international organizations residing in Thailand that will most likely extend assistance to the Thai government when a disaster occurs. The ministry will request for disaster assistance and coordinate support from the foreign governments and international organizations. Disaster information on affected foreigners including the deceased will be communicated to the foreign governments and embassies through MOFA. The office supports and coordinates with the Department of Disaster Prevention and Mitigation for assistance requests from ASEAN member countries.

Ministry of Agriculture and Cooperatives

The Ministry of Agriculture and Cooperatives (MOAC) assesses and monitors agriculture disaster situations and assists the agricultural community in the impacted areas. The ministry develops the flood forecasting system and monitors the situation to allow for timely warnings.

Ministry of Transport

The Ministry of Transport (MOT) organizes staff and resources to prepare land and waterways for disaster conditions. The ministry arranges drivers and vehicles, equipment, and fuel supplies to assist in disaster operations. The MOT supports

the evacuation process for the affected population from the disaster risk or disaster impacted areas.

Ministry of Natural Resources and Environment

The Ministry of Natural Resources and Environment (MONRE) assesses threat factors for natural resources and the environment through analysis of weather data, rainfall, and water and land factors.

Ministry of Information and Communication Technology

The Ministry of Information and Communication Technology (MOICT) has the critical responsibility of preparing the main, auxiliary, and standby communication and telecommunication systems and providing the necessary staff to maintain the communications during a disaster. Together with the National Disaster Warning Center, the office supports the dissemination of warning information and signals through the Communication Crisis Management Center.

Ministry of Interior

The Ministry of Interior (MOI) is the main office working with the provincial government and local administration organizations to conduct disaster operations. In conjunction with directing and coordinating the disaster operations within the stated jurisdictions, the MOI enforces the various acts (Building Control, Land Excavation, and Landfilling Act) to ensure the well-being of the general public. The ministry is involved in the disaster declaration process through the DDPM's role in preparing the declarations. The MOI provides relief and assistance to the affected people and rehabilitates the affected areas in large scale disasters.

Ministry of Science and Technology

The Ministry of Science and Technology (MOST) performs a range of disaster management duties which involves assisting local authorities in chemical substance and hazardous material incidents including prevention and containment of radioactive hazards, and support related to the sciences and technology expertise of the office. The MOST creates the disaster management data bank, and provides research and technology assistance for disaster operations.

Ministry of Education

The Ministry of Education (MOED) develops the school curricula on disaster related topics for

primary to higher education. The organization coordinates disaster management education for the general public and community. The MOED encourages youth involvement (boy and girl scouts, girl guides, etc.) in disaster management activities and also assists with vocational training for affected households.

Ministry of Public Health

The Ministry of Public Health (MOPH) is responsible for the preparedness of the medical and public health personnel and resources to support and deploy in a disaster. The MOPH has been tasked to create a medical and public health database which houses information on the personnel and equipment to access to determine availability and operability in an emergency event.

Emergency Medical Institute of Thailand

The Emergency Medical Institute of Thailand coordinates both the domestic and foreign, public and private emergency medical service organizations. The institute will request support from public and private organizations at the national, regional, and local level when a disaster occurs according to the Emergency Medical Service Act 2008.

Thai Red Cross Society

The organization functions to support the disaster preparedness and relief programs of the government. The Thai Red Cross secures blood, medicine, and medical supplies, arranges assistance during and after the disaster to obtain medical services, and distributes consumables and basic necessities to alleviate the hardship of the affected people. The organization arranges first aid and public health training to the Thai Red Cross Society, Red Cross Volunteers, Provincial Red Cross and other involved people. The society will coordinate with foreign Red Cross Societies through the International Federation of Red Cross and Red Crescent Societies Committees.

Rajaprajanugroh Foundation under Royal Patronage

The foundation provides volunteers to support disaster operations. The organization assists in the provision of basic necessities and household materials to the affected people.

Disaster Management Command Centers and Responsibilities⁹⁸

Command centers are established at the different government levels to execute disaster

management responsibilities. For a large scale disaster, all disaster management command centers will fall under the Prime Minister. Two major categories of command centers are designated at the national and local levels. The National Command Headquarters' responsibilities are to direct, control, oversee, supervise, and coordinate disaster operations conducted by the command centers at all levels. The Local Command Center responsibilities are to direct, control, perform and coordinate disaster management activities according to the area of responsibility.

National Command Headquarters Organization:

Title	Member
National Commander	Minister of Ministry of Interior
Deputy National Commander	Permanent Secretary for Ministry of Interior
Center Director	Director General of Department of Disaster Prevention and Mitigation
General membership	Representatives from every government agency, public enterprise and designated private entity
Administrative staff	Personnel from Department of Disaster Prevention and Mitigation

Local Command Center:

The Local Command Center includes command centers for the Tambon Administration Organization, Municipality, Pattaya City, District, Bangkok Metropolitan District, Provincial, and Bangkok Metropolitan.

Tambon Administration Organization Command Center Responsible for disaster operations within tambon jurisdiction	
Title	Member
Director	Chief Executive of Tambon Administration Organization (TAO)
Deputy Local Director	TAO Clerk
General membership	Sub-district headman, village headman, representatives from every private sector located within tambon jurisdiction

Municipality Command Center Responsible for disaster operations within municipality jurisdiction	
Title	Member
Director	Mayor
Deputy Director	Municipal Clerk
General membership	Chiefs of municipality divisions and designated private sector representatives

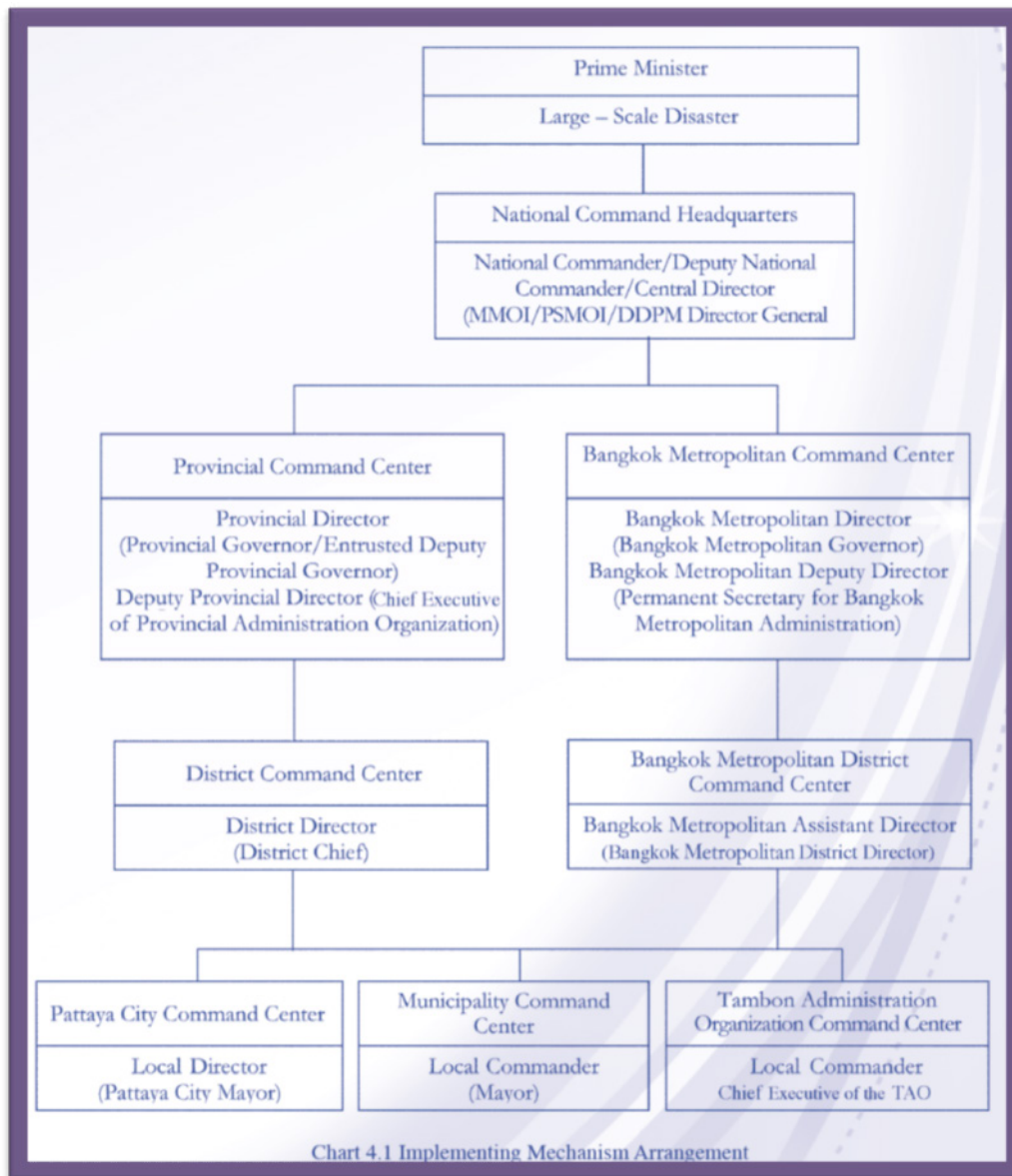
Pattaya City Command Center Responsible for disaster prevention and mitigation operations within Pattaya City jurisdiction	
Title	Member
Director	Mayor
Deputy Director	Pattaya City Clerk
General membership	Chiefs of Pattaya City office divisions and designated private sector representatives

District Command Center Responsible for disaster operations within district jurisdiction and to assist the provincial disaster operations	
Title	Member
District Director	District Chief
General membership	District clerk, chiefs of district office divisions, representatives of local administration organization and private sector located in district jurisdiction

Bangkok Metropolitan District Command Center Responsible for conducting disaster operations within district jurisdiction and to assist the Bangkok Metropolitan Director and assist Bangkok Metropolitan Administration in managing a disaster in the Bangkok Metropolitan jurisdiction	
Title	Member
Bangkok Metropolitan Assistant Director	Bangkok Metropolitan District Director
General membership	Officials of divisions and sectors of Bangkok Metropolitan district office, and representatives from private sector located in district jurisdiction

Provincial Command Center Responsible for disaster operations within district jurisdiction and to assist the provincial disaster operations	
Title	Member
Provincial Director	Provincial Governor
Deputy Provincial Directors	Deputy Provincial Governor and Chief Executive of Provincial Administration
General membership	Chiefs of government offices located in province and representatives from designated public and private enterprises

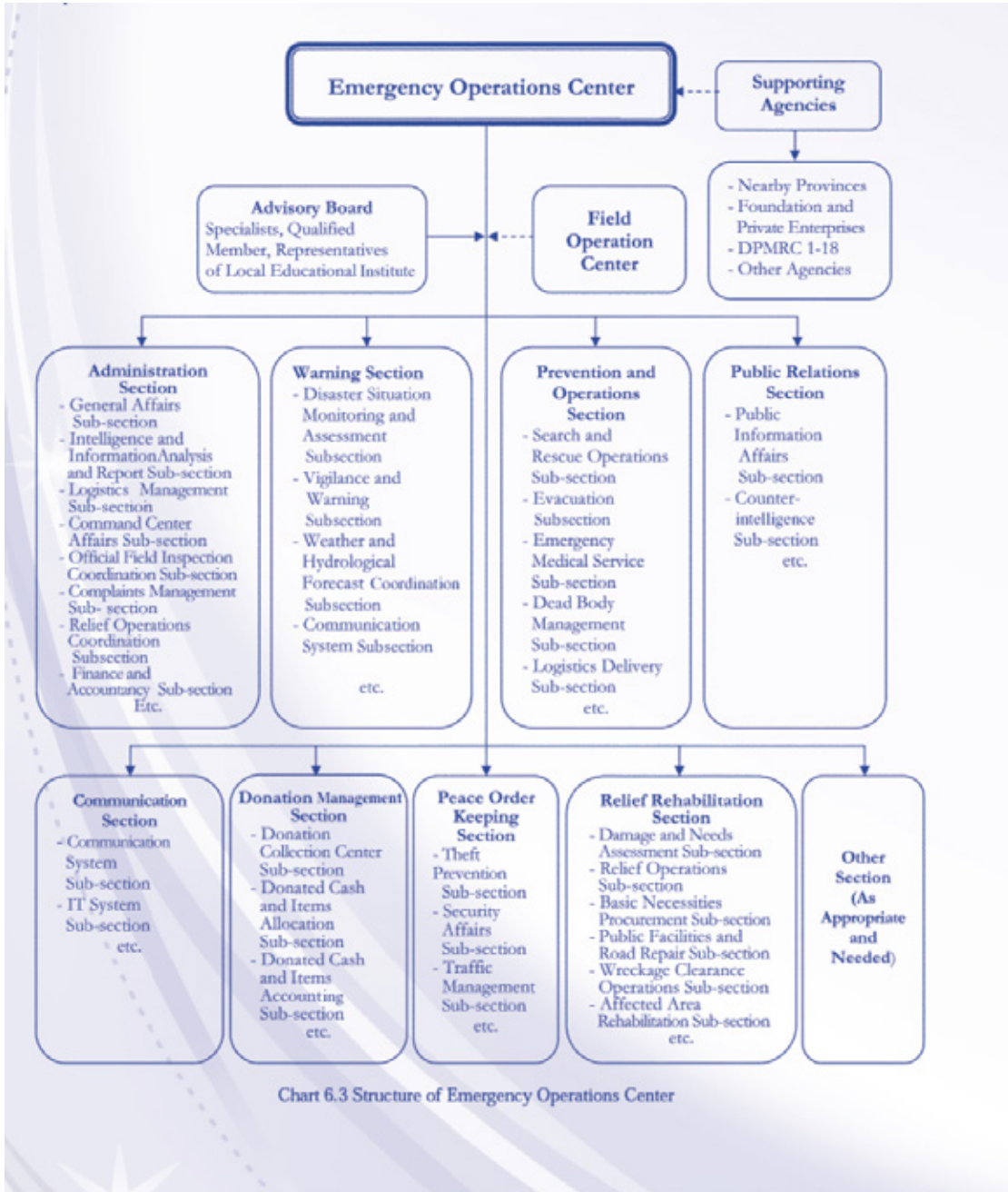
Bangkok Metropolitan Command Center Responsible for disaster operations within Bangkok Metropolitan	
Title	Member
Bangkok Metropolitan Director	Bangkok Metropolitan Governor
Bangkok Metropolitan Deputy Director	Permanent Secretary for Bangkok Metropolitan Administration
General membership	Chiefs of government offices located in province and representatives from designated public and private enterprises



Disaster Management Implementation Chart from NDPM

Emergency Operations Center ⁹⁹

The National Command Headquarter and the Local Command Centers transform into emergency operations centers (EOCs) upon the onset of a disaster. The EOCs will function as the pivotal point to mobilize disaster resources from all agencies, and direct the joint disaster response between the civil agencies, military agencies, local administration, and charitable organizations. The national plan recommends eight sections and an advisory board for the structure of the EOCs. The advisory board members include specialists and representatives from the educational establishments in the area. The eight sections include Administration, Disaster Warning, Prevention and Operations, Public Relations, Communication, Donation Management, Peace and Order, and Relief and Rehabilitation. The sections, sub-sections, and functions are adjusted according to the disaster situation and condition of the affected area.



Emergency Operations Center Structure depicted in NDPM

Disaster Declaration Process¹⁰⁰

In the event of an emergency or disaster, a disaster declaration can be proclaimed for the stricken area by the authorities permitted under the Ministry of Finance, Regulations on Disaster Relief Contingency Fund for Affected People Assistance 2003 and the addendum. When the emergency or disaster occurs at the provincial level, the provincial governor has the authority to declare the disaster. The declaration will be prepared for the governor by the Disaster Prevention and Mitigation Provincial Office. When the emergency or disaster occurs in the Bangkok Metropolitan area, the Director General of the Department of Disaster Prevention and Mitigation has the authority to declare the disaster. For the metropolitan area, the Department of Disaster Prevention and Mitigation prepares the declaration. The disaster declarations will state the disaster type, affected area, date of event beginning and end, and timeline for relief assistance which should not exceed three months from the disaster date.

Laws, Policies, and Plans on Disaster Management

The Disaster Prevention and Mitigation Act 2007 (DPM Act) of November 2007 superseded the outdated Civil Defence Act 1979 and the Fire Prevention and Suppression Act 1999. The DPM Act designated the Department of Disaster Prevention and Mitigation (DDPM) as the principal government department responsible for national disaster management work. The Act also empowers the local governments with the responsibility of disaster management consistent with the provincial plans.¹⁰¹

Disaster Prevention and Mitigation Act 2007¹⁰²¹⁰³

The Act provides the basic legal framework for disaster management in the country. The core principles defined in the Act will:

- Establish DDPM with the responsibility to prevent and mitigate all types of disasters to include accidents and post disaster rehabilitation
- Extend the disaster management scope to encompass all types of disasters and the definitions of disaster and security threats
- Designate the National Disaster Prevention and Mitigation Committee

to set the policy for the development of the National Disaster Prevention and Mitigation Plan

- Designate the Department of Disaster Prevention and Mitigation as the national focal point to execute disaster management activities for the country
- Formulate three disaster prevention and mitigation plans at the national, provincial, and Bangkok Metropolitan levels
- Identify authorized staff and assigned disaster management tasks at all levels of government

The law is comprised of six chapters which address key aspects for the conduct of disaster prevention and mitigation.

Chapter 1 titled General Provisions outlines the creation of the National Disaster Prevention and Mitigation Committee, the membership of the national committee, and defines roles and responsibilities which include overseeing the development of the national plan. The requirements for the national plan and the primary agency responsible for writing the plan (Department of Disaster Prevention and Mitigation) are stated. The law addresses the roles in detail for the provincial level, with less description for the district level. Some of the local administrations responsibilities are described with most of the details covered in Chapter 2.

Chapter 1: General Provisions	
A. Establish the National Disaster Prevention and Mitigation Committee (NDPMC) roles and membership for a term of four years	
Committee Role	Members
Chairpersons	Prime Minister or designated Deputy Prime Minister
Vice Chairpersons First Second	Ministry of Interior Permanent Secretary for Interior
Members with Permanent Secretaries Status	Permanent Secretaries of Defense, Social Development and Human Security, Agriculture and Cooperatives, Transportation and Communications, National Resources and Environment, Information and Communication Technology, and Public Health
Members (continued)	Director General of Bureau of Budget, Commissioner-General of Royal Thai Police, Supreme Commander, Commandant of Royal Thai Army, Commandant of Royal Thai Navy, Commandant, of Thai Air Force, Director-General of National Security Council
Cabinet appointed members	Five intellectuals experienced in city planning and disaster prevention and mitigation
Secretariat Assistant Secretary	Director-General of Department of Disaster Prevention and Mitigation Two officials from Department of Disaster Prevention and Mitigation
B. Powers and Duties of the NDPMC	
Summary Description	<ol style="list-style-type: none"> 1. Propose the policy to develop the National Disaster and Mitigation plan. Approve and submit plan to Cabinet. (The plan is in place as of 2010) 2. Effectively integrate the development of the disaster prevention and mitigation mechanism within the government agencies, local administrations, and relevant private sectors. 3. Recommend, support, and promote disaster prevention and mitigation activities. 4. Propose regulations related to disaster prevention and mitigation expenses in line with applicable existing rules.
C. Department of Disaster Prevention and Mitigation shall be the central government unit to operationally conduct disaster prevention and mitigation activities	
Summary powers and authorities	<ol style="list-style-type: none"> 1. Develop the National Disaster Prevention and Mitigation Plan to be approved by the Cabinet (the plan is in place as of 2010). 2. Organize and research procedures and measures to prevent and mitigate disaster impacts. 3. Collaborate, support and train government services, local administrations and relevant private sectors on disaster prevention and mitigation. Assess and evaluate these activities.

Chapter 1: General Provisions (continued)	
D. Senior Leadership Roles	
Commander in Chief	Designated Minister has the power to control and oversee disaster prevention and mitigation with power to command Directors, Deputy Directors, Assistant Directors, Officers, and Volunteers throughout the Kingdom.
Deputy Commander in Chief	Permanent Secretary of Interior assists the Commander as required or delegated with the associated command powers.
Central Director	Director-General has the power to control and oversee operations of other Directors, Deputy Directors, Assistant Directors, Officers, and Volunteers in disaster prevention and mitigation throughout the Kingdom.
E. Provincial Responsibilities and Powers	
Provincial Director	Provincial Governor has the powers and is responsible for disaster prevention and mitigation, supporting the local administrations and tasking government agencies and local administrations in disaster prevention and mitigation activities. <ul style="list-style-type: none"> • Develop the Provincial Disaster Prevention and Mitigation Plan in accordance with the national plan • Oversee and train volunteers for province • Oversee and examine local administrations preparation of equipment and related hardware according to plan • Operate as the government service unit to provide basic support to the disaster affected people
Provincial Committee members involved with Provincial Disaster Prevention and Mitigation Plan	Provincial Governor and Deputy, Commander of the Army Circle or Commander of the Provincial Army base or representative, Provincial Administrator, representatives for provincial government, local administrations including municipalities, and Tambon (sub-district) Administration, and public charities, Chief Officer Disaster Prevention and Mitigation Office or representative, higher education representatives.
F. District and Local Administration Responsibilities	
District Director	District Governor will perform duties on disaster prevention and mitigation in their responsible area and as required by Provincial Director with the powers to direct government agencies and relevant local administration and volunteers on operations.
Local Director	Local Administration will perform duties in disaster prevention and mitigation in their areas and assist the Provincial and District Directors as requested.

Chapter 2 titled Disaster Prevention and Mitigation provides the necessary authorities to the local administration to perform disaster management roles to protect the public. Important responsibilities include activation of emergency responders, evacuation and sheltering, security measures, coordination with the private sector, and damage assessments. The Local Director can command the government and private sector resources of the affected area. The Local Director and Officers can also take actions on private property as necessary to mitigate disaster impacts or save lives. These authorities demonstrate the all-encompassing powers of the administration. There is specific verbiage to deploy disaster prevention and mitigation support for drought. While the chapter is titled disaster prevention and mitigation, the roles described also involve pre-disaster activities to safeguard the community and disaster response once the disaster occurs.

Chapter 2: Disaster Prevention and Mitigation	
A. Local Administration Responsibilities and Powers	
Local Director	<p>The Local Director has the powers to conduct disaster prevention and mitigation operations to:</p> <ul style="list-style-type: none"> • Require local civil servants, government employees and officers, and volunteers to perform necessary actions for disasters • Utilize resources (such as equipment, vehicles, materials) and communication devices of the government and private sectors in the affected areas for disaster prevention and mitigation • Request assistance from other local administrations • Order the entry and exiting of people from the affected area, buildings or locations • Request through the District and Provincial Directors assistance from government agencies outside of the local administration area • Conduct of damage assessment and issuance of certification verifying the damage impact to allow for compensation
Local Officers	Local Officers of the affected area report to the Local Director and have the powers to implement operations for the safety of the public
Director and Local Officers authorities regarding private property	<ul style="list-style-type: none"> • The Director and commanded Offices can modify, destroy, move, or remove any obstacles, structures, and materials of any private property to mitigate impacts of disasters or save lives of the affected people. • The Officers have the authority to remove belongings from properties or buildings if the property owner ignores or is unable to comply with orders
Director and Designated Officers disaster mitigation operations authorities	<ul style="list-style-type: none"> • Build temporary shelters for use as living quarters or first aid stations for affected people • Manage traffic and security for disaster impacted areas • Support evacuation of people and their belongings from disaster impacted areas

Chapter 3 titled Disaster Prevention and Mitigation in Bangkok Metropolitan outlines the disaster prevention and mitigation process for the individual area.

Chapter 3: Disaster Prevention and Mitigation in Bangkok Metropolitan	
A. Bangkok Metropolitan Responsibilities and Powers	
Bangkok Director	The Bangkok Metropolitan Governor serves as the Bangkok Director and has the powers to conduct disaster prevention and mitigation operations similar to the provincial level: <ul style="list-style-type: none"> • Develop the Disaster Prevention and Mitigation Plan for Bangkok in accordance with the national plan • Oversee and train volunteers in Bangkok • Procure materials, equipment, tools, vehicles and related hardware according to plan • Provide basic recovery, security, and disaster prevention and mitigation actions to the disaster affected people • Support and assist local administrations
Committee members involved with the Disaster Prevention and Mitigation Plan for Bangkok	Bangkok Governor is the Chairperson and the Permanent Secretary for Bangkok is the Vice Chairperson. Committee members include representatives from government agencies/offices, public charities, and communities in Bangkok and representatives from the Department of Disaster Prevention and Mitigation. The Bangkok Governor appoints representatives from the Ministry of Defense and universities as consultants or committee members.
Bangkok District Directors roles	Each Bangkok District Director serves as the Assistant Bangkok Director to support the Director in the disaster prevention and mitigation duties for their districts. The Assistant Bangkok Director has the authority to command government services for these duties.

Chapter 4 titled Officers and Volunteers defines the powers and authorities for the appointment of Officers, the organization of a volunteer unit, and coordination with public charities to assist during the disaster. Directors are allowed to appoint Officers to perform duties with the associated area of responsibility. The Central Director appoints Officers who will perform responsibilities throughout the Kingdom. The Province Director will do the same of Officers assigned to the province and so on through to the Bangkok Director level. Chapters 5 and 6 explain the laws and penalties under which the disaster prevention and mitigation officials abide by.

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.

National Disaster Prevention and Mitigation Plan 2010-2014¹⁰⁴

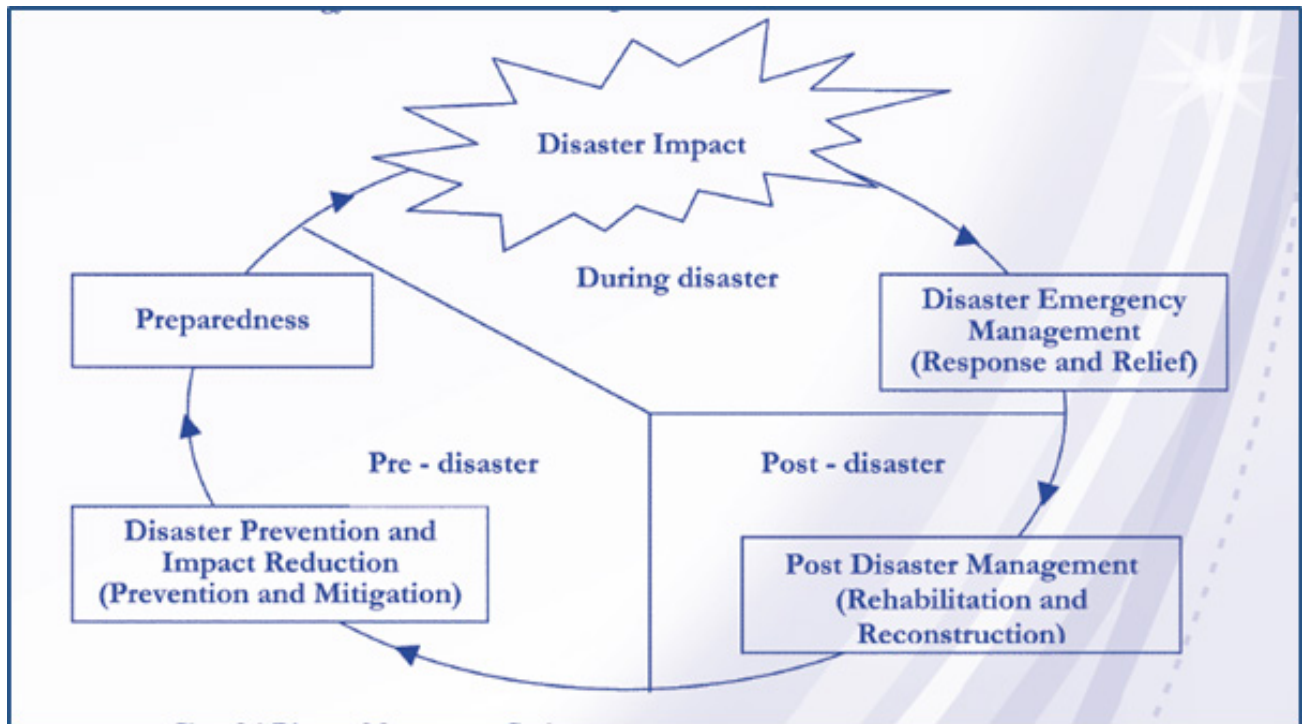
The National Disaster Prevention and Mitigation Plan 2010-2014 is the principal national disaster management plan, which focuses on minimizing disaster risks and loss of life and property. Guidelines are delivered for pre, during, and post disaster management activities for governmental

Fourteen types of disasters are addressed together with the major required actions for the pre, during, and post disaster times frames. The characteristics, threats, and seasonal time frame of the specific hazard are described. The fourteen disasters inter-mingle natural and man-made situations which impact Thailand. Four security threats are identified which include sabotage, mine and landmine threat, air threat, and protest and riot.

1. Flood and Landslide
2. Tropical Cyclone
3. Fire
4. Chemical and Hazardous Materials
5. Transport Hazards
6. Drought
7. Cold Spell
8. Forest Fire and Haze
9. Earthquake and Building Collapse
10. Tsunami
11. Human Epidemic
12. Plant Disease and Pest
13. Animal and Aquatic Animal Epidemics
14. Information Technology Threat

A disaster severity scale has been determined with four levels and the designated Director or Commander.

Level	Disaster Scale	Description	Disaster Management Lead
1	Small - scale	Local and district level have capabilities to contain and control the situation	Local Director, District Director, and/or Bangkok Metropolitan Director Assistant
2	Medium - scale	Disaster situation beyond the local and district capacities	Provincial Director and/or Bangkok Metropolitan Director
3	Large – scale with severe and widespread impact or requirement for specialists or specific types of equipment	Disaster situation beyond the second level Directors	Central Director and/or National Commander
4	Large - Catastrophic	Disaster situation requiring national level leadership	Prime Minister or Deputy Prime Minister as the Commander



Disaster Strategies Diagram from National Disaster Prevention and Mitigation Plan

The plan explains the four strategies associated with each disaster management phase. Each strategy has the purpose, measures, and a key performance index described.

First Strategy: Disaster Prevention and Impact Reduction (pre-disaster)

The first strategy intends to improve the disaster management system to facilitate capacity building and preparedness prior to the disaster in order to reduce disaster severity and impact on the people at risk.

Second Strategy: Preparedness Arrangement (pre-disaster)

The second strategy intends to develop the disaster preparedness system and guidelines to cope with disaster and to reduce the government's burden of providing disaster relief and assistance after the onset of a disaster.

Third Strategy: Disaster Emergency Management (during disaster)

The third strategy intends to increase readiness to respond rapidly and efficiently in the event of a disaster. The strategy also strives to facilitate systematic and organized disaster emergency operations to minimize loss of life and material.

Fourth Strategy: Post Disaster Management (after disaster)

The fourth strategy intends to ensure the provision of rapid, efficient, and uninterrupted relief assistance to rebuild livelihoods of the affected people and restore the affected areas to a normal state.

Strategic National Action Plan on Disaster Risk Reduction 2010-2019¹⁰⁵

The Department of Disaster Prevention and Mitigation, Ministry of Interior developed the Strategic National Action Plan (SNAP) on Disaster Risk Reduction 2010-2019, to address the implementation of the Hyogo Framework for Action (HFA) in Thailand. The Asian Disaster Preparedness Center (ADPC) assisted DDPM with funding support from the United Nations International Strategy for Disaster Reduction (UNISDR). The SNAP also abides by the strategic priorities of the United Nations Partnership Framework (UNPAF) developed by the Royal Government of Thailand and the United Nations Country Team. The UNPAF highlights disaster risk reduction as one of the top priorities in the next 10 years by the government.

The plan identifies the disaster risk reduction vision, objectives, goals and strategies of Thailand.

Disaster Risk Reduction Vision for Thailand:

- Enhance the safety and security arrangements in country by meeting international safety and security standards by 2018
- Become a leader in disaster risk reduction in the region
- Establish an integrated nation-wide action plan for the people and agencies at all levels from the local to the national levels in order to achieve a coordinated and collaborative strategy and approach to disaster risk reduction

Disaster Risk Reduction Objectives:

- Enhance safety and security of life and assets for the Thai citizens and visitors as aligned with international safety standards
- Mainstream disaster risk reduction into the national and sectoral development plans and programs
- Demonstrate clearly the intentions of the Royal Thai Government with regards to national disaster risk reduction
- Develop and prepare a long term Strategic National Action Plan for Disaster Risk Reduction for the country which is in line with the Hyogo Framework for Action 2005-2015
- Establish a long term action plan for all relevant agencies in the country which will synchronize activities in a systematic and integrated approach in the same direction

Disaster Risk Reduction Goal:

The goal is to significantly reduce disaster risk at all levels by integrating disaster risk reduction into Thailand's national development process and by implementing disaster risk reduction programs and activities which comply with the comprehensive and long term SNAP.

Disaster Risk Reduction Strategies:

The four disaster risk reduction strategies of 1) Prevention and Mitigation, 2) Preparedness, 3) Emergency Response (Disaster Management in national plan), and 4) Post Disaster Management are the same strategies as outlined in the Disaster Prevention and Mitigation Plan. The SNAP provides a practical application of the strategies.

Prevention and Mitigation

This component concerns structural and non-structural measures for the prevention and mitigation of disasters; such as, information management, disaster risk assessment, damage assessment and the community based disaster risk management, etc.

Preparedness

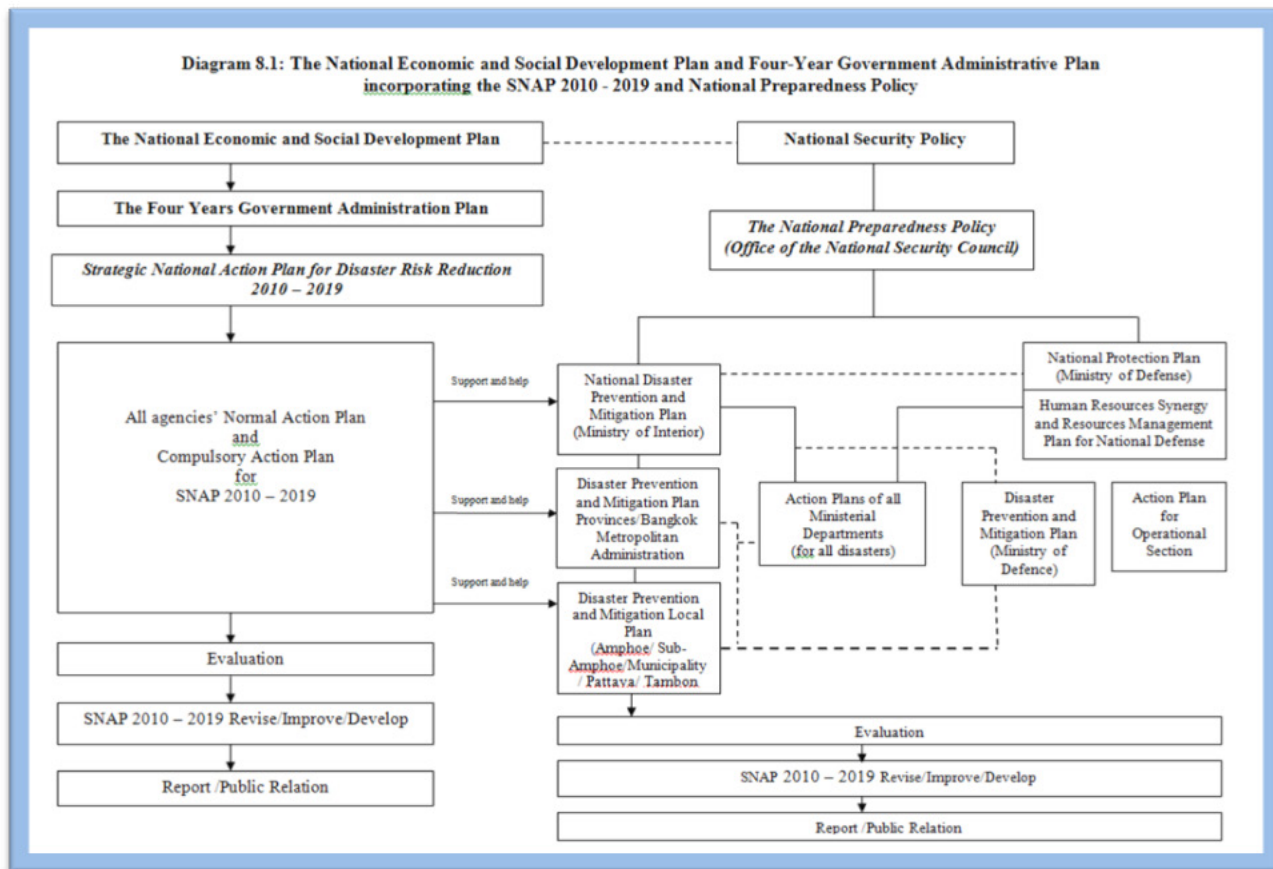
Preparedness involves monitoring and assessment systems, planning and practical training for emergency response and networking, providing the four necessities of life (food, clothing, habitat and medicine), availability of appropriate equipment and tools, public relations, sanitation facilities, etc.

Emergency Response

Emergency response encompasses command systems, planning, evacuations, first aid, emergency warnings, monitoring measures, response and rescue measures, emergency repairs, etc.

Post Disaster Management

Post Disaster Management takes the form of needs assessment, recovery assistance measures, victim assistance networks, sanitary measures, financial measures, basic facility restoration, initial monitoring and assessment measures, etc.



Graphic from the Strategic National Action Plan: Government Plans and Policy with the SNAP

Government Capacity and Capability

The Thailand National Progress Report on the Implementation of the Hyogo Framework for Action (HFA) 2009-2011 documents the Government's disaster management actions against the Hyogo framework with progress levels ratings. The government developed the Strategic National Action Plan to concentrate on the HFA. The Priority for Action items and the ratings provide insight on the government's progress.¹⁰⁶

A summarization of the results is detailed below:

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 1: *National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels*

Level of Progress Achieved: 4

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

Description: The Disaster Prevention and Mitigation Act 2007 superseded the Civil Defence Act 1979 and the Fire Defence Act 1999. The 2007 Act emphasizes the disaster management organizational structure, roles and responsibilities for the administrative government levels of national, provincial, district, and sub-district. The National Disaster Prevention and Mitigation (DPM) Plan 2010-2014 builds on the priorities of the Act and provides the strategic framework of action for all stakeholders as approved by the Cabinet.

Discussion on Context and Constraints:

Effective implementation has been hampered by lack of disaster awareness by the public and lack of good governance to uphold the national policy and framework. Thailand is striving to foster a "culture of safety awareness" amongst the population especially the local community

members, local authorities, and school students and teachers who have the capability to build, promote and maintain the safety culture.

Core Indicator 2: *Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels*

Level of Progress Achieved: 3

Institutional commitment attained, but achievements are neither comprehensive nor substantial

Description: Disaster risk reduction resources are unavailable at all administrative levels. Authorities are designated by the Disaster Prevention and Mitigation Act 2007 and National DPM Plan 2010-2014 to the national and provincial levels, to enforce and encourage development of DPM action plans and the budgets to support annual exercises to practice the plans. The Central government allocates a small budget to support provincial annual exercises to practice the plan.

Discussion on Context and Constraints:

The DPM Act 2007 does not designate authorities to the local government at sub-district and village levels to create DPM action plans for their levels. To compensate for the deficiency, the local development plan incorporates a small portion of disaster risk reduction mainly to address priorities to build infrastructure instead of applying preventive and mitigation measures.

Core Indicator 3: *Community participation and decentralization is ensured through the delegation of authority and resources to local levels*

Level of Progress Achieved: 4

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

Description: In 2002, the government reformed and decentralized authorities to the local government level and provided the administration with the associated budget. The provincial governor is the director for the province and responsible for disaster prevention and mitigation with the authorities to provide basic support to victims and mobilize resources such as personnel, equipment and funding. The local administration chief is assigned as the District Director and is responsible for disaster prevention and mitigation

and has some resources assigned. The Department of Disaster Prevention and Mitigation collaborates with other government agencies to increase public awareness and encourage participation in disaster management.

Discussion on Context and Constraints:

A large number of community disaster risk reduction and management programs and projects are instigated especially by the government however a comprehensive monitoring and evaluation system is lacking to track improvement of the relative capabilities.

Core Indicator 4: *A national multi-sector platform for disaster risk reduction is functioning*

Level of Progress Achieved: 4

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

Description: The National Disaster Prevention and Mitigation Committee is legally delegated to provide the framework and guidance for disaster management in Thailand. The national body is comprised of representatives from all of the ministries and organizations from every sector and is chaired by the Prime Minister or Deputy Prime Minister. Disaster exercises are conducted every year which improves the coordination and functional roles for the committee members and organizations. Thailand is able to strengthen national disaster risk reduction capacities by participating in the regional disaster risk reduction platforms.

Discussion on Context and Constraints:

The effectiveness of the committee is hindered by the lack of a shared vision between the member organizations and lack of active participation by the representatives. The climate change action members do not necessarily recognize the interconnectivity with disaster risk reduction. Budget and expertise are also listed as items in the top challenges faced by the committee.

Education Programs

Training Requirements

The National Command Headquarters is designated by the national plan as the responsible party for disseminating disaster information and training programs, publicizing

disaster information, providing the budget to implement the plan and the policy, evaluating the implementation, and coordinating with all stakeholders to organize the training programs. The Local Command Center (includes all command centers other than national level) is responsible for translating the disaster management training policy into action in the jurisdictions for the targeted groups of the general public and officials.

Training programs for the general public involve educating the people on basic disaster knowledge about disasters threats, prevention and preparation techniques. Disaster management training addresses utilizing appropriate mass media, organizing training programs, demonstration events and activities, and facilitating private sector's integration in disaster management activities.

Training programs for Civil Defence volunteers focus on the specific areas related to the activities the volunteers will assist in. Training on early warning, assisting in disaster emergency operations, transporting the injured to the medical center, and general disaster watchfulness are taught.

Training programs for officials emphasize understanding of their assigned responsibilities and the relevant tasks to enhance skills and preparedness. Functional training, simulated scenario training, or local command center exercises are methods used to prepare the officials and then evaluations are conducted to determine if objectives are met.

All command centers are required to conduct annual exercises following guidelines from the national plan. Table top, functional, or full-scale exercises are designed dependent on the needs for the area at risk and the contingency plan. The process includes exercise planning, conduct, evaluation and results reporting.¹⁰⁷

Another training resource at the national level is the Disaster Prevention and Mitigation Academy (DPMA). The national training center was established in 2004, and collaborates with national and international agencies on the development of curricula and mobilization of technologies for standard training. DPMA has six campuses and the training curriculum involves Fire Fighting, Building Collapse (Search and Rescue), Hazmat Emergency Management, Civil Defense Volunteer, and Disaster Management. The intent of the training is to increase the disaster management capacities of the people in charge.¹⁰⁸

Training Conducted

Community Based Disaster Risk Management (CBDRM) training is key to building the capabilities within communities to improve disaster response and recovery. The Department of Disaster Prevention and Mitigation identified 27,000 communities living in high-risk areas with only 5,400 disaster trained according to the 2011 Floods assessment report by the United Nations Development Programme (UNDP). DDPM implemented the CBDRM and One Tambon-One Search and Rescue Team (OTOS) training for communities and community volunteers. For OTOS, DDPM planned to train 77,000 people and establish 7,000 teams nationwide.¹⁰⁹

Increased flooding events with severe impacts on the population such as from the 2010 flash floods, have amplified disaster risk reduction efforts. The 2010 floods affected 6 million people in 38 provinces with thousands of children evacuated from schools and over one thousand schools damaged. National programs such as the "One Million Safe Schools and Hospitals" initiatives centered on increasing the safety of 32,000 schools, 832 hospitals and 10,000 district and sub-district health facilities from disasters. International organizations such as the United Nations International Strategy for Disaster Reduction (UNISDR), United Nations Educational, Scientific, and Cultural Organization (UNESCO) and United Nations Volunteers (UNV) partnered with national governmental and non-governmental organizations on the project.¹¹⁰

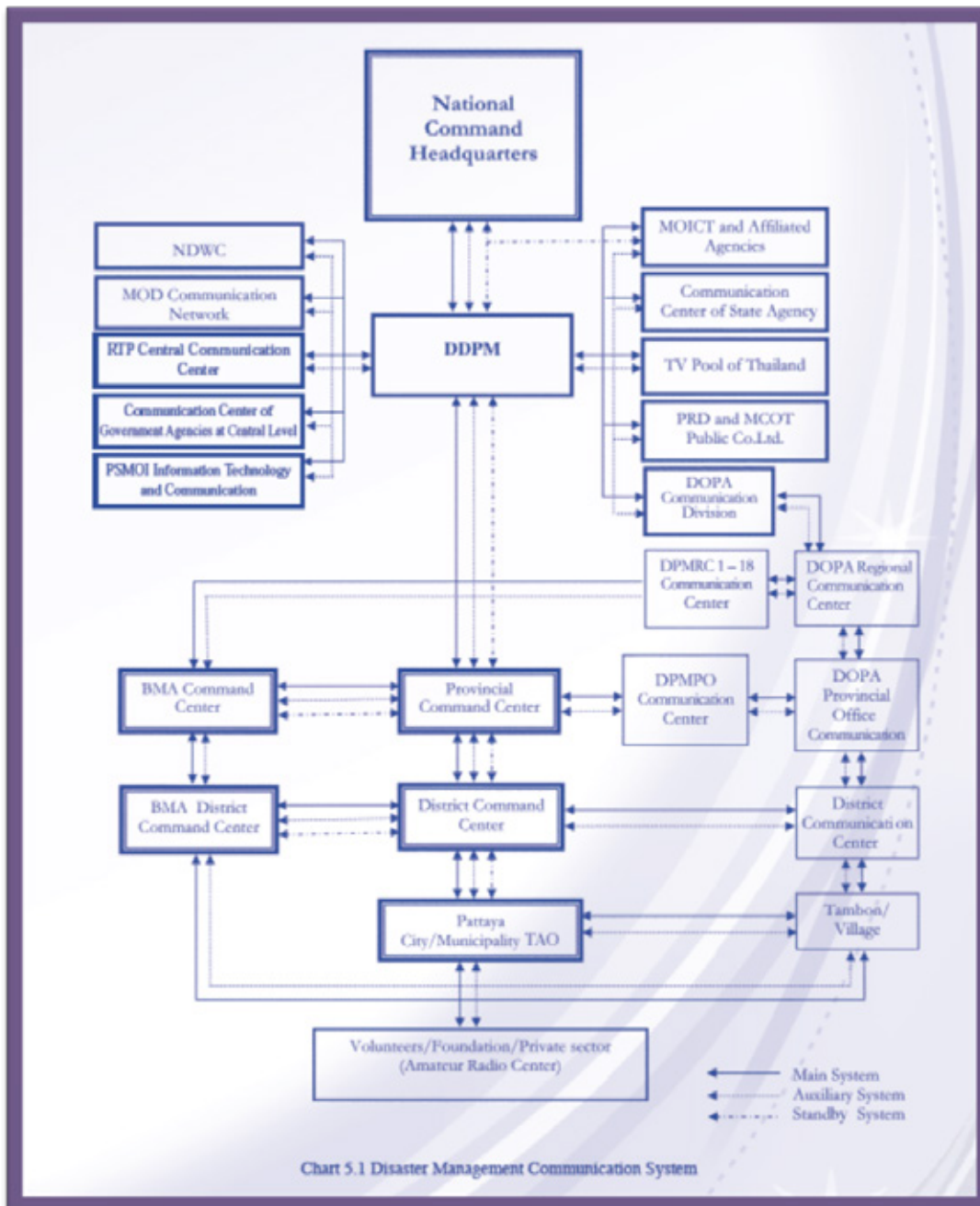
Education on disaster risk reduction in schools became a primary focus in 2011 due to the heavy flooding which affected 13.6 million people of which approximately 3.8 million are children. A total of 65 provinces out of the 77 provinces in the nation experienced the massive flooding which caused displacement and destruction. The Save the Children organization and the U.S. Agency for International Development (USAID) partnered to distribute storybooks, to help primary school students and their communities prepare for and respond to disaster situation. Educators were trained to develop preparedness plans, incorporate disaster risk reduction into school curricula, and now to facilitate child-centered preparedness activities.¹¹¹

National training programs such as the Capacity Building Towards Resilience, Reducing Risks of Population Displacement in Thailand training funded by USAID/OFDA, and conducted by the International Organization for Migration

(IOM) help the Thais to better prepare for disasters. IOM assists the displaced populations and host governments in Camp and Collective Management (CCCM). This expertise was utilized to train the DDPM officials in natural disasters, train the trainers for provincial programs and produce teaching tools. Sessions were held to provide information on camp lifecycle, laws and framework, protection and standards and management. At the completion of training, over 400 Thai officials were trained.¹¹²

Disaster Management Communications

The government established a communication system to be utilized between government agencies involved with disaster management and between the government agencies and the people. The government agencies are required by the national plan to prepare, maintain, and drill the main, auxiliary, and standby communication



Disaster Management Communication System Chart from National Disaster and Mitigation Plan

systems. Communication centers have assigned agencies and the key agencies include the Ministry of Information and Communication Technology, Ministry of Interior, and Department of Disaster Prevention and Mitigation. Communication facilities include equipment for telephone, mobile phone, internet, satellite communication system/mobile unit, call center, hot-line, AM/FM radio broadcast, television broadcast, official and amateur radio communication networks, trunk radio network, community radio station warning towers, and close-circuit radio broadcast.

Early Warning

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. 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 Defence volunteers will handle surveillance and information circulation at the community level.

The National Disaster Warning Center (NDWC) performs the key responsibilities of operating a 24/7 warning center, monitoring tidal waves and earthquakes, notifying the public of an impending tsunami or earthquake, and training residents living in coastal areas on preparing for tsunamis and related disasters. In 2012, the

NDWC installed a tsunami early alert warning system and equipment along the Andaman coast which has been hailed as the best warning system in Southeast Asia. Eight years after the devastating 2004 tsunami, a system is in place which can warn the public within 15 minutes of the danger of a tsunami. Data is collected from the three tsunami detection buoys placed near the coast and in the deep sea. The buoys will detect abnormal tidal waves then send the data via satellite to NDWC for analysis. NDWC staff work around the clock to monitor the updates. The data received will be checked with authorized disaster monitoring agencies such as the Thai Meteorological Department, the United States Geological Survey (USGS), and the World Meteorological Organization (WMO).

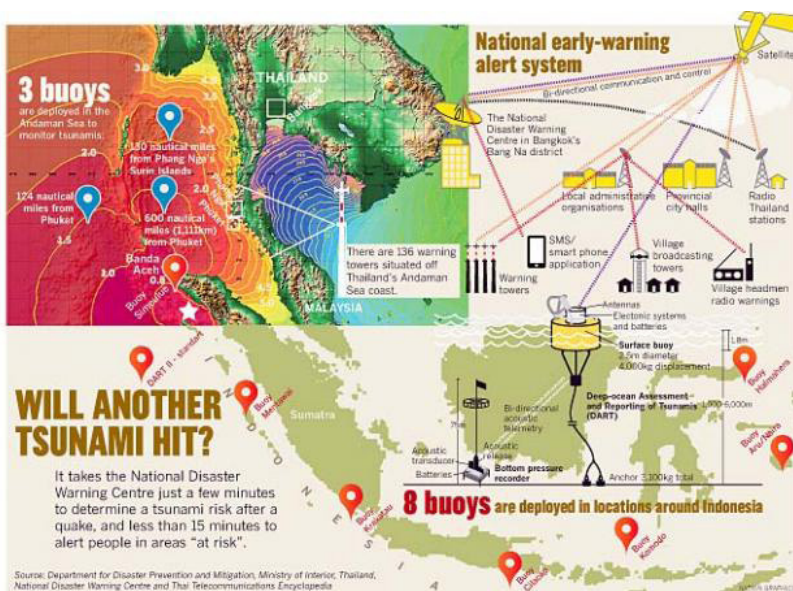
Once the data is reviewed, validated, and wave direction and time calculated, messages to the public are disseminated through the satellites and warning towers. Messages are further distributed to the media and related agencies with the use of fax machines, hotlines, radio stations, and television stations. The center has the capability to send short messages to 90 million mobile phones however budget constraints limit the use to 15,000 public officials in the country. NDWC worked with the National Broadcasting and Telecommunications Commission (NBTC) to issue a regulation which allows the center to broadcast tsunami warning messages without requiring the station's permission.

Earthquake monitoring for the world and in particular the Indian Ocean and Andaman Sea is another function performed by NDWC. The data tracks at least 10 earthquakes a year with an over 7 magnitude in the Indian Ocean. The center will send earthquake alerts for tremors of a 7.8 magnitude or greater and with an epicenter of 100 kilometers underground.¹¹³

Disaster Messaging¹¹⁴

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.

Tambon/Village Level: 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.

State-run media¹¹⁵: The majority of national television networks and many radio networks are operated by the government or military in Thailand. The print media are mainly private owner operated and the Thai language daily newspapers account for most of the sales. The media has the freedom to criticize government policies and report on issues such as corruption and human rights abuse however in general self-censorship is practiced. Self-censorship would be applied to the military, the monarchy, the judiciary and other sensitive issues. The introduction to martial law and army coup in May 2014 resulted in restrictions on the media.

The Press	
Bangkok Post	English Language
The Nation	English Language
Daily News	Thai-language daily, mass-circulation
Thairath	Thai-language daily, mass-circulation
Television	
Thai TV3	Operated by the Mass Communications Organization of Thailand (MCOT), a government agency
TV5	Owned by Royal Thai Army
BBTV Channel 7	Owned by Royal Thai Army
ModerNine (Channel 9)	Operated by government agency MCOT
Thai Public Broadcasting Service (TPBS)	Public TV created under 2008 legislation
Radio	
Radio Thailand	National network and external service operated by National Broadcasting Services of Thailand (NBT) which is a part of the government Public Relations Department
MCOT Radio Network -	Operated by government agency MCOT with stations in Bangkok and provincial networks
Army Radio	Owned by Royal Thai Army
Social Media	
	Facebook is the most popular

Military Role in Disaster Relief¹¹⁶¹¹⁷¹¹⁸¹¹⁹

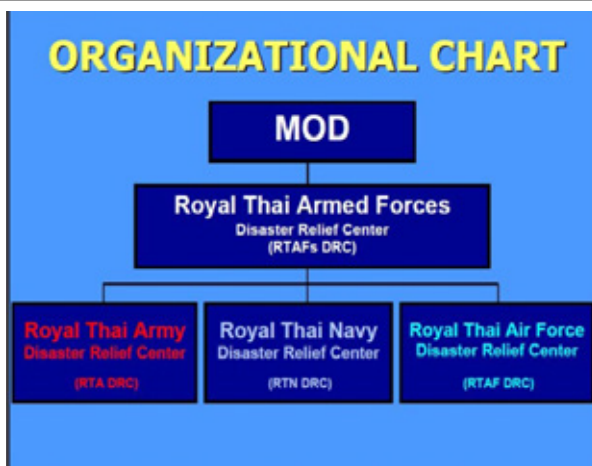
The Defence Organizational Act 2008, charges the Ministry of Defense (MOD) with three main responsibilities to 1) protect and safeguard national interests, 2) develop national stability in the country, and 3) solve disaster related problems and provide assistance to the people in the event of a disaster. The military has an integral role in the disaster management planning structure as deemed by the Disaster Prevention and Mitigation Act 2007. The Commander of Army Circle or the Commander of Provincial Army base or the representative, is a Vice Chairperson for the provincial committee formulating the Provincial Disaster Prevention and Mitigation Plan. The Bangkok Governor appoints representatives from the Ministry of Defense as consultants or committee members for the Bangkok Disaster Prevention and Mitigation Plan.

In the National Disaster Prevention and Mitigation Plan 2010-2014, guidelines are provided for military joint operations and based

on written agreements between the military and government. The agreements direct the disaster management activities involving military affairs, personnel, or property, and are therefore critical to the disaster management support and coordination. Joint agreements are maintained between the Provincial Director or the Bangkok Metropolitan Director and the military commandant of the relevant military area except when the Prime Minister or Deputy Prime Minister (as designated by the Prime Minister) is in command. The guidance from the agreement will also be referred to when the disaster occurs outside of the military area but concerns military affairs, personnel, or property.

The MOD Disaster Relief Master Plan provides the guidance on disaster relief operations procedures, the coordination and supervision of units, the knowledge and training required for the military and the use of the military media resources related to the disaster relief responsibilities. The plan describes the three main phases of Preparation Stage, Operation Stage, and Rehabilitation Stage and disaster relief centers.

Disaster Relief Centers (DRCs): DRCs are established at the Armed Forces level and then for each military component for the Army, Navy, and Air Force. The DRCs serve as coordination centers which in times of emergency, process requests to the designated and standby units. Disaster relief units are temporarily assigned to duty based on requirements and provide their own personnel and equipment.



- RTAFs DRC is a joint DRC center
- RTA DRC provides the control and coordination of the stand-by units/task forces to facilitate rescue and medical support teams, and transportation
- RTN DRC provides the control and coordination of the stand-by units/fleets to facilitate rescue and medical support teams, establishment of floating points or naval base
- RTAF DRC provides the control and coordination of the of stand-by units/flights to facilitate rescue and medical support teams, transportation, and establishment of an air base

The Preparation, Operation and Rehabilitation Stages focus on specific critical responsibilities.

Preparation Stage: The military conducts internal preparations and assists civilian agencies to prepare the public. The military places heavy emphasis on preparing in advance for disaster events. The areas of responsibility are organized for each military component and aligned with the appropriate DRC.



- Monitor the situation and gather information to notify military units and the public
- Prepare resources such as personnel, equipment, tools and communication systems
- Coordinate with civil agencies to prepare safe areas

Operation Stage: The military will render assistance to the victims and support the relief mission as requested in the event of a disaster. The level of support is scalable and categorized according to the severity of the event.

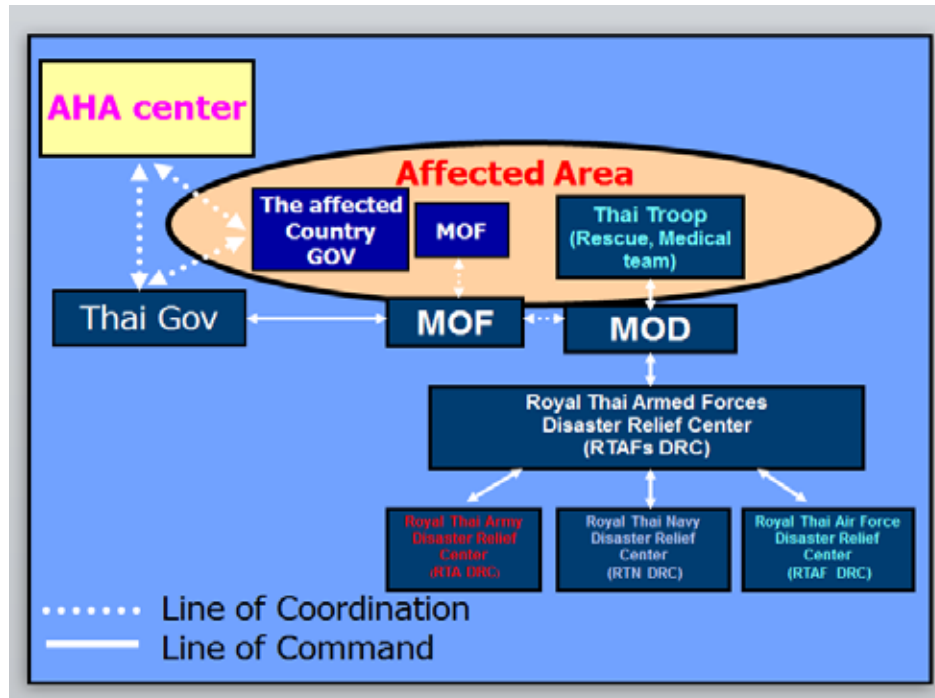


- Level 1 is a minor disaster
- Level 2 is a moderate disaster
- Level 3 is a major disaster
- Level 4 is a catastrophic disaster (as noted in the national plan)

Rehabilitation Stage: During the Rehabilitation stage, the military is actively involved in providing disaster relief and services to the affected people, restoring the infrastructure and the environment, and documenting damage information to assist the government agencies in the recovery efforts.



- Plan, coordinate, administer, publicize, and monitor the available assistance
- Repair infrastructure and public property
- Restore the environment
- Provide life necessities
- Set-up psychological rehabilitation activities
- Survey damage to determine assistance needed by responsible agencies



Note: The coordination process within Thailand and the AHA Centre. The AHA Centre is the point for mobilisation of resources to disaster-affected areas and acts as the coordination engine to ensure ASEAN's fast and collective response to disasters within the ASEAN region.

Thai Military and International Disaster Relief Operations

The Thai Military supports international disaster relief operations as approved by the Thai government after the affected country requests assistance. The military adheres to the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and the ASEAN Standard Operational Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP). The AADMER allows for more proactive regional cooperation, coordination, technical assistance and resource mobilization related to disaster risk reduction, preparedness, and response. The SASOP institutionalizes regional arrangements as promoted by AADMER.¹²⁰ The designated and stand-by military units in Thailand prepare for international response by participating in the 1) combined exercises and multilateral discussions with the ASEAN counterparts, 2) ASEAN military workshop on Multilateral Cooperation in Humanitarian Assistance and Disaster Relief (HA/DR), and 3) ASEAN Regional Disaster Emergency Response Simulation Exercise (ARDEX).

The decision to send the military is determined by the Foreign Ministry and Defense Ministry as advised by the Joint Disaster Relief Operations.



Once a decision has been made to support the disaster affected country, resources for relief operations will be identified dependent on the scale of the disaster, damages incurred, relief requirements and available capacities. The Foreign Ministry and Defense Ministry will also decide on the redeployment of the troops. The disaster relief mission revolves around operations for rescue, medical support, and transport of relief supplies in the affected areas. The military has graphically outlined a coordination process with the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) however the interaction with the international agencies is not depicted.

The Thai military participated in disaster relief efforts in Bangladesh, Laos, and Burma (Cyclone Nargis). For Cyclone Nargis, air and land transportation support was provided by the Royal Thai Armed Forces. The Royal Thai Army DRC established a donation center in Bangkok and sent a ten truck convoy to transport disaster relief supplies to Burma. The Royal Thai Navy DRC set-up 7 donation centers upcountry in Thailand and supported the disaster relief supplies transport of the Royal Thai Armed Forces to Burma. The Royal Thai Air Force DRC also organized donations centers and flew over 30 flights with C-130 carrier aircrafts to Yangon with disaster relief supplies.

Foreign Military Assistance

Civil-Military Coordination

Thailand utilizes the Asia-Pacific Regional Guidelines for the Use of Foreign Military Assets in Natural Disaster Response Operations as a key reference guide for civil-military coordination briefings, workshops, and exercises. The Guidelines contain civil-military coordination guidance written specifically for the region by member states and organizations based on their experience and lessons learned. Thailand participated in the series of conferences held to finalize the Guidelines. The guidelines are voluntary and intended to help establish the basic framework for effective and efficient use of foreign military assets in international disaster response operations.¹²¹

U.S. Military Support

The National Guard State Partnership Programs (SPP) are designed to foster relationships between the U.S. States and their partnered nations to exchange best practices and expertise. The Washington National Guard SPP was established in 2002 by the Governor and The Adjutant General, to develop a long-term relationship between the Washington State Military Department and the Kingdom of Thailand. The partnership focuses on sharing “best practices” for military support to civilian authorities, emergency management, disaster planning, port security, HAZMAT/WMD response initiatives and airport security. Exercises involving the Army and Air Force serve as a platform to demonstrate effective practices and techniques. In addition to the military to military exchanges, the SPP helps to facilitate economic, commercial, social, and cultural government interactions.¹²²

Under the SPP, the 176th Engineer Company has supported the Exercise Cobra Gold for four years to build infrastructure such as school houses. The most recent participation occurred in the 2014 exercise and involved members from the Royal Thai Army, and Malaysian and Indonesian Armed Forces together with the 176th.¹²³

Foreign Assistance and International Partners¹²⁴

Thailand is a member of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) which has been instituted since July 2005. The AADMER aims to provide effective mechanisms to reduce disaster losses in lives and in the social, economic, and environmental assets of the Parties and to jointly respond to disasters with regional and international cooperation. Guidelines for international disaster assistance are provided by the National Disaster Prevention and Mitigation Plan 2010-2014. The Ministry of Foreign Affairs is authorized as the principal government point of contact to request international disaster assistance following the process outlined in the plan.

1. When there is a need for international assistance in disaster prevention and mitigation, the Department of Disaster Prevention and Mitigation notifies the Ministry of Foreign Affairs. The Ministry requests assistance from the foreign government, international organization or foreign agency.
2. In the situation where Thailand is offered assistance from the foreign government, international organization or foreign agency, the Ministry of Foreign Affairs verifies the information. After verification is complete, the Ministry notifies the Department of Disaster Prevention and Mitigation to coordinate the arrangements in country.
3. Measures to facilitate entry of the donor international organization or foreign agency into Thailand are reviewed by the Ministry of Foreign Affairs, Department of Disaster Prevention and Mitigation, Immigration Office, Customs Department and other involved agencies.
4. If the donor organization or foreign agency arrives without pre-coordination

or notification, the Immigration Office contacts and seeks guidance from the Ministry of Foreign Affairs, Customs Department and Department of Disaster Prevention and Mitigation.

5. If the international organization has a representative office residing in Thailand with the ability to provide technical assistance and equipment, coordination can occur directly with the government agency in charge of the disaster. This government agency should in turn notify the Department of Disaster Prevention and Mitigation and Ministry of Foreign Affairs.
6. In the case of the death of a foreign national, the Ministry of Foreign Affairs coordinates with the foreign embassy.

The Kingdom has been receptive to providing humanitarian assistance to the international community in the wake of disasters. The government approved the Thai military support to their neighbors in the region such as Bangladesh, Burma, and Laos. Thailand has the opportunity to amplify its regional role in HA/DR as encouraged by United States Secretary of Defense Chuck Hagel during the Association of Southeast Asian Nations (ASEAN) 2014 meeting in Hawaii. Thailand has the optimal location to function as the regional hub for assistance, drills, and training in HA/DR. This role would greatly benefit Asia due to the high frequency occurrence of natural disasters.¹²⁵

Thailand has been generally receptive in receiving international assistance however in the case of the 2004 tsunami, the government initially turned down all foreign assistance. The government had taken the stance that there was enough resources to recover from the disaster which killed 5,400 people. Nine months after the event, the country accepted US \$5 million in funding from Japan and the World Bank to restructure the impacted areas.¹²⁶ In the 2011, the worst flooding in 50 years in Thailand occurred and over 2.5 million people were affected by the disaster. As is the practice for middle-income countries in Asia-Pacific, Thailand did not formally appeal for assistance, but did welcome support. Post floods requests were generated by various government ministries and departments to international agencies, which created some uncertainty about roles and responsibilities by the international actors and the national disaster

management authorities. The confusion led to a slower and less efficient response to the victims in need of humanitarian assistance. In the end, Thailand received over USD \$19 million in assistance from Australia, Canada, China, Czech Republic, Japan, Germany, and Luxembourg. Japan provided the most assistance with over US \$13 million. DDPM is also leading a committee to use the lesson learned from the floods in applying it to guidelines for international assistance.^{127,128}

Strengthening Thailand's legal preparedness for international disaster response will strengthen the process and the International Federation of Red Cross and Red Crescent Societies (IFRC) is an active partner with the Thai government and UNOCHA to advance in this area. IFRC has steadily provided support to Thailand over the years.

- The 2006 study on legal issues impacting international relief operations after the 2004 Indian Ocean tsunami
- Pledges at the 2011 International Red Cross/Red Crescent Conference to promote capacity building, and improve partnerships between the government and civilian sectors in line with the international disaster relief and initial recovery guidelines (IDRL Guidelines)
- Conduct of the workshop in 2012 on the role of customs in international disaster relief to increase awareness of government officials on the need for national regulations for international relief and assistance operations
- Conduct of IDRL workshop by IFRC and Thai Red Cross and UNOCHA's Regional Office for Asia and the Pacific which focused on the recommendation from the ASEAN Regional Forum DiREx 2013 to develop guidance on international assistance and operationalize disaster management legislation¹²⁹

Foreign Assistance Logistics

Humanitarian Transportation

The Civil Aviation Authority in Thailand is the Department of Civil Aviation (DCA). The department is responsible for promoting, developing and regulating civil aviation affairs for Thailand to meet international standards. DCA

is accountable for developing an extensive civil aviation network and services to satisfy market demand, promote tourism, and national growth to advance Thailand as an aviation hub for South-East Asia. Responsibilities for DCA include the following:

1. To implement the Air Navigation Act, take action on certain offences against air navigation and other civil aviation laws relating to licensing of pilot, aircraft mechanic and air traffic controller, aircraft registration, licensing of aerodrome and temporary landing area, authorization for setting up airlines, to monitor and inspect civil aviation activities to comply with the required standard and regulations, to prevent the sabotage of aircraft and airport as well as aircraft hijacking and to investigate aircraft accident.
2. To promote and develop national civil aviation infrastructure in order to build up nationwide air transport network and boost national aviation industry.
3. To systematize the civil aviation in accordance with regulations and universal standard to fully safeguard the rights of consumers and operators.
4. To set up and run affiliated airports to provide the public with quality services and to ensure safety of aircrafts, passengers and other activities pertaining to transport of goods, luggage and postal items by air.
5. To cooperate with domestic and international organizations or agencies concerning civil aviation, to deal with international conventions and agreements such as bilateral and multilateral negotiations and signing of agreements on air traffic rights and aircraft standards, and to act as a search and rescue center for aircraft and vessel in distress.¹³⁰

Foreign aircraft can operate in Thailand by abiding by the international and national laws and agreements required by the government.

- On April 4, 1947, Thailand agreed to the terms in the Convention on International Civil Aviation (1944) which includes articles related to health measures for aircraft.¹³¹

Federal Aviation Administration Guidelines for Thailand¹³²

- Foreign aircrafts/airlines are required to obtain permission prior to fly over, take-off or landing in the territory of the Kingdom of Thailand. Permission applications are submitted to the Director of Air Transport Control Division.

Director of Air Transport Control
Department of Civil Aviation
71 Soi Ngamdu-plee, Rama IV Road.
Bangkok 10120, Thailand
Telephone number: (662) 286 8154
Telefax number: (662) 287 3139

- The articles described below are restricted and prohibited for entry into Thailand
 - Narcotics and stimulated drugs
 - Armaments and dangerous objects
 - Obscene articles
 - Telecommunication equipment
 - Wild animals and plants
 - Any articles concerning Intellectual Property Right (IPR) violation
 - Other prohibited and restricted goods according to laws and regulations of concerned government agencies
- Entry Requirements for flights departing U.S. (see the Technical Stops section if stops are involved)
 - File an Electronic Advance Passenger Information System (eAPIS) manifest outbound (recommend filing inbound at the same time)
 - File and activate international flight plan
 - Land at a designated airport of entry (AOE) – customs and immigration
 - Documents required for passengers and pilots are a valid passport, VISA (visits less than 30 days are not required for U.S. citizen tourists), Embarkation/Disembarkation Card
 - Documents required for aircraft are 5 General Declarations (1 for Airport Authority, 1 for Customs, 2 for Immigration, 1 for Health), 6 Passenger Manifests (1 for Airport Authority, 1 for

Customs, 3 for Immigration, 1 for Health), 5 Cargo Manifests (1 for Airport, 2 for Customs, 1 for Plant Quarantine, 1 for Animal Quarantine)

- Exit Requirements
 - File eAPIS manifest if inbound to the U.S.
 - File an international flight plan
 - Call U.S. Customs at filed U.S. airport of entry
 - Depart from an AOE
 - Documents required are the Embarkation/Disembarkation Card
 - Documents required for aircraft are 4 General Declarations (1 for Airport Authority, 1 for Customs, 2 for Immigration), 5 Passenger Manifests (1 for Airport Authority, 1 for Customs, 3 for Immigration), 4 Cargo Manifests (1 for Airport, 2 for Customs, 1 for Animal Quarantine) 1 Stores List for Customs
- For Technical Stop/Overflight conditions, the foreign aircraft/airline is required to obtain permission prior to flying over or landing in the territory of the Kingdom of Thailand. Applications for permission are submitted to the Director of Air Transport Control (see contact information above).
- For Non-Scheduled Flights (Charters), aircraft of Contracting States of the Convention on International Civil Aviation are required to apply in writing to the Department of Civil Aviation no less than 7 days prior to the intended date of operation with the following information
 - Name of operator
 - Type, nationality and registration markings of the aircraft
 - Purpose of flight and landing in the Kingdom of Thailand
 - Routing
 - Name of aerodrome to land in the Kingdom of Thailand
 - Dates and times of its arrival and departure at each aerodrome
- Number and list of passengers, categories of passengers (i.e. Inclusive Tour Group, Affinity Group or Own Use Charter etc.) including points of embarkation or disembarkation of passengers
- Name of charter organization and agent including address to contact in the Kingdom of Thailand
- Description and quantity of freight, consignor, consignee, including points of loading and unloading of freight
- Private flights for aircraft of the Contracting States of the Convention on International Civil Aviation planning to fly into, transit or stop in the Kingdom of Thailand for passenger transit are required to submit in writing or telex or AFTN message to the Department of Civil Aviation not less than 15 days in advance of intended date of operation with the following information for aircraft of 5700 kgs weight at take-off.
 - Number and type of aircraft
 - Identification/nationality and registration markings of the aircraft
 - Flight rule and status with route schedule
 - Date/times of entry/exit BKK FIR boundaries
 - Date/times of arrival/ departure (in case of landing in the Kingdom of Thailand)
 - Airways to be used via BKK FIR and alternate aerodrome
 - Speed, level, endurance
 - Passenger and crew members on board
 - Purpose of flight and landing
 - Owner and address
- Airport fees vary depending on airport for landing, passenger service, parking and air navigation charges
- Fuel is unavailable at all airports and should be coordinated with the airport authority.

Driving License:¹³³

General Information

- Residents of Thailand should apply for a Thai driver's license instead of an international driver's license
- There are four branch offices in Bangkok available to residents to apply for a driver's license
 - Branch Office Area 1, Bangkhuntien, Tel: 02-415-7337
 - Branch Office Area 2, Talingchan, Tel: 02-882-1620 through 1635
 - Branch Office Area 3, Sukhumvit 62 Road, Tel: 02-332-9691 through 9694
 - Branch Office Area 4, Nong Jork, Tel: 02-543-5500 through 5512
- Contact the Provincial Transportation Division to locate an office in the province of residence

Driver's License in Thailand

Documents to provide to apply for a Thai driver's license include the following:

- An Affidavit of Thai Driver's License (PDF 40KB) executed at the U.S. Embassy. Thai officials usually call this an Affidavit of Residence.
- U.S. passport including a photo copy of the main page and the Thai visa page
- Medical Report (as obtained at any hospital or clinic for the purpose of a driver's license)
- Valid State / International driver's license (if you do not have a valid license then you may need to complete a driving course and test)
- Two photos (size 1 x 1 inch)
- 105.00 Baht fee

International Driver's License

Documents to provide to apply for an international driver's license include the following:

- Affidavit for an International Driver's License (PDF 40KB) executed at the U.S. Embassy. Thai officials usually call this an Affidavit of Residence. A work permit maybe accepted in lieu of the affidavit.

- U.S. passport including a photo copy of the main page and the Thai visa page.
- Thai driver's license, which has been renewed for a second year.
- Two photos (size 2 x 2 inches)
- 505.00 Baht fee

Customs¹³⁴

General Process

Shipments arriving in Thailand are processed through Customs at the port of entry. The proper processing involves shipment arrival at the port of entry, delivery of the merchandise is authorized by Customs, and applicable taxes and duties have been paid. The importer is responsible for submitting the Goods Declaration and other supporting documents and arrange for examination and release of the imported cargo. The importer is also accountable for contacting the permit issuing agencies and obtaining a permit to facilitate the clearance of the imports as necessary prior to importation.

Customs has a red line (high risk shipment) and green line process. Specific documents are requisite for red line shipments to clear Customs and include:

1. Import Declaration
2. Bill of Lading (B/L) or Air Waybill
3. Invoice
4. Packing List
5. Import License (if applicable)
6. Certificates of Origin (if applicable)
7. Other relevant documents such as catalogue, product ingredients, etc.

Red and Green Channel System

Customs is responsible for conducting checks on people, baggage, and vehicles entering the country and for collecting applicable taxes and duties at the checkpoints. A Red and Green Channel System have been instigated at all major airports to expedite the clearance of arriving travelers. Travelers requiring Customs services or completing payment of taxes and duties on goods can proceed directly to the Customs office upon arrival.

Travelers should proceed to the Red or Goods to Declare channel and notify the Customs Officer if the following items are being carried and submit the pertinent permits if applicable.

- Prohibited items
- Controlled or restricted items
- Taxable or items exceeding or ineligible for the duty-free concessions

Travelers should proceed to the Green or Nothing to Declare Channel at the entry point if the following conditions apply. Customs officers may still require an inspection or select passengers at random.

- Goods are in compliance with the duty-free concessions at arrival
- Goods requiring duty or prohibited/controlled items are not in possession of traveler

Travelers might be at risk for prosecution/penalty if goods are not properly declared or prohibited or controlled items without permit are found on their person or in the luggage.

E-Import

An electronic Customs process is available under the e-Import system. The E-Import system process posted on the website involves four major stages for declaration and clearance as stated below.

1. **Submission of a Declaration:** The first stage of import clearance process is to complete an Import Declaration and submit it to the e-Customs system. Prior to the arrival of cargo or upon the arrival of cargo, a shipping agent electronically transmits a ship or aircraft arrival report, and manifest information to the e-Customs system. If there is no error, the ship or aircraft arrival report number is automatically generated by the e-Customs system and the response message is transmitted to the shipping agent. When the cargo arrives at the port or place of entry, an importer or a Customs broker submits an Import Declaration to the e-Customs system.
2. **Check and Verification of the Declaration:** The second stage is the check and verification of the Declaration

and all supporting documents (in case of red line) made by an importer. Again, the e-Customs system validates the given data and issues a Declaration and Payment Numbers within a few seconds in conjunction with the e-payment. In addition, the selective profile system will validate the transmitted data and specify the Goods Declaration to be the Green Line or Red Line.

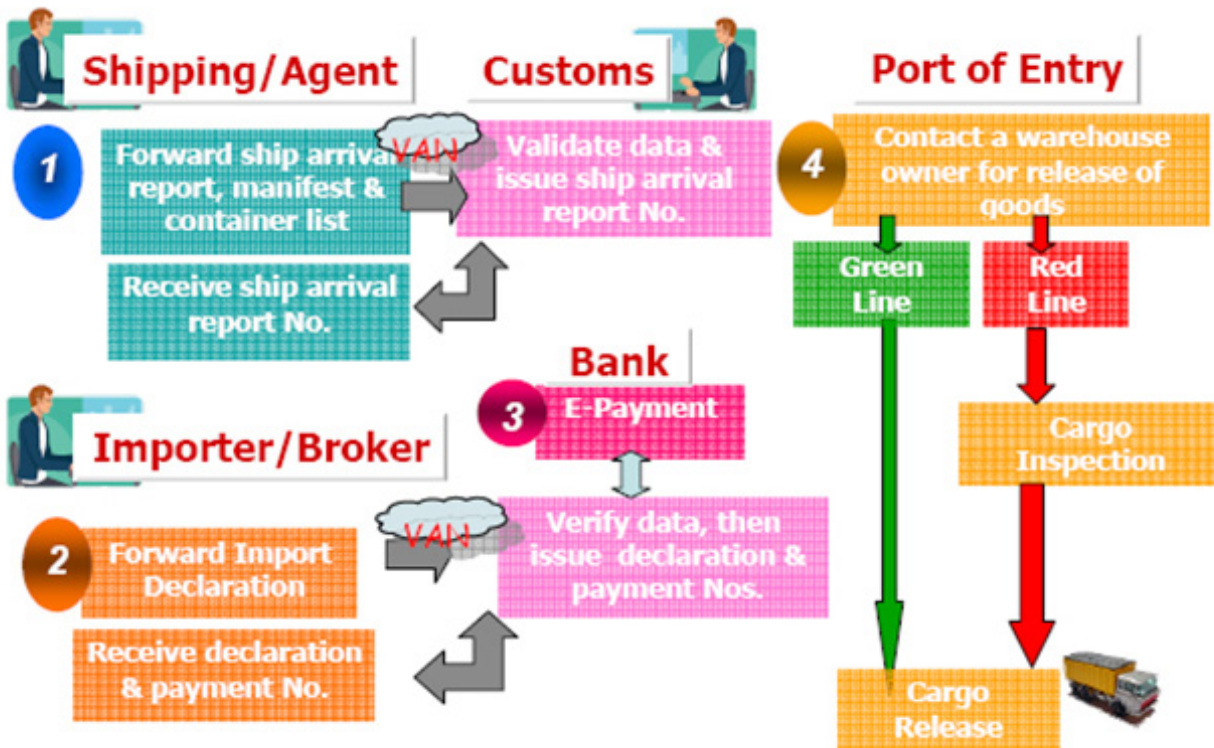
3. **Payment of Import Duties and Taxes:** The third stage is payment of applicable duties and taxes and/or guarantee. There are currently 2 options for the payment of import duties and taxes: payment at the Customs Department, and payment via e-Payment system.
4. **Inspection and Release of Cargo:** The last stage is to inspect and finally release cargo from Customs custody.
 - 4.1 In case of green line, an importer submits the verified Declaration together with the payment receipt at appropriate warehouses for the release of goods. At this stage, cargo data is screened against predetermined selectivity criteria in order to indicate whether the Declaration is under a Red Line (requiring thorough physical inspection) or a Green Line (permission of release). A Green Line Declaration is cleared within a few minutes without Customs intervention. Then, the cargo status is electronically sent to both the Port Authority and the importer/Customs broker.
 - 4.2 In case of red line, the predetermined selectivity criteria indicates that the cargo is subject to be the Red Line, the Port Authority removes the cargo container for physical inspection by Customs before the release of the cargo.

Importing Privileged Goods Process

Goods imported under specific circumstances can be relieved of the usual taxes and duties as covered by privileges in accordance with the United Nations, under International Laws/Treatises or by reciprocity through diplomatic channels. Goods imported by diplomatic missions, international organizations and entitled staff might be exempted

from Customs taxes and duties dependent on the agreements. The conditions defined under Customs include United Nations and Diplomatic Missions, Technical Cooperation Programs and the Florence Agreements. The United Nations and Diplomatic Agreements would be pertinent for the purposes of this report however details on the other agreements can be accessed from the associated reference.

The Diplomatic Privilege and Immunity Division, Department of Protocol and Ministry of Foreign Affairs will determine and approve the quantity and type of goods to be imported free of taxes and duties for agencies under the United Nations and diplomatic missions. The minimum completed documentation required by Customs clearance includes a Import Declaration, an air waybill (AWB) or bill of lading (B/L), a delivery order, a D.P.I. Form (Entry Form for diplomatic clearance of goods imported by diplomatic missions, international organizations) issued by the Ministry of Foreign Affairs, and other documents relating to the importation as necessary.



Import Process from The Customs Department, Thailand website as of Aug. 25, 2014



THAILAND

Infrastructure

Thailand Disaster Management Reference Handbook | 2015

Infrastructure

Thailand's ruling military recently approved a \$75 billion master plan to upgrade the country's transportation infrastructure over an eight year period. The infrastructure plan will include the expansion of dual track rail lines which will boost the efficiency of logistics to the run-down rail sector. The plan will also extend the elevated train lines in Bangkok and the surrounding metropolitan area along with increasing capacity at airports and seaports.¹³⁵ The eight year plan to advance Thailand's transportation infrastructure will make the country a key logistics hub in the ASEAN Economic Community (AEC) when the projects are completed by 2022. The goal is to develop the logistics system and integrate all means of transportation (air, rail, road, water) which go beyond the country's borders.¹³⁶

Airports

Thailand has numerous domestic and international airports scattered throughout the country. There are five main international airports in Thailand: Bangkok, Chiang Mai, Chiang Rai, Hat Yai, and Phuket. There are many airports throughout the country serving domestic flights. There are a few different airport operators for Thai airports: Airports of Thailand (AOT), the government, military, Department of Civil Aviation and Bangkok Airways. The Airports of Thailand (AOT) is a Thai public company which operates six airports throughout Thailand. They operate, Suvarnabhumi Airport, Don Mueang International Airport, Phuket International Airport, Chiang Mai International Airport, Hat Yai International Airport, and Mae Fah Luang Chiang Rai International Airport. The Department of Civil Aviation (DCA) is responsible for promoting, developing and regulating civil aviation affairs of Thailand to meet international standards and form an extensive civil aviation network and services which will satisfy the market demand.¹³⁷ Bangkok Airways is a private aviation company in Thailand serving all major domestic cities and a handful of international cities. The airline invested in building and maintaining three private-operated airports.¹³⁸

Don Mueang International Airport used to be the largest airport in Thailand until it was replaced with the newer Suvarnabhumi International Airport. Currently, Don Mueang still functions

as a cargo, charter flight, military air strip, and serves domestic flights. Suvarnabhumi Airport also known as (New) Bangkok International Airport is Thailand's premier airport as it is a hub serving many international passengers and is a gateway to various destinations in Thailand and Asia. The airport opened in September 2006 and is considered one of the most spectacular airports in the world.¹³⁹ The airport is located about 18 miles east of downtown Bangkok. Each year, the airport can service up to 45 million passengers, 76 flights per hour, and 3 million tons of cargo a year.¹⁴⁰ Expansion plans are underway to increase the airports passenger capacity to 65 million by 2016.¹⁴¹ Suvarnabhumi serves as a hub and connector for many international carriers including the national airline Thai Airways.¹⁴² The airport took measures to prevent the airport from a flooding event by building it on a watershed. The area is surrounded by a dyke and within the dyke are numerous canals which drain into reservoirs. These reservoirs can hold up to 4 million cubic meters of water. There are also two water pumping stations in which pumped water is discharged into the canals and then empty into the Gulf of Thailand.¹⁴³

Phuket, Chiang Mai, Hat Yai, and Koh Samui are other airports serving international travel in and out of the country. Phuket International Airport is located on the northern end of Phuket Island and is the third busiest airport in the country serving both domestic and international travelers behind Don Mueang and Suvarnabhumi. The airport plays a major role in Thailand's tourism industry. It is currently undergoing an expansion to build a new international terminal, refurbish the existing domestic terminal, and airfield improvements. The expansion will be complete in 2015 and it will increase passenger capacity to 12.5 million.¹⁴⁴

Chiang Mai International Airport is the gateway to northern Thailand and serves more than 2 million passengers a year. AOT is expanding both the domestic and international departure terminals, adding an apron for a larger aircrafts, restroom improvements and building an One Tambon One Product (OTOP) center. Completion for these upgrades is 2014. The airport also expanded its operating hours to 24 hours.¹⁴⁵

Hat Yai Airport is the primary hub serving southern Thailand. The airport is located 6 miles from downtown Hat Yai and roughly 1 million people travel through the international terminal. Samui International Airport is located on the

northern end of a major resort island in the Gulf of Thailand. It is the sixth busiest airport and handles more than a million passengers each year.¹⁴⁶

Below are international and domestic airports with passenger service in Thailand:

Location	Airport Name	Airport Type	Operator	Runway Length
Bangkok	Don Mueang Airport	Public/ Military	Airports of Thailand	12,139ft, 11,483ft
Bangkok	Suvarnabhumi Airport International	Public	Airports of Thailand	13,976ft, 12,500ft
Chiang Mai	Chiang Mai International Airport	Public/ Military	Airports of Thailand	10,171ft
Chiang Rai	Mae Fah Luang International Airport	Public	Airports of Thailand	9,843ft
Hat Yai	Hat Yai International Airport	Public	Airports of Thailand	10,007ft
Phuket	Phuket International Airport	Public	Airports of Thailand	9,843ft
Pattaya	U-Tapao International Airport	Public/ Military	Government	11,500ft
Udon Thani	Udon Thani International Airport	Public/ Military	Government	10,000ft
Buriram	Buriram Airport	Public	Dept. of Civil Aviation	6,890ft
Chumphon	Chumphon Airport	Public/ Military	-	6,890ft
Hua Hin	Hua Hin Airport	Public	Dept. of Civil Aviation	6,890ft
Khon Kaen	Khon Kaen Airport	Public/ Military	Military	10,007ft
Ko Samui	Samui Airport	Public	Bangkok Airways	6,890ft
Krabi	Krabi Airport	Public	Dept. of Civil Aviation	9,850ft
Lampang	Lampang Airport	Public	Government	6,465ft
Mae Hong Son	Mae Hong Son Airport	Public	-	6,562ft
Mae Sot	Mae Sot Airport	Public	Government	4,921ft
Nakhon	Nakhon Airport	Public	Dept. of Civil Aviation	8,530ft
Nakhon Si Thammarat	Nakhon Si Thammarat Airport	Public	Government	6,890ft
Nan	Nan Airport	Public	Government	6,562ft
Narathiwat	Narathiwat Airport	Public/ Military	Military	8,202ft
Phetchabun	Phetchabun Airport	Public	Government	6,890ft
Phitsanulok	Phitsanulok Airport	Public	Government	9,843ft

INFRASTRUCTURE

Location	Airport Name	Airport Type	Operator	Runway Length
Phrae	Phrae Airport	Public	-	4,921ft
Ranong	Ranong Airport	Public	Government	6,562ft
Roi Et	Roi Et Airport	Public	Government	6,890ft
Sakon Nakhon	Sakon Nakhon Airport	Public	-	8,530ft
Sukhothai	Sukhothai Airport	Public	Bangkok Airways	6,890ft
Surat Thani	Surat Thani Airport	Public/ Military	Dept. of Aviation	9,843ft
Trang	Trang Airport	Public	Dept. of Civil Aviation	6,890ft
Trat	Trat Airport	Public	Bangkok Airways	4,950ft
Ubon Ratchathani	Ubon Ratchathani Airport	Public	Government	9,848ft



Thailand Airports (Source: Thailand Maps)

Seaports

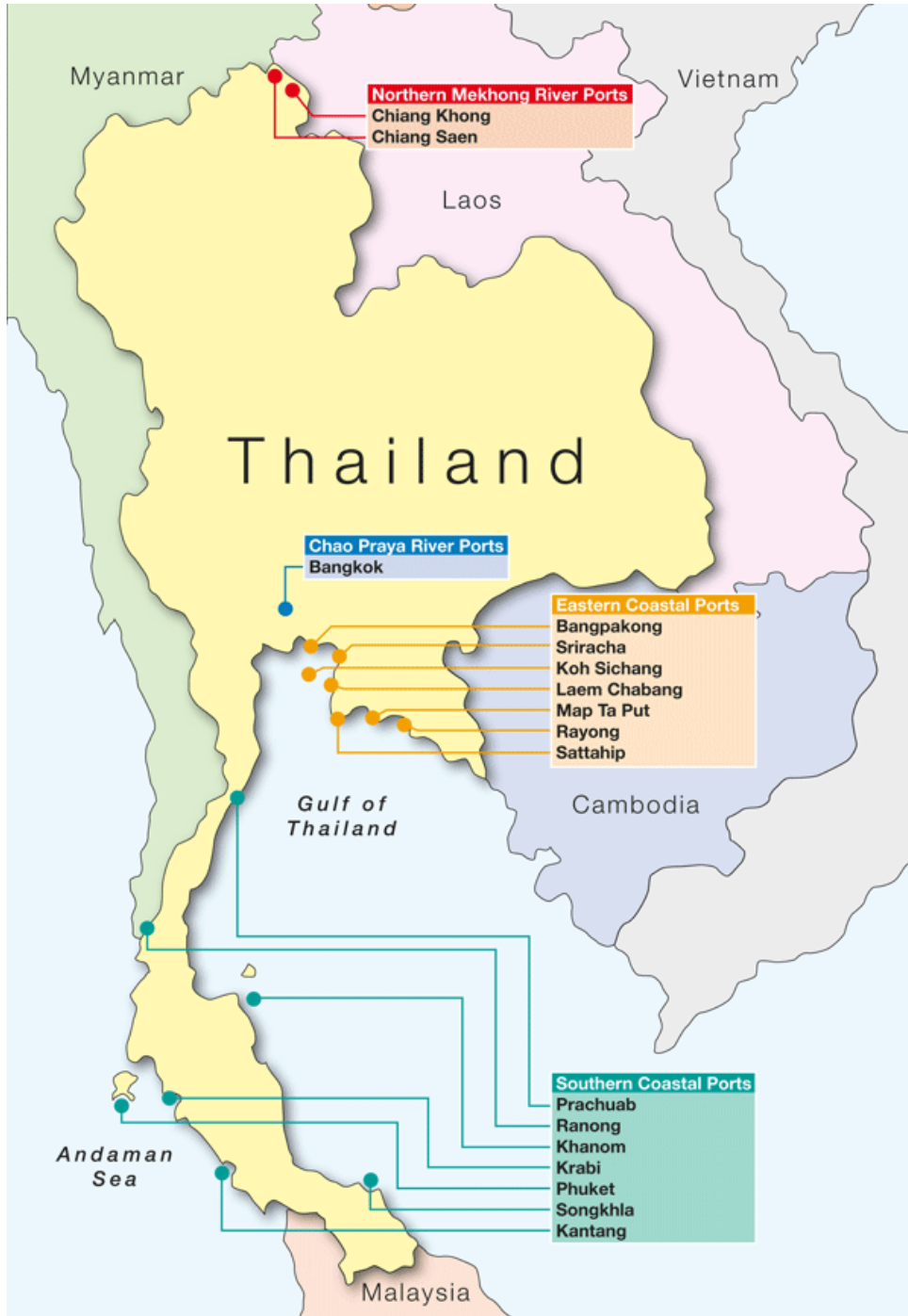
Thailand has a total coastline of 3,219 kilometers with over 4,000 kilometers of inland waterways. Main seaports in Thailand include: Bangkok, Laem Chabang, Ranong, Phuket, Songkhla, Sattahip, and Si Racha.¹⁴⁷

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. 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. PAT currently manages two main commercial ports and 3 regional ports. There are currently eight international deep seaports in operation and four private ports which are permitted to handle container cargo.¹⁴⁸

Major Seaports in Thailand

Port	Description
Port of Bangkok ¹⁴⁹	<ul style="list-style-type: none"> • Located on the left side of the Chao Phraya River in the Khlong Toei District • Covers roughly 3.6 square kilometers with 66 kilometers of riverfront • Well connected with road and rail systems which aid in the transport of cargo
Port of Laem Chanbang	<ul style="list-style-type: none"> • Located in eastern Thailand on the Gulf of Thailand • Main deep seaport in country • Handles 7.7 million TEUs per year, roughly 54 percent of Thailand's overall exports and imports • Currently operates 15 of its 18 berths; berths are 500-700 meters • Supports ships up to 800 deadweight tons (dwt)
Port of Chiang Saen	<ul style="list-style-type: none"> • Located on the Mekong River across from Laos in the Chiang Rai province in the north • Trade connection with Burma, Laos, and southern China • Terminal is two pontoons with bridges linking with the dockside • Berth capacity can accommodate ships less than 200 gross tonnage • Expansion and new facilities are being planned near by
Port of Chiang Khong	<ul style="list-style-type: none"> • Located on Mekong River across from Laos • Small river port, mainly serves small ships from Laos • Terminal is 24 meters wide and 108 meters long, accommodates 3-5 motor vessels each at 80-150 gross tonnage at a time
Port of Ranong	<ul style="list-style-type: none"> • Located on the Kra Buri River on the Kra Peninsula across from Burma and near the Indian Ocean • Multipurpose terminal with 26 meter width and 134 meter length which accommodates two cargo ships of less than 500 gross tons each at the same time • Container terminal with a 30 meter width and 150 meter length which accommodates a cargo vessel less than 12,000 deadweight tones • Expansion is planned to better serve the West Indian Ocean and Andaman Sea



Source: Bangkok Shipowners and Agents Association

Land Routes

Thailand has one of the most extensive road transportation networks with over 390,000 kilometers of roads in which nearly all are paved. The country is also a vital link in the Greater Mekong Subregion's East-West Economic Corridor which connects most of Southeast Asia to China's Yunnan Province.¹⁵⁴

Roads

Roads are the main means of transportation in Thailand. The Thai network covers roughly 70,000 kilometers throughout the country with around 97 percent which are paved. The rural road network is roughly 35,000 kilometers with around 82 percent which are paved. The road and highway network in Thailand falls under the responsibility

of the Department of Highways (DOH) and the Department of Rural Roads (DORR), both under the oversight of the Transportation Ministry of Thailand. The Highway Act of 2006 defines the five highway types:¹⁵⁵

- **Special Highway or Motorway** – A high capacity highway designed for high speed traffic, the DOH carries out construction, expansion, upkeep and repairs. Motorway entrances and exits have controlled access and are controlled by the DOH. Registration of motorways is overseen by the DOH Director General.
- **National Highway** – A primary highway is part of the network connecting regions, provinces, districts, and other important destinations. The DOH carries out the construction, expansion, upkeep and repairs. Registration of national highways is overseen by the DOH Director General.
- **Rural Highway or Rural Road** – The DORR carries out construction, expansion, upkeep and repairs. Registration of rural highways is overseen by the DORR Director General.
- **Local Highway or Local Route** – The local administrative organization carries out construction, expansion, upkeep and repairs. Registration of local highways is overseen by the provincial governor.
- **Concession Highway** – A legal government concession has been granted. Registration of concession highways is overseen by the DOH Director General.

The Expressway and Rapid Transit Authority of Thailand (ETA) is responsible for construction and maintenance of expressways in Thailand along with solving traffic problems.¹⁵⁶ The Bangkok Mass Transit Authority (BMTA) is responsible for providing local bus service for 102 routes in Bangkok and nearby provinces.¹⁵⁷ A recent 2014 study ranked Thailand as the second worst in road fatalities in the world with 44 road death per 100,000 people. Namibia was the top ranked country ahead of Thailand. Fatalities from road accidents made up around 5 percent of total deaths in Thailand. In 2011, the Thai government announced they wanted to cut road deaths in half by 2020 as part of a decade-long campaign to improve traffic safety. The World Health Organization reported that 74 percent of road deaths involved motorbikes.¹⁵⁸

Thailand is a part of the Asian Highway (AH) which is a joint project among countries in Asia and Europe, and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) to improve the highway systems in Asia. Thailand currently has AH routes running through the country. They include the following:

AH Number	Route
AH 1 and AH2	Bangkok – Chiang Rai and continuing to Tachilek, Burma
AH16	Tak – Khon Kaen as AH16 and continues into northeastern Thailand
AH12	Saraburi – Nong Khai
AH15	Udon Thani – Nakhon Phanom
AH123	Bangkok – Trat
AH1 and AH2	Ayutthaya – Nakhon Sawan
AH1	Saraburi – Sa Kaeo
AH19	Bang Na-Trat Highway, Bangkok – Chachoengsao
AH2	Bangkok – Phetchaburi
AH19	Pak Kret, Nonthaburi – Nakhon Ratchasima

After the 2011 floods in Thailand, water continued to flood for nearly six months. The water moved slowly from the north, then through the central valley then made its way to Bangkok before moving down to the Gulf of Thailand. Some areas experienced water for up to two months. Transportation modes throughout the country were affected. The road network received the extent of the damages from the floods. Many of the main routes leading out of Bangkok were inundated, limiting links between Bangkok and other parts of the country. The only road transport in Bangkok which was not affected was elevated expressways. During disasters, transportation access is vital for relief operations. Boats became a reliable mode of transport during these floods by transporting people to higher grounds.¹⁵⁹

Bridges

Thailand and Laos have a total of five Thai-Lao Friendship Bridges to date. These bridges benefit the economies, trade, tourism, investment, culture, transport logistics and travel links of the two countries.¹⁶⁰ The Greater Mekong Subregion (GMS), comprising Thailand, Laos, Vietnam, Cambodia, Myanmar, and China's southern province of Yunnan, agreed to develop road networks in accordance with the East-West Economic Corridor project, which is geared at promoting economic and social development in this subregion. The project links Thailand, Laos, Vietnam, and Myanmar, and will also open communications routes to other countries, such as China, Japan, the Republic of Korea, Bangladesh, and India.

The First Thai-Lao Friendship Bridge opened in 1994 connecting Nong Khai Province, Thailand and Vientiane, Laos. The bridge is 1.2 kilometers with two 1.5 meter road lanes. As a vital part of this project, the Second Thai-Lao Friendship Bridge was built to reduce transport costs and provide convenient land transport access for the entire region. The second bridge opened in 2007 and connects Mukdahan Province, Thailand and Savannakhet, Laos. The bridges spans 1,600 meters with two traffic lanes. The benefits of this bridge include increased freight traffic, higher number of tourists and additional transport operators. In 2008, the bridge was later equipped with a single-meter gauge railway line. In 2011, the number of people using the bridge was 1.5 million which increased from 600,000 people in 2007 when the bridge first opened.¹⁶¹

The Third Thai-Lao Friendship Bridge opened in 2011 connecting Nakhon Phanom Province, Thailand with Khammouane, Laos. The length of the bridge is 1,423 meters. The Fourth Thai-Lao Friendship Bridge opened in December 2013. The 630 meter bridge links Chiang Rai Province, Thailand with Bokeo Province, Laos. The bridge also connects to Route R3A which links Bangkok and Kunming, China. The bridge is expected to further increase trade and travel among the Greater GMS.¹⁶² A fifth Thai-Lao Friendship Bridge is underway with construction expected

to begin in 2015 for the ASEAN Economic Community (AEC). Once complete the bridge will be 1,600 kilometers long linking Bueng Kan Province, Thailand to Bolikhamxai Province, Laos. It is expected to be finished in 2017, and will open a new border trade route between northeastern Thailand and southern Laos along the East-West Economic Corridor. It will also link Burma, southern China, and Vietnam.¹⁶³



Other notable bridges in Thailand:¹⁶⁴

- Bhumibol Bridge also known as the Industrial Ring Road Bridge connects southern Bangkok with Samut Prakan Province. The 582 meter bridge crosses over the Chao Phraya River two times with the goal of reducing traffic problems in Bangkok and surrounding areas.
- Bukit Bunga-Ban Buketa Bridge crosses over the Kolok River at the Thailand-Malaysia border. The bridge connects Kelantan, Malaysia with Narathiwat

Province, Thailand. This crossing was a cooperative project under the framework of Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT).

- Rantau Panjang-Sungai Golok Bridge also known as the Harmony Bridge is a road bridge crossing over the Kolok River at the Thailand-Malaysia border. The 109 meter bridge connects Kelantan, Malaysia with Narathiwat, Thailand. The bridge is part of the Asian highway network (AH18) which includes Thailand Route 4056 and Federal Route 3.

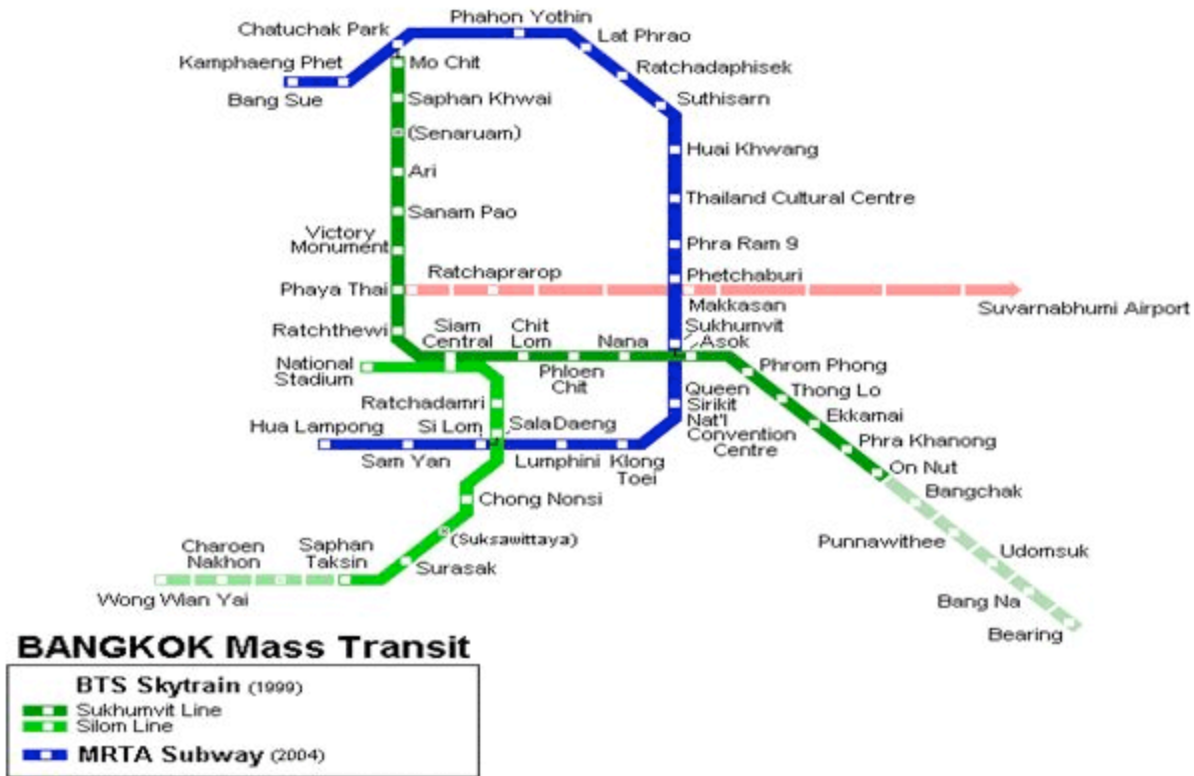
Railways

Railways are managed and operated by the state-owned State Railway of Thailand (SRT). Each year approximately 70 million people utilize the railways. The rail systems spans roughly 4,071 kilometers.¹⁶⁵ There are four main routes: Northern, Northeast, Eastern and Southern which all begin at the hub at Bangkok Station or Hua Lamphong.¹⁶⁶

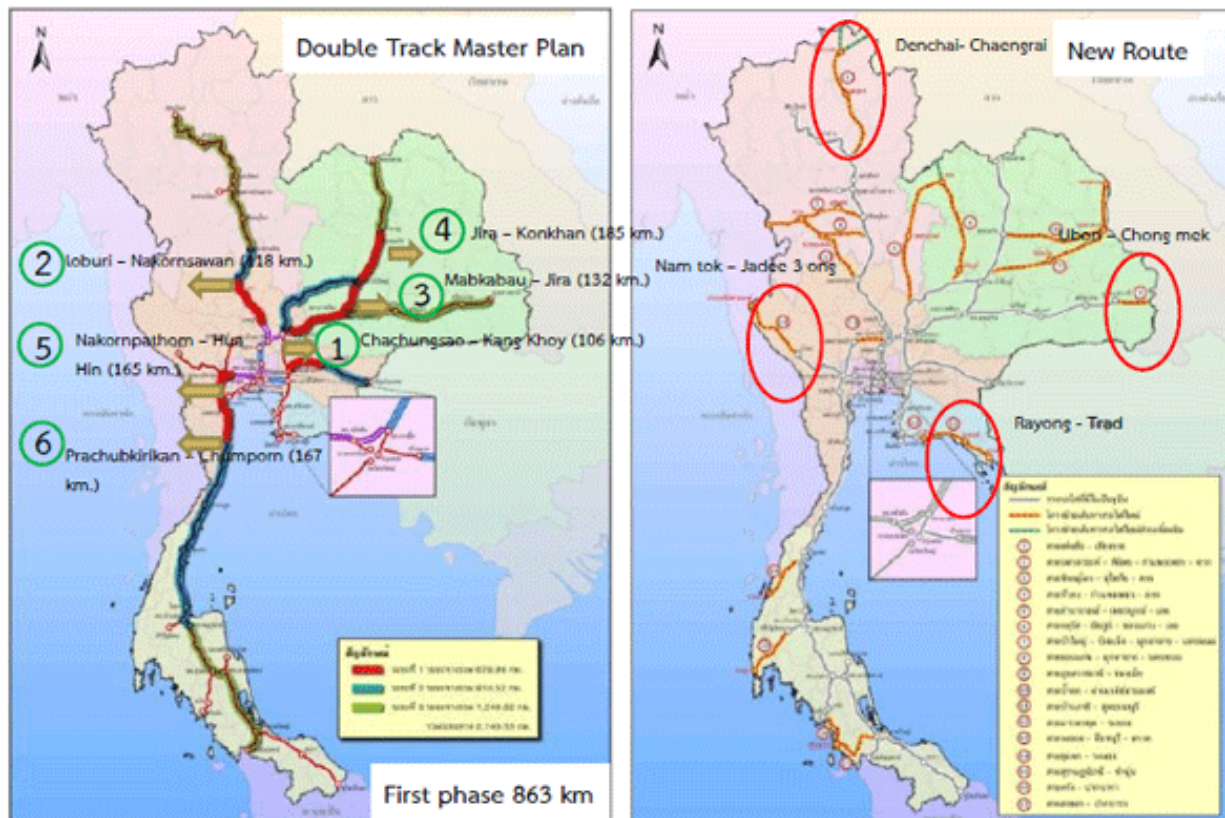
The Mass Rapid Transit Authority (MRTA) of Thailand is responsible for providing Bangkok and other provinces with a modern rapid transit system.¹⁶⁷ There are currently two mass transit lines in Bangkok, the skytrain (BTS) and the subway (MRT). The Mass Rapid Transit (MRT) is the underground railway which serves 18 stations and runs for 20 kilometers in a horseshoe shape through downtown Bangkok. The Bangkok Mass Transit System (BTS), known as the BTS or Skytrain is an elevated rapid transit system in the capital. It has two lines, the Silom Line and the Sukhumvit Line which stretch around 35 kilometers along 34 stations.¹⁶⁸

In 2013, Thailand's Transport Minister Chadchart Sittipunt unveiled the plan to build high-speed railways and motorways, upgrade existing rail lines and highways, and extend Bangkok's mass-transit system. Over 50 percent of the budget is dedicated to rail projects, including four high-speed rail lines which will connect Thailand to its neighbors.¹⁶⁹





Key Projects: Railways Improvements



Source : Office of Transport and Traffic Policy and Planning

Schools

Schools located near the coastal areas sustained damaged or destruction during the 2004 Indian Ocean tsunami. Reports indicate that 5 schools were destroyed and over 50 were damaged. Most of the furniture, equipment and educational materials were also destroyed.¹⁷⁰

The 2011 floods in Thailand affected over 1,200 schools in seven southern provinces. According to the Ministry of Education, the total amount of damages from the flooding amounted to over USD \$14 million. Vocational schools were tasked to establish “Fix It Center” where students provided repair services for people after the floods.¹⁷¹

Communications

Telecommunications capacity in the major cities of Thailand is considered to be efficient. The Ministry of Transport and Communications (MOTC) retains overall authority for telecommunications in Thailand. There are three units under the MOTC: the Post and Telegraph Department (PTD), CAT Telecom Public Company Limited (CAT), and the Telephone Organization of Thailand (TOT). Telecommunication services in Thailand are provided by two state enterprises, TOT and CAT. TOT is responsible for providing domestic communication services while CAT provides international communication services.¹⁷² CAT is state-owned and is responsible for running Thailand’s international telecommunication infrastructure including international gateways, satellite, and submarine cable network connections.¹⁷³

There are roughly 92 million mobile network subscribers in Thailand as of 2013. Fixed-line telephone subscribers are way below the mobile network at just around 6 million subscriptions. These numbers have been on the decline since 2008.¹⁷⁴ In 2012, CAT Telecom constructed an additional submarine cable in the Gulf of Thailand to control its data transmission capacity. This cable is an addition to the current five cables which provide a communication landing for the country. The new cable enhances data transmission from the central to southern parts of Thailand and will ease international transmission along with support the communication of the ASEAN Economic Community (AEC) scheduled in 2015. CAT also set up 20,000 free Wi-Fi at public places across the country as part of the country’s ICT master plan which was initiated by the Ministry of Information and Communication Technology.¹⁷⁵

The National Broadcasting and Telecommunications Commission (NBTC) regulates Thailand’s telecommunications fairly, transparently, and equitably on the basis of international standards. The commission aims to enhance the capacity of the country’s telecommunications industry and enable the industry to efficiently adapt to a constantly evolving environment.¹⁷⁶

During the heavy rains of late 2010, southern Thailand experienced severe flooding and landslides which damaged communication facilities. Hat Yai, the largest city of southern Thailand experienced the majority of the floods which left many stranded in their homes. Electricity and landline telephones were down along with mobile telephone service severely affected due to downed Base Transceiver Stations (BTS). Emergency mobile phone service was provided in disaster hit areas using a Mobile VSAT Vehicle (MVV) equipped with Femtocell Access Point (AP), which is a small cellular base station which works on a plug and play basis. The MVV allowed residents to make phone calls and access the internet via Wi-Fi until BTS towers were restored.¹⁷⁷

Utilities

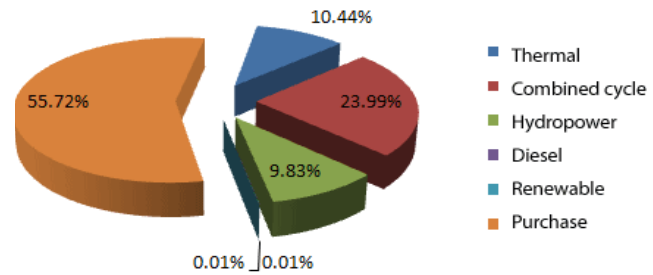
In 2009, the World Bank reported that 99.3 percent of the population had access to electricity.¹⁷⁸ Currently, utility companies in Thailand are state run. The country imports electricity from neighboring countries which drives up domestic utility costs. The majority of homes receive their water supply through the main water supply which is provided by the Local Waterworks Department. However, many homes in Thailand use ground water via holding tanks or wells as their main water supply.

Power

The main purpose of the Electricity Generating Authority of Thailand (EGAT) is to create and improve the quality of life and strengthen Thailand’s competitiveness through reliable and affordable energy and services. EGAT is responsible for generating, acquiring, transmitting and selling bulk electric energy via their transmission network.¹⁷⁹ As the country’s system operator, EGAT manages and controls through the National Control Center and five regional control centers. The authority owns and operates the national transmission network

(transmission lines and substations of various voltage levels) which span all areas of Thailand.¹⁸⁰ The Metropolitan Electricity Authority (MEA) provides electricity for Bangkok, Nonthaburi, and Samut Prakarn. MEA also designs, installs, and maintains high and low voltage electrical systems, air-conditioning systems, and safety and security systems.¹⁸¹ The main responsibilities of Provincial Electricity Authority (PEA) involve the generation, procurement, distribution and sale of electricity to the public, business and industrial sectors in 74 provinces, which is roughly 99 percent of the population. PEA does not provide services to Bangkok, Nonthaburi and Samut Prakarn.¹⁸²

Thailand's total power generation was 33,681 megawatts (MW) as of December 2013 which was up 3.3% from the previous year. Growth in power demand averages 4 percent annually.¹⁸³ The 20-Year Energy Efficiency Development Plan 2011-2030 (EE Plan 2011-2030) is a policy which targets 25 percent reduction of energy intensity of the country within 20 years. The reduction



System Installed Generating Capacity (Source: Electricity Generating Authority of Thailand)

would result in a decrease of Thailand's power demand projection on account of energy saving programs and energy efficiency programs. The 10-Year Alternative Energy Development Plan (AEP) 2012-2021 targets increasing the share of renewable energy and alternative energy uses by 25 percent instead of fossil fuels, which will result in the replacement of planned conventional power plants by renewable power plants.¹⁸⁴

Power Plants in Thailand ¹⁸⁵		
Power Plant	Location	Total Generating Capacity
Mae Moh Power Plant	Lampang Province	2,400 MW
Bang Pakong Power Plant	Chachoengsao Province	4,384.60 MW
North Bangkok Power Plant	Nonthaburi Province	704 MW
Krabi Power Plant	Krabi Province	340 MW
South Bangkok Power Plant	Samut Prakan Province	1,690.6 MW
Nam Phong Power Plant	Khon Kaen Province	710 MW
Surat Thani Power Plant	Surat Thani Province	244 MW
Chana Power Plant	Songkhla Province	731 MW
Lan Krabue Power Plant	Kamphaeng Phet Province	150 MW
Wang Noi Power Plant	Phra Nakhon Si Ayutthaya Province	2,027.11 MW
Lam Ta Khong Hydropower Plant	Nakohn Ratchasima Province	1,000 MW
Lam Ta Khong Wind Power	Nakohn Ratchasima Province	2.50 MW

Prior to the Thai government's overthrow in early 2014, the country's solar photovoltaic (PV) sector was rising. Recently, the newly appointed director general for the Alternate Energy Development and Efficiency Department announced he will reignite Thailand's renewable energy landscape, starting with restoring the feed-in-tariff (FIT) and reintroduce tax breaks for solar installers. The new ruling regime sees solar energy

projects as vital to attracting foreign investment. In September 2013, a solar rooftop scheme was launched with the goal of installing 200 MW of rooftop capacity. Currently, there is only 3.78 GW of renewable energy capacity installed falling short of the goal of 14 GW by 2021.¹⁸⁶ A pilot project called Smart Grid is demonstrating that the use of electricity and energy in Thailand by consumers can be greater while maintaining power supplies

over the long term. Charging stations for electric vehicles and a virtual power plant are also being tested under the pilot. Smart Grid is in parallel with other Energy Policy and Planning Office (EPPO) operations under the Energy Ministry.¹⁸⁷



Hydro-Power (Dams)

Thailand has built more than 40 major dams for power generation and irrigation since the mid-1960s. However, these dams caused opposition from rural communities. To meet energy demands, Thailand is importing hydropower from Laos, Burma, and China's Yunnan Province. Power companies from Thailand are developing many of these projects which are backed by Thai commercial banks and Thailand's export credit agency, the Export-Import Bank of Thailand.¹⁸⁸

Dams in Thailand¹⁸⁹		
Dam	Location	Total Capacity
Bhumibol Dam	Tak Province	743.8 MW
Sirikit Dam	Uttaradit Province	500 MW
Ubol Ratana Dam	Khon Kaen Province	25.2 MW
Rajjaprabha Dam	Surat Thani Province	240 MW
Srinagarind Dam	Kanchanaburi Province	720 MW
Sirindhorn Dam	Ubon Ratchathani Province	36 MW
Chulabhorn Dam	Chaiyaphum Province	57 million units
Vajiralongkorn Dam	Kanchanaburi Province	760 million kWh
Nam Poong Dam	Sakon Nakhon Province	6M W
Pak Mun Dam	Ubon Ratchathani Province	136 MW
Bang Lang Dam	Yala Province	72 MW
Kang Krachan Dam	Phetchaburi Province	70 million units
Tha Thung Na Dam	Kanchanaburi Province	38 MW
Mae Ngat Somboon Chol Dam	Mae Taeng Province	9 MW

In 2005, The National Economic and Social Development Board (NESDB) approved EGAT to renovate five small hydropower plants: Ubol Ratana, Chulabhorn, Sirindhorn, Nam-Poong, and the Kang Krachan. Once completed, the operation efficiency will increase on these plants which have been in operation for over 30 years. All dams are located in northeastern Thailand with the exception of the Kang Krachan Dam which is located in central Thailand. The Ubol Ratana Dam in the northeastern province of Khon Kaen was the first hydroelectric project developed in the area. The dam stores the Nam Phong, a tributary of the Mekong River. There are multi-purpose functions to the dam: electricity generation, irrigation, flood control, transportation, fisheries, and a tourist attraction.¹⁹⁰

Several dams are being planned or already built along the Mekong River, with the Xayaburi being the first.¹⁹¹ The Xayaburi dam is the most advanced of the dams being planned for the Lower Mekong River. When complete, it will generate

1,260 MW of electricity and 95 percent will be exported to Thailand.¹⁹²

Water and Sanitation

The Metropolitan Waterworks Authority (MWA) is a state run organization which is responsible for water services in Bangkok, Nonthaburi Province and Samut Prakan Province. The goal of MWA is to be a leading organization in providing good quality water supply and to be a socially responsible organization.¹⁹³ The Provincial Waterworks Authority (PWA) is also a state run organization, who is responsible for the production and delivery of water to 73 provinces in Thailand. PWA produces a clean water supply that meets WHO standards.¹⁹⁴ The lead organization in water resources development and integrated water management is the Royal Irrigation Department (RID), with the current irrigated area as one of the best in the world. RID prevents and mitigates water hazards.¹⁹⁵

Many factors are impacting the quality of

water sources in the country such as urbanization, agricultural and industrial expansion, and pollutants from human activities. Severe flooding during the rainy season and extreme drought in the dry season could become the main causes of Thailand's water crisis. The population relies on surface and ground water sources as their primary sources for drinking water. Reports indicate that one third of surface water in Thailand is poor quality. This quality varies across the country's regions, but tests indicate that the northern central and southern regions have the poorest quality. The lower central plain surrounding Bangkok has the largest source of groundwater and is used to help meet the region's water demands. The Central Plain relies on Thailand's Northern region for water because they do not have any water reservoirs.¹⁹⁶ Thailand is projecting to have an abundance of good quality water by 2025.

A report in 1999 stated nearly the entire population of Thailand had access to sanitation. Those without access live in remote or water-scarce areas located along the borders, highlands or floating communities by the river.¹⁹⁷ In February 2013, an independent expert to the UN reported the disparities on access to water and sanitation between populations. The majority of people in Thailand have experienced rapid development, but millions of people including stateless people and undocumented migrant workers have not seen the same benefits. The expert said, "There are huge disparities in access to safe drinking water and the systematic monitoring of water quality." The Ministry of Health estimates the current rate of access to drinking water in rural and urban areas is around 25 and 40 percent, and only 21 percent of community wastewater produced daily is treated.¹⁹⁸ The government announced in April 2013, they were investing US \$11.5 billion in a well-integrated water management infrastructure and flood prevention system. The 2011 flooding provided an opportunity to re-evaluate and introduce a complete and integrated approach to water management and flood prevention.¹⁹⁹



THAILAND

Health

Thailand Disaster Management Reference Handbook | 2015

Health

Overview

Healthcare in Thailand is comprehensive and generally used as a model for other developing middle income countries. There is a robust public health system, and every Thai citizen has their health care costs covered by a government insurance scheme. Additionally, the private healthcare system is world class and supports a booming medical tourism industry. The country has met almost all health-related Millennium Development Goals (MDGs) on a national basis, but progress varies by region within Thailand. Some rural areas lag far behind the more developed urban core. The leading causes of disability-adjusted life years lost are non-communicable diseases, communicable diseases, and injuries due to traffic accidents.²⁰⁰

Thailand's National Health Development Plan forms the backbone of health related policy in the country. Currently in its 11th version, it is tied to the broader National Development Plan. The Health Plan's vision, goals, and strategies align with those in the whole of government plan. The plan's vision is that all Thai citizens are healthy and take part in creating a sufficiency health system with equity. In this case, a sufficiency system is defined as a "health care system with good quality, standards, strengths, sufficiency, and accessibility, that is responsive to people's health problems and needs at a reasonable cost."²⁰¹ The vision will be accomplished by working towards these five goals:

1. The people, communities, local authorities, and partners have the capacity for health promotion and disease prevention, reducing morbidity due to preventable diseases or lifestyle related diseases, and using Thai wisdom as well as public participation in dealing with individual and community health problems.
2. Having in place disaster monitoring and warning systems that are sensitive and able to provide timely information for efficiently responding to health threats.
3. Having in place efficient proactive health systems, focusing on health promotion, disease prevention, and consumer protection in health.

Life expectancy at birth (M/F) 71/78

Total expenditure on health as % of GDP 6.4

Total expenditure on health per capita (Intl PPP) \$ 331

Source: World Health Statistics 2013, WHO; 11th National Health Development Plan 2012.

4. Having in place health-care systems of good quality and standards that are able to respond to people's health needs and problems with good provider-recipient relationships.
5. Having in place an efficient and unified healthcare financing system.

The Health Development Plan also provides strategies for accomplishing these goals in the coming five-year period:

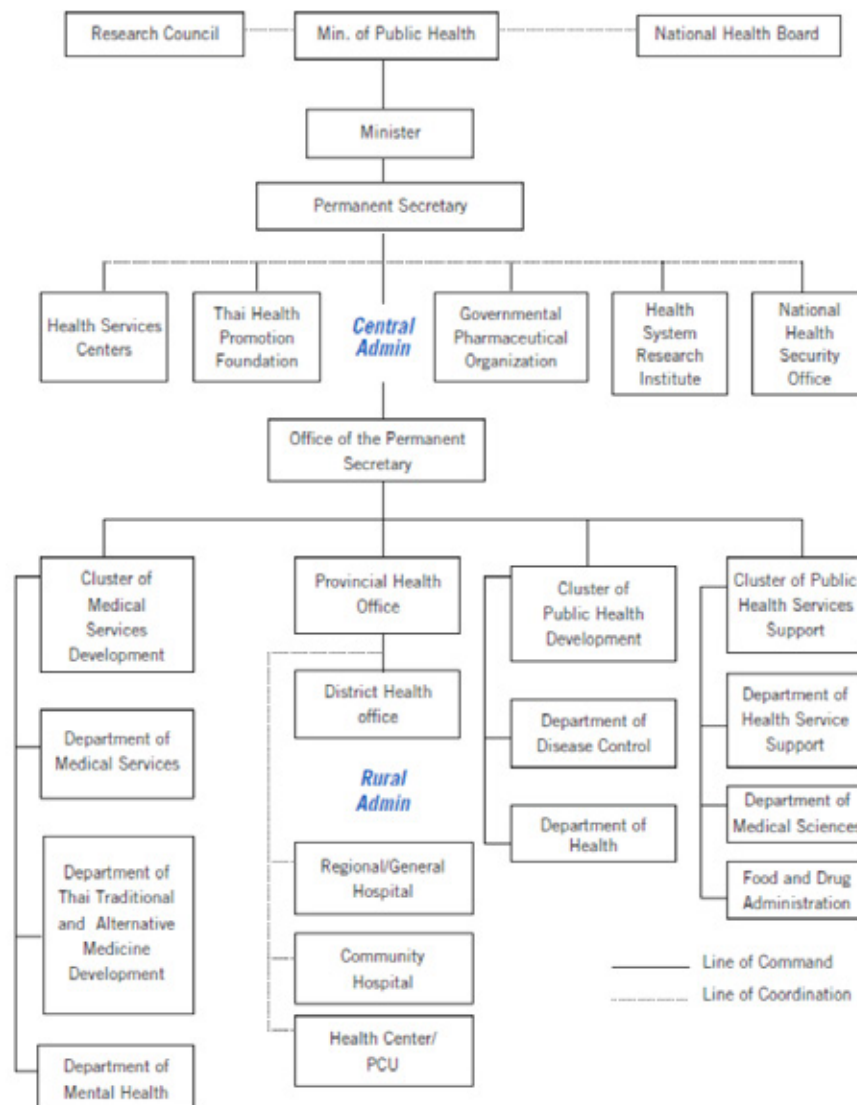
- Strengthening partners by promoting collaboration in the public and private sectors. This includes international partnerships, partnerships in emerging research areas, and partnerships to promote responsible use of technology.
- Further developing systems for monitoring and management of disasters, accidents, and health threats. This includes natural disasters, epidemics, and contamination with hazardous substances.
- Focusing on health promotion, disease prevention, and consumer protection in health. This gives importance to developing proactive health systems through increased investment in disease prevention. It also puts increased emphasis on health behaviors in the general public.
- Strengthening the quality of the health care system by improving the referral system. This strategy recognizes that disadvantaged groups sometimes struggle to obtain the higher levels of care needed, and allocates resources to make health care access easier and more ubiquitous.

- Creating national mechanisms for enhancing the efficiency of health care system governance and resource management systems. This establishes a National Health Service Delivery Board that will balance the needs to purchasers and providers, decrease disparities, and set an efficient health care financing mechanism.²⁰²

The World Health Organization (WHO) Country Collaboration Strategy (CCS) is often a good indicator of a country's overall healthcare system status and areas for improvement. Areas which the WHO and Thai government will focus on together include prioritizing health needs of the aging and improving migrant health programs.²⁰³

Structure

Healthcare in Thailand is highly centralized despite multiple government attempts to distribute authority out to the provinces. The public sector which accounts for 80 percent of the care provided, falls directly under the purview of the Ministry of Public Health (MoPH), while the private sector is highly regulated by a related office. The MoPH runs more than 800 hospitals at various levels of care. Additionally, primary care facilities are very common throughout the country. People living in rural Thailand are served by a health volunteer system. More than a million volunteers are responsible to check on the health of families in their village, and refer those needing further care to a primary care facility.



Source: Bureau of Policy and Strategy, Ministry of Public Health

The MoPH sets and delivers national health policy in Thailand. There are seven technical departments and one administration unit working under this office. These are: the Department of Medical Services; the Department of Development of Thai Traditional and Alternative Medicine; the Department of Mental Health; the Department of Disease Control; the Department of Health; the Department of Health Service Support; the Department of Medical Science, and the Food and Drug Administration. The MoPH's total budget in 2007 was USD \$3.9 million or 8.3 percent of the National Budget.²⁰⁴

Other prominent government agencies involved in the health system include the Health Systems Research Institute (HSRI), Thai Health Promotion Foundation (ThaiHealth), the National Health Security Office (NHSO), and the Emergency Medical Institute of Thailand (EMIT). HSRI ensures that policy takes into account relevant health systems knowledge, methods and interventions. ThaiHealth is a relatively new agency that gets its funding from alcohol and tobacco taxes. Its mandate is “to spark, stimulate, support and develop health promotion process(es) that will lead to good health of the Thai people and Thai society.” NHSO is essentially the government's contracting arm, and purchases health services for those covered by the universal care scheme. Finally, EMIT maintains the country's disaster health response system and is the Medical Emergency Coordinating body during disasters.

Legal

The government of Thailand has written key laws and policies to define the legal environment and govern the operations of the health sector.

National Health Security Act:

This act forms the basis for Thailand's universal care coverage scheme. Since 2002, the entire Thai population is entitled to government provided health service. The act created the National Health Security Office (NHSO) which serves as an autonomous agency under the authority of the National Health Security Board (NHSB).²⁰⁵

National Health Act:

This act created the National Health Assembly, which is a key policy setting body. The National Health Assembly consists of public, private, civil society and academic health practitioners. The act also expanded the definition of the health system to include mental and social aspects, which

has been an important change to the sizeable population with mental health needs.

Health Promotion Foundation Act:

This act created an additional 2 percent sales tax on alcohol and tobacco and established the Thai Health Promotion Foundation (ThaiHealth). ThaiHealth's mission is to support all relevant sectors to play a proactive role in health promotion, with no framework or procedural limitation in implementing creative approaches that will lead to better health behavior in the general public.²⁰⁶ This act is widely considered highly progressive, and it remains to be seen if it will help the country address its growing problem with non-communicable diseases (NCDs).

Universal Health Care (UHC) Policy of 2002:

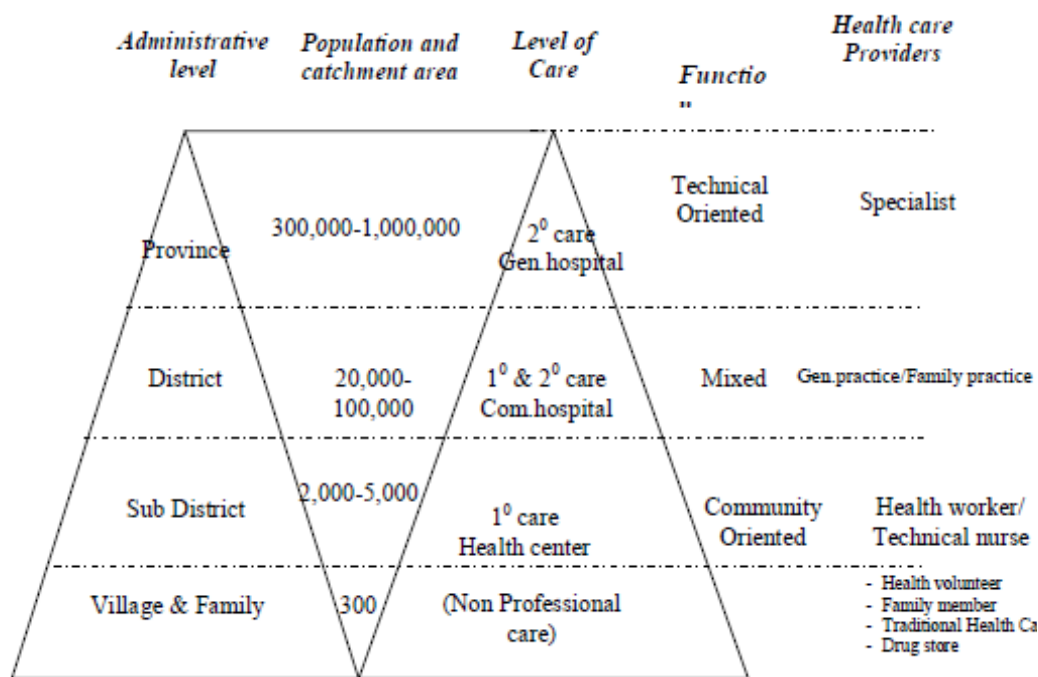
This policy (linked to the National Health Security Act) created the universal care coverage scheme that provides care to 99 percent of people living in Thailand. The policy depends on health insurance to reimburse health workers, hospitals, and clinics for providing care. Prior to this policy's implementation, 20 percent of the population was not covered by any insurance plan. The benefits include inpatient and outpatient treatment at registered primary care facilities and referral to secondary and tertiary care facilities, dental care, health promotion services, and prescription drugs. Commonly referred to as the 30 baht plan, there was a required co-pay from 2002 to 2006, but this has since been abolished and care is now free of charge.²⁰⁷

Health system

Thailand has one of the most effective health systems amongst developing nations and provides universal healthcare to all citizens and documented residents. The MoPH is responsible for preventative and curative healthcare for the country's population. These services are provided by a mix of sub-district health centers, district hospitals, and specialized regional hospitals. Rural care is provided in a similar fashion, but with another layer of monitoring and health evaluation by trained volunteers. Payments for service are distributed to providers through the NHSO. In the private sector, world-class care is provided at market rates. Medical tourism is encouraged, and estimates place the number of annual medical tourists in Thailand at 2 million.²⁰⁸

Public Healthcare

Public sector healthcare is universally accessible for all citizens of Thailand and is free of charge. Patients generally do not have first contact with a doctor. Instead, they see a nurse or other health professional for evaluation and referral. Outside of Bangkok, there are approximately 50,000 of these community health centers that are staffed with health volunteers. At least one clinic per sub-district will provide public health services and primary care by health professionals on an outpatient basis. Medical doctors are generally available only after referrals to a hospital, but some doctors keep clinic hours, and patients do not need referrals for emergency care. Bangkok's primary care system is separate from the rest of the country, but set up in a similar fashion. In urban areas, pharmacies are often a provider of choice and offer basic health services.



Public Sector Healthcare Structure²⁰⁹

Private Healthcare

The private healthcare sector plays a significant role in Thailand's health economy. While many consider private healthcare a network of doctors and hospitals, in reality drugstores and pharmacies make up a sizeable portion of the private healthcare sector in Thailand. The services provided by hospitals and doctors that attract a thriving medical tourism business meet high international standards like the International Organization for Standardization (ISO), but are offered at much lower prices than comparable services in other countries.²¹⁰ There is some concern that the growth of this lucrative private industry has weakened the public healthcare system, but there has not yet been a move to constrain growth. One of the biggest concerns is that the private system attracts doctors away from the public sector, so Thai citizens are left with a lesser level of care.

Disaster Preparedness and Response

Thailand's robust public healthcare system makes it relatively well-prepared for disaster response. There are two types of health responses to disasters: disasters involving communicable diseases as the main hazard (i.e. SARS, avian influenza), and disasters involving health concerns as a secondary hazard (i.e. mass care after a flood). Thailand's MoPH works closely with the WHO, the U.S. Centers for Disease Control (CDC), and the Armed Forces Research Institute of Medical Sciences (AFRIMS) to conduct monitoring and surveillance of diseases of pandemic potential. The broader health care system is robust and has great absorptive capacity. In this sense, Thailand is well-prepared for communicable disease disasters.

Thailand's health system preparedness for caring for those affected by other hazards is less clear. Accounts of Thailand's response to the 2004 tsunami describe a medical system that responded

quickly and decisively. For example, one group of researchers found that “mass casualty plans were immediately activated, and medical personnel, technical experts, and supplies arrived soon after the tsunami struck. Health assessments conducted 1 week after the 2004 tsunami indicated that, despite a huge influx in the number of patients, the medical system was intact and functioning effectively.”²¹¹ Longer term assessments found that mental healthcare was available and utilized by survivors, and that processing of remains was efficient with the help of responding countries.²¹² However, reports also indicate that there may not be a comprehensive national system for medical disaster response. For example, “modes of operation differed between provinces, and preparedness was deficient although hospital systems performed well.”²¹³ A recent assessment by a group of Thai practitioners found that “the problem might be insufficient and unclear national model scheme in terms of task framework and action roles” in the event of disaster.²¹⁴

Hospitals

Thailand has an extensive network of hospitals that together provide many levels of care. Public hospitals include 6 regional-level medical-school hospitals, 25 regional-level hospitals, 47 specialized hospitals, 70 provincial-level general hospitals, and 730 community-level district hospitals controlled by the MoPH. Additionally, the Ministry of Defense runs 59 hospitals.²¹⁵ Nationwide, the public sector provides 80 percent of the hospital care, but only 50 percent of doctors work in the public sector.²¹⁶ This can lead to a skewed doctor to patient ratio, especially in rural areas where public facilities dominate the care available. For example, the chart below shows counts and ratios of doctors, nurses, and beds in Thailand (public or private). Ratios are much higher in Bangkok where private facilities proliferate.

Category		Region					
		Bangkok	Central	North	Northeast	South	Total
Doctors (2006)	Number	6 411	5 113	3 547	3 721	2 259	21 051
	Ratio	886	2 963	6 020	5 738	3 789	2 975
Nurses (2006)	Number	20 778	26 920	18 342	21 154	13 494	101 143
	Ratio	273	563	648	1 009	614	619
Beds (2008)	Number	18 326	38 584	23 770	27 500	17 686	125 866
	Ratio	312	402	500	779	492	502

Numbers and Ratios of Care Resources in Thailand²¹⁷

Laboratories

Thailand’s laboratories are organized and well-secured. The Pathogens and Animal Toxins Act governs laboratories in Thailand, and it clearly lays out authorities and permissions associated with bio-safety. Thailand has 23 biosafety level (BSL)-3 labs and 4 animal BSL-3 labs and is capable of handling highly infectious specimens. The National Institutes of Health even has mobile BSL 2 and 3 laboratories.²¹⁸ The Thai government has identified training to extend capabilities nation-wide and regional collaboration in disease surveillance as areas for improvement.²¹⁹

Challenges in the Healthcare System

Thailand’s healthcare system challenges are typical of those faced by rapidly developing middle income countries. Millennium Development Goals (MDGs) have mostly been met, so the country’s real challenge is building a sustainable, efficient system that can respond to the changing needs of its people. Challenges fall into one of two categories – challenges relating to changing demographics, and challenges related to healthcare financing.

As Thailand develops, non-communicable diseases are consuming more resources than they did previously. Nine of the top ten disease burdens

in Thailand are now NCDs. Cancer, heart disease, and traffic injuries are all common causes of death. The health system struggles to respond to these costly new disease burdens as chronic patients need long-term care. This burden is increased by Thailand's rapidly aging population. Both Thailand's National Health Development Plan and the WHO CCS recognize the importance of this challenge, but neither has presented a possible solution.

Additionally, demographics of border groups present a serious difficulty for Thailand's healthcare system. Border populations have much higher rates of communicable diseases and lower rates of healthcare utilization than their urban counterparts.²²⁰ This is in part due to their transient lifestyle and difficulty of access to healthcare providers.

The Thai government also struggles to balance healthcare funding needs. The universal coverage scheme has greatly improved the overall population health in the country, but this comes at a significant cost. The 11th National Health Development Plan anticipates funding shortfalls in the coming years as the cost of drugs increases, the cost of managing chronic conditions increases, and as the population ages.²²¹ This may be the impetus behind the current government movement for a sufficiency system that provides 'good enough' health care.

Outbreaks

Communicable diseases

Although the Thai government's efforts over the last 30 years have greatly lessened their impact, communicable diseases still cause significant morbidity. Communicable diseases of major concern include HIV/AIDS and tuberculosis (TB). Diseases under surveillance include dengue, malaria, Japanese Encephalitis (JE), cholera, and influenza among many others.

HIV/AIDS is the only communicable disease that falls in the top 10 causes of death in Thailand (the rest are NCDs). The UN estimates that there are 440,000 people living with HIV in Thailand, and that the adult prevalence rate is 1.1 percent.²²² While this disease burden is actually low for the region, there has been an alarming increase in infections among men who have sex with men, particularly in urban areas. The prevalence rate in this group is 25.2 percent.²²³ Thailand is also considered a tuberculosis high burden country

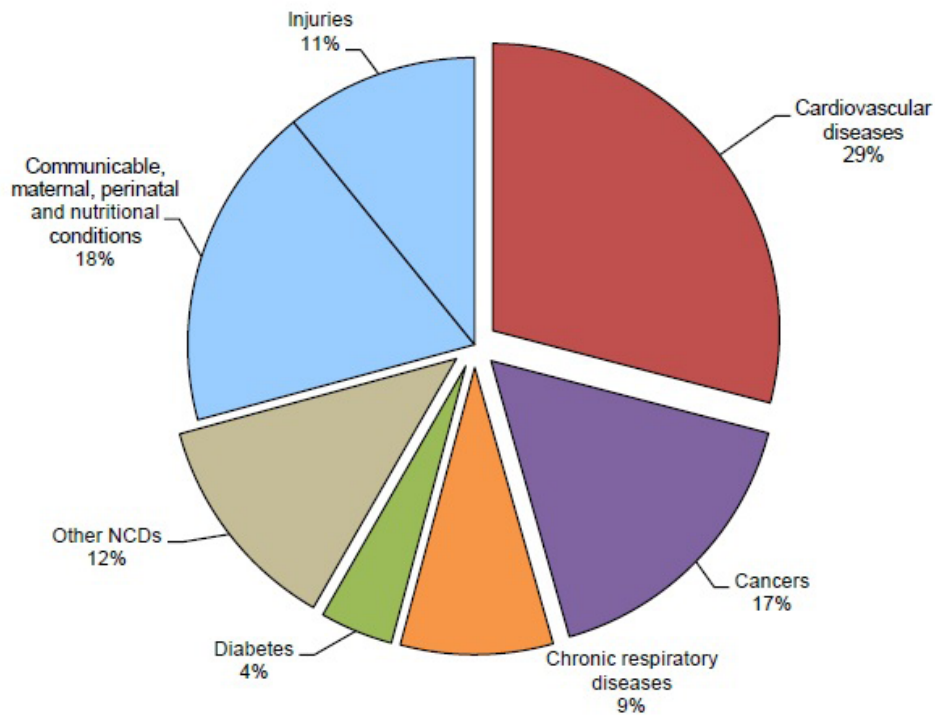
by the WHO. TB is most prevalent among HIV infected patients and those in the Northern provinces. In recent years, Thailand has struggled with the emergence of multi-drug resistant TB, but overall mortality rates have dropped sharply due to advances in medical interventions and better monitoring practices.

Malaria, dengue, and Japanese encephalitis are all endemic to Thailand. They are most problematic in border provinces. A drug resistant strain of malaria is present in the country, and the disease is monitored closely. In 2012, 50 percent of provinces were malaria free, 42 percent experienced low transmission rates, and 8 percent reported high rates of transmission.²²⁴ Cholera and influenza are monitored because they are highly contagious. Generally, widespread outbreaks are rare and infection control procedures are in place.

Non-communicable diseases

Non-communicable diseases are rising in Thailand. NCDs now account for 71 percent of total deaths in the country, with cardiovascular disease and cancers together causing 46 percent of all deaths. While the proportion of deaths directly attributable to NCDs is very high, the disease burden attributable to NCDs is even higher. Eight of the top ten conditions in the disease burden ranking in Thailand are NCDs – traffic related injuries and HIV/AIDS are the only exceptions to this list.²²⁵

Mental health is integrated into the primary care system in Thailand. Treatment is available for both inpatients and outpatients. Schizophrenia is by far the most common diagnosis for inpatient admissions at 59 percent, followed by substance abuse at 17 percent.²²⁶ Primary care providers often serve in a maintenance role, prescribing psychotropic medicines with restriction.²²⁷



Total deaths: 501,000

NCDs are estimated to account for 71% of total deaths.

Proportional Mortality (% of total deaths, all ages) Source: World Health Organization, 2014

Training for Health Professionals

The Government of Thailand provides training for doctors, nurses, and primary care workers (PCW) through its universities. There are 13 public medical schools and 1 private medical school in Thailand.²²⁸ Thailand targets medical student enrollment at 2,000 annually and training to become a doctor lasts six years. Nursing students enroll in a four-year program with an average of 6,000 graduates annually. PCWs train for 2 years at public health colleges.²²⁹ Doctors must serve at least 2 years in the public sector before being eligible to work in the private sector. This measure is intended to keep quality care available in rural areas, but in practice doctors tend to leave for the private sector after the initial commitment and the problem persists.



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Conclusion

Conclusion

The CFE-DMHA Thailand Country Book revealed a number of significant findings in the Thailand disaster management systems, authorities, capabilities, and vulnerabilities. These findings have been outlined in each of the sections of the report, but a summarization of key findings is captured here in the conclusion for quick reference. This country reference book is an important step in developing a common understanding of the disaster management context in Thailand and to identify Thailand's strengths and vulnerabilities for future disaster responses and capability-building engagements.

Finding #1:

Thailand is experiencing climate change effects which have the potential to severely impact the country's economy, culture, and environment.

Currently, the nation is impacted by climate change effects such as high surface temperatures, floods, droughts, storms and sea level rise which place the agriculture industry at risk. There is also the future potential of Bangkok being submerged within two decades. These impacts of climate change will have vast economic, cultural and environmental consequences on the country. To address climate change, the government prepared two major documents. The National Strategy on Climate Change (2008-2012) / National Strategy on Climate Change – Draft (2013-2017) provides a comprehensive guideline of national responses to climate change challenges through its six outlined strategies. The Thailand Climate Change Master Plan (2012-2050) is a framework of integrated policies and action plans relating to climate change.

Finding #2:

The Kingdom of Thailand has greatly strengthened the disaster management structure since the devastation of the 2004 tsunami.

The Thai Government strengthened the country's disaster management structure with the proclamation of the Disaster Prevention and Mitigation Act 2007. The Act dictates the essential legal framework, designates the key government entities, and sanctions the roles and responsibilities of the local government in disaster management. Two major national level plans were developed to institute disaster risk reduction, the National Disaster Prevention and Mitigation Plan 2010-2014 and the Strategic National Action Plan 2010-2019. A robust disaster management organization with command centers and defined responsibilities from the national through the local levels are described. Thailand is also better prepared for disasters with new technologies and equipment to warn the population through the elaborate warning systems. The challenge for the government is to increase disaster awareness and promote a culture of safety awareness with the public to be able to effectively implement the policy and plans.

Finding #3:

Thailand has the opportunity and potential to become the regional hub for humanitarian assistance/disaster relief

During the ASEAN 2014 meeting in Hawaii, United States Secretary of Defense Chuck Hagel discussed with Gen. Nipat Thonglek, Thailand's permanent secretary for Defense, the importance of Thailand in the region and opportunity to amplify its role in HA/DR. This role would greatly benefit Asia due to the high frequency occurrence of natural disasters. Thailand has the optimal location to function as the regional hub for assistance, drills, and training in HA/DR. Presently, the country hosts the Asian Disaster Preparedness Center, a non-governmental organization working on HA/DR issues in the area. The Thai government also readily supports neighbors in the region such as Bangladesh, Burma, and Laos in the aftermath of disasters.



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Appendices

Appendices

Disaster Statistics²³⁰

Table 1: Statistical Disaster Information for Thailand from 2006 to 2015

Disaster type	Occurrence	Deaths	Total affected	Total damage (USD \$ x 1,000)
Drought	4	-	16,482,602	-
Earthquake	2	2	17,539	62,000
Epidemic	2	29	38,608	-
Extreme temperature	1	63	1,000,000	-
Flood	20	1,616	27,523,287	41,292,284
Storm	3	18	1,001,000	-
Total	32	1,740	46,063,036	41,354,284

Disaster Management Laws and Guidelines

Authorities at the national and provincial levels are enforced and encouraged to develop their own DPM action plans as well as budget for plan implementation and exercises. According to the Thailand Hyogo Framework for Action (HFA) 2009-2011, the country's structure and frameworks in the plan have not been effectively implemented due to the lack of disaster awareness and a lack of culture of safety awareness by the public. Below is a listing of the main disaster plans and act.

Disaster Prevention and Mitigation Act 2007 (DPMA Act)

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.

Disaster Prevention and Mitigation Plan 2010-2014

The principal national disaster management plan which focuses on minimizing disaster risks and loss of life and property. The plan intends to structure the operations and preparedness process across the 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.

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

The plan identifies the disaster risk reduction vision, objectives, goals and strategies of Thailand. It addresses the implementation of the Hyogo Framework for Action in Thailand. The SNAP abides by the strategic authorities of the United Nations Partnership Framework developed by the Royal Government of Thailand and the United Nations Country Team.

Department of Defense DMHA Engagements in the Past Five Years (FY 2010-2014)

The following list contains US DoD engagements related to disaster management that involved Thailand from 2010 to 2014.

FY 14

#	Date	Name	Sponsoring Agency/ POC	Location
1	24-27 June 2014	Thailand Critical Care Air Transport SME	PACAF	Thailand
2	20-24 May 2014	CARAT Thailand FTX	PACFLT	Thailand
3	25-28 Feb 2014	Trilat Infectious Disease SMEE	USPACOM J07	Thailand
4	21-24 Feb 2014	Cyber Defense SMEE	USARPAC	Thailand

FY 13

#	Date	Name	Sponsoring Agency/ POC	Location
1	20-22 Aug 2013	Thailand-Myanmar-US Trilat on HA/DR	USPACOM J07	Thailand
2	22-26 July 2013	Thailand Log SMEE	USARPAC	Thailand
3	10-12 July 2013	Thailand G2 SMEE	USARPAC	Thailand
4	17-28 June 2013	Hanuman Guardian 13	USARPAC	Thailand
5	11-27 June 2013	C-IED at Hanuman Guardian 2013	USARPAC	Thailand
6	3-12 June 2013	CARAT 13 (Ground)	MARFORPAC	Thailand
7	6-20 Feb 2013	C-IED Training & STX at Cobra Gold 2013	USARPAC	Thailand
8	22 Jan-25 Feb 2013	Cobra Gold 2013	MARFORPAC	Thailand
9	1 Jan-31 Mar 2013	Thailand (RTA) GEOINT SMEE	USARPAC	Thailand

FY 12

#	Date	Name	Sponsoring Agency/ POC	Location
1	14-17 Aug 2012	Royal Thai Army G-2 Biometrics SMEE	USARPAC	Thailand
2	23-27 July 2012	Thailand Log SMEE	USARPAC	Thailand
3	25 Jun-8 Jul 2012	C-IED Training at BAE 12	USARPAC	Thailand
4	17-26 June 2012	Hanuman Guardian 12	USARPAC	Thailand
5	20-24 Feb 2012	Thailand SMEE Royal Thai Police	USARPAC	Thailand
6	7-14 Feb 2012	C-IED Training at Cobra Gold 2012 TTX	USARPAC	Thailand
7	30 Jan-9 Feb 2012	Lao MMD Lab Training Workshop at AFRIMS	PACAF	Thailand
8	25-27 Jan 2012	Royal Thai Army G-2 OSINT SMEE	USARPAC	Thailand
9	21-28 Jan 2012	Thailand Air Base Equipment SMEE	PACAF	Thailand

FY 11

#	Date	Name	Sponsoring Agency/ POC	Location
23	7-9 Sept 2011	APMCLS TTX Thailand	CFE	Thailand
24	2-10 Sept 2011	Thailand Log SMEE	USARPAC	Thailand
25	22-26 Aug 2011	RTAF SMEE	PACAF	Thailand
26	22-26 Aug 2011	RTN SMEE	PACFLT	Thailand
27	8-10 Aug 2011	RTAF CBERN DECON AE SMEE-PAC ANGEL 11	PACAF	Thailand
28	1-5 Aug 2011	Asia Pacific Military Nursing Symposium	PACAF	Thailand
29	12 Jul-8 Aug 2011	Balance Torch – Infantry SMEE	MARFORPAC	Thailand
30	20 Jun-22 Jul 2011	Balance Torch	SOCAPAC	Thailand
31	13-17 Jun 2011	Thai Navy Intel Exchange	PACFLT	Thailand
32	6-10 Jun 2011	Comprehensive Blast Injury Seminar	PACAF, CFE	Thailand
33	11-20 May 2011	CARAT 11 (Ground)	MARFORPAC	Thailand
34	9-13 May 2011	TH MTWS 11-2 (RTMC)	MARFORPAC	Thailand
35	1 May-30 June 2011	Thailand CMO SMEE	USARPAC	Thailand
36	21-22 Apr 2011	Humanitarian Assit Resp Training	CFE	Thailand
37	14-25 Mar 2011	Security Forces MWD/NLW SMEE	PACAF	Thailand
38	9-25 Mar 2011	COPE TIGER 11FTX	MARFORPAC	Thailand
39	7-18 Feb 2011	COBRA GOLD	USARPAC	Thailand
40	31 Jan-4 Feb 2011	Thai Navy Intel Exchange	PACFLT	Thailand

APPENDICES







FY 10

#	Date	Name	Sponsoring Agency/ POC	Location
1	17-23 Sept 2010	Thailand Log SMEE	USARPAC	Thailand
2	10-19 Aug 2010	Thai COIN SMEE #2	USARPAC	Thailand
3	21-25 June 2010	TH MTWS 10-2A (RTMC)	MARFORPAC	Thailand
4	14-25 June 2010	Thai COIN SMEE #1	USARPAC	Thailand
5	13-21 May 2010	CARAT 10 (Ground)	MARFORPAC	Thailand
6	4-17 Feb 2010	COBRA GOLD 2010	MARFORPAC	Thailand
7	15-22 Jan 2010	US-RTN Submarine SMEE	PACFLT	Thailand
8	1 Jan- 31 Mar 2010	Cobra Gold	USARPAC	Thailand
9	3-12 Dec 2009	TH MTWS 10-1A (RTMC)	MARFORPAC	Thailand
10	16-20 Nov 2009	Thailand Intel Exchange Conference #1	USARPAC	Thailand

Disaster Management Partners in Thailand

The following contact list is included with the intent to provide planners and deploying personnel initial contacts for disaster management-related organizations in Thailand. Out of consideration for privacy concerns, this list does not contain individual contact information, but instead has email addresses and telephone numbers for offices.




Organization	Office	Email	Phone	Description	Logo
ACTED	Regional Coordination Office		66 2 634 4423	ACTED is a non-sectarian global NGO that works with populations in crisis. It runs a regional office in Bangkok and has programs to assist refugees from Burma/Myanmar. The office was set up in 2013 to provide logistical, financial and administrative support to operations in the region, but also to better streamline ACTED's interventions and develop a more focused and coherent approach that meets the needs and challenges of the South and South-East Asia region. ²³¹	
Adventist Development and Relief Agency	Country Office	office@adrathailand.org	66 53 839 401 402	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. Community-based development includes a wide range of activities leading to improved health, economic and social well-being, and self-reliance. 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. ²³²	
Asia Development Bank	Resident Mission		66 2 263 5300	ADB works closely with Thailand's government to ensure its economic growth remains strong. ADB's country partnership strategy (2011-2016) focuses 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. ²³³	

Asian Disaster Preparedness Center	Head Office	adpc@adpc.net	66 2 298 0681 92	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. ²³⁴	
Australian Aid				NOTE: AusAID has not been active in Thailand since 2003 when the Thai government requested that the Australian government recognize Thailand's transition to donor economy from recipient economy. ²³⁵	
Food and Agriculture Organization	Regional Office for Asia and the Pacific	FAO-THA@fao.org	66 2 697 4000	FAO has been collaborating with the Thailand since 1947. Now 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. ²³⁶	
German Development Cooperation	Country Office	giz-thailand@giz.de		GIZ concentrates on the areas of peace and security, the environment, rural development and climate change in Thailand. Engagement is limited due to Thailand's ability to self-sustain without foreign intervention, but GIZ still maintains a country office. ²³⁷	
International Federation of Red Cross	Thai Red Cross	intertrc@redcross.org.th	66 2 256 4037	The Thai Red Cross provides six major services: Blood Services, Disaster Management Services, Safety Services, Health Services, Social Services, Red Cross Youth and Volunteer Services. ²³⁸	
International Labour Organization	Regional Office	sro-bkk@ilo.org	66 2 288 1798	The ILO's operations in Thailand focus on worker's rights as many broader employment and development issues are less significant than in other Asia-Pacific countries. Current focus areas include social services and protections, enforcement of labor inspections, and strengthening collective bargaining institutions. ²³⁹	

International Monetary Fund	Technical Assistance Office for Lao PDR and Myanmar		66 2 282 4753 4	The IMF's office in Thailand serves to provide assistance to neighboring Lao PDR and Myanmar. Other involvement is mostly in a consultative capacity. ²⁴⁰	
International Organization for Migration	Country Office	iombangkok@iom.int	66 2 343 9300	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. IOM maintains 20 offices in the country and is present in nine refugee camps along the Thai-Myanmar border. ²⁴¹	
Japan International Cooperation Agency	Country Office	ti_oso_rep@jica.go.jp	66 2 261 5250	JICA in Thailand provides cooperation in economic growth, poverty reduction, disaster mitigation, other development issues such as health and governance. ²⁴²	
Joint United Nations Programme on HIV/AIDS	Regional Office	rstap@unaids.org	66 2 288 1234	National HIV prevalence remains low in Thailand through support from the Global Fund to Fight AIDS. Much of UNAID's presence in Thailand is devoted to coordinating support for other countries in the Asia-Pacific. ²⁴³	
Office for the Coordination of Humanitarian Affairs	Regional Office for Asia and the Pacific	ocha-roap@un.org	66 2 288 1234	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 ²⁴⁴	
Save the Children	Country Office	info.thailand@savethechildren.org	66 2 684 1286	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. ²⁴⁵	
The Asia Foundation	Country Office	TAF-TH@asiafound.org	66 2 233 1644	The Asia Foundation's programs in Thailand promote better governance to support economic growth and strengthen the rule of law. Building on its wide network of partners, the Foundation supports peaceful conflict mitigation, criminal justice reform, democratic institutions and processes, and citizen voice in environmental governance. ²⁴⁶	

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United Nations Children's Fund	Country Office	thailandao@unicef.org	66 2 356 9499	UNICEF focus areas in Thailand are child protection, education, HIV/AIDS, and emergency response. ²⁴⁷	
United Nations Development Programme	Country Office	info.thailand@undp.org	66 2 304 9100	UNDP in Thailand has shifted its emphasis to policy support, technical assistance, and knowledge management since Thailand's ascent to middle-income country. ²⁴⁸	
United Nations High Commissioner for Refugees	Country Office	thaba@unhcr.org	66 2 288 1234	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, and the organization has 4 field offices in Thailand. The organization works on ensuring refugees have adequate accommodation, fair protections, and all basic needs are met. ²⁴⁹	
United Nations Office for Disaster Risk Reduction	Regional Office		66 022882894	The UNISDR Asia and Pacific office in Bangkok serves more than 16 countries. 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. ²⁵⁰	
United Nations Population Fund	Country Office	unfpa.thailand@unfpa.org	66 2 687 0138	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. ²⁵¹	
United States Agency for International Development	Country Mission	info-rdma@usaid.gov	66 2 257 3000	USAID's programs in Thailand focus on supporting the responsible use of natural resources; reducing the incidence of HIV/AIDS; preventing human and wildlife trafficking; promoting peace and civic reconciliation; and helping civil society groups work more closely with the government. Bangkok is also home to USAID's regional mission, which is involved with the Lower Mekong Initiative. ²⁵²	
The World Bank	Country Office	Thailand@worldbank.org	66 2 686 8300	The World Bank in the Thailand is focusing on long-term strategic and structural development challenges as it strives to transition to an upper middle income country. ²⁵³	

World Food Programme	Country Office	WFP.Bangkok@wfp.org	66 2 655 4115	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. ²⁵⁴	
World Health Organization	Country Representative	registrywhothai@searo.who.int	66 2 591 8198	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. ²⁵⁵	
World Vision	Country Office	info@worldvision.or.th	66 2 022 9200	World Vision provides emergency assistance to children and families affected by natural disasters and civil conflicts, works with communities to develop long-term solutions to alleviate poverty, and advocates for justice on behalf of the poor. ²⁵⁶	

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.

Passport/Visa

You must have a passport valid for at least six months beyond the date of your intended arrival in Thailand. An entry/exit visa is not required if you are visiting for fewer than 30 days and if you have a return ticket to the United States or an onward ticket to another country. If you plan to stay longer than 30 days, you must obtain a tourist visa at the Royal Thai Embassy or Consulate in the United States prior to arriving in Thailand. The tourist visa must be used within 90 days from the date of issue and allows an initial stay of 60 days. After arrival in Thailand, a tourist visa may be extended twice, each time for an additional 30 days. For the most up-to-date visa information, visit <http://bangkok.usembassy.gov/service/thai-visas-for-americans.html>.

Emergency Contact Information

For U.S. Citizens, contact the U.S. Embassy in Bangkok:

95 Wireless Road
Bangkok 10330, Thailand
Email address: acsbkk@state.gov
Switch Board: 66 2 205 4000
Telephone: 66 2 205 4049
Fax : 66 2 205 4103

Currency Information

The currency in Thailand is Baht.

Additional Information

- Before visiting Thailand, the CDC advises travelers to obtain the following vaccinations:
 - Standard routine vaccinations (all travelers)
 - Hepatitis A (most travelers)
 - Typhoid (most travelers)
 - Hepatitis B (some travelers)
 - Rabies (some travelers)

- Japanese Encephalitis (some travelers)
- Malaria (some travelers)
- Yellow Fever (some travelers)
 - Thailand Calling Code: +66 (2) (Bangkok)
 - Thailand Time Zone: UTC/GMT +7 hours

Thailand Characteristics

Country Name: Conventional long form: Kingdom of Thailand

Conventional short form: Thailand

Government: The Kingdom of Thailand is a constitutional monarchy. Their legal system consists of civil law and common law influences throughout three branches of government; Executive, Legislative, and Judicial. Active public political participation and political demonstrations are common.

Language: Thai (official) and English (unofficial, and used only among elite)

Geography: The Kingdom of Thailand is located in Southeastern Asia. Thailand is bordered by Burma to the northwest, Laos to the north and east, Cambodia to the southeast, Malaysia to the south, and the Andaman Sea to the west and the Gulf of Thailand to the east. The country consists mostly of mountainous terrain in the north, including the Khorat Plateau in the northeast, while the south is composed of wide coastal plains. The country, twice as large as the state of Wyoming has a population of approximately 66,720,153 people (July 2011 est.), making it the 20 most populous in the world. 10.3% of the country's populations, 6.902 million people (2010 est.); reside in Bangkok, the capital of Thailand.

People: There are nearly 68 million people living in Thailand. The country is not ethnically diverse, with 95% of the population identifying as ethnically Thai. The remaining 5% is evenly divided among Burmese, other, and unspecified groups. 94% of the population is Buddhist, 5% is Muslim, and 1% identify as other.

Military Branches: Thailand's military is comprised of the Royal Thai Army (includes Thahan Phran and Army Reserve Force Students), the Royal Thai Navy (includes Royal Thai Marine

Corps and Royal Thai Navy SEALs), and the Royal Thai Air Force. According to a 2005 estimate, Thailand spent 1.8% of its GDP on military expenditures, which ranks the nation 82nd in the world.

Thailand has traditionally placed an emphasis on internal security and counterinsurgency warfare, yet over the past decade, Thailand has pursued a doctrinal shift emphasizing conventional warfare because of the decrease in insurgent activity. Thailand currently engages in counter-insurgency operations in the south against the ethnic Malays and Islamic rebels. The Insurgency intensified in 2004, when terrorist attacks on ethnic Thai civilians occurred. The RTAF responded with heavy armed tactics. Currently there is a plan by the Royal Thai Government to hand over responsibility of the conflict to a civilian body.

In recent years the RTAF has begun increasing its role on the international stage by providing peacekeeping forces to the United Nations, in the International Force for East Timor from 1999 to 2002 and in the multinational force in Iraq and the mission there from 2003 to 2004.

Risks and vulnerabilities

- The Department of State warns U.S. citizens that there is some risk of terrorism in Thailand. In April 2014, Thai police arrested two individuals with suspected ties to Hizballah. Additionally, in January 2012, Thai police discovered a large quantity of explosive materials linked to suspected Hizballah operatives. In February 2012, individuals from Iran—who police believe were plotting a terrorist attack against foreign interests in Thailand—detonated explosive devices on a busy street in central Bangkok while they were trying to evade law enforcement officials.
- U.S. citizens may encounter a heightened military presence throughout Thailand, particularly in Bangkok, Chiang Mai, and the northeast. Individuals—including foreigners—may be detained for publicly criticizing Thailand’s current political environment, the National Council for Peace and Order, or the monarchy. Security operations against possible demonstrations have led to disruptions to traffic as well as to some public transport services, and restricted access to some areas around major shopping and hotel districts in central Bangkok.

- The deep south of Thailand has experienced almost daily incidents of criminally and politically motivated violence for several years, including acts attributed to armed local separatist groups. Although the separatist groups have primarily targeted security officials and Thai government interests in the southern provinces, they sometimes target public and commercial areas, including railways and areas where foreigners may congregate. In March 2014, at least 50 violent incidents killed more than 30 people in these provinces. On May 6, 2014, four separate bomb blasts injured five people in Hat Yai. On May 24, 2014, three people were killed and 55 injured in multiple bombing attacks in Pattani, Yala, and Narathiwat provinces.
- The Thai/Burma border region remains a possible flashpoint for conflicts between the Burmese Army and armed ethnic opposition groups based in Thailand as well as clashes between Thai security forces and armed drug traffickers. Pirates, bandits, and drug traffickers operate in these border areas. It is possible that significant flare-ups of military activity on the Burmese side of the border could spill over into adjacent areas of northern Thailand.

Health Information

Medicines/Items:

- Have enough prescription medication to last during the trip. Keep them in their original prescription bottles and always in carry-on luggage.
- Medicine for diarrhea, usually over-the-counter.
- Iodine tablets and portable water filters to purify water if bottled water is not available.
- Antibacterial hand wipes or alcohol-based hand sanitizer containing at least 60% alcohol.
- To prevent insect/mosquito bites, bring:
 - Lightweight long-sleeved shirts, long pants, and a hat to wear outside, whenever possible.
 - Flying-insect spray to help clear rooms of mosquitoes.

During the Trip:

Many diseases like malaria and dengue are spread through insect bites. One of the best protections is to prevent insect bites by:

- Using insect repellent (bug spray) with 30%-50% DEET. Picaridin, available in 7% and 15% concentrations, needs more frequent application.
- Wearing long-sleeved shirts, long pants, and a hat outdoors.
- Remaining indoors in a screened or air-conditioned area during the peak biting period for malaria (dusk and dawn).

Food and Water:

Diseases from food and water are the leading cause of illness in travelers. Follow these tips for safe eating and drinking:

- Wash hands often with soap and water, especially before eating. If soap and water are not available, use an alcohol-based hand gel (with at least 60% alcohol).
- Drink only bottled or boiled water, or carbonated (bubbly) drinks in cans or bottles. Avoid tap water, fountain drinks, and ice cubes. If this is not possible, learn how to make water safer to drink.
- Do not eat food purchased from street vendors.
- Make sure food is fully cooked.
- Avoid dairy products, unless they have been pasteurized.
- Check bottles for cracked seals.

Traveling with Medications

When medications are necessary for travel, it is important to remember the following:

- Original containers: All medications should be carried in their original containers with clear labels, so the contents are easily identified. Although many travelers like placing medications into small containers or packing them in the daily-dose containers, officials at ports of entry may require proper identification of medications.
- Prescriptions: Travelers should carry copies of all prescriptions, including their generic names.

- Physician notes: For controlled substances and injectable medications, travelers are advised to carry a note from the prescribing physician on letterhead stationery.
- Restricted medications: Travelers should be aware that certain medications are not permitted in certain countries. If there is a question about these restrictions, particularly with controlled substances, travelers are recommended to contact the embassy or consulate of the destination country.

Acronyms and Abbreviations

Acronym	Definition
AADMER	Agreement On Disaster Management and Emergency Response
ADPC	Asian Disaster Preparedness Center
AEC	ASEAN Economic Community
AEP	Alternative Energy Development Plan
AFRIMS	Armed Forces Research Institute of Medical Sciences
AH	Asian Highway
AOE	Airport of Entry
AOT	Airports of Thailand
AP	Access Point
ARDEX	Disaster Emergency Response Simulation Exercise
ASEAN	Association of Southeast Asian Nations
AWB	An Air Waybill
BMA	Bangkok Metropolitan Administration
BMTA	Bangkok Mass Transit Authority
BOT	Bank of Thailand
BSL	Biosafety Level
BTS	Bangkok Mass Transit System
BTS	Base Transceiver Stations
CAT	CAT Telecom Public Company Limited
CBDRM	Community Based Disaster Risk Management
CCCM	Camp and Collective Management
CCS	Country Collaboration Strategy
CDC	Centers For Disease Control
CPI	Corruption Perception Index
DCA	Department of Civil Aviation
DDPM	Department of Prevention and Mitigation
DOH	Department of Highways
DORR	Department of Rural Roads
DPM	Disaster Prevention and Mitigation
DPMA	Disaster Prevention and Mitigation Academy
DPMA	Disaster Prevention and Mitigation Act
EGAT	Electricity Generating Authority of Thailand
EMIT	Emergency Medical Institute of Thailand
EPPO	Energy Policy and Planning Office

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Acronym	Definition
ESCAP	Social Commission For Asia and the Pacific
ETA	Expressway and Rapid Transit Authority of Thailand
FBA	Foreign Business Act
FDI	Foreign Direct Investment
FIT	Feed-In-Tariff
GII	Gender Inequality Index
GMS	Greater Mekong Subregion
HA/DR	Humanitarian Assistance and Disaster Relief
HDI	Human Development Index
HFA	Hyogo Framework For Action
HSRI	Health Systems Research Institute
IMT-GT	Indonesia-Malaysia-Thailand Growth Triangle
IOM	International Organization For Migration
IPR	Intellectual Property Right
ISO	International Organization For Standardization
JE	Japanese Encephalitis
LMI	Lower Mekong Initiative
M&A	Mergers and Acquisitions
MCOT	Mass Communications Organization of Thailand
MEA	Metropolitan Electricity Authority
MOAC	Ministry of Agriculture and Cooperatives
MOD	Ministry of Defense
MOED	Ministry of Education
MOFA	Ministry of Foreign Affairs
MOI	Ministry of Interior
MOICT	Ministry of Information and Communication Technology
MONRE	Ministry of Natural Resources and Environment
MOPH	Ministry of Public Health
MOST	Ministry of Science and Technology
MOT	Ministry of Transport
MOTC	Ministry of Transport and Communications
MRT	Mass Rapid Transit
MRTA	Mass Rapid Transit Authority
MSDHS	Ministry of Social Development and Human Security
MVV	Mobile VSAT Vehicle
MW	Megawatts

Acronym	Definition
MWA	Metropolitan Waterworks Authority
NBT	National Broadcasting Services of Thailand
NBTC	National Broadcasting and Telecommunications Commission
NDPMC	National Disaster Prevention and Mitigation Committee
NDPMP	National Disaster Prevention and Mitigation Plan
NDWC	National Disaster Warning Center
NESDB	National Economic and Social Development Board
NHSB	National Health Security Board
NHSO	National Health Security Office
OCCC	Office of Climate Change Coordination
OTOP	One Tambon One Product
OTOS	One Tambon-One Search and Rescue Team
PAT	Port Authority of Thailand
PCW	Primary Care Workers
PEA	Provincial Electricity Authority
PPP	Purchasing Power Parity
PTD	Post and Telegraph Department
PV	Photovoltaic
PWA	Provincial Waterworks Authority
RID	Royal Irrigation Department
SASOP	Standard Operational Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations
SNAP	Strategic National Action Plan
SPP	State Partnership Programs
SRT	State Railway of Thailand
TAO	Tambon Administration Organization
TB	Tuberculosis
TIP	Trafficking In Persons
TOT	Telephone Organization of Thailand
TPBS	Thai Public Broadcasting Service
UHC	Universal Health Care
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFCC	Framework Convention On Climate Change
UNISDR	United Nations International Strategy For Disaster Reduction
UNPAF	United Nations Partnership Framework

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Acronym	Definition
UNV	United Nations Volunteers
USAID	U.S. Agency For International Development
USAID-OFDA	U.S. Agency For International Development Office of Foreign Disaster Assistance
USG	United States Government
USGS	United States Geological Survey
WHO	World Health Organization
WMO	World Meteorological Organization

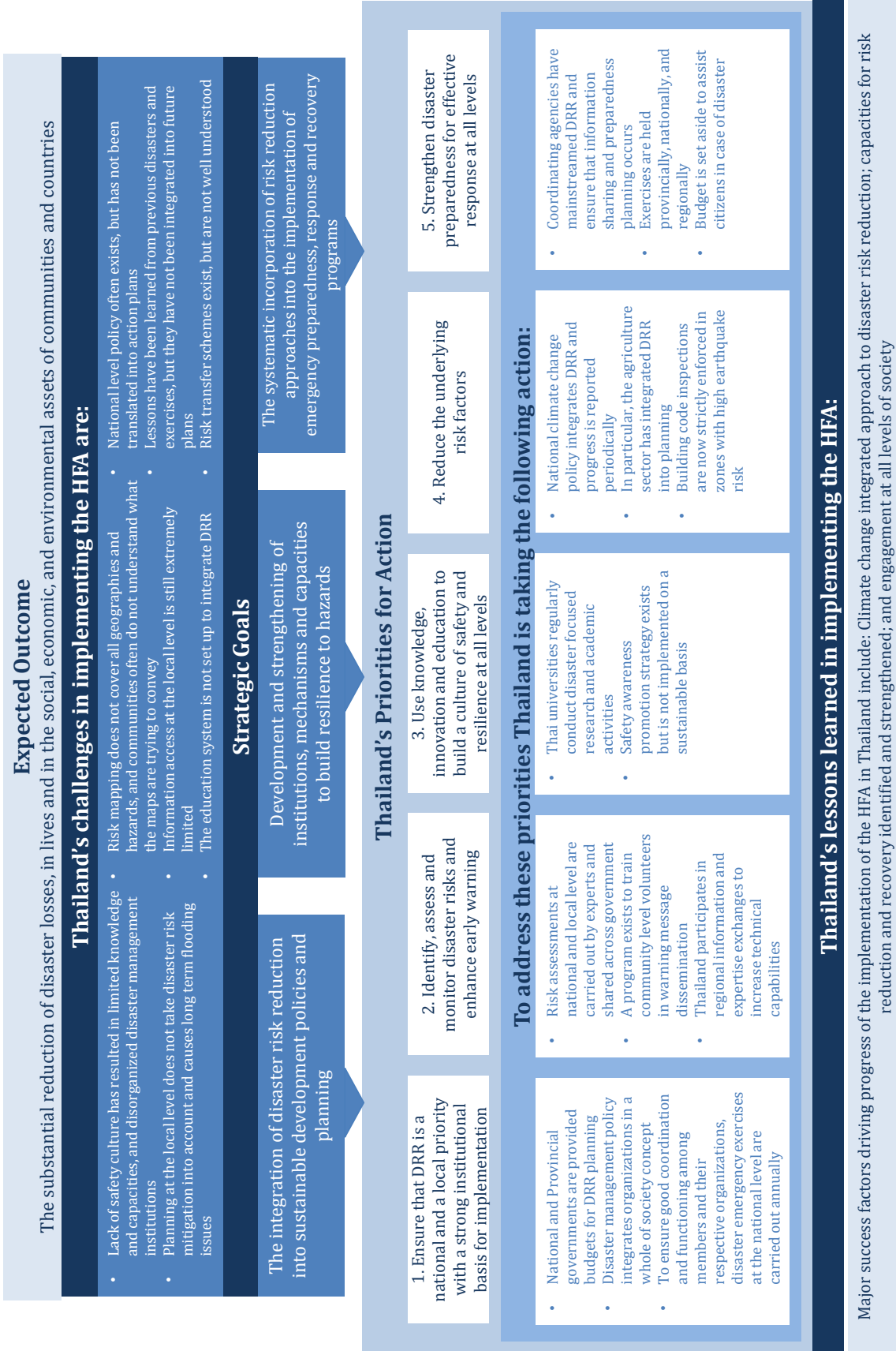
HFA Country Progress Report

The Hyogo Framework for Action (HFA) was adopted as a guideline to reduce vulnerabilities to natural hazards. The HFA assists the efforts of these countries to become more resilient to, and manage better the hazards that threaten their development. Below is a summarization of the 2009-2011 results of the HFA for Thailand. The full report is available at http://www.preventionweb.net/files/18764_tha_NationalHFAProgress_2009-11.pdf



Thailand Summary of the Hyogo Framework for Action (2009– 2011): Building the Resilience of Nations and Communities to Disasters (Hyogo Framework)

United Nations
International Strategy for Disaster Reduction



Summarization of Thailand's National Progress Report on the Implementation of Hyogo Framework for Action (2009-2011)

The Hyogo Framework for Action (HFA) was adopted as a guideline to reduce vulnerabilities to natural hazards. The HFA assists the efforts of these countries to become more resilient to, and manage better the hazards that threaten their development. Below is a summarization of the 2009-2011 results of the HFA for Thailand. The full report is available at http://www.preventionweb.net/files/18764_tha_NationalHFAprogress_2009-11.pdf.

Overall, the level of HFA progress reported for Thailand exceeded regional averages for Asia-Pacific. Thailand scored slightly below the regional average on early warning systems and risk assessment. The areas where Thailand scored above the regional average were DRR policy, reducing underlying risk factors, and education and information. Thailand scored well above the regional average in preparedness for effective response.



Future Outlook Area 1: Integration of disaster risk considerations into sustainable development policies, planning and programming at all levels.	
Challenges:	Linking community, local administration, and sub-national disaster management plans with the National Disaster Management Plan is very difficult. Most community disaster management plans are designed by policy makers rather than villagers, therefore, community people have to be able to participate more fully in creating the plan.
Future Outlook Priorities:	The improvement national policy should be integrated efforts toward regional and international level in terms of trans-boundary information sharing, public awareness for safety culture in our society and a user friendly early warning system together with a multi hazard risk assessment.
Future Outlook Area 2: Development and strengthening of institutions, mechanisms, and capacities at all levels to build resilience to hazards.	
Challenges:	The local administration organizations have to learn and understand their roles and responsibilities. Community Based Disaster Management Approach is necessary to equip the local people to ensure their preparedness and involvement in diverting or encountering disaster impacts.
Future Outlook Priorities:	To promote the local administration agencies to realize and be aware of disaster preparedness and rely on themselves. The proper budget allocation from central government will be transferred to local governments together with knowledge dissemination.
Future Outlook Area 3: Incorporation of risk reduction approaches in the preparedness, response, and recovery programs during the reconstruction of affected communities.	
Challenges:	Stakeholder participation is difficult given uneven understanding of disaster risks, responsibilities, and policies.
Future Outlook Priorities:	A collective of lesson learned from community, provincial, national, regional and global level in disaster risk reduction and multi- sector cooperation are the pivotal in building our regional resilience.

Thailand National Progress Report on the Implementation of Hyogo Framework for Action (2009-2011)

Many countries around the world are committed to taking action to reduce disaster risk. The Hyogo Framework for Action (HFA) was adopted as a guideline to reduce vulnerabilities to natural hazards. The HFA assists the efforts of these countries to become more resilient to, and manage better the hazards that threaten their development. Below are the 2009-2011 results of the HFA for Thailand:

Priority for Action #1: Making disaster risk reduction a policy priority, institutional strengthening			
Core Indicator	Indicator Description	Level of Progress Achieved*	Regional Average Score
1	National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels.	4	3.48
2	Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels.	3	3.03
3	Community Participation and decentralization is ensured through the delegation of authority and resources to local levels.	4	3.11
4	A national multi sectoral platform for disaster risk reduction is functioning.	4	3.11
Priority for Action #2: Risk assessment and early warning systems			
1	National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.	3	3.14
2	Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.	3	3.07
3	Early warning systems are in place for all major hazards, with outreach to communities.	3	3.29
4	National and local risk assessments take account of regional / trans-boundary risks, with a view to regional cooperation on risk reduction.	3	3.29
Priority for Action #3: Education, information and public awareness			
1	Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc).	4	3.03
2	School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.	3	3.03
3	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.	4	2.55
4	Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.	4	3.44

Priority for Action #4: Reducing underlying risk factors			
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.	4	3.14
2	Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.	3	2.74
3	Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities.	2	2.88
4	Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.	4	2.84
5	Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes.	3	3.0
6	Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.	4	2.73
Priority for Action #5: Preparedness for effective response			
1	Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.	4	3.29
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	3.42
3	Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.	5	3.33
4	Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews.	4	3.34

***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

Country Profile

Sourced directly from: Central Intelligence Agency World Factbook.²⁵⁷

Introduction: Thailand

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 taken over by a European power. A bloodless revolution in 1932 led to 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 United States in Vietnam. Thailand since 2005 has experienced several rounds of political turmoil including a military coup in 2006 that ousted then Prime Minister Thaksin Chinnawat, followed by large-scale street protests by competing political factions in 2008, 2009, and 2010. Thaksin's youngest sister, Yinglax Chinnawat, 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, Yinglax was removed from office and in late May 2014, the Royal Thai Army staged a coup against the caretaker government. Thailand has also experienced violence associated with the ethno-nationalist insurgency in Thailand's southern Malay-Muslim majority provinces. Since January 2004, thousands have been killed and wounded in the insurgency.

Geography: Thailand

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
Country comparison to the world: 51
Land: 510,890 sq. km
Water: 2,230 sq. km

Land boundaries:

Total: 4,863 km,
Burma 1,800 km, Cambodia 803 km, Laos 1,754 km, Malaysia 506 km

Coastline:

3,219 km

Maritime claims:

Territorial sea: 12 nm
Exclusive economic zone: 200 nm
Continental shelf: 200 m or 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 extremes:

Lowest point: Gulf of Thailand 0 m
Highest point: Doi Inthanon 2,576 m

Natural resources:

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

Land use:

Arable land: 30.71%
Permanent crops: 8.77%
Other: 60.52% (2011)

Irrigated land:

64,150 sq. km (2007)

Total renewable water resources:

438.6 cu km (2011)

Freshwater withdrawal (domestic/ industrial/agricultural):

Total: 57.31 cu km/yr (5%/5%/90%)
Per capita: 845.3 cu m/yr (2007)

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

People and Society: Thailand

Nationality:

Noun: Thai (singular and plural)
Adjective: Thai

Ethnic groups:

Thai 95.9%, Burmese 2%, other 1.3%, unspecified 0.9% (2010 est.)

Languages:

Thai (official) 90.7%, Burmese 1.3%, other 8%
Note: English is a secondary language of the elite (2010 est.)

Religions:

Buddhist (official) 93.6%, Muslim 4.9%, Christian 1.2%, other 0.2%, none 0.1% (2010 est.)

Population:

67,741,401
Country comparison to the world: 21

Age structure:

0-14 years:
17.6% (male 6,117,993/female 5,827,981)

15-24 years:
15% (male 5,194,332/female 4,999,669)

25-54 years:
46.9% (male 15,685,882/female 16,097,245)

55-64 years:
10.9% (male 3,468,620/female 3,893,925)

65 years and over:
9.8% (male 2,830,418/female 3,625,336) (2014 est.)

Dependency ratios:

Total dependency ratio: 38.6 %
Youth dependency ratio: 24.7 %
Elderly dependency ratio: 13.9 %
Potential support ratio: 7.2 (2014 est.)

Median age:

Total: 36.2 years
Male: 35.3 years
Female: 37.2 years (2014 est.)

Population growth rate:

0.35% (2014 est.)
Country comparison to the world: 165

Birth rate:

11.26 births/1,000 population (2014 est.)
Country comparison to the world: 175

Death rate:

7.72 deaths/1,000 population (2014 est.)
Country comparison to the world: 110

Net migration rate:

0 migrant(s)/1,000 population (2014 est.)
Country comparison to the world: 81

Urbanization:

Urban population: 34.1% of total population (2011)

Rate of urbanization: 1.6% annual rate of change (2010-15 est.)

Major urban areas - population:

BANGKOK (capital) 8.426 million; Samut Prakan 1.212 million (2011)

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: 0.97 male(s)/female

55-64 years: 0.97 male(s)/female

65 years and over: 0.82 male(s)/female

Total population: 0.98 male(s)/female (2014 est.)

Maternal mortality rate:

48 deaths/100,000 live births (2010)

Country comparison to the world: 110

Infant mortality rate:

Total: 9.86 deaths/1,000 live births

Country comparison to the world: 142

Male: 10.82 deaths/1,000 live births

Female: 8.85 deaths/1,000 live births (2014 est.)

Life expectancy at birth:

Total population: 74.18 years

Country comparison to the world: 115

Male: 71 years

Female: 77.54 years (2014 est.)

Total fertility rate:

1.5 children born/woman (2014 est.)

Country comparison to the world: 192

Contraceptive prevalence rate:

79.6% (2011)

Health expenditures:

4.1% of GDP (2011)

Country comparison to the world: 163

Physicians density:

.3 physicians/1,000 population (2004)

Hospital bed density:

2.1 bed/1,000 population (2011)

Drinking water source:

Improved:

Urban: 96.7% of population

Rural: 95.3% of population

Total: 95.8% of population

Unimproved:

Urban: 3.3% of population

Rural: 4.7% of population

Total: 4.2% of population (2012 est.)

Sanitation facility access:

Improved:

Urban: 88.7% of population

Rural: 95.9% of population

Total: 93.4% of population

Unimproved:

Urban: 11.3% of population

Rural: 4.1% of population

Total: 6.6% of population (2012 est.)

HIV/AIDS - adult prevalence rate:

1.1% (2012)

Country comparison to the world: 43

HIV/AIDS - people living with HIV/AIDS:

443,100 (2012 est.)

Country comparison to the world: 19

HIV/AIDS - deaths:

20,800 (2012 est.)

Country comparison to the world: 17

Obesity - adult prevalence rate:

8.8% (2008)

Country comparison to the world: 135

Children under the age of 5 years underweight:

7% (2006)

Country comparison to the world: 76

Education expenditures:

5.8% of GDP (2011)

Country comparison to the world: 47

Literacy:

Definition: age 15 and over can read and write

Total population: 93.5%

Male: 95.6%

Female: 91.5% (2005 est.)

School life expectancy (primary to tertiary education):

Total: 13 years

Male: 13 years

Female: 13 years (2009)

Unemployment, youth ages 15-24:

Total: 2.8%

Country comparison to the world: 144

Male: 2.5%

Female: 3.1% (2012)

Government: Thailand

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

Government type:

Constitutional monarchy

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:

77 provinces (changwat, singular and plural); Amnat Charoen, Ang Thong, Bueng Kan, Buriram, Chachoengsao, Chai Nat, Chaiyaphum, Chanthaburi, Chiang Mai, Chiang Rai, Chon Buri, Chumphon, Kalasin, Kamphaeng Phet, Kanchanaburi, Khon Kaen, Krabi, Krung Thep Mahanakhon (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, Sara Buri, Satun, Sing Buri, Sisaket, 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:

Month	Holiday(s)
January	New Year's Day
February	Makha Bucha Day
March	None
April	Chakri Memorial Day, Songkran Festival
May	Coronation Day, Royal Ploughing Ceremony Day, Wisakha Bucha Day
June	None
July	Asarnha Bucha Day, Buddhist Lent Day
August	H.M. Queen's Birthday
September	None
October	King Chulalongkorn Memorial Day
November	None
December	H.M. The King's Birthday, Constitution Day, New Year's Eve

Constitution:

Many previous; latest approved by referendum 19 August 2007, effective 24 August 2007 (2013)

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

Suffrage:

18 years of age; universal and compulsory

Executive branch:

Chief of state: King PHUMIPHON Adunyadet, also spelled BHUMIBOL Adulyadej (since 9 June 1946)

Head of government: Prime Minister (acting) NIWATTAMRONG Boonsongpaisan; Deputy Prime Minister PHONGTHEP Thepkanchana also spelled PHONGTHEP Therkanchana (since 28 October 2012); Deputy Prime Minister YUKHON Limlaemthong (since 25 March 2013); note - 4 other deputy prime ministers were removed from office on 7 May 2014

Note: Prime Minister YINGLAK Chinnawat, also spelled YINGLUCK Shinawatra, was removed from office on 7 May 2014 after the Constitutional Court ruled she illegally transferred a government official; Thai army declared martial law on 20 May 2014 and a coup on 22 May 2014

Cabinet: Council of Ministers

Note: a Privy Council advises the king

Elections: the monarchy is hereditary; the prime minister is elected from among members of the House of Representatives; following national elections for the House of Representatives, the leader of the party positioned to organize a majority coalition usually becomes prime minister by appointment by the king; the prime minister is limited to two four-year terms

Legislative branch:

Bicameral National Assembly or Rathasapha consisted of the Senate or Wuthisapha (150 seats; 76 members elected by popular vote representing 75 provinces and 1 metropolitan district (Bangkok), 74 appointed by the Senate Selection Committee; members serve six-year terms) and

the House of Representatives or Sapha Phuthaen Ratsadon (500 seats; 375 members elected from 375 single-seat constituencies and 125 elected on proportional party-list basis; members serve four-year terms)

Elections: Senate - last held on 30 March 2014; House of Representatives - last held on 2 February 2014, but later declared invalid by the Constitutional Court; a new election will be held on 20 July 2014

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

Note: 73 senators were appointed on 12 April 2011 by a seven-member committee headed by the chief of the Constitutional Court; 76 senators were elected on 30 March 2014; elections to the Senate are non-partisan; registered political party members are disqualified from being senators

Judicial branch:

Highest court(s): Supreme Court of Justice (consists of the court president, 6 vice-presidents, and NA judges and organized into civil and criminal divisions); Constitutional Court (consists of the court president and 8 judges); Supreme Administrative Court (the number of judges determined by the 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; judges' terms NA; 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; judge tenure NA

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

Political parties and leaders:

Chat Pattana Party or CPN (Nation Development Party) [WANNARAT Channukul]

Chat Thai Phattana Party or CTP (Thai Nation Development Party) [THEERA Wongsamut]

Mahachon Party or Mass Party [APHIRAT Sirinawin]

Matubhum Party (Motherland Party) [Gen. SONTHI Bunyaratkalin]

Phalang Chon Party (People Chonburi Power Party) [SONTHAYA Khunpluem]

Phumjai (Bhumjai) Thai Party or PJT (Thai Pride) [ANUTIN Charnvirakul]

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

Prachathipathai Mai Party (New Democracy Party) [SURATIN Phijarn]

Puea Thai Party (For Thais Party) or PTP [CHARUPHONG Rueangsuwan also spelled JARUPONG Ruangsuwan]

Rak Prathet Thai Party (Love Thailand Party) [CHUWIT Kamonwisit]

Rak Santi Party (Peace Conservation Party) [Pol. Lt. Gen. THAWIL Surachetphong]

Political pressure groups and leaders:

- Multicolor Group
- People's Alliance for Democracy or PAD
- People's Democratic Reform Committee or PDRC
- Student and People Network for Thailand's Reform or STR
- 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, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO

Diplomatic representation in the US:

Chief of mission: Ambassador WICHAWAT Isarabhakdi (since 3 December 2013)

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 Kristie A. KENNEY (since 10 January 2011)

Embassy: 120-122 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 anthem:

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

Economy: Thailand

Economy - overview:

With a well-developed infrastructure, a free-enterprise economy, generally pro-investment policies, and strong export industries, Thailand achieved steady growth due largely to industrial and agriculture exports - mostly electronics, agricultural commodities, automobiles and parts, and processed foods. Unemployment, at less than 1% of the labor force, stands as one of the lowest levels in the world, which puts upward pressure on wages in some industries. Thailand also attracts nearly 2.5 million migrant workers from neighboring countries. The Thai government in 2013 implemented a nation-wide 300 baht (\$10) per day minimum wage policy and deployed new tax reforms designed to lower rates on middle-income earners. The Thai economy has weathered internal and external economic shocks in recent years. The global economic recession severely cut Thailand's exports, with most sectors experiencing double-digit drops. In late 2011 Thailand's recovery was interrupted by historic flooding in the industrial areas in Bangkok and its five surrounding provinces, crippling the manufacturing sector. The government approved flood mitigation projects worth \$11.7 billion, which were started in 2012, to prevent similar economic damage, and an additional \$75 billion for infrastructure over the following seven years. This was expected to lead to an economic upsurge but growth has remained slow, in part due to ongoing political unrest and resulting uncertainties. Spending on infrastructure will require re-approval once a new government is seated.

GDP (purchasing power parity):

\$673 billion (2013 est.)

Country comparison to the world: 25

\$654 billion (2012 est.)

\$614.2 billion (2011 est.)

Note: data are in 2013 US dollars

GDP (official exchange rate):

\$400.9 billion (2013 est.)

GDP - real growth rate:

2.9% (2013 est.)

Country comparison to the world: 119

6.5% (2012 est.)

0.1% (2011 est.)

GDP - per capita (PPP):

\$9,900 (2013 est.)

Country comparison to the world: 120

\$9,600 (2012 est.)

\$9,100 (2011 est.)

Note: data are in 2013 US dollars

GDP - composition, by end use:

Household consumption: 53.5%

Government consumption: 13.3%

Investment in fixed capital: 28.2%

Investment in inventories: 0.9%

Exports of goods and services: 70.6%

Imports of goods and services: -66.6%

(2013 est.)

GDP - composition, by sector of origin:

Agriculture: 12.1%

Industry: 43.6%

Services: 44.2% (2013 est.)

Agriculture - products:

Rice, cassava (manioc, tapioca), rubber, corn, sugarcane, coconuts, soybeans

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; world's second-largest tungsten producer and third-largest tin producer

Industrial production growth rate:

-3.1% (2013 est.)

Country comparison to the world: 185

Labor force:

39.38 million (2013 est.)

Country comparison to the world: 17

Labor force - by occupation:

Agriculture: 38.2%
Industry: 13.6%
Services: 48.2% (2011 est.)

Unemployment rate:

0.7% (2013 est.)
Country comparison to the world: 3
0.7% (2012 est.)

Population below poverty line:

13.2% (2011 est.)

Household income or consumption by percentage share:

Lowest 10%: 2.8%
Highest 10%: 31.5% (2009 est.)

Distribution of family income – GINI index:

39.4 (2010)
Country comparison to the world: 64
42 (2002)

Budget:

Revenues: \$80.91 billion
Expenditures: \$92.9 billion (2013 est.)

Taxes and other revenues:

20.2% of GDP (2013 est.)
Country comparison to the world: 162

Budget surplus (+) or deficit (-):

-4% of GDP (2013 est.)
Country comparison to the world: 144

Fiscal year:

1 October - 30 September

Inflation rate (consumer prices):

2.2% (2013 est.)
Country comparison to the world: 79
3% (2012 est.)

Central bank discount rate:

2.25% (31 December 2013 est.)
Country comparison to the world: 102
3.25% (31 December 2011 est.)

Commercial bank prime lending rate:

6.9% (31 December 2013 est.)
Country comparison to the world: 117
7.1% (31 December 2012 est.)

Stock of narrow money:

\$50.18 billion (31 December 2013 est.)
Country comparison to the world: 45
\$52.18 billion (31 December 2012 est.)

Stock of Broad Money:

\$516.4 billion (31 December 2013 est.)
Country comparison to the world: 23
\$488.6 billion (31 December 2012 est.)

Stock of domestic credit:

\$511.2 billion (31 December 2013 est.)
Country comparison to the world: 26
\$480.5 billion (31 December 2012 est.)

Market value of publicly traded shares:

\$348.5 billion (31 December 2013 est.)
Country comparison to the world: 25
\$383 billion (31 December 2012)
\$268.5 billion (31 December 2011 est.)

Current account balance:

-\$3.2 billion (2013 est.)
Country comparison to the world: 158
-\$1.4 billion (2012 est.)

Exports:

\$225.4 billion (2013 est.)
Country comparison to the world: 26
\$225.8 billion (2012 est.)

Exports - commodities:

Electronics, computer parts, automobiles and parts, electrical appliances, machinery and equipment, textiles and footwear, fishery products, rice, rubber

Exports - partners:

China 11.7%, Japan 10.2%, US 9.9%, Hong Kong 5.7%, Malaysia 5.4%, Indonesia 4.9%, Singapore 4.7%, Australia 4.3% (2012)

Imports:

\$219 billion (2013 est.)
Country comparison to the world: 24
\$219.8 billion (2012 est.)

Imports - commodities:

Capital goods, intermediate goods and raw materials, consumer goods, fuels

Imports - partners:

Japan 20%, China 14.9%, UAE 6.3%, Malaysia 5.3%, US 5.3% (2012)

Debt – external:

\$142.6 billion (31 December 2013 est.)
Country comparison to the world: 39
\$130.9 billion (31 December 2012 est.)

Exchange rates:

Baht per US dollar -
30.59 (2013 est.)
31.083 (2012 est.)
31.686 (2010 est.)
34.286 (2009)
33.37 (2008)

Energy: Thailand

Electricity - production:

173.3 billion kWh (2012 est.)
Country comparison to the world: 24

Electricity - consumption:

169.4 billion kWh (2012 est.)
Country comparison to the world: 23

Electricity - exports:

1.535 billion kWh (2012 est.)
Country comparison to the world: 49

Electricity - imports:

9.575 billion kWh (2012 est.)
Country comparison to the world: 25

Electricity - installed generating capacity:

32.6 million kW (2012 est.)
Country comparison to the world: 27

Electricity - from fossil fuels:

89% of total installed capacity (2012 est.)
Country comparison to the world: 80

Electricity - from nuclear fuels:

0% of total installed capacity (2011 est.)
Country comparison to the world: 168

Electricity - from hydroelectric plants:

10.9% of total installed capacity (2012 est.)
Country comparison to the world: 110

Electricity - from other renewable sources:

0.2% of total installed capacity (2012 est.)
Country comparison to the world: 95

Crude oil - production:

574,000 bbl/day (2012 est.)
Country comparison to the world: 30

Crude oil - exports:

32,200 bbl/day (2011 est.)
Country comparison to the world: 50

Crude oil - imports:

793,900 bbl/day (2011 est.)
Country comparison to the world: 14

Crude oil - proved reserves:

453.3 million bbl (1 January 2013 est.)
Country comparison to the world: 51

Refined petroleum products - production:

913,600 bbl/day (2011 est.)
Country comparison to the world: 23

Refined petroleum products - consumption:

721,100 bbl/day (2011 est.)
Country comparison to the world: 25

Refined petroleum products - exports:

192,400 bbl/day (2011 est.)
Country comparison to the world: 31

Refined petroleum products - imports:

41,700 bbl/day (2011 est.)
Country comparison to the world: 78

Natural gas - production:

36.99 billion cu m (2011 est.)
Country comparison to the world: 26

Natural gas - consumption:

45.08 billion cu m (2010 est.)
Country comparison to the world: 20

Natural gas - exports:

0 cu m (2011 est.)
Country comparison to the world: 188

Natural gas - imports:

9.58 billion cu m (2011 est.)
Country comparison to the world: 31

Natural gas - proved reserves:

284.9 billion cu m (1 January 2013 est.)
Country comparison to the world: 40

Carbon dioxide emissions from consumption of energy:

269.6 million Mt (2011 est.)

Communications: Thailand

Telephones - main lines in use:

6.391 million (2012)
Country comparison to the world: 26

Telephones - mobile cellular:

84.075 million (2012)
Country comparison to the world: 17

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) (2011)

Broadcast media:

6 terrestrial TV stations in Bangkok broadcast nationally via relay stations - 2 of the networks 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 (2008)

Internet country code:

.th

Internet hosts:

3.399 million (2012)
Country comparison to the world: 31

Internet users:

17.483 million (2009)
Country comparison to the world: 23

Transportation: Thailand

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)

Railways:

Total: 4,071 km
 Country comparison to the world: 43
 Standard gauge: 29 km 1.435-m gauge (29 km electrified)
 Narrow gauge: 4,042 km 1.000-m gauge (2008)

Roadways:

Total: 180,053 km (includes 450 km of expressways) (2006)
 Country comparison to the world: 28

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: 363
 Country comparison to the world: 28

By type: bulk carrier 31, cargo 99, chemical tanker 28, container 18, liquefied gas 36, passenger 1, passenger/cargo 10, petroleum tanker 114, refrigerated cargo 24, roll on/roll off 1, vehicle carrier 1

Foreign-owned: 13 (China 1, Hong Kong 1, Malaysia 3, Singapore 1, Taiwan 1, UK 6)

Registered in other countries: 46 (Bahamas 4, Belize 1, Honduras 2, Panama 6, Singapore 33) (2010)

Military: Thailand

Military branches:

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) (2013)

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)

Manpower available for military service:

Males age 16-49: 17,689,921
 Females age 16-49: 17,754,795 (2010 est.)

Manpower fit for military service:

Males age 16-49: 13,308,372
 Females age 16-49: 14,182,567 (2010 est.)

Manpower reaching militarily significant age annually:

Male: 533,424
 Female: 509,780 (2010 est.)

Military expenditures:

1.47% of GDP (2012)
 Country comparison to the world: 65
 1.6% of GDP (2011)
 1.47% of GDP (2010)

Transnational Issues: Thailand

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; 140,000 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): 78,970 (Burma) (2013)

IDPs: up to 35,000 (resurgence in ethno-nationalist violence in south of country since 2004) (2013)

Stateless persons: 506,197 (2012); 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

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, who are most often from neighboring countries, especially Burma, and also China, Vietnam, Russia, Uzbekistan, and Fiji, migrate to Thailand in search of economic opportunities but are forced, coerced, or defrauded into labor or commercial sexual exploitation; forced laborers are exploited in fishing, low-end garment production, domestic service, and some are forced to beg; some men forced to work on fishing boats

have reportedly been kept at sea for years; sex trafficking of Thai and migrant children and sex tourism remain significant problems; Thailand is a transit country for victims from North Korea, China, Vietnam, Pakistan, and Burma destined for exploitation in third countries, including Malaysia, Indonesia, Singapore, Russia, the Republic of Korea, the US, and Western European countries

Tier rating: Tier 2 Watch List - Thailand does not fully comply with the minimum standards for the elimination of trafficking; the government investigated more trafficking-related cases but prosecuted and convicted fewer trafficking offender in 2012 than it did in the previous year; widespread corruption among law enforcement personnel creates an enabling environment for human trafficking; local authorities lack an awareness of the elements of trafficking and are deficient at identifying and protecting victims; weak law enforcement, inadequate human and financial resources, and fragmented coordination among regulatory agencies in the fishing industry contributes to overall impunity for exploitive labor practices in this sector; no labor recruitment companies have been punished for forced labor or trafficking allegations (2013)

Illicit drugs:

A minor producer of opium, heroin, and marijuana; transit point for illicit heroin en 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

Indices

Health

- In 2000, the World Health Organization ranked Thailand's health system 47 out of 191.²⁵⁸
- Thailand's ranking for life expectancy at birth is 76/180.²⁵⁹
- Regarding mortality under the age of five, Thailand ranks 130th out of 193 countries.²⁶⁰

Government

- According to Transparency International, the Thailand' Corruption Perceptions Index is 102/177.²⁶¹

Education

- Thailand has one of the highest literacy rates in the world, 93.5% in 2005-2010.²⁶²

Other

- Thailand placed 89th out of 148 countries ranked for gender inequality.²⁶³
- According to the Human Development Index, which measures longevity, education, and standard of living, Thailand ranked 89th.²⁶⁴
- When considering exposure, vulnerability, susceptibility, coping capabilities, and adaptive capabilities, the World Risk Index places Thailand at number 94.²⁶⁵

End Notes

- 1 <http://www.touropia.com/top-attractions-in-thailand/>
- 2 http://newsroom.mastercard.com/wp-content/uploads/2014/07/Mastercard_GDCI_2014_Letter_Final_70814.pdf
- 3 UNDP Thailand.
- 4 National Disaster and Mitigation Plan 2010-2014. P 15.
- 5 BBC Asia, Thailand Overview.
- 6 The Modern Monarch. <http://www.thailandtoday.in.th/monarchy/the-modern-monarch>
- 7 <http://www.tourismthailand.org/Thailand/politics>
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- 9 <http://lowermekong.org/about/lowermekong-initiative-lmi>
- 10 Culture in Thailand. <http://www.reachtoteachrecruiting.com/guides/thailand/culture-in-thailand/>
- 11 Culture in Thailand. <http://www.reachtoteachrecruiting.com/guides/thailand/culture-in-thailand/>
- 12 <http://www.hellosiam.com/html/thailand/thailand-religion.htm>
- 13 <http://www.renown-travel.com/temples.html>
- 14 <http://www.tourismthailand.org/Thailand/politics>
- 15 The Government Public Relations Department. http://thailand.prd.go.th/list_news.php?idxstart=200&a=2
- 16 Transparency International. <http://cpi.transparency.org/cpi2013/results/>
- 17 UNDP Thailand.
- 18 Encyclopedia Britannica.
- 19 Encyclopedia Britannica.
- 20 Encyclopedia of the Nations, Thailand – Ethnic Groups. <http://www.nationsencyclopedia.com/Asia-and-Oceania/Thailand-ETHNIC-GROUPS.html>
- 21 Encyclopedia of the Nations, Thailand – Ethnic Groups. <http://www.nationsencyclopedia.com/Asia-and-Oceania/Thailand-ETHNIC-GROUPS.html>
- 22 Encyclopedia of the Nations, Thailand – Ethnic Groups. <http://www.nationsencyclopedia.com/Asia-and-Oceania/Thailand-ETHNIC-GROUPS.html>
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