



INDONESIA

Disaster Management Reference Handbook

2015

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Welcome - Note from the Director

Dear Reader,

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DMHA) 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 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 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 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,



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-DMHA was founded because of a worldwide need based on lessons learned in complex humanitarian emergencies that took place in the Balkans, the African Great Lakes Region, Somalia and the Middle East since the beginning to mid-1980s. The need was for integrated education, training, certification, operational research, and interagency cooperation and coordination among many agencies and organizations, both civilian and military, to provide relief and regional stability.

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-DMHA 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 Indonesia is intended to be a reference for individuals deploying to conduct disaster preparedness engagements or disaster response operations in Indonesia, 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 Indonesia 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.

Indonesia is an archipelagic state comprised of over 17,000 islands, of which 6,000 are inhabited with a rich diversity of ethnic, religious, and social cultures. There are over 500 distinct ethnic groups with 88 percent of the people identifying themselves as Muslim, thereby rendering Indonesia as the most populous Islamic country in the world. The country is prone to a number of natural hazards such as earthquakes, tsunamis, floods, and volcanic activity due to its geographic location on the Pacific Ring of Fire. Despite the propensity of natural hazards, the country is only ranked as the world's 38th most at risk country for disaster in the United Nation's 2014 World Risk Report.

The most notable disaster to affect Indonesia was the 2004 Indian Ocean earthquake and tsunami which left over 150,000 people dead and affected over 530,000 people. Since this event, Indonesia has instituted the Indonesia Tsunami Early Warning System which determines if a tsunami will result from an earthquake. As one of the leading emitters of greenhouse gases, the Government of Indonesia recognizes the vulnerability the nation to climate changes. Multiple approaches for climate change adaptation are instituted from efforts to reduce gas emissions to finding alternate crops to raise in anticipation of adverse weather effects on the agriculture livelihoods.

The current infrastructure in the country is a critical issue when a disaster event occurs and buildings collapse. It is estimated that a major disaster in Indonesia could cost the country up to 3 percent of their GDP. Housing and public infrastructure would sustain the most damages. The government plans to invest in infrastructure which has direct impact to the country's preparedness for future disasters.

In 2007, Indonesia implemented regulations to establish laws and the National Disaster Management Agency known locally as Badan Nasional Penanggulangan Bencana (BNPB). Indonesia progressed on by developing guidelines under BNPB to manage international assistance according to the IDRL Guidelines. The Law, regulations and guidelines instituted by the Government launched Indonesia as one of the leading countries in the world to execute legislative reform to implement recommendations from the International Disaster Response Law (IDRL) Guidelines.

Indonesia is a member of regional groups such as East Asia Summit (EAS), Asia-Pacific Economic Cooperation (APEC), Group of 20 (G20) and the Association of Southeast Asian Nations (ASEAN). The country plays a vital role in each of these regional forums due to its robust democracy, performing economy, strong military and country size.



Map of Indonesia



INDONESIA

Country Overview

Indonesia Disaster Management Reference Handbook | 2015



Country Overview

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Indonesia, officially known as the Republic of Indonesia, is a sovereign island nation located in Southeast Asia along the equator. As the fourth most populous country in the world, it is a culturally diverse nation due to its archipelagic nature and history as a major trade hub. Indonesia's location on the Pacific Ring of Fire and proximity to the equator makes the country prone to earthquakes and volcanic activity.

Indonesia's numerous islands are both a source of diversity and a source of tension. Historically, the islands were not necessarily tied by any common language or ethnicity. Rather, distinct cultures grew out of tribal and kin groups. These groups were brought together by colonialists, and the degree of autonomy granted to an island or people varied widely. Some groups were integrated to form a cohesive culture, other groups were left to govern themselves as they saw fit.

Indonesia was first colonized by the Dutch imperialists in the seventeenth century. The islands were used as a key transportation route for the spice trade from China to Europe, and as a source of spices, minerals, and timber. When the company governing the archipelago for more than two hundred years went bankrupt, the islands were informally governed by the Netherlands. In

the early 1900s, the Netherlands formalized its colonization with expanded military presence, but this was relatively short-lived with the coming of World War II and Japanese occupation.

When WWII ended, Indonesian nationalists attempted to secure independence from the Netherlands. The fight lasted five years and in 1949, Indonesia became a sovereign nation.¹ However, countless smaller groups outside of the island of Java did not necessarily want to be part of a united Indonesia, and this has been an ongoing source of tension for the country's 65 year existence.² Indonesia's government has dealt with this tension by pursuing policies of economic development and decentralization. Major events related to ongoing friction include the formation of Timor Leste as a sovereign country, and the increased autonomy of Papua and Aceh. Indonesia is a member of the United Nations (UN), World Trade Organization (WTO), East Asia Summit (EAS), Asia-Pacific Economic Cooperation (APEC) Forum, G-20, and the Association of Southeast Asian Nations (ASEAN).³

Culture

The Indonesian culture is heterogeneous and comprised of the distinct ethnic, religious, and tribal cultures of the nation's 6,000 inhabited islands. Since the country is not yet 100 years old, many cultural influences pre-date Indonesia itself and are rooted in centuries of distinct traditions. However, early national leaders and governments created a strong push for nationalism in their quest for sovereignty. The result is a country that is generally united by ideals, often tolerant of long-held cultural values, and sometimes struggling to balance development with regional priorities.

Indonesian ideals are very clearly articulated, and broadly interpreted. Known as Pancasila, Indonesia has five principles for life and society. These are reflected in Indonesia's constitution and in government policies. They are:

- Belief in one and only God;
- Just and civilized humanity;
- Indonesian unity;
- Democracy under the wise guidance of representative consultation; and
- Social justice for all the people of Indonesia.⁴

These uniting principles helped strengthen Indonesian society in its early days and are still important in governance. However, some accuse the second Indonesian regime, led by President Suharto, of using these principles to stifle dissent and focus on economic development at the cost of regional liberty.⁵

Developing a common language for Indonesia was also a key consideration in forming a national identity. Dutch colonialists and Japanese occupiers left those living in what is today Indonesia, to speak their native languages and did not try to unite the islands through language. As a result, there was no commonly spoken language when the nation of Indonesia was formed. The most common language was Javanese, spoken by the ethnic majority on the island of Java. However, early officials bypassed this language and instead chose Malay as the national language, rebranding it Bahasa Indonesia. According to some scholars, a minority language was chosen to show that the new country was not focused on just the island of Java.⁶ Today, most Indonesians speak Bahasa as a secondary language, and almost all written communication is conducted in Bahasa.

Indonesia's population is predominantly Muslim and the world's most populous Islamic country as 88 percent of Indonesians are Muslim which accounts for 13 percent of the total world Muslim population.^{7 8} Other religions practiced include Christianity (7 percent), Protestantism (3 percent), and Hinduism (2 percent). The government recognizes these four religions along with Buddhism and Confucianism. Indigenous religions and those that practice animism are not officially recognized.⁹

The political environment in Indonesia is a democracy with a directly elected president and legislature. The current President Susilo Bambang Yudhoyono focuses policy efforts on alleviating poverty, consolidating democracy, and controlling unrest. The number of women participating in politics has increased markedly with new quotas that require political parties to have a minimum of 30 percent of candidates be female.¹⁰ Prior to this quota's enforcement, women held only 9 percent of seats in the 500 member National Parliament (1999). After the quota, women doubled their representation to 18 percent in 2009.¹¹

Indonesia ranks 107 of 177 countries on Transparency International's Corruption Perception Index (CPI) for 2014, with a score of 34 out of 100.¹² Corruption is an obstacle to good governance in the country. All levels of corruption are present from bribery to patronage. Efforts are being made to reduce corruption as a part of a larger development framework that emphasizes fair and open competition.¹³

Demographics

Understanding the demographic context of Indonesia 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

Indonesia's population is ethnically diverse because of the country's history as a distinct island kingdom and its colonization by Dutch spice traders. In all, Indonesia contains more than 500 distinct ethnic groups. Historically, ethnic groups co-existed side by side with relatively little interaction and distinct languages. Indonesia's

COUNTRY OVERVIEW

independence and nation-building processes less than 100 years ago, brought many of these groups together for the first time and united them with a common language based on Malay. However, many of these groups retain the distinct cultural and linguistic patterns that define their ethnicities.

The Javanese are the largest ethnic group in Indonesia, comprising about 40 percent of the population. The mostly enfranchised group lives primarily on Java and Bali islands. While the Javanese proportion of the population declined 1 percent between 2000 and 2010, there is little chance they will see large population declines in the coming years.¹⁴ Other large ethnic groups include the Sundanese with 16 percent and the Malay with 3.5 percent of the total population. Each group's proportion of Indonesia's population remained relatively steady between 2000 and 2010.¹⁵

Often, ethnic groups are not highly mixed outside of population centers. Members of ethnic groups tend to live in the areas their ancestors historically inhabited. While this retention of culture is vital to building resiliency, it is also linked to increased tension between groups and can lead to vulnerability (see vulnerable groups section). One driver of this tension is the Indonesian government's initiative to support transmigration from overcrowded Java Island to less populated outer islands. People of primarily Javanese ethnicity relocated to islands populated by the Sundanese and others with financial support from the Indonesian government. This alleviated congestion on Java and helped spread development on other islands. However, it also damaged the environment and disturbed the way of life for existing populations.¹⁶



Indigenous and Ethnic Groups¹⁷

- Javanese
- Sundanese
- Malay
- Batak
- Madurese
- Betawi
- Minangkabau
- Buginese
- Bantenese
- Banjarese
- Balinese
- Acehnese
- Sasak

Non-Indigenous Ethnic Groups¹⁸

- Chinese
- American
- Australian
- Indian
- Japanese
- Hispanic
- Malaysian
- Korean
- Pakistani
- Filipino
- Singaporean
- Thai
- Dutch

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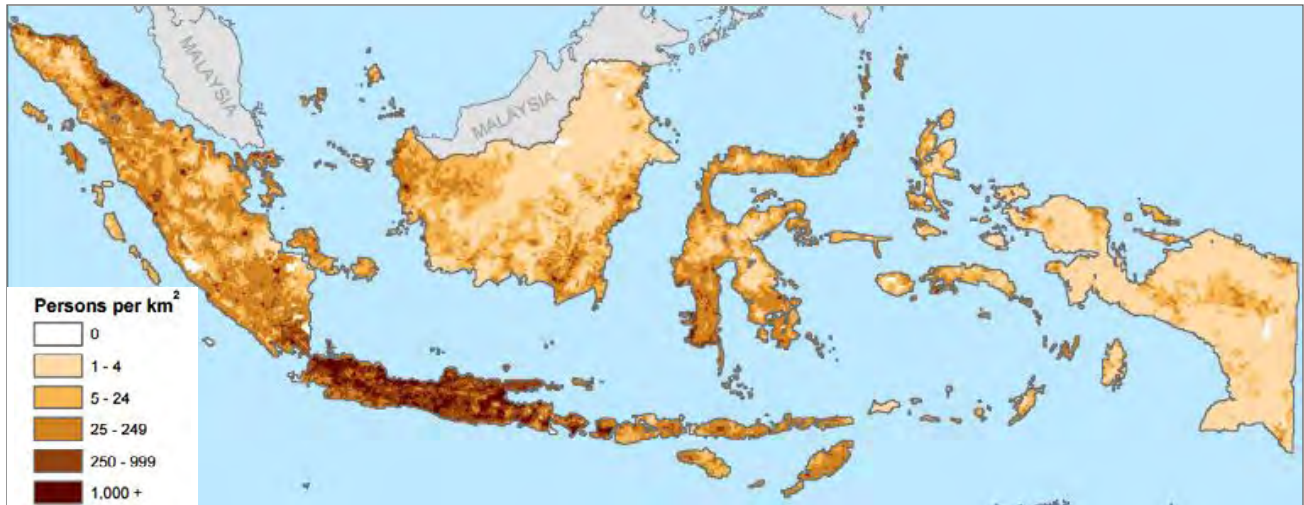
Key Population Centers

Indonesia's development initiatives have resulted in significant urban areas throughout the country. Most of the development was planned therefore urban areas tend to host better infrastructure and higher levels of economic activity than rural areas in the country. Overall, this has led to measured, steady growth in the urbanization rate. Between 2000 and 2010, the only years the country has completed a formal census, the overall urbanization rate rose 8 percent from 41.9 to 49.7.¹⁹ With half of the country's population living in urban areas, industry in these key population centers has evolved from farming

to finance, services, manufacturing, property, and trade. In many ways, Indonesia's urban economy resembles that of most developed nations.²⁰

However, this urbanization and growth is not without pitfalls. Most of the growth occurred in cities on Java, Bali, and Sumatra. This may lead to overcrowding and over-burdened infrastructure on these three islands, while other islands lack basic infrastructure needed to continue economic development.²¹

Jakarta is the country's capital and the largest city in Indonesia.²³ Jakarta has been a center of Indonesian life since the 16th century when it served as the main port and administrative center for colonial rulers. The city is the center



Indonesia's Population Density in 2000²²

of a network of smaller cities that feed into its economic activity, this network is also known as Jabodetabek or Greater Jakarta. There are five municipalities within Jakarta proper – Central, North, South, East, and West. With 9 million people, Jakarta is very densely populated. This complicates the issues Jakarta faces related to flooding. The city is surrounded and bisected by complex river systems, and many areas are prone to flooding during the monsoon season. See the Hazards sections for more information.

Surabaya is another major city on the island of Java and is located in the eastern half of the island. The city is known for its important role in the battle for Indonesian independence and for its large seaport. The city is the major economic and trade hub for East Java. Like Jakarta, Surabaya sits on low-lying land that is prone to flooding from nearby rivers. There is also concern that sea level rise will inundate much of the coastal land in Surabaya.²⁴

Bandung is the third most populated city in the country and is situated between West and Central Java, approximately 100 miles inland from Jakarta. The city is mainly an industrial and residential area. Bandung is also known for the presence of several universities. Landslides are the major hazard in Bandung.²⁵ For example, a slope failed in heavy rains and more than 140 people were killed in 2005.²⁶

Medan is the largest city on an outer island. Located at the Northeast corner of Sumatra, Medan is the capital of the province of North Sumatra and the economic driver in the area. Much of the economy is focused on the growth and harvest of tobacco, palm oil, and tea, expanding its capacity to trade with China and Malaysia. Since the 2004 tsunami, Medan has seen a sizable new population arrive from nearby rural areas that were more highly affected by the disaster, which has created a vulnerable population who may lack coping capacity in future hazard events.²⁷



Major Cities in Indonesia

Jakarta	10,135,030
Surabaya	2,843,144
Bandung	2,575,478
Bekasi	2,510,951
Medan	2,185,789

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Vulnerable Groups

Women, children, elderly, people with disabilities, and migrants are considered the most vulnerable groups in Indonesia. Groups living in isolated, coastal areas are also vulnerable. All of these individuals need special attention when disasters strike such as specific foods and toiletry items along with assistance on removing them from dangerous areas. Many of them are amongst the first to become victims of disasters because they do not have sturdy homes and safe shelters making them prone to risk.²⁸

According to the US Department of State Trafficking in Persons (TIP) report, Indonesia is a major source country for sexual exploitation and forced labor. The greatest numbers of trafficked persons originate from West Java, Central Java, East Java, West Nusa Tenggara, East Nusa Tenggara, and Banten. Destinations for trafficked Indonesians include Saudi Arabia, the United Arab Emirates, Qatar, Oman, Taiwan, Singapore, and Malaysia among other countries.²⁹

Poverty in Indonesia remains despite very significant economic growth. While the official poverty rate fell from 24 percent in 1999 to 11.4 percent in 2013, a quarter of the population lives on less than USD \$2 per day.³⁰ Due to poverty, these households have less capacity to meet basic needs and more than half of the households are not able to meet nutritional requirements. Another

cause of poverty is unemployment, particularly amongst vulnerable groups.³¹

The United Nations High Commission for Refugees' (UNHCR) main focus areas in Indonesia are asylum seekers, refugees, and broader asylum-migration issues. Indonesia has lower numbers of refugees and asylum seekers than other Southeast Asian nations. However, Indonesia has served as a transit country for refugees who are in need of temporary relocation outside of the country of asylum pending departure for resettlement until recently. Areas of focus include: protection monitoring, civil and birth certification and protection of people with special needs.³² More than half of asylum seekers registered in Indonesia come from Afghanistan. Other source countries include Iran, Somalia, Iraq, and Sri Lanka. Many hoped to use Indonesia as a transit country to resettlement in Australia, but Australia no longer accepts asylum seekers arriving via irregular maritime movements.³³ While registered asylum seekers suffer from poverty and unstable living conditions, unregistered asylum seekers are of even greater concern – they have no safety net and are vulnerable to a multitude of hazards.³⁴ Internally displaced persons (IDPs) are also a concern. There are none registered in Indonesia, but unofficial reports cite as many as 90,000 people displaced due to various conflicts.³⁵

UNHCR Statistics (as of July 2014)

	Residing in Indonesia	Originating from Indonesia
Refugees	3,830	14,782
Internally Displaced Persons (IDPs)	0	0
Stateless Persons	0	N/A
Asylum Seekers	6,286	1,037
Returned IDPs	0	0
Various	0	N/A
Total Population of Concern	10,116	15,819

Indonesia has struggled with conflict repeatedly in various parts of the country. This is sometimes due to cultural differences when new groups move in to areas traditionally occupied by native peoples. In other areas, the conflict is driven by an area's desire to secede from the rest of

the Indonesian nation and achieve independence. Both types of conflict erode a community's coping capacity and leave it more vulnerable to natural hazards. The table below summarizes some of the long running conflicts:³⁶

Area	Conflict
Aceh	Peace agreement signed in 2005 after 26 years of fighting between separatists and the Indonesian government. More than 15,000 people died in the conflict.
Kalimantan	Ethnic conflict occurred in central Kalimantan between the indigenous Dayak people and the Madurese who had migrated to the island. Between 1996 and 2001 hundreds of Madurese were killed and more than 100,000 fled from Kalimantan. Tensions remain between ethnic groups in some areas.
Sulawesi	Violence in Sulawesi tends to be religiously motivated as Christians and Muslims occasionally clash. Between 1998 and 2001, 100s were killed and 10,000 fled from areas engaged in conflict.
Moluccas	Violence in the Moluccas tends to be religiously motivated as Christians and Muslims occasionally clash. Between 1999 and 2002, 5,000 people were killed and 500,000 fled from areas engaged in conflict.
Papua	Conflict in Papua is ongoing and stems from issues related to Indonesian rule. For many years separatist movements fought for independence, and there were clashes between Papuans and security forces or settlers from other parts of Indonesia. Today, conflict tends to occur between Papuan groups as some choose to sell their land to corporate interests for farming or mining. Affected populations in Papua are particularly vulnerable and humanitarian aid groups struggle to access them. ³⁷

Economics

Indonesia is a lower middle income country. The United Nations Development Programme (UNDP) 2013 Human Development Index (HDI) value for Indonesia is 0.684, placing the country in the medium human development category, and placing them 108 out of 187 countries.³⁸ Indonesia's 2011 Gini coefficient which reflects income equality was 38.1. This is a better score than the average ranking and better than the United States' rank.³⁹

Indonesia's economy is evolving rapidly as large numbers of people emerge from poverty and a second wave of economic development seems to be commencing. At the close of the financial crisis in 1999, Indonesia's official poverty rate sat at 24 percent of the population. By 2014, that number dropped to 11.3 percent.⁴⁰ However, the rate of decrease slowed dramatically between 2005 and 2014, and the World Bank estimates that

GDP (PPP):	\$1.3 trillion 5.8% growth 5.9% 5 yr annual growth \$5,214 per capita
Unemployment:	6.0%
Inflation (CPI):	6.4%
FDI Inflow:	\$18.4 billion

(Source: Heritage Foundation)

up to 100 million people are at risk of poverty. Most interesting, the World Bank found that “over half of the poor each year were not poor the year before.”⁴¹ The large turnover in population in poverty may indicate that a large number of people are vulnerable to disaster due to precarious economic circumstances.⁴²

At a macro level, Indonesia’s economy appears strong and primed for growth. Low oil prices at the end of 2014 and the beginning of 2015 allowed the government to end most fuel subsidies in the country and dedicate that money to other social programs that support workforce development.⁴³ Programs that assist segments of the population in poverty include rice subsidies (Raskin), free health care (Jaskemas), scholarships, and cash transfers. While all these programs have been shown to be highly effective, targeting has been a problem in the past with Indonesia’s high turnover rate for poverty.⁴⁴

GDP growth in the country has continued to outpace growth in East Asia and the Pacific. In 2014, growth was 5.1 percent, with growth rates of 5.5 percent each forecast for 2015 and 2016.⁴⁵ In comparison, Thailand’s GDP growth rate in 2014 was .5 percent, and expected GDP growth in 2015 and 2016 is between 3.5 and 4.0 percent.⁴⁶ Strong, steady growth rates may indicate a resilient economy that is less vulnerable to disaster than neighboring countries.

Indonesia’s economic freedom score is 58.1, ranking its economy the 105th freest in the 2014 index. The score rose almost two points from the previous year due to notable improvements in labor freedom and freedom from corruption. Areas for improvement include business freedom, government spending, and fiscal freedom. Indonesia ranked 22 out of the 42 countries in the region in the same index, making its score slightly below the global average. The country has demonstrated a high degree of resilience. The economy has documented an average growth of roughly 5 percent over the past 5 years.⁴⁷

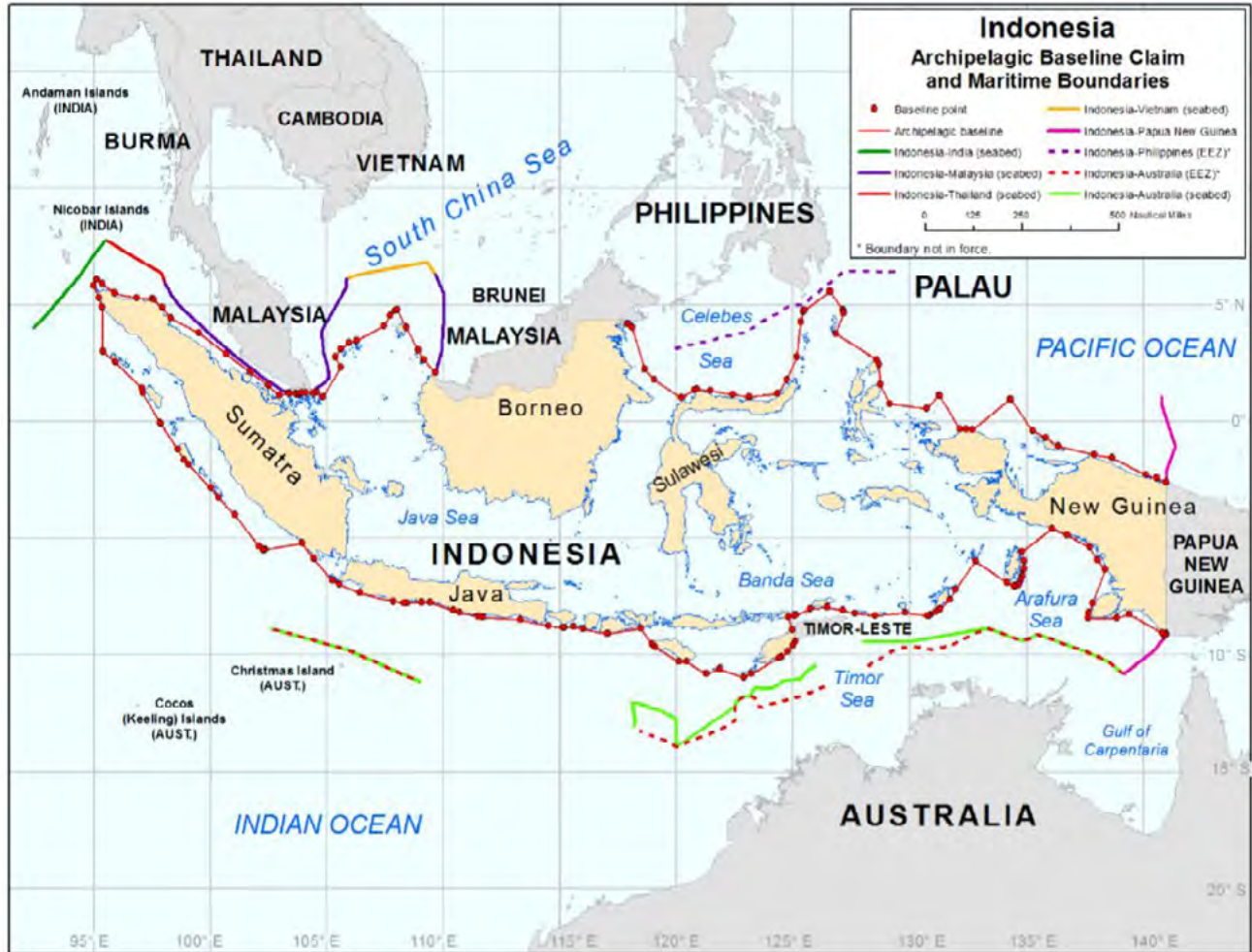
Environment

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 Indonesia’s disaster hazards and affect potential response operations.

Borders

Indonesia is an archipelagic nation located in Southeast Asia between the Indian Ocean and the Pacific Ocean, stretching across the equator. The country is comprised of more than 17,000 islands, 6,000 of which are inhabited.⁴⁸ It has limited land borders and shares islands with Timor Leste, Malaysia, and Papua New Guinea. These border regions are for the most part stable, although they are not officially established as fixed. Borders with Timor Leste are not completely determined, and there are a number of refugees from Timor Leste residing in Indonesia near the border.⁴⁹

Indonesia’s has maritime borders with all of its neighbors, most of which are stable and officially determined, although a few are under negotiation such as Malaysia. Indonesia has unlimited maritime boundaries with India (EEZ in the Andaman Sea), Malaysia (territorial sea and EEZ in the Strait of Malacca; territorial sea in the Singapore Strait; EEZ in the Natuna Sea portion of the South China Sea; all maritime zones in the Celebes Sea), Palau (EEZ and continental shelf in the Pacific Ocean), Philippines (continental shelf in the Celebes Sea), Thailand (EEZ in the Andaman Sea), Timor-Leste (Timor Sea and Savu Sea), and Vietnam (EEZ in the Natuna Sea).⁵⁰ See the map on the following page for a graphic representation of these borders.⁵¹



Maritime Boundaries of Indonesia (US Dept of State)

Geography

Indonesia has a land area of roughly 1.9 million square kilometers of which 93,000 sq km is water area.⁵² The country is surrounded by the Indian Ocean to the west and the Pacific Ocean to the east. The Java Sea, Banda Sea, Celebes Sea, Timor Sea, and Arafura Sea lie between Indonesia and its neighboring countries. In all, the country stretches 1,760 km north to south and 5,120 km east to west.⁵³ It is an archipelago comprising of 17,000 islands, with only 6,000 of them being occupied. The country is divided into five main geographic areas: Sumatra, Java, Kalimantan, Sulawesi, and Papua. Java is by far the most densely populated island with 130 million people. Sumatra is more than twice the size with less than one third of the population, and the remaining islands are even more sparsely populated.⁵⁴

Topographically, Indonesia is broken up by the sea which gives it one of the longest coastlines

in the world. The topography of the islands is mountainous with narrow to large coastal lowlands depending on which island. Mountain ranges extend from east to west. The larger islands of Indonesia are mountainous with peaks reaching 3,800 meters above sea level on the western islands and as high as 5,000 meters on Papua. The highest point is Puncak Jaya (5,030 meters) on Papua. The region is tectonically unstable with some 400 volcanoes, of which 100 are active.⁵⁵ The country is part of the “Pacific Ring of Fire” with many active volcanoes throughout the island and a high frequency of earthquakes. In total, 129 volcanoes in Indonesia are active, 70 are considered potentially dangerous, 23 have erupted in the last twenty years, and two are currently actively erupting (Feb 2015).⁵⁶ Most volcanoes can be found on Java, where population density is high and mass population displacement is possible. See the Natural Hazards section for more information.

Most of the land in Indonesia is considered permanent forest. The largest province with this type of land is Papua, and in total permanent forest occupies more than 100 million hectares. Plantation land is the next most common land type, comprising almost 8 percent of land in Indonesia and common on Kalimantan. The most populous island, Java, hosts land types including dry land, wetland, and housing.⁵⁷ Wetlands are used in Indonesia for rice production and are an important part of food security in the country.⁵⁸

There are many river systems in Indonesia. The principal rivers are the Musi, Batanghari, Indragiri, and Kampar rivers on Sumatra; the Kapuas, Barito, and Mahakam rivers on Kalimantan; the Memberamo and Digul rivers on Papua; and the Bengawan Solo, Citarum, and Brantas rivers on Java, which are used primarily for irrigation.⁵⁹ Irrigation plays a major role in agriculture in the country. On Java, which has 70 percent of the country's irrigated agriculture, there are emerging issues related to water use during the dry season and flooding during the wet season. The Food and Agriculture Organization (FAO) expects that over time water used for agriculture will need to be diverted for urban and industrial uses, and that this could affect future food security.⁶⁰

Climate

Indonesia's climate is tropical year round due to its location on the equator. The country also experiences constant temperatures due to the uniformly warm waters that make up most of Indonesia's area. Temperatures average 80 degrees Fahrenheit year round, with averages dropping in the inland mountainous regions. Humidity in the country is generally very high with rainfall levels varying due to monsoons.⁶¹ The dry season is generally between June and September, with monsoon season occurring between December and March. During monsoon season, Sumatra, Java, Bali, and the interior of Kalimantan receive the most rainfall. The eastern islands nearer to Australia receive much less rainfall and the weather patterns in the Malukus can vary tremendously.⁶² Generally, typhoons are not a concern for Indonesia because they tend to affect areas further away from the equator.

Climate change is a major issue for Indonesia. The country is one of the largest emitters of greenhouse gasses (GHG) in the world and is also expected to be very vulnerable to the effects of climate change. As such, Indonesia is taking aggressive steps in climate change mitigation and

adaptation. Indonesia's huge amounts of carbon dioxide emissions are caused by deforestation, forest fires, and peat land degradation. When the country's vast peat bogs are drained or forests are cleared for agriculture, stored carbon dioxide is released into the air. Intentionally set forest fires (designed to clear land) also contribute to the problem.⁶³ The National Action Plan on GHG Emission Reduction proposes solutions for this issue. The solutions include: sustainable peat land management, reducing the rate of deforestation, developing carbon sequestration projects in forestry, promoting energy efficiency, and developing renewable energy resources.⁶⁴

Despite attempts at GHG emission reduction, Indonesia will still likely face the effects of climate change. Meteorologists in Indonesia have observed a pattern of decreasing rainfall during the December through March monsoon season, in areas of Indonesia including West Java, Sumatra, and Kalimantan. Increasing rainfall has been observed in East Java and Papua during the monsoon season. In the dry season, most of Indonesia experiences decreased rainfall.⁶⁵ Additionally, the monsoon onset has been increasingly delayed and shorter in duration overall. This may indicate monsoons that are short in duration with extreme rainfall that is highly likely to cause widespread flooding. The government expects crop production to be negatively impacted and is researching alternative crop varieties.⁶⁶ Sea level rise and sea temperature increases will also negatively affect Indonesia. Widespread coral bleaching is expected, and coastal areas are likely to be inundated when the effects of sea level rise combine with land subsidence.⁶⁷ This is a known issue in Jakarta and more damaging floods are expected in the coming years. See the Hazards section for more information.



INDONESIA

Disaster Overview

Indonesia Disaster Management Reference Handbook | 2015



Disaster Overview

Photo: AusAID / Licensed under CC BY 2.0

Indonesia is susceptible to many different types of hazards, and the varied nature of threats complicates risk management in the country. Floods, earthquakes, volcanic eruptions, tsunamis, and forest fires are all common in Indonesia, and the scale of these events can sometimes be massive. The geographically dispersed population and uneven development leaves large sections of the population exposed to some level of disaster. However, Indonesia's total risk exposure is considerably lower than many other Asian nations' exposure. The United Nation's (UN) 2014 World Risk Report named Indonesia the 38th most 'at risk' country for disaster.⁶⁸ This is far behind neighboring Philippines' 2nd most 'at risk' status. Other Asian nations with higher overall risk levels include Bangladesh, Cambodia, Papua New Guinea, Timor-Leste, Japan, and Vietnam. The World Bank estimates that Indonesia will incur fiscal losses of about USD \$500 million in any given year due to disasters. The probable maximum loss in a 10 year return period jumps to USD \$800 million, and in a hundred year return period the probable maximum loss is USD \$1.6 billion.⁶⁹

Risk assessments are subjective, and even authoritative sources do not always agree. For example, a 2010 ASEAN study ranked Indonesia's economic and social vulnerability to disaster highest behind only Burma (Myanmar).⁷⁰ Risk is distributed across a variety of hazards, and not all types of risk are equal. Indonesia's Humanitarian Country Team's (HCT) Contingency Plan cites a 2009 UN assessment that found Indonesia was 1st of 265 countries and special territories for potential population exposed to a tsunami and 3rd of 153 countries and special territories for population exposed to earthquakes. These statistics guide the current planning efforts in the country.⁷¹

The 2004 Indian Ocean earthquake and tsunami demonstrated that calculated risk levels can only inform decision making and cannot predict events. With 155,000 dead, 532,898 affected, and USD \$4.4 billion in damages in Indonesia alone, the tsunami hazard event overshadowed all other disasters in the Pacific for many years.⁷² This section will provide an overview of the different hazards that can affect Indonesia and detail examples of relevant events.

Natural Hazards

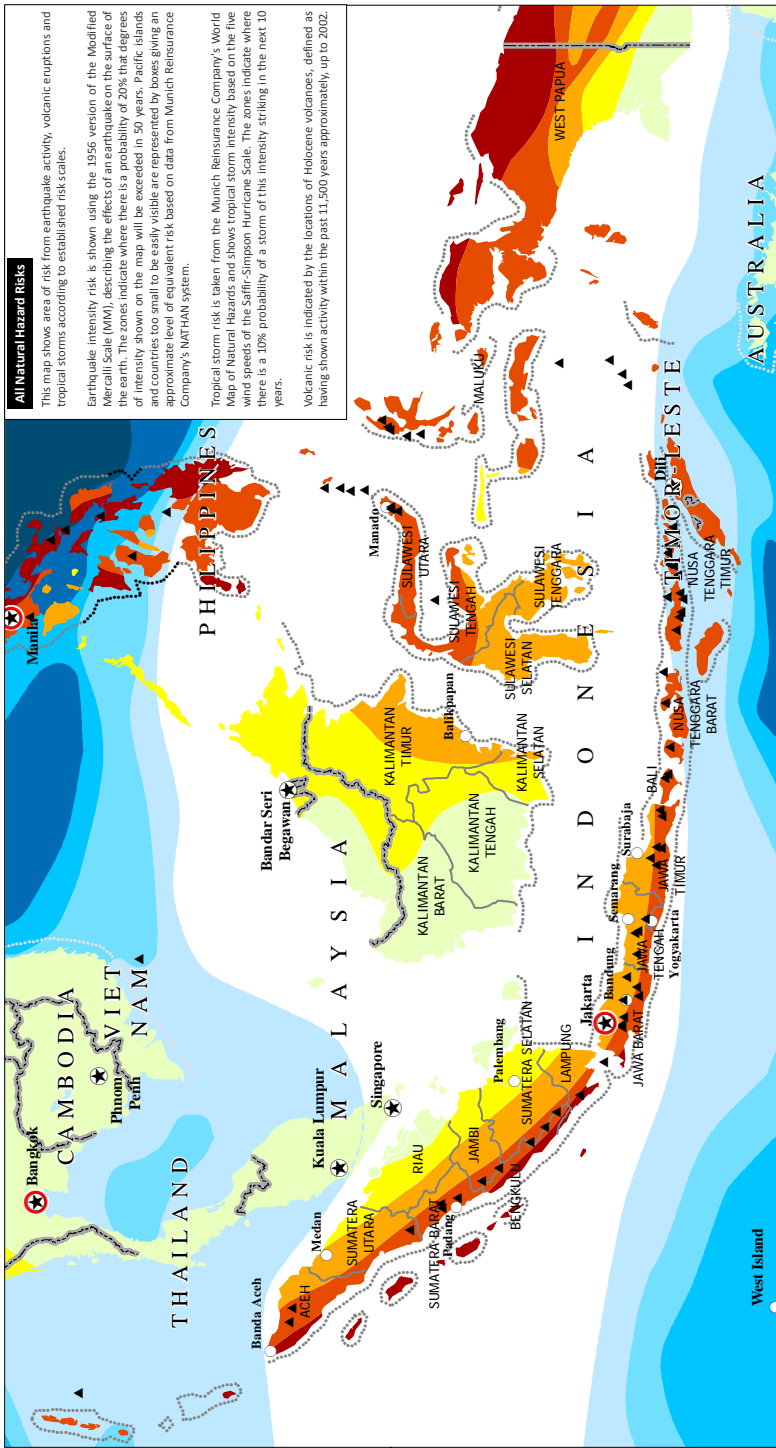
Natural hazards are the most prevalent threat in Indonesia, driven by their geographic position on the 'Ring of Fire' and location at the boundaries of three tectonic plates. These geographic features essentially cause very high seismicity and a proliferation of active volcanoes. The ten deadliest disasters in Indonesia between 1980 and 2015 are shown in the table below.⁷³

Earthquakes were the overwhelming fatality associated disaster type, followed by epidemics and drought. If the data set is expanded further back in time, volcanic activity is also associated with fatalities. However, better monitoring and evacuation practices have drastically decreased fatalities in modern times.

The Office for the Coordination of Humanitarian Assistance (OCHA) hazard map displays the meteorological and seismic hazards the country is exposed to in aggregate.⁷⁴

Disaster Type	Year	Fatalities	Description
Earthquake and Tsunami	2004	165,708	Indian Ocean 9.2RS
Earthquake	2006	5,778	Yogyakarta and Central Java 6.3RS
Earthquake	1992	2,500	Flores 7.8RS
Earthquake	2009	1,117	West Sumatra 7.6RS
Earthquake	2005	915	Nias 8.7RS
Earthquake	2006	802	Tasikmalaya, South Java 7.7RS
Epidemic	1998	777	Dengue, Jakarta
Drought	1997	672	Central Papua
Epidemic	1998	672	Rabies, Flores
Epidemic	2004	658	Dengue, Jakarta

OCHA Regional Office for Asia Pacific Indonesia: Natural Hazard Risks Issued: 01 March 2011



All Natural Hazard Risks
This map shows area of risk from earthquake activity, volcanic eruptions and tropical storms according to established risk scales.

Earthquake intensity risk is shown using the 1956 version of the Modified Mercalli Scale (MMS), describing the effects of an earthquake on the surface of the earth. The zones where there is a probability of 20% or more of being affected by the earthquake are shown in yellow. The Pacific Islands and countries too small to be easily visible are represented by boxes giving an approximate level of equivalent risk based on data from Munich Reinsurance Company's NATHAN system.

Tropical storm risk is taken from the Munich Reinsurance Company's World Map of Natural Hazards and shows tropical storm intensity based on the five wind speeds of the Saffir-Simpson Hurricane Scale. The zones indicate where there is a 10% probability of a storm of this intensity striking in the next 10 years.

Volcanic risk is indicated by the locations of Holocene volcanoes, defined as having shown activity within the past 11,500 years approximately, up to 2002.

Legend

- ⊛ OCHA office or presence
- ★ Country capital
- Major town or city
- International boundary
- Province boundary
- ▲ Holocene volcano
- ▲ Tsunami Hazards
- Storm surge
- Tsunami
- Tsunami and Storm surge

Earthquake Intensity

Modified Mercalli Scale

- Degree I-V
- Degree VI
- Degree VII
- Degree VIII
- Degree IX-XII

Tropical Storm Intensity

Saffir-Simpson Scale

- One: 118-153 kmh
- Two: 154-177 kmh
- Three: 178-209 kmh
- Four: 210-249 kmh
- Five: 250+ kmh

Map Doc Name:
- OCHA_ROAP_Hazards_v4_110606

GLIDE Number:
- / / a

Creation Date:
- 22 March 2011

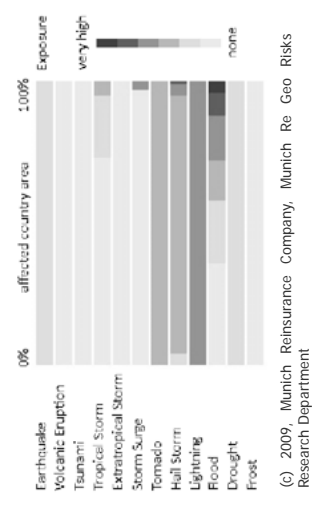
Projection/Datum:
- Behrman

Web Resources:
- <http://ochaonline.un.org/roap>

Nominal scale at A4:
- 62,000,000

Map data source(s):
UN Cartographic Section, Global Discovery, Indonesia National Statistical Office, Smithsonian Institute, Pacific Disaster Center, UNISYS, Munich Reinsurance Group

Disclaimers:
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.



The bar chart shows the degree of exposure to natural hazards and the percentage of area affected (per country). Tsunami and storm surges are a threat to coastal regions, particularly gulfs, bays, and estuaries. The flood hazard results from river floods and torrential rain. The hazard of dryness and drought is caused by major deviations from the normal amounts of precipitation. The frost hazard depends on the elevation and the latitude.

0 15,000 30,000 Kilometers

(c) 2009, Munich Reinsurance Company, Munich Re Geo Risks Research Department

Earthquake

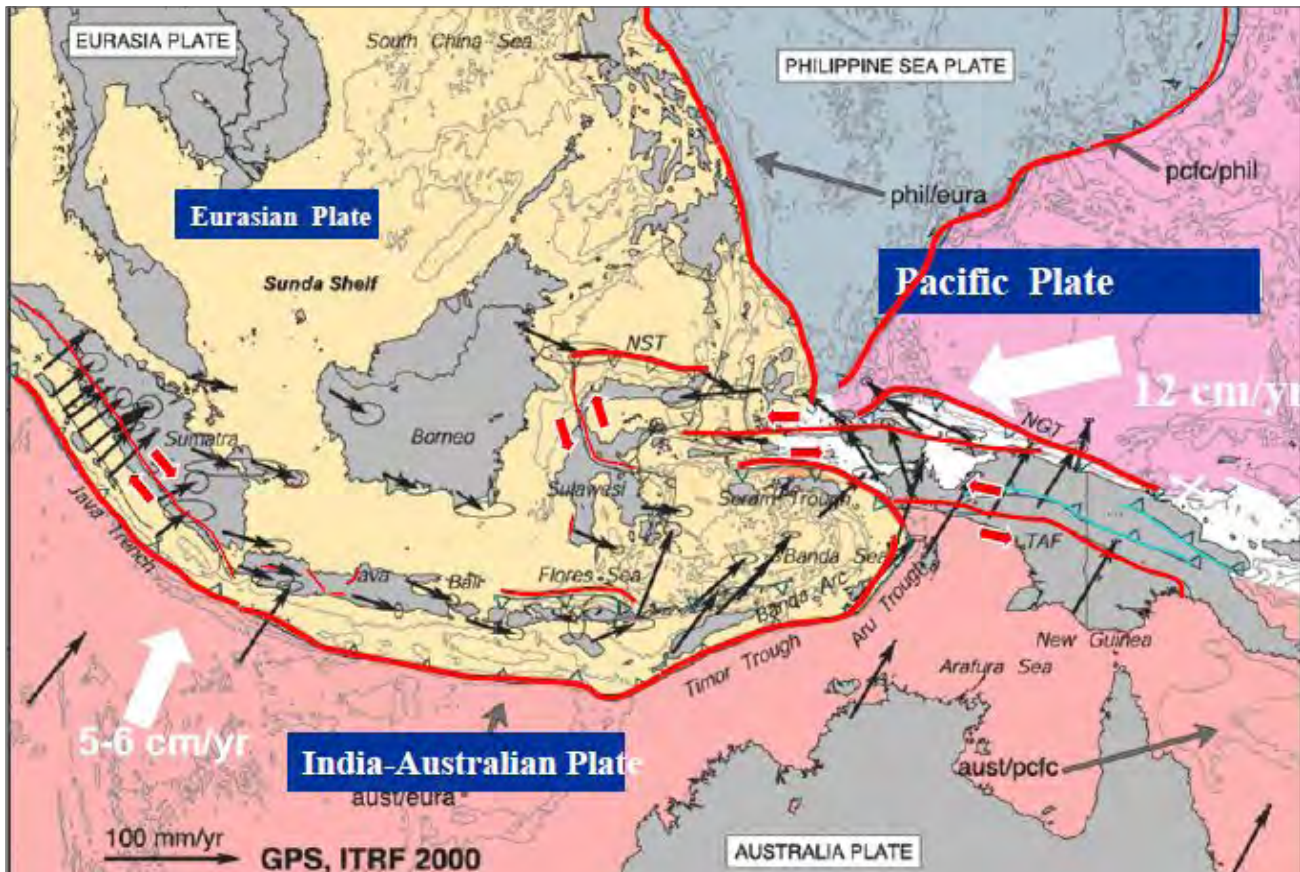
Indonesia experiences frequent and severe earthquakes because the country lies along the boundaries of three tectonic plates with many active faults. The Eurasian Plate surrounding much of the country is moving east and north, and the Pacific Plate to the country's east is moving south and west. As these two plates meet, the India-Australian plate moves north, colliding with its northern neighbors. This plate boundary generates very large earthquakes and sustained volcanic activity. Refer to the plate and fault map for further information.⁷⁵ The provinces most at risk of severe earthquakes include: Sumatera, Java, Bali, Nusa Tenggara, Maluku, Sulawesi, and Papua.⁷⁶

Between 1970 and 2009, earthquakes accounted for more deaths and people affected than any other disaster type in Indonesia, including tsunamis. Additionally, earthquakes also caused the second highest levels of economic loss, exceeded only by wildfires.⁷⁷

Earthquakes are monitored by the Indonesia Meteorology, Climatology and Geophysics Agency (BMKG) who is responsible for reporting on every earthquake exceeding a magnitude 5.0. In January

2015, the agency reported 18 earthquakes with a magnitude that met the threshold.⁷⁸ Frequent earthquakes are a fact of life in Indonesia, but the country is still greatly affected by them.

The Indonesian government recently made a concerted effort to better understand earthquake risk in the country. In 2012, the Australia-Indonesia Facility for Disaster Reduction (AIFDR) reported that the “map underpinning current building codes in Indonesia is almost 10 years old and does not incorporate lessons learned from recent damaging earthquakes or advances in earthquake hazard science.”⁷⁹ Since then, several groups (including AIFDR) have undertaken projects to update the country's earthquake risk maps. It will be several more years until these maps are incorporated into building codes, and even longer for the new recommendations to significantly reduce earthquake risk to buildings in Indonesia. In the interim, the UN HCT uses earthquakes in both its medium and high impact scenarios for contingency planning. The medium impact scenario imagines a 7.9 magnitude earthquake hitting a densely populated area at night. The UN estimates that this would cause 1,200 deaths, 1,800 injuries, affect 1,250,000



Plates and Faults affecting Indonesia



Rescue workers sift through a damaged building in Padang, Indonesia, 2009. Photo: UNDP / Hakan Bjorkman.

people, and damage 220,000 houses, 2,500 schools, 125 hospitals, and 800 government buildings. Emergency response would last 2 months, while full rehabilitation would take 2 years.⁸⁰ Planning assumptions include welcomed foreign assistance, minimal long-term internally displaced people (IDP), frequent outbreaks of communicable diseases, household asset losses, and significant psychological trauma.⁸¹ The UN's large impact scenario mirrors the destruction seen in the 2004 Indian Ocean earthquake and tsunami (see tsunami section).

On September 30th, 2009, a destructive 7.6 magnitude earthquake occurred at 17:15 local time in West Sumatra. The epicenter was located 57 km west of the island at a relatively deep 71 km in the Sunda trench.⁸² The Sunda trench fault is the same fault affected in the 2004 earthquake that generated the Indian Ocean tsunami, but this event was further south and smaller overall. However, scientists have warned that this location is known to have megathrust potential which would generate an exceptionally large earthquake and possible tsunami.⁸³ While there was no associated tsunami, ground shaking caused building collapses and fires that killed 1,117 people and damaged 140,000 houses and 4,000 other buildings in a city of 1,000,000 people. In

rural areas, landslides covered 3 villages entirely and left 600 people missing or presumed dead.⁸⁴

The BNPB identified “proximity to the epicenter, geological factors, poor construction practices, and pre-existing damage from a 2007 earthquake” as contributing factors to the damage.⁸⁵ An independent Earthquake Engineering Research Institute (EERI) assessment found that building design, codes, and practices were mostly responsible for the high death toll and damages. Specifically, schools and government buildings in the area were highly damaged due to their unreinforced concrete construction, and death tolls would have been higher had the earthquake occurred during normal business hours.⁸⁶ As a result of ground shaking, fire was an important secondary hazard. Earthquakes can rupture gas and electricity lines, leading to large fires that have the potential to burn 5 to 10 percent of a city's area. Humanitarian needs included agriculture supplies as planting season was about to begin, temporary classrooms, and health delivery staff and facilities.⁸⁷ Twenty international teams deployed for search and rescue, however the Japanese International Cooperation Agency (JICA) reported that “teams were unable to find a single survivor.”⁸⁸

Tsunami

Like other geologic hazards, tsunamis are a real threat to Indonesia. The 2004 Indian Ocean tsunami is the most devastating example of the threat tsunamis pose to the country. Since then, Indonesia has experienced three major tsunamis resulting in a total of 1,333 deaths and 47,502 people affected.⁸⁹ Indonesia experiences these high losses because it is geographically exposed to the phenomena that generate tsunamis. The faults that occur along tectonic plate borders are located on the sea floor rather than on land, meaning earthquake epicenters are more likely to be located where they can generate tsunamis. Further, the type of plate movement generates shallow, strong earthquakes, which are the type most likely to be tsunami genic. Finally, the country's many volcanoes occasionally generate local tsunamis when their eruption disrupts the seafloor. Most of Indonesia's coastline is considered high risk for tsunamis (See tsunami risk map).⁹⁰ A new National Tsunami Hazard Assessment for Indonesia found that regions most likely to experience a tsunami greater than 3m in any given year were Lampung Barat, the Mentawai Islands, and Nias. Regions with a two to ten percent chance of a 3m tsunami in any given year include Java's southern coast, the south-west coast of Sumatra, and parts of Bali.⁹¹

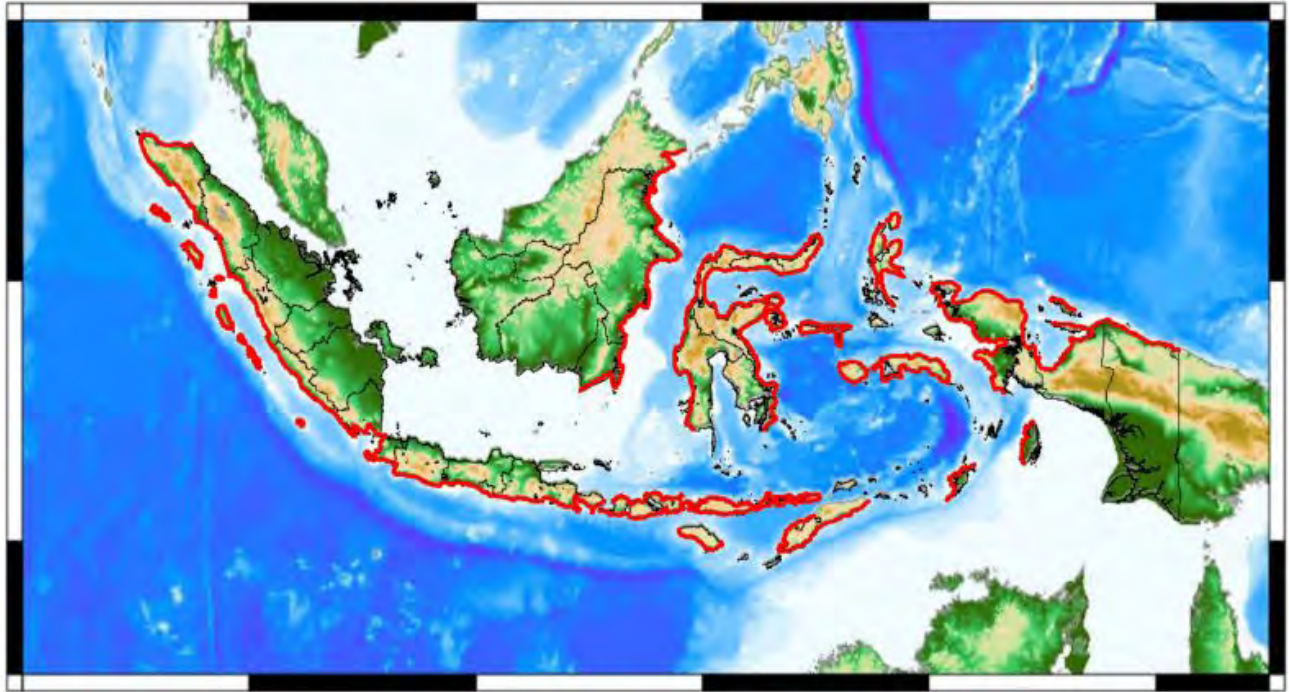
Indonesia's vulnerability to tsunamis is driven by its geography, the most at risk are communities

situated on the southern and western coastlines. These communities tend to be poor, isolated, and dependent on fishing to sustain their livelihoods. Because of this, large amounts of people reside adjacent to the water without adequate access to timely risk information. For example, the 2006 Pangandaran tsunami in West Java killed 600 people and displaced more than 75,000 others because there was no warning for those living near the sea. The earthquake which generated this tsunami had an epicenter 220km offshore and a depth of 10 km ground shaking on land was minimal, but within an hour the tsunami waves between 1m and 8m made landfall over 250km of Central Java's southern coast.⁹² In some areas, no buildings survived within 150m of the shoreline.⁹³ At the time, there was no tsunami warning system in place.

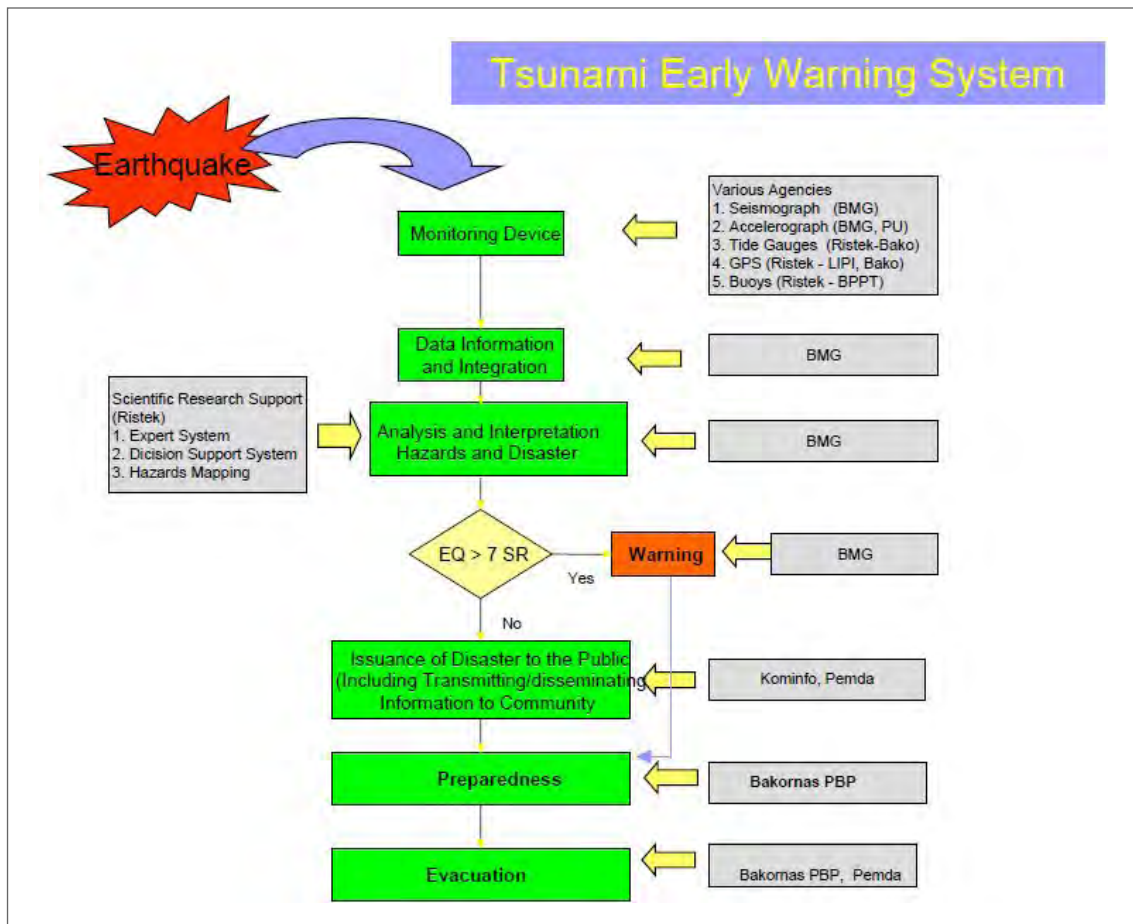
Since 2006, Indonesia instituted the InaTEWS (Indonesia Tsunami Early Warning System) which connects a series of monitoring devices to a data information and integration center that quickly determines if an earthquake is likely to produce a tsunami. Any applicable warnings are then disseminated through a series of public broadcast systems.⁹⁴ The multimodal warning dissemination includes text messages, internet, television, radio, and sirens to alert the public.⁹⁵ The system has been active since 2010, and is financed by the Indonesian government with assistance from Germany, Japan, and China.



Banda Aceh Shoreline After Tsunami, 28 December 2004. Photo: Digitalglobe



Tsunami Risk Areas



Tsunami Warning System Process Chart (Bakornas Pbp)

Volcanic Eruption

Volcanic eruptions are another notable geologic hazard to affect Indonesia. While they are capable of causing major damage, volcanoes are associated with less than three percent of people affected by disaster, and less than one percent of fatalities.⁹⁶ However, much of the country is in close proximity to an active volcano (see chart).⁹⁷ There are a total of 129 active volcanoes of which 70 are considered potentially dangerous and 23 have erupted in the last twenty years with two currently actively erupting (Feb 2015).⁹⁸ The majority of volcanoes can be found on Java, where population density is high and mass population displacement is possible

In the past, volcanic eruptions have caused large numbers of fatalities. For example, Mt. Krakatau (Krakatoa) exploded in 1883. It caused more than 36,000 deaths and affected people around the world. Many years' later, global temperatures decreased by 3 degrees Fahrenheit, and skies were discolored by ash. Locally, the eruption caused tsunamis that wiped out populations of entire islands and lahars (volcanic mud and ash flows) that buried towns. Very few people died from the volcanic eruption directly.⁹⁹

Today, volcanic activity is closely monitored by the Center of Volcanology and Geophysical Hazard Mitigation and the Ministry of Energy and Mineral Resources. The Center utilizes a system with four levels of alert:

- Alert 1 (Code Green - Active Normal) - No activity based on monitoring visual seismicity and other events. No eruptions in the foreseeable future.
- Alert 2 (Code Yellow - Danger/Waspada) - Increased seismicity and other volcanic events such as gases; visual changes around the crater and magmatic, tectonic or hydrothermal disturbances. Eruption is not imminent, however due to the increased danger, local officials should prepare for a disaster
- Alert 3 (Code Orange - Ready to Erupt/Siaga) - Rapid rise in seismicity accompanied by obvious visual changes in the crater. Large eruption possible within one-to-two weeks, depending on data analysis.
- Alert 4 (Code Red - Active Danger/Awas) - Begin evacuation due to small eruptions and/or potential for a large eruption spewing ash, lava and gases. A major eruption is imminent, possibly within 24 hours



Gunung Batok, Gunung Bromo, and Gunung Semeru. Photo: Michael Day

Evacuations for areas around active volcanoes are a regular occurrence and fatalities as a result of volcanic eruptions are relatively rare, Mount Merapi is a recent exception. In 2010, approximately 15 miles north of Yogyakarta City in the Central Java Province, Mt. Merapi erupted at least four times. The volcano emitted clouds of smoke and volcanic ash as much as one mile up in the air. The International Federation of Red Cross and Red Crescent Societies (IFRC) estimated around 30 deaths and 90 injuries, but

other estimates have the estimated fatalities as high as three hundred.^{100 101} Prior to the eruption, the Center of Volcanology and Geological Hazard Mitigation under the government worked with civil defense and local authorities to issue warnings and evacuate people within a 6 mile radius of Mt. Merapi. The BNPB estimated damages at USD \$24 billion which included the economic effects of the eruption on livelihoods.¹⁰²



Major Volcanoes of Indonesia (USGS)

Flooding

Floods are the most pervasive hazard affecting Indonesia. While the impacts vary regionally, every part of the country sustains flood related damages annually. Between 1995 and 2015, floods accounted for 43 percent of disaster occurrences which is double to the next most prevalent disaster (earthquakes).¹⁰³ Floods also affected the second most number of people over the same time period (after earthquakes) and accounted for just slightly less total damage than earthquakes and forest fires. Disasters are defined here by EM-DAT's criteria: 10 or more people reported killed, 100 or more people reported affected, a call for international assistance, or a declaration of a state of emergency. The Indonesian government (BNPB) recognizes disasters on a smaller scale and therefore may have a different count. Current information is not available, but the following chart reflects an average year of flood damages in Indonesia (as recorded by BNPB):¹⁰⁴

Flood Events and Impact 2003/2004



Jakarta's flooded areas, 2007



Flooded marketplace, Jakarta, Indonesia, 2007. Photo: Charles Wirriawan

Flooding in Indonesia is driven by annual rains during the monsoon season. The wet season occurs between November and March, when Asian and Pacific air masses influence weather patterns. The dry season between June and October is dictated by the influence of the Australian continent. The areas at highest risk for flooding include the northeast coast of Sumatra, the northwestern coasts of Java, the western and southern regions of Kalimantan, the southern region of Sulawesi, and southern Papua. Rivers at a high risk of flooding include the Bengawan Solo and Benanain River.¹⁰⁵

Other factors affecting flooding include deforestation upstream, changes in sedimentation, and paving over the catchment area. For example, when rain falls in areas that have been stripped of vegetation, water is not absorbed into the ground and instead becomes runoff, adding to the total amount of water that moves downstream. As this water moves downstream, its path may be blocked by trash and other obstructions in the river. The water then floods over the river banks, and paved urban areas are unable to absorb the excess water. While floods themselves cause large amounts of damage, Indonesia is also at risk of secondary hazards, including landslides and disease outbreaks.

Jakarta experiences severe annual heavy flooding as a result of monsoon rains interacting with human risk factors along the 13 rivers that flow through the city. Most of the precipitation falls between January and February, with rainstorms that are concentrated in the afternoon and early evening hours.¹⁰⁶ Fatalities are generally lower than other types of disasters that affect the capital, but the economic and long term consequences can be much higher due to the huge amounts of inundated land. In 2007, flooding inundated 50 percent of land in metro Jakarta causing 80 deaths and displaced 400,000 people. The entire city came to a halt leaving USD \$500 million in damages.¹⁰⁷ See map for the 2007 flooding, produced by Indonesia's hazard mapping software, InaSFE.¹⁰⁸

Experts fear that Jakarta's flooding problems will be more intensified in the near future. According to the Jakarta Flood Mapping Framework, increasing population pressure, annual land subsidence of 10cm/year, and increasing high tide lines may cause 4 million people and 25 percent of the city to be affected by inundation by 2025.¹⁰⁹ Proposed short term actions to reduce risk include: canal dredging, halting industrial ground water extractions, improving early warning system, and strengthening building codes.¹¹⁰

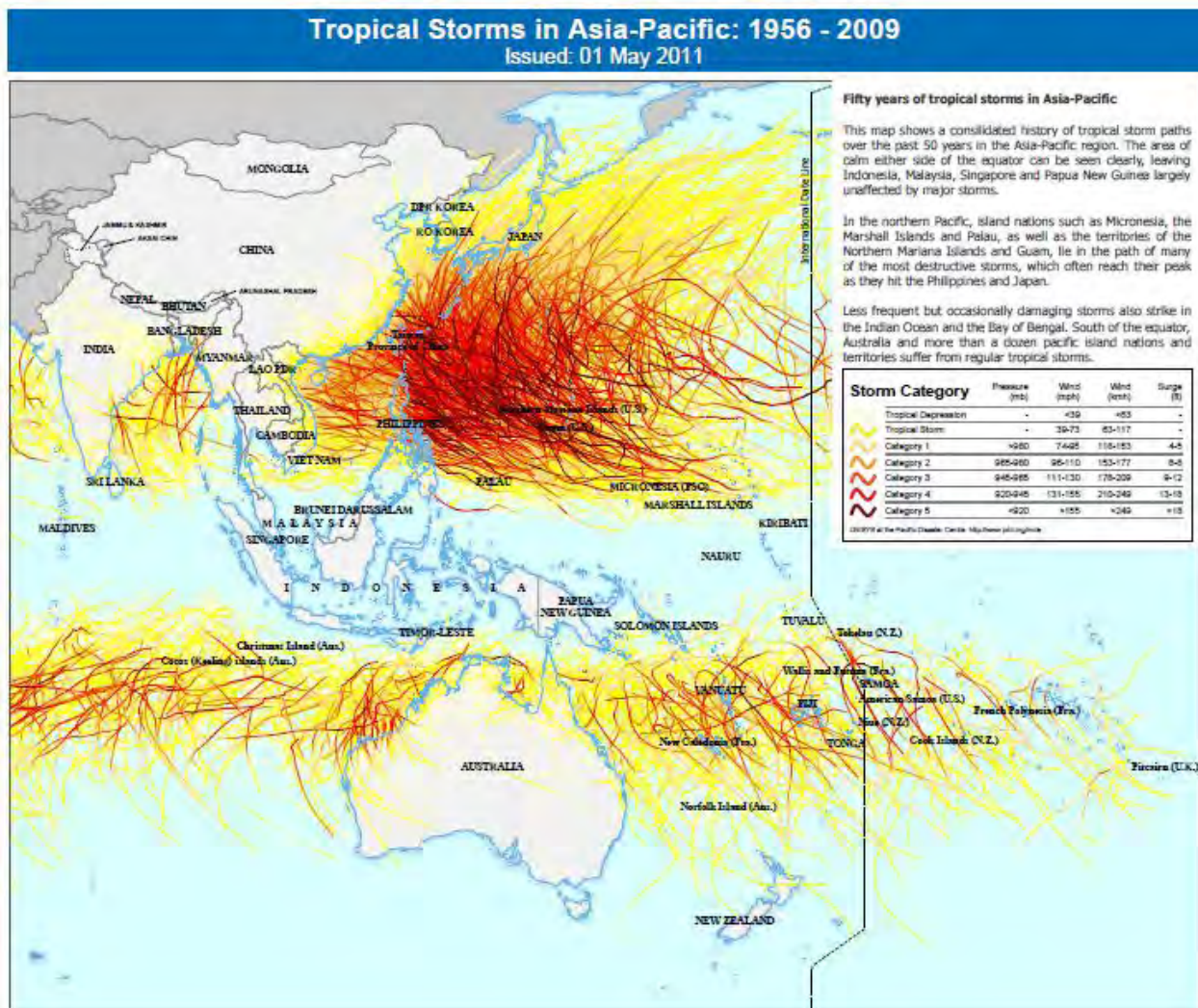
Typhoons and Storms

Typhoons are rare in Indonesia, which may be surprising given the high risk levels in neighboring Philippines. An analysis of disasters in Indonesia between 1995 and 2015, showed that typhoons accounted for fewer than one percent of all disasters (by count, by people killed, and by total damages) because the country lies in the equatorial region between the tropics of Cancer and Capricorn, an area mostly free of typhoons.¹¹¹ See the OCHA map for historic typhoon tracks in the Asia-Pacific.¹¹²

However, rainfall and wave activity associated with storms that are not strong or organized enough to be considered typhoons do pose some level of risk. Excess rainfall can cause widespread flooding, particularly if the system acts in conjunction with monsoon rains. See the flooding section for a more detailed description of these hazards.

Wave activity associated with typhoons affecting Australia may also cause high levels of erosion on shorelines and threaten coastal structures. Areas at risk for wave damage include the southern coasts of Sumatra and Java including Aceh, Medan, Padang, and Selayar District.

Whirlwinds are regularly mentioned by the BNPB as a storm associated hazard in Indonesia. However, other sources do not identify whirlwinds as a major threat. Whirlwinds are a term for strong winds associated with storms, or they may be actual tornadoes, although this is unlikely. These winds are most common during seasonal transitions as the monsoon season starts and ends and can cause damage to light roofing, electricity poles, and small trees.

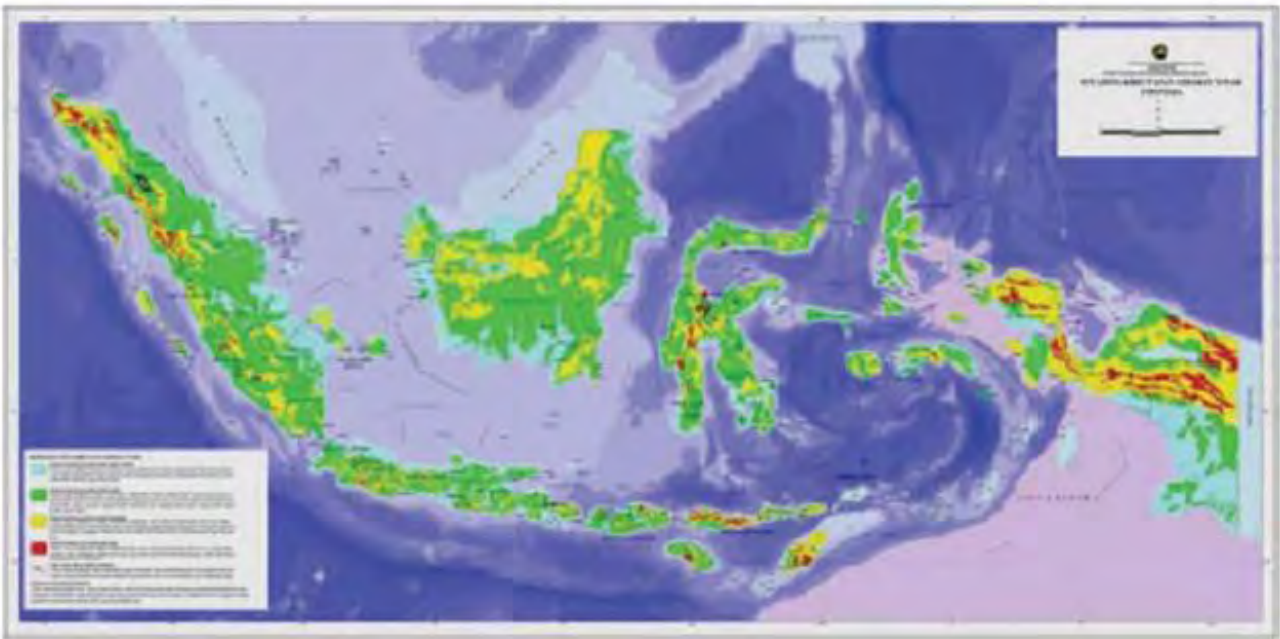


Tropical Storms In Asia-Pacific: 1956-2009

Landslides

Landslides are an important secondary hazard in Indonesia and are closely associated with flooding, earthquakes, and volcanic activity. All three primary hazards regularly cause landslides as they work in different ways to weaken the integrity of hillsides. Heavy rainfall can cause ground liquefaction and slope failure. Earthquakes dislodge loose soils and cause rock falls, while volcanoes can cause landslides by either depositing ash that later flows downhill (lahars) or by causing ground deformation that weakens slopes.¹¹³

Landslides can be even more prevalent when heavy rainfall, earthquakes, or volcanic eruptions combine with poor building practices and deforestation. In all three types of landslides, affected communities generally do not have warning. The people most likely to be affected are generally those living in rural areas and the poor. While most areas in Indonesia are capable of experiencing landslides, northern Sumatra, northern Kalimantan, southern Java, and Papua are most at risk (see Indonesian government map).¹¹⁴



Landslide Prone Areas In Indonesia

Drought

Indonesia is vulnerable to drought as reductions in rainfall can seriously harm necessary rice production. Droughts occur when there is a substantial decrease in the water available as compared to normal conditions—these drought conditions harm crop harvest and threaten food security. In Indonesia, droughts are driven by smaller than expected monsoon seasons and are more likely when El Niño is present. El Niño affects Indonesia by delaying the onset of the wet season, making planting crops difficult and leading to food shortages.¹¹⁵

The effects of drought conditions can be severe, especially if the drought occurs in conjunction with other hazards. The most recent severe drought occurred in 1997 which was associated

with a very strong El Niño. The drought officially caused 672 deaths, affected 1 million people, and caused USD \$88 million in damages. However, these numbers do not accurately reflect the effects of drought on the Indonesian people. Concurrent with the drought, Indonesia faced the Asian financial crisis and record wildfires. With all these three hazards impacting the country concurrently, the World Food Programme (WFP) estimated 7.5 million people faced food insecurity. Irian Jaya located in West Papua was most affected with food shortages due to drought. The Indonesian government requested more than 3,000 tons of rice, and hundreds of tons of sugar, salt, and milk powder. A large international assistance effort was launched, with 12 countries contributing cash grants.¹¹⁶

Man-Made Hazards

While natural hazards are generally more widespread and devastating in Indonesia, man-made hazards are a persistent threat and can occur on a very large scale in some instances.

Forest Fires

Intentionally set forest fires are a major hazard in Indonesia. Forest fires begin when farmers burn large tracts of land to clear for planting. While this practice is generally not environmentally sustainable, fires are especially dangerous because winds can turn planned fires into uncontrolled burns.

In fact, between 1995 and 2015, forest fires accounted for greater economic damage than any other type of disaster, with USD \$9.3 billion in direct costs (see pie chart).¹¹⁷ The vast damages from forest fires are from the massive amounts of smoke generated by fires and the threat uncontrolled fires pose to communities and businesses. Areas with the greatest number of forest fires are Sumatra, Kalimantan, and parts of Sulawesi and Java.¹¹⁸

During the 1997-1998 El Niño, the worst haze was recorded when extensive fires broke out on Borneo Island and covered large portions of Southeast Asia for months. An El Niño related drought exacerbated the fires and neighboring countries lodged formal complaints. Damages included disruptions to air travel, smaller crop yields, and widespread health effects.

Civil Unrest and Conflict

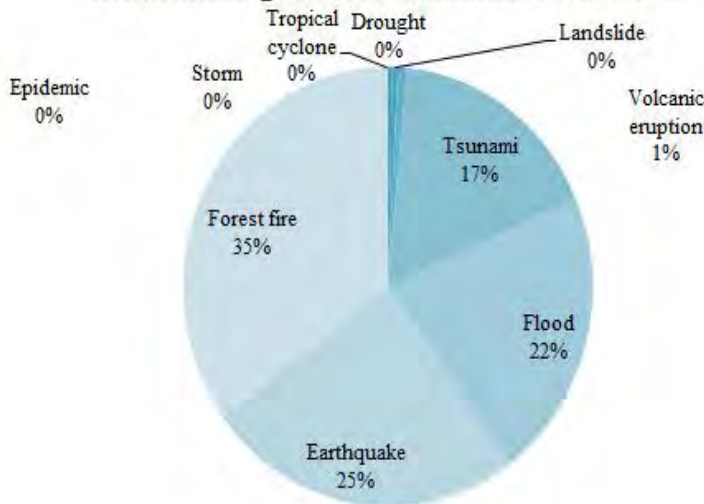
Parts of Indonesia have struggled with internal conflict and civil unrest, which can reach a level serious enough to impact those living in affected areas experiencing disaster. The UN's platform for measuring humanitarian risk assessed Indonesia's relative risk for conflict at 6.43/10. For context, this is a slightly higher level of risk than in Ethiopia, Iran, and Sri Lanka, and a slightly lower level of risk than for Egypt, the Democratic Republic of Congo, and Burma (Myanmar).¹¹⁹ Conflict leads to marginalized populations that lack access to a social safety net. This precarious situation can wear down a community's capacity to cope with natural hazards, leading to a disaster for those affected. Indonesia's National Plan for Disaster Management now acknowledges this challenge and specifies that future studies of conflict and vulnerability will take place.¹²⁰

Infectious Disease

Indonesia experiences sustained transmission of numerous key communicable diseases including diarrheal diseases, malaria, tuberculosis (TB), typhoid fever, dengue fever, and selected neglected tropical diseases (NTDs).¹²¹ In any given year, pronounced outbreaks of several of these diseases occur and are compounded during disaster events. Floods, earthquakes, and tsunamis can lead to contaminated water sources and cut communities off from healthcare resources,

further promoting disease spread. Additionally, diseases of pandemic potential are a concern in Indonesia. The country was a node of activity during the 2008 Avian Influenza crisis. HIV is also a concern as the country's overall incidence is low (.27 percent), but it is experiencing a high growth rate in key affected populations.¹²²

Total damages from disaster, 1995-2015



Damages from Forest Fires and Other Hazards

Each year haze from illegal forest fires in Indonesia is becoming a regional problem. In 2010, Malaysia and Singapore were affected by haze generated by illegal forest clearing fires. The fires were lit to clear land in the northern part of Sumatra, and burned larger and for longer than planned.

Endemic Conditions

Communicable and Infectious Diseases

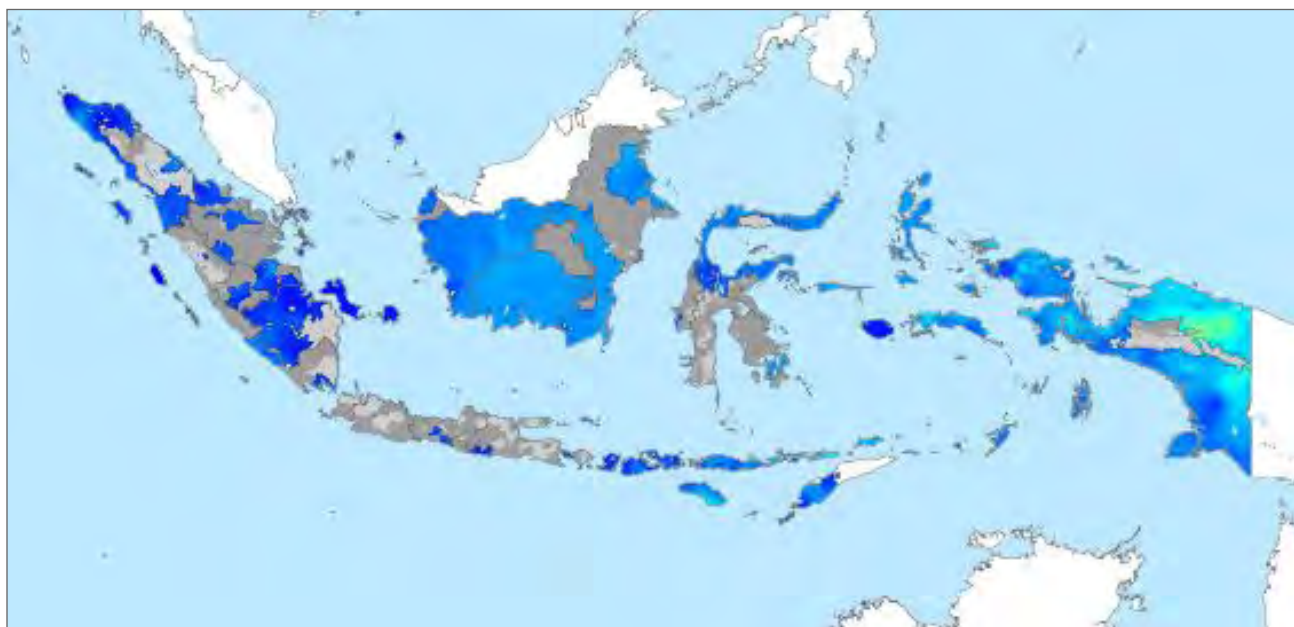
Endemic communicable and infectious diseases in Indonesia include diseases transmissible from person to person, diseases transmitted via vectors, and a group of distinct diseases that are generally classified as neglected tropical diseases (NTD). Diseases that can be passed by direct human contact tend to concentrate in pockets of infection that arise sporadically over background levels, while vector transmitted diseases and NTDs are a continuing problem.

Malaria, dengue fever, and Japanese Encephalitis (JE) are all endemic to Indonesia and are all transmitted by mosquitos. Malaria and dengue fever are both relatively widespread, but JE is considered to be low-incidence in comparison to other Southeast Asian (SEA) nations. The WHO estimates the JE overall incidence rate to be 1.7 cases/100,000 people in Indonesia.¹²³ In contrast, malaria has an incidence rate of 95/100,000, and dengue had a countrywide incidence rate of 37.3/100,000 in 2012.^{124 125} Malaria and Dengue generally affect those who spend large amounts of time outdoors, and can become problematic if they spread to areas of where the population is more concentrated. Malaria infections are mainly concentrated in the eastern and northern parts of Indonesia (see map),¹²⁶ and dengue's highest endemic levels are in Jakarta, Java, and Bali.¹²⁷

Tuberculosis (TB), typhoid fever, and diarrheal diseases are endemic diseases that are transmitted from person to person or through contaminated water. Indonesia is considered a TB very high burden country by the WHO. The disease causes more years of life lost in Indonesia over any other illness, except stroke.¹²⁸ TB is transmitted through the air via suspended droplets of infected bodily fluids.

Diarrheal diseases remain endemic, causing 21 percent of national morbidity and more hospital inpatient admissions than any other illness.¹²⁹ The disease is transmitted via contaminated water, and outbreaks are more likely during flooding conditions and after disasters when normal sanitation infrastructure is not operational.

NTDs endemic in Indonesia also include trichuriasis, ascariasis, hookworm, schistosomiasis and other Soil-transmitted helminthes (STH's). The first three STH's infect between 60 and 90 million people in Indonesia at any given time.¹³⁰ These diseases are caused by parasitic worms generally associated with agriculture and fishing. STH's are endemic in 31 of Indonesia's 33 provinces and are spread via inadequate sanitary and waste management facilities, lack of potable water, and poor eating habits.¹³¹ Symptoms are wide ranging (from fever to intestinal discomfort), but treatment is relatively uncomplicated via widely available drugs. Treatment of these STH's is complicated by access to infected populations and social stigma.¹³² Children are at greatest risk due to symptom-associated malnutrition during growth stages.



Distribution of Malaria Endemicity in Indonesia in 2010



INDONESIA

Government

Indonesia Disaster Management Reference Handbook | 2015



Government Structure for Disaster Management¹³³

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The devastating 2004 tsunami which swept through Aceh Province leaving behind a wake of destruction accelerated the transformation of disaster management in Indonesia. The legal framework prior to the disaster consisted of Presidential decrees from 1979 which established the National Disaster Management Coordinating Board, BAKORNAS and the provincial and district counterparts. At the provincial level, SATKORLAK supervised the response while SATLAK provided relief at the district and sub-district level. The international disaster received by Indonesia overwhelmed the Government and disaster response structure with significant challenges confronted in the facilitation and regulation of emergency relief, entry of personnel and materials, and coordination.

The Indonesia Government accounted for the disparities in the legal system and wrote the first comprehensive disaster management law for the country in 2007. The new Law heralded the beginning of the paradigm shift from a disaster response approach to a disaster management methodology which encompassed all phases (before, during, post). The Government adopted regulations to implement the new Law and established a new National Disaster Management

Agency (BNPb). Indonesia progressed on by developing guidelines under BNPb to manage international assistance according to the IDRL Guidelines. The Law, regulations and guidelines instituted by Government, launched Indonesia as one of the leading countries in the world to execute legislative reform to implement recommendations from the International Disaster Response Law (IDRL) Guidelines.

National

At the national level, organizations exist to execute laws and regulations developed to comprehensively address disaster management and disaster risk reduction in the country.

National Disaster Management Agency^{134 135 136}

The Disaster Management Law (Law 24/2007) required the Government of Indonesia to establish the National Disaster Management Agency. Presidential Regulation Number 8 of 2008 on National Disaster Management Agency (Regulation 8/2008) created the Badan Nasional Penanggulangan Bencana (BNPB) as a non-departmental government institution equal in status to the national ministries. The agency reports to the President and the lead position is termed BNPB Head.

The agency shall have the tasks to:

- Provide guidelines and directions on disaster management which include disaster prevention, emergency response, rehabilitations, and reconstruction in a fair and equitable manner
- Set disaster management standardization and requirements by virtue of Legislation
- Communicate information on activities to the community
- Report on disaster management to the President once a month in normal conditions, and at any time in disaster emergency conditions,

- Use and provide account for international and national contributions/aid
- Account for use of budget received from the State budget
- Carry out other obligations in accordance with Legislation
- Prepare guidelines on establishment of Regional Disaster Management Agency
- Functions of the BNPB are to:
 - Formulate and stipulate disaster management policy and handling of refugees through quick, appropriate, effective, and efficient actions
 - Coordinate disaster management activities in a well-planned, integrated, and comprehensive manner
 - The disaster management steering committee will formulate the national disaster management policy concept, monitor and evaluate disaster management

In accordance with Law 24/2007, the BNPB shall be comprised of a steering committee and managing executive body. The steering committee members are government officials and professional community members as appointed by the House of Representatives. Regulation 8/2008 provides the committee structure, tasks, and functions.

Disaster Management Steering Committee

Positions, Tasks, and Functions

- The Disaster Management Steering Committee is accountable to the BNPB Head
- Committee provides inputs and suggestions to BNPB for disaster management
- The Committee organizes policy formulation, monitoring, and evaluating the implementation of disaster management

Membership

Chairperson and 19 Members, including:

- 10 Echelon I of Government Officials or equivalent nominated by Head of Government Institutions
- 9 Professional Community Members

Government Officials represent:

- Coordinating Ministry for People's Welfare
- Departments of Home Affairs, Social Affairs, Public Works, Health, Finance, Transportation, Energy and Mineral Resources
- National Police of the Republic of Indonesia
- National Army of the Republic of Indonesia

Disaster Management Executive Committee

Positions, Tasks, and Functions

The Disaster Management Executive Committee is accountable to the BNPB Head

Committee has the task of conducting integrated disaster management for pre-disaster, emergency response, and post-disaster periods

Committee organizes these functions:

- Coordinate disaster management
- Command disaster management
- Implement disaster management

Organizational Structure

Members report to the BNPB Head

Chief Secretariat

(comprised of 4 Bureaus, each Bureau has 4 divisions and each division has 2 sub-divisions)

- Led by Chief Secretary
- Task to coordinate, plan, foster, and control program, administration, and resources
- Coordinate, synchronize and integrate within BNPB
- Coordinate, plan, and formulate BNPB technical policy
- Foster and provide services of administration, law, and legislation matters, organization, management, personnel, finance, coding, equipment, and BNPB household
- Public relations and protocol fostering and implementation within BNPB
- Facilitate task performance and functions of steering committee
- Coordinate preparation of BNPB report

Deputy of Prevention and Alertness

(Each Deputy is comprised of 4 Directorates, each Directorate has 3 sub directorates, and each sub directorate has 2 Articles)

Note: All deputy positions are held by a Deputy

- Task to coordinate and implement general policy in disaster management during the pre-disaster period and on community empowerment
- All tasks refer to disaster management during the pre-disaster period and on community empowerment
- Formulate, coordinate and implement general policy
- Maintain employment relations for same period
- Monitor, evaluate, and analyze the reporting on the implementation of general policy

Deputy of Emergency Management

- Task to coordinate and implement general policy on disaster management during emergency response
- All tasks refer to disaster management during the emergency response and in refugee management
- Formulate, coordinate, and implement general policy
- Command the implementation of general policy
- Maintain employment relations
- Monitor, evaluate, and analyze the reporting on the implementation of general policy

Disaster Management Executive Committee (continued)

Organizational Structure (continued)

Members report to the BNPB Head

Deputy for Rehabilitation and Reconstruction

- Task to coordinate and implement general policy on disaster management during the post-disaster period
- All tasks refer to disaster management during the post-disaster period
- Formulate, coordinate, and implement general policy
- Maintain employment relations
- Monitor, evaluate, and analyze the reporting on the implementation of general policy

Deputy of Logistics and Equipment

- Task to conduct logistics and equipment coordination and support in disaster management
- All tasks are related to disaster management
- Formulate policy on logistics and equipment
- Implement planning for logistics and equipment
- Monitor, evaluate, and analyze the reporting on the implementation of policy on logistics and equipment

Chief Inspectorate

(comprised of 3 Inspectorates, each Inspectorate has 1 Administration sub division, and a Group of Auditor Functional Jobs)

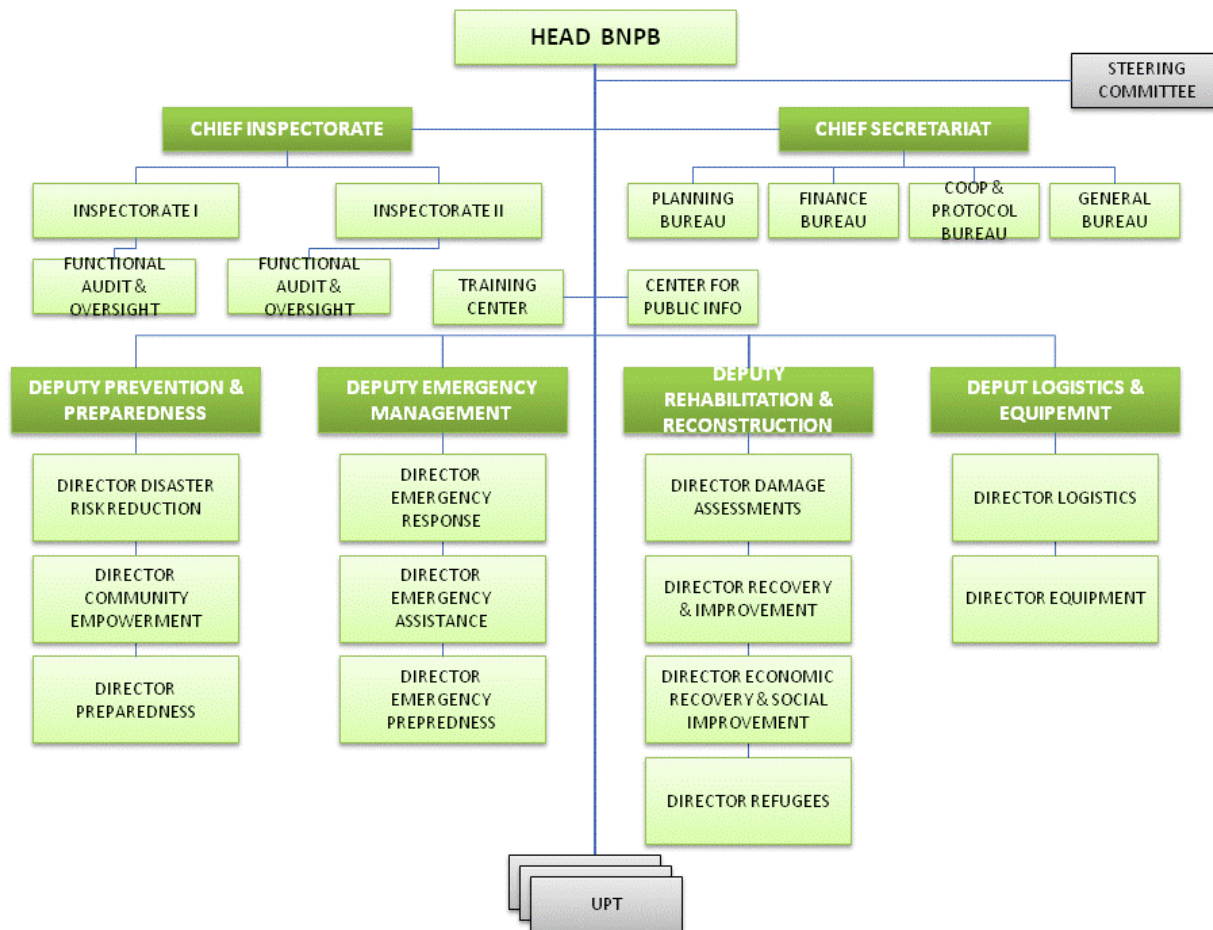
- Led by Chief Inspector
- Execute functional supervision of BNPB tasks and functions
- Prepare policy on functional supervision
- Supervise performance, finance, and other areas as directed by BNPB
- Conduct Chief Inspectorate administration affairs
- Prepare reports on results of supervising

Center

- Led by Center Head
- Two centers established as supporting committees for the executive committee tasks and functions

Technical Executing Unit

- Led by Technical Executing Unit Head
- Conduct operational technical tasks or support technical tasks



Center for Excellence in Disaster Management and Humanitarian Assistance. Country Disaster Response Handbook: Indonesia (2011).

Indonesia Rapid Response and Assistance^{137 138}

The Government of Indonesia created a Stand-By Force for emergency management/disaster relief to function as BNPB's initial reaction team due to the geographical propensity of the country to encounter natural hazards and disaster events. The Indonesia Rapid Response and Assistance (INDRRA) or Disaster Relief Rapid Reaction Force (Satuan Reaksi Cepat Penanggulangan Bencana/SRCPB) is comprised of Civil-Military personnel from various ministries and agencies. The reaction force is deployed to assist the local governments affected by disaster and to provide a timely and coordinated emergency response. INDRRA conducts rapid assessments on the disaster impacts and determined humanitarian needs during the initial and early stages of emergency phase.

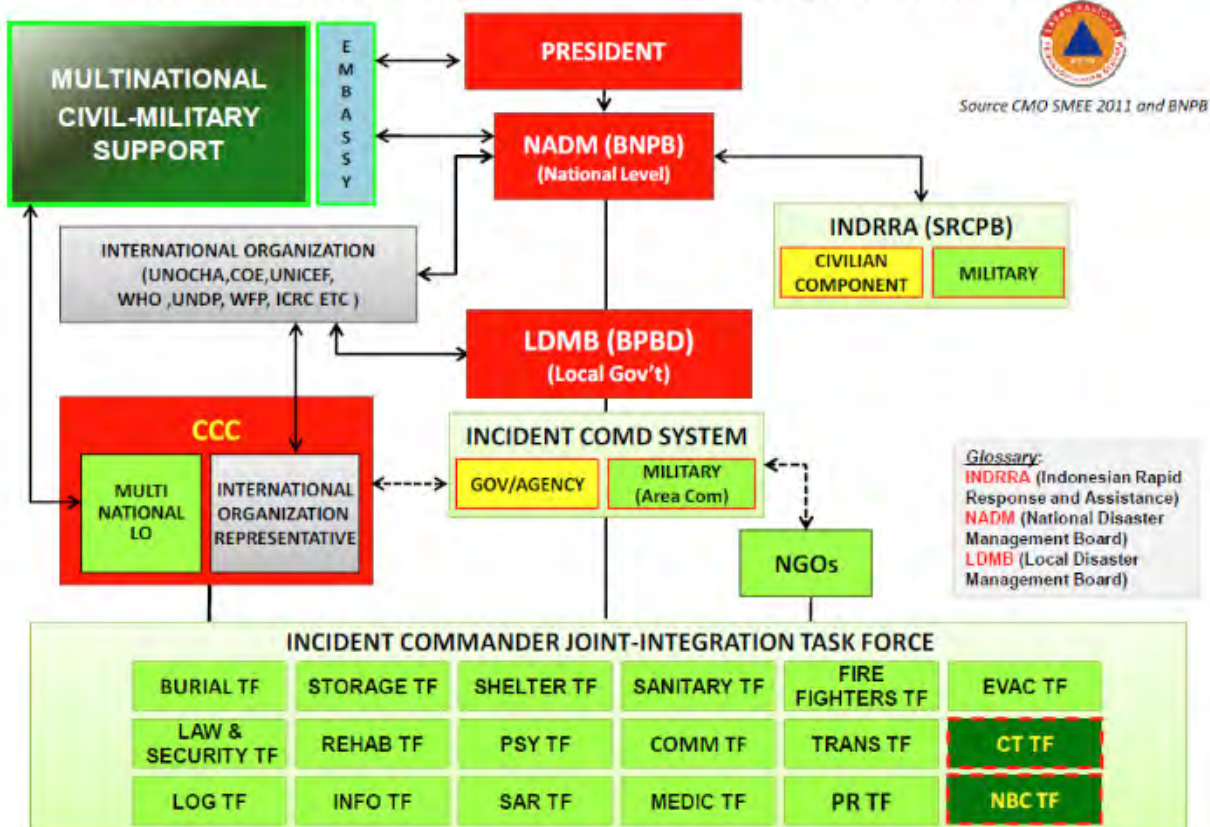
There are two units responsible for the Western and Eastern parts of the country which were established in 2009. The personnel receive various trainings to develop emergency/disaster related capabilities and knowledge. The units are fully equipped and self-sufficient.

Base of Operations for INDRRA:

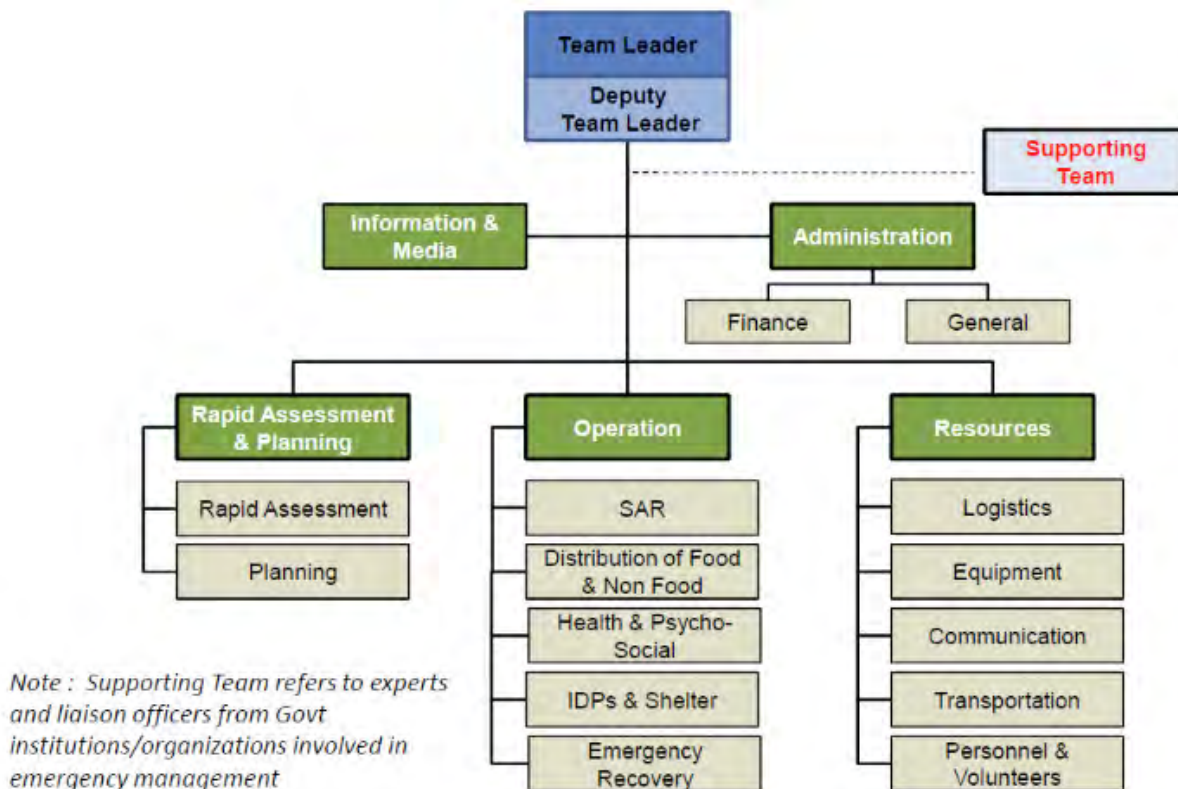
Western Region – Halim Perdana Kusuma Air Force Base, Jakarta

Eastern Region – Abdulrahman Saleh Air Force Base in Malang of East Java

COORDINATION MECHANISM OF DISASTER MANAGEMENT



Satun Reaksi Cepat Penanggulangan Bencana SRC PB / Indonesia Rapid Response and Assistance (INDRRA)



National Platform for Disaster Risk Reduction Indonesia^{139 140}

In April 2009, the National Platform for Disaster Risk Reduction Indonesia (Planas PRB Indonesia) was established as an independent forum to relevant stakeholders at the national and local levels. Members are comprised of representatives from key government institutions, nongovernmental organizations, private sector, civil society, higher education/universities, media, and international institutions. The forum fosters and facilitates cooperation between the stakeholders in disaster risk reduction efforts in the country. The organization seeks to accept all disaster related interests and help synchronize the various policies, programs and activities for disaster risk reduction at the national level and in line with the Hyogo Framework for Action. The Yogyakarta Disaster Risk Management (DRM) Forum and the East Nusa Tenggara DRM Forum exist at the local level.

Local Government^{141 142 143}

In accordance with Law 24/2007, Regional Disaster Management Agencies (Bedan Penanggulangan Bencana Daerah or BPBD) have been founded and coordinate with the BNPB. Meetings are held with BNPB at least twice a year. Regional BPBDs are composed of members from the district/city level agencies and mirror the national level in terms of structure, tasks, and functions. The BPBDs are comprised of a provincial level agency led by an official ranking second to governor or equivalent to the required echelon. The regency/city level agency is presided by an official whose position is second to the regent/mayor or equivalent to the required echelon.

Disaster management agencies have been created in the 34 provinces since 2010-2013. Presently, local disaster management agencies (BPBDs) exist in more than 90 percent of the districts and cities in the country. BNPB continues to encourage BPBDs and the local DRR platforms to promote DRR at the village level. Training and simulation exercises conducted at the district/city and village levels builds capacities for response, risk assessment, and community-based DRR. Response capacity for climate-related risks is not as significantly matured at the local level.

A summary of the local disaster management tasks include:

- Stipulate guidelines in accordance with local government and Disaster Management National Agency policies on disaster management which include disaster prevention, emergency response, rehabilitation, and reconstruction in a fair and equitable manner
- Stipulate disaster management standardization and requirements by Legislation
- Prepare, decide on, and disseminate maps of disaster-prone areas
- Prepare and decide on disaster management procedure
- Conduct disaster management in territory
- Report disaster management to local government head on a monthly basis in normal conditions, and as frequent as necessary during disaster emergency conditions
- Monitor money or goods collection and distribution
- Provide account on budget use
- Conduct other obligations per Legislation

Disaster Emergency Status and Declaration¹⁴⁴

As authorized by the disaster management law, the Government decides on the disaster emergency status dependent on the scale of the disaster.

- National disaster emergency status declared by the President
- Provincial disaster emergency status declared by the Governor
- Regency/City disaster emergency status declared by the Regent/Mayor

Once a disaster emergency status has been declared the National and Regional Disaster Management Agencies obtain easy access to:

- Mobilization of human resources, equipment, and logistics
- Immigration, excise, and quarantine
- Licensing
- Procurement of goods/services
- Management and accountability for money and/or goods
- Rescue
- Command over sectors/institutions

Command and Control¹⁴⁵

Government Regulation Number 21 of 2008 Concerning Disaster Management outlines the command process in an emergency. The BNPB or BPBD head assumes the commanding position according to their authorities over the sector/institution under one command. BNPB or BPBD will appoint a Commander to lead the disaster emergency. The Commander is responsible for overseeing the mobilization of human resources, equipment, logistics, and rescue. A disaster plan is prepared by the Commander to be used for the disaster response.

The operation control center is activated and becomes the command post for the response. The command post will coordinate, control, monitor, and evaluate the disaster emergency response and is the authorized institution to provide data and information. Field command posts are established by the Commander according to the disaster location and level. The field command posts will provide disaster response and communicate information to the overall command post.

Laws, Policies, and Plans on Disaster Management^{146 147 148}

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In 2010, Indonesia received the distinction of becoming one of the first countries worldwide to adopt a new legal framework with components that defined the role of international assisting actors in disaster management and response. The Government of Indonesia gained the title after instituting the Disaster Management Law in 2007 and adopting key regulations and guidelines in 2008 and 2010.

Law of the Republic of Indonesia, Number 24 of 2007 Concerning Disaster Management

The Law of the Republic of Indonesia, Number 24 of 2007, Concerning Disaster Management (Law 24/2007) establishes the basis of the disaster management legal framework in the country. Law 24/2007 is hailed as the first comprehensive DM law which delineates national and regional government responsibilities, community rights and obligations, roles of businesses and international organizations, the disaster management stages and requirements, and disaster aid finance and management.

According to Law 24/2007, the Republic of Indonesia bears the responsibility to safeguard the nation and homeland with the goal of protecting life and livelihood including disasters. Disasters are defined as natural, non-natural, and social events or a series of events. Natural disasters are caused by nature such as earthquake, tsunami, volcanic eruption, flood, drought, typhoon, and landslide. Non natural disasters involve events related to technological failure, modernization failure, and epidemic. Social disasters include events caused by humans for example social conflicts between community groups or terrorism.

The four aspects of disaster management are: 1) social, economic, and cultural lives, 2) environmental conservation, 3) benefit and effectiveness, and 4) scope of territory. The stages of disaster management of pre-disaster, emergency response, and post-disaster are described in the law in detail together with the associated disaster management responsibilities in the various articles.

Disaster Management Stages and associated activities and responsibilities

Pre-Disaster	Situation without disaster	<p>Article 35, Situation without disaster involves:</p> <ul style="list-style-type: none"> Disaster management planning, Disaster risk reduction, Prevention, Integration into development planning, Disaster risk analysis requirements, Spatial structure plan implementation and enforcement, Education and training, and Technical standard requirement
	Situation with potential disaster	<p>Article 44, Situation with potential disaster includes:</p> <ul style="list-style-type: none"> Alertness, Early warning, Disaster mitigation
Emergency Response	No sub definitions	<p>Article 48, Emergency response involves:</p> <ul style="list-style-type: none"> Quick study of location, damages, and resources, Decide on disaster emergency status, Rescue and evacuation of disaster affected community, Basic necessities, Protect vulnerable group, Immediate recovery of essential facilities and infrastructure
Post-Disaster	Rehabilitation	<p>Article 58, Rehabilitation requires:</p> <ul style="list-style-type: none"> Improve disaster area environment, Repair public facilities and infrastructure, Provide aid for home repair in the communities, Socio-psychological recovery, Healthcare; Reconciliation and conflict resolution, Socioeconomic and cultural recovery, Security and order recovery
	Reconstruction	<p>Article 59, Reconstruction requires:</p> <ul style="list-style-type: none"> Rebuilding of facilities and infrastructure, Rebuilding of community's social facilities, Revival of socio cultural community life, Use of design with improved and disaster-resistant equipment, Participate in social institutions and organizations, business world, and community, Improve social, economic, and cultural conditions, Improve public service functions, Improve essential services in community

The law explains the government responsibilities and authorities as the national and regional level.

The government's responsibilities for disaster management from Article 6 are summarized as:

1. Disaster risk reduction and integration of DRR into the development program
2. Protect the community against disaster impact
3. Guarantee rights of disaster affected communities and refugees in a fair manner and in accordance with minimum service standard
4. Conduct recovery from disaster impact
5. Allocate sufficient disaster management budget in the National budget
6. Allocate the disaster management budget in a ready fund form
7. Safeguard original files/documents against disaster threat and impact

The disaster management responsibilities under the regional governments as summarized from Article 8 of the DM Law encompass:

1. Assure the rights of disaster affected community members and refugees in a fair manner and in accordance with minimum service standard
2. Protect the community against disaster impact
3. Disaster risk reduction and integration of DRR into the development program
4. Allocate sufficient disaster management budget in APBD

The communities, businesses, and international institutions overall roles in disaster management are outlined in the law.

Obligations of the Community

Law 24/2007 assigns overall obligations to the community as involved with disaster management as summarized below.

- Maintain a harmonious social community life, balance and sustainability of environment functions
- Conduct disaster management activities
- Provide accurate information to the public on disaster management

Business Institutions Role

Business institutions have responsibilities to the government and public during a disaster which the law describes as:

- Shall adjust their activities to the disaster management policy
- Are obligated to submit a report to the government and/or agency in charge of disaster management and inform the public as well
- Are obligated to consider the principles of humanity in performing disaster management economic functions

International Institutions Role

The roles of international institutions are guidelines as worded in the Law versus assigned however government regulations still preside over the conduct of disaster management activities.

- International institutions and foreign non-governmental organizations can participate in disaster management activities and receive Government protection for their workers
- These organizations can conduct disaster management individually, jointly, and/or together with Indonesian working partners with consideration for the local community, social, cultural, and religious backgrounds
- The implementation of disaster management activities by international and foreign non-government organizations shall be governed by Government regulation

Regulations

The Government created key regulations or Peraturan Pemerintah (PP) in 2008 to implement the Disaster Management Law which elicited guidance from the IDRL guidelines and established the BNPB.

Regulation Number 8 (2008) on National Disaster Management Agency

Presidential Regulation 8/2008 on National Disaster Management Agency founded the BNPB as a non-departmental government institution on a level equal to the national ministries. The regulation explains BNPB's position, tasks and functions, organization, procedures, appointments and dismissals. The document states BNPB will coordinate with the Regional Disaster Management Agencies (BPBD) which needs to be established per Law 24/2007.

Regulation Number 21 (2008) Concerning Disaster Management

Presidential Regulation 21/2008 focuses on disaster management and the related activities from a broad perspective. The document also refers to international assistance as delivered by states, international institutions and foreign non-governmental organizations. The regulation presents information on access for foreign aid in the areas of Immigration, Excise, and Quarantine and Licensing. Under these sections easy access to visas and permits, exemption from import duty and taxes, and licenses for foreign personnel and equipment are authorized. Details are outlined in the Foreign Assistance section of this report.

Regulation Number 22 (2008) Disaster Aid Financing and Management

Presidential Regulation 22/2008 provides guidance on disaster management fund sources and fund use, disaster aid management, financing, supervision, reporting and accountability. State and regional budgets are referenced. The State budget (APBN) provides the disaster contingency fund, ready fund, and grant patterned social assistance funds. Disaster management fund use is utilized in pre-disaster, disaster emergency response, and post-disaster phases. The general usage for each phase is described in the regulation. Disaster aid management allows for compensation for grief, aid for basic necessities, disability compensation, soft loan for productive businesses as coordinated by BNPB.

Regulation Number 23 (2008) on the Participation of International Institutions and Foreign Non-Government Institutions in Disaster Management

Presidential Regulation 23/2008 concentrates on the responsibilities of international institutions and foreign non-governmental organizations in disaster management and response. The regulation details the procedures to prepare a proposal, memorandum of understanding or work plan, information to provide to obtain approval from BNPB to provide aid, prohibited activities, and expectations to respect the local community social, cultural, and religious backgrounds. The details are provided in the Foreign Assistance Section of this report.

Guideline Number 22 (2010) on the Role of International Organizations and Foreign Non-Government Institutions during Emergency Response

The National Agency for Disaster Management developed Guideline 22/2010 which specifically details the roles of the assisting international actors in disaster response. Guidelines 22/2010 is written for the stakeholders on the management of international assistance during emergency response as defined in the disaster management law. The actors involved are the international organizations and foreign NGOs. The guidelines are based on an extensive list of laws starting from 1962-2009. The scope includes coordination, administration, supervision, security, and proper handling of assistance in terms of personnel and goods for disaster affected people during emergency response. The principles abide by national and international laws and United Nations General Assembly resolutions.

Three main objectives are targeted:

1. Initiation of international assistance
2. Management of international assistance
3. Termination of international assistance

Planning

Disaster management planning which emphasizes disaster prevention, mitigation, preparedness, and vulnerability reduction is integrated into the administrative levels of government. BNPB furnished all provinces with disaster management plans in 2012-2013 and assisted 61 districts and cities in the development of their DM plans. As of the April 2015 HFA report, the national emergency management agency has piloted village-level DM plans in 8 villages in the District of West Pasaman, Pandeglang, Jember, and Sukabumi. The local level DM plans are anticipated to escalate mainstreaming DRR into regular development planning as facilitated by the local DRR stakeholders.

Incorporation of risk reduction approaches in the design implementation of emergency preparedness, response and recovery programs has resulted in the development of multiple hazards contingency plans in 122 districts and cities in the country. While contingency plans are formulated only a limited number sufficiently address gender sensitivities. Most of these plans speak to emergency situations vice continued basic service delivery. A small group of BPBDs are able to use regular disaster drills and rehearsals to employ the contingency plans. The lack of awareness on the importance of the contingency and preparedness plans contributes to the disparities seen.

Communities and DRR stakeholders in contingency planning and disaster emergency response exercises are expanding their support. The large Mentawai Megathrust Tsunami Disaster Exercise organized in 2013 with participants from international partners and 18 neighboring countries represents the growing interest in conducting disaster simulations and exercises.

The Indonesian Government understand the importance of planning and supports the requirements with the Indonesia Multi-Donor Fund Facility for Disaster Recovery (IMDFF-DR). The IMDFF-DR has been created to help fund the implementation of Indonesia's Rehabilitation and Reconstruction Action Plans (RENAKSI) developed after disasters requiring international assistance. The United Nations reports:

“In the event of a sudden onset emergency, the IMDFF-DR ensures that funds are immediately available for delivering assistance in the crucial days of early recovery. The mechanism also allows for reduced transaction costs and minimal delays, so that communities will get the support they need to recover from disasters as soon as the initial emergency response stage is over.”



National Long-Term Development Plan¹⁵¹

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The National Long-Term Development Plan (RPJPN 2005-2025) is developed in accordance with Article 4 of Law Number 25 Year 2004 on National Development Planning. The long term plan spans twenty years and is a continuation and renewal of the development planning process in the country. The RPJPN aims to accomplish the development goals mandated in the Preamble to the Constitution of 1945. The plan involves institutional restructuring while maintaining growth of the nation in stride with other nations.

The long term plan is divided into four stages termed National Medium Term Development Plan (RPJMN) with a five year time frame for each plan. The five year lifespan is timed to coincide with the new government taking office. The new government can determine its own priorities in the process of national economic development as long as it aligns with the long term plan.

Vision and Mission of RPJPN 2005-2025:

To establish a country that is developed and self-reliant, just and democratic, and peaceful and united.

Developed and self-reliant: Means to encourage development that ensures the widest possible equality in the country, supported by quality human resources, developed infrastructure, the application of science and technology, and supported by the implementation of a free and active foreign policy.

Just and democratic: Means to encourage development that ensures the rule of law that is fair, consistent, non-discriminatory, serves the public interest and supports the gradual continuation of democracy in various aspects of political life in order to be accepted as a constitutional democracy.

Peaceful and united: To encourage development that is able to realize a sense of security and peace among all people, able to accommodate the aspirations of this dynamic society, upholding state sovereignty and territorial integrity, as well as to protect all people from any threat.

Medium Term Plans

A summary of each of the four plans is provided.

1. The First RPJMN (2005-2009): The plan was executed during a time of financial crisis for the United States and Europe which impacted Indonesia. There was still growth however a negative impact on social indicators such as poverty eradication and unemployment was seen.
2. The Second RPJMN (2010-2014): The second medium term plan strove to consolidate reform in all fields in the country and emphasized efforts to increase the quality of human resources such as science and technology and economic competitiveness. According to the United Nations:

“The Government of Indonesia has prioritized the control and management of natural disaster risks in its National Medium-Term Development Plan (RPJMN 2010-2014). The Government has significantly strengthened the framework for disaster prevention, preparedness and response, with one of its priorities being to increase the capacity to overcome natural disasters. In 2011, Indonesia’s President Susilo Bambang Yudhoyono was designated as Global Champion of Disaster Risk Reduction by the United Nations.”

3. The Third RPJMN (2015-2019): The third medium term plan aims for increased consolidation of development in a comprehensive manner for all fields with emphasis on economic competitiveness. The current plan is divided into three books with Book I speaking to sustainable development by balancing social, economy, and environment development. Food security and sovereignty is an important objective tied to water and energy security, environment and disaster management. Book II addresses mainstreaming of the sustainable development policy, climate change issues across the sectoral program and natural resources and environments. Book III includes the regional strategies and activities.

4. The Fourth RPJMN (2020-2025): The objective of the fourth medium term plan is to situate the Indonesian society as self-reliant, advanced, just, and prosperous through increased development in the different fields based on a competitive economic structure supported by quality human resources.

National Disaster Management Plan 2010-2014¹⁵⁴

The Government of Indonesia published the National Disaster Management Plan (Renas PB) 2010-2014 in 2012. The plan encompasses policies, strategies, program priorities and concentrates on disaster management and disaster risk reduction for the five year time period. Themes of the plan incorporate disaster risk management, the economics of disaster risk reduction, governance, and risk identification and assessment. The document aims to:

1. Identify disaster risks for nation, focus on program activities, priorities and funding
2. Provide a reference for the ministries, government agencies, and stakeholders in disaster management to be able to manage disasters in a planned, integrated, coordinated, and comprehensive manner

Government Capacity and Capability¹⁵⁵

The Indonesia National Progress Report on the Implementation of the Hyogo Framework for Action (HFA) 2013-2015 documents the Government's disaster management actions against the Hyogo framework with progress levels ratings. The government has developed and instituted the necessary legal framework to support disaster risk reduction and climate change adaptation. The Priority for Action items and the ratings provide insight on the government's progress.

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 Indonesian National Agency for Disaster Management (BNBP) noted in the progress report the incorporation of disaster risk reduction in the national development plan, sector strategies and plan, climate change policy and strategy, and Common Country Assessment (CCA)/United Nations Development Assistance Framework (UNDAF). The integration of disaster risk reduction is absent in the poverty reduction strategy papers and civil defence policy, strategy, and contingency planning. Numerous guidelines and regulations on disaster risk reduction and disaster management are in place from the central government levels to the district/city levels. Central and local level capabilities are improved however the district/city level needs strengthening.

Discussion on Context and Constraints:

Coordination between stakeholders is identified as the key challenge to address commonly shared issues and taking action together. Mainstreaming disaster risk reduction into local development and defining the responsibilities of the BNPB, national actors, and Regional Disaster Management Agency (BPBDs) are areas to improve upon.

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:

Budgets for disaster risk reduction initiatives have been programmed, allocated, and integrated into the regular programs by the line ministries. The provincial level of government is working on integrating disaster management into local development plans and budget. The districts and cities with developed disaster management plans are encouraged to incorporate these plans into the development plans.

Discussion on Context and Constraints:

The national and local legislatures’ awareness and understanding of disaster risk reduction has not been inclusive. Disaster risk reduction is considered non-essential by the majority of the decision makers thus budgets are allocated for emergency and post-disaster recovery programs only.

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:

The government indicates the legislation exists to mandate disaster risk reduction at the local level. Therefore, the local governments have the legal responsibility and systematic budget allocations

for disaster risk reduction. An estimated .1 to .38 percent of the local budget is assigned to DRR. Indonesia implemented decentralization since 1999 which directs DRR to the local BPBDs for the districts and cities. BNPB supports rather than leads the BPBDs and provides facilities, infrastructure, and technical assistance.

Discussion on Context and Constraints:

Decentralized disaster risk governance is challenged by lack of resources at the local level and limited regional human resources. Community participation in DRR is increased if the areas have experienced major disasters. Community participation in DRR is being promoted through the BNPB “Disaster Resilient Village” program initiated in the last 4 years.

Core Indicator 4:

A national multi-sector platform for disaster risk reduction is functioning

Level of Progress Achieved: 3

Institutional commitment attained but achievements are neither comprehensive nor substantial

Description:

The national platform representatives include civil society organizations, national finance and planning institutions, key economic and development sector organizations.

Civil society members	67
Nat’l finance and planning institutions	2
Sectoral organizations	22
Private sector	9
Science and academia institutions	26
Women’s organizations	2
Other	2

The national coordinating authority responsible for disaster management and disaster risk reduction in Indonesia is BNPB. In 2008, the National Platform for disaster risk reduction, Planas PRB was established. The multi-stakeholder platform involves members from government institutions, non-governmental organizations and the private sector. Recently, a new chairman and new management team have been appointed.

Discussion on Context and Constraints:

The capabilities of the national platform need to be raised to support the government in promoting DRR. BNPB is facilitating Planas PRB's key responsibility to promote DRR in the country.

Education Programs¹⁵⁶

Disaster risk reduction and recovery concepts and practices are embedded in school curricula, education materials, and training at the national level. The Ministry of National Education (DEPDIKNAS) is incorporating disaster risk knowledge into curriculum from primary through tertiary school. Extracurricular activities for disaster risk learning have also been created since primary and secondary school curriculum is very comprehensive.¹⁵⁷ The Government rates their progress as level 4 in the HFA report due to the substantial achievement that has been made with recognized limitations. Disaster risk reduction is incorporated in primary, secondary, and university curriculum as well as professional DRR educational programs. Joint efforts between the Ministry of Education and Culture, Ministry of Public Works, Ministry of Religious Affairs, Ministry of Home Affairs, BNPB and non-government stakeholders have resulted in a stronger implementation of DRR in curriculum. Non-government partners are increasing the number of training programs developed to fortify disaster recovery capacities.

The Government identifies one lingering

challenge in the education area which involves the need to augment coordination between the national and local level agencies. The Government recognizes the need to advocate further the integration of DRR and recovery concepts into school education with disaster management training and exercises at the district/city government level as the service providers.

Currently there are no regulations in place requiring hotels to provide public awareness materials to tourists. However, the Law on Disaster Management states businesses must practice transparency in providing information to the public. The Ministry of Culture and Tourism provides hyperlinks to ongoing threats and hazards in Indonesia on their website, tourists are also warned of these threats through their country's consular sections.¹⁵⁸

Indonesia and the United Nations¹⁵⁹

The United Nations has been one of Indonesia's earliest partners in the efforts to integrate disaster risk reduction into development programming in the country. The UN works to ensure the local governments and communities have access to knowledge and mechanisms to minimize disaster risks and assists to improve disaster response and recovery. Some of the highlights of the collaboration involve:

- UN is fulfilling an important role in the establishment and implementation of the Indonesia Multi Donor Fund Facility for



Kindergarten school children doing earthquake simulation practice in West Java. Photo: IOM

Disaster Recovery (IMDRR-DR)

- The UN Office for Coordination of Humanitarian Affairs (OCHA) supports capacity development training for the BNPB staff on a regular basis
- World Food Programme works to enhance logistics capacity of the local authorities at the provincial levels in Aceh, Papua, and East Nusa Tenggara
- United Nations Development Programme is involved with integrating disaster risk reduction into the development programs in Indonesia such as the “Safer Communities for Disaster Risk Reduction” program
- The United Nations Office for the Coordination of Humanitarian Assistance (UNOCHA) leads a working group on disaster management in Indonesia which coordinates programs to support disaster risk reduction, resilience and recovery

Interagency and international cooperative efforts between the Government of Indonesia and local level emergency management agencies (BPBD) together with the U.S. Embassy Jakarta’s International Criminal Investigative Training Assistance Program (ICITAP) and the PACOM Augmentation Team (PAT) have resulted in multiple disaster risk reduction infrastructure surveys in the country. The overall goal of the ICITAP Incident Command System (ICS) Training Program is to “increase local capacity to effectively plan for and manage disasters, emergencies, and other incidents, utilizing the principles of ICS.” The program supports surveys of critical organizations and infrastructure associated with a district’s disaster management and disaster response capabilities, programs, and systems. The final product is intended to assist with planning, preparedness, training and disaster management for the local recipient organizations in country. The recommendations and observations documented in the survey provide information to help mitigate existing disaster risks and improve disaster management practices based on the ICS principles. The information gained from each district also serves as a means to share best practices between the communities. Survey books have been completed for Central Java, Cilacap, Karanganyar, Kebumen, Klaten, Medan, Nilas, Padang, Purworejo, Sukoharjo, Surabaya, Surakarta, and Wonogiri.¹⁶⁰

Disaster Management Communications

Early Warning

The Indonesia Meteorology, Climatology and Geophysical Agency (BMKG) is a non-departmental government agency. The agency is tasked to monitor, analyze and disseminate tsunami early warnings.¹⁶¹ In addition, the agency collaborates with other national institutions as well as regional institutions. BMKG is considered a Regional Tsunami Watch Provider (RTWP) to support other RTWP’s of the Indian Ocean by providing data and information regarding tsunamis.¹⁶²

Tsunami Monitoring

Following the 2004 Indian Ocean tsunami, the GFZ German Research Centre for Geosciences developed an early warning system for the Indian Ocean. Starting in 2005, the German-Indonesian Tsunami Early Warning System (GITEWS) was created. Personnel at Indonesian institutions were trained to take over responsibility of the warning system. In 2011, the GITEWS gained positive reviews from a commission of international experts before being handed over to Indonesia. Since then, the system is referred to as the Indonesian Tsunami Early Warning System (InaTEWS) and is operated by the Indonesian Service for Meteorology, Climatology and Geophysics BMKG. InaTEWS obtains its data from around 300 measuring stations and a warning can be sent out five minutes after an earthquake occurs. Since taking over the system, six tsunami warning have been issued to the public.¹⁶³

Indian Ocean Member States requested the Intergovernmental Oceanographic Commission of United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO) form the Intergovernmental Coordination Group (ICG) to implement an Indian Ocean Tsunami Warning and Mitigation System (IOTWOS) in response to the 2004 Indian Ocean tsunami. National governments have the main responsibility for outlining and implementing national preparedness procedures, UNESCO supports the development of technical, educational and communication plans.^{164 165}

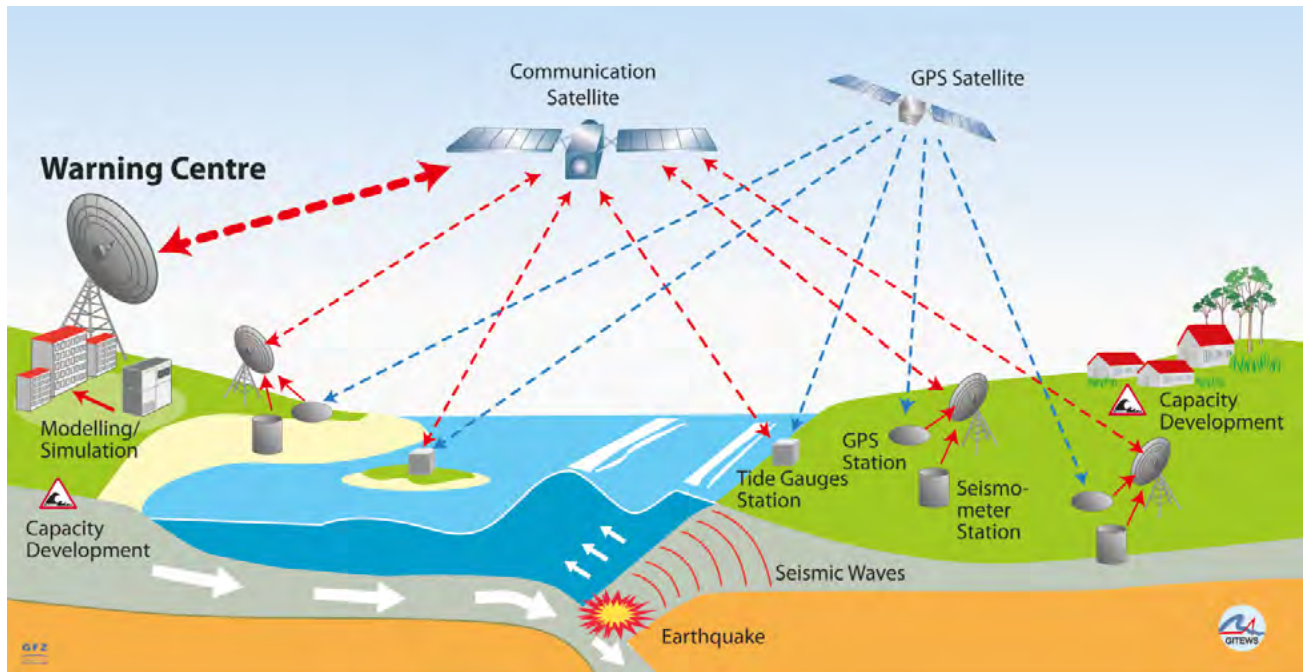
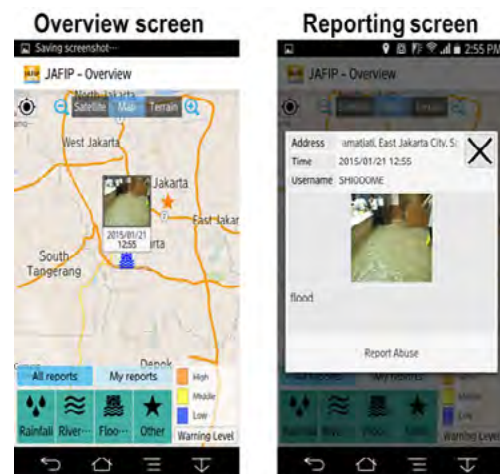


Image: GITEWS

Flood Monitoring^{166 167 168}

DKI Jakarta Regional Disaster Management Agency also known as Badan Penanggulangan Bencana Daerah (BPBD DKI Jakarta) is a disaster management agency established under the Regional Governor's Authority. The agency is responsible for determining guidelines and directives for fair and equal relief efforts that include disaster prevention, emergency response, rehabilitation and reconstruction. BPBD is currently using the Disaster Information Management System (DIMS) application which manages damage and shelter information, a digital map, and can send messages to staff and other disaster management agencies. The application plays a vital role in the time and dissemination of information during the flood mitigation process by establishing a quick early warning system. This allows BPBD to collect information quickly and make key decisions.

In 2015, Fujitsu Indonesia built a disaster information-sharing system for BPBD which allows Jakarta residents to share disaster information via a smartphone app. Residents can use the app send pictures and comments, and based on their smartphone GPS location, the system will collect rainfall amounts and river levels onto a map. The system is linked to DIMS so when BPBD issues a flood warning in DIMS, alerts are automatically sent to smartphones that have the app installed.



Smartphone app screens

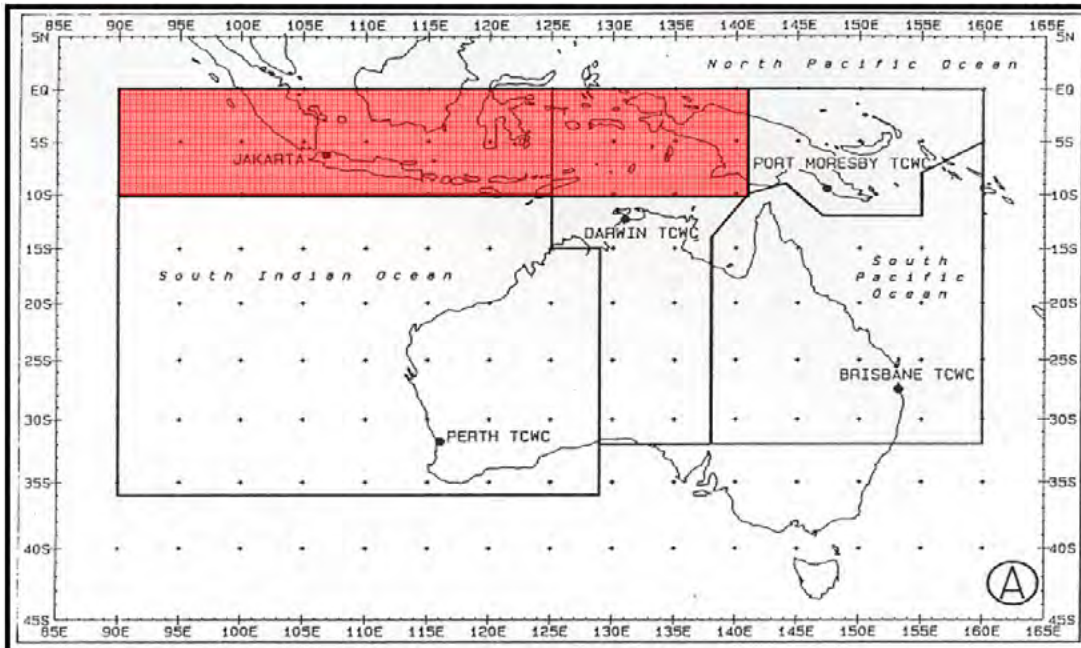


Image: Jakarta TCWC Area of Responsibility

Cyclone Warning

The Jakarta Tropical Cyclone Warning Centre (Jakarta TCWC) began operations in 2008 and is overseen by BMKG. The centre's main functions are to provide the general public forecasts and warnings for tropical cyclones for the coastal and land areas of Indonesia, along with forecast and warnings for open sea.¹⁶⁹ Jakarta TCWC is a participating member of the World Meteorological Organization (WMO) Tropical Cyclone Programme which is tasked to establish national and regionally coordinated systems to ensure that the loss of life and damage caused by tropical cyclones are reduced to a minimum. There are currently six TCWC in the Asia Pacific region.¹⁷⁰

Fire Monitoring

BMKG developed the Fire Danger Rating System (FDRS) which produces daily maps based on real time weather observations from their network. The FDRS maps are disseminated to resource management agencies and to the public on their website to prompt prevention and preparedness measures during extreme haze events.

Reporting and Analysis

A multi-hazard monitoring and warning service called SIMBA was created by the National Institute of Aeronautics and Space (LAPAN) and provides warning for most weather and climate related hazards such as floods, drought and forest fires.

Government Review of EWS and Recommendations to Strengthen System¹⁷¹

In 2013, an earthquake/tsunami table top exercise (TTX) was held with national, regional and NGO participants. Findings with regard to the tsunami early warning system revealed warning dissemination mechanisms at the sub-national level were in place but varied at each location. Other findings included – warning levels were not being understood by local communities and the short message system is not a reliable warning dissemination tool. At the national level, the warning system is very technical and standard operating procedures are not being socialized down to the sub-national level. Since then, the government is continuing to address these issues as seen in the Hyogo Framework for Action report.

The Government of Indonesia ranks the progress as a level 4 with substantial achievements in the placement of early warning systems for all major hazards with recognized limitations. The risk prone communities receive timely and clear warnings of imminent hazard events. In general, the Government believes that:

1. Early warnings are acted upon effectively
2. There is local level preparedness
3. Communication systems and protocols are applied
4. There is active involvement of media in the early warning dissemination

There are advanced early warning systems for hazards such as extreme weather, excessive waves, forest fires, flood, tsunami, and volcanic eruption. The difficulty lies in the early warning systems reaching out to the grassroots communities and building the capacities of the communities to respond to the warnings. Key challenges faced by the national authorities include:

1. Limited access to disaster early warning messages by the community members
2. Early warning systems developed by the sectoral ministries and national agencies reaches only the district/city offices
3. Systems need to be established or improved to deliver warning messages to reach all households within the hazard prone areas

Challenges

The population of Indonesia is dispersed over 6,000 islands which is divided into 5 main geographic locations. Thus, the government is challenged with disseminating disaster-related information to people living in remote locations. Television and radio networks which cover almost all parts of the country are able to reach some of the citizens. There is a cultural obstacle to also overcome as the people are not proactive in seeking information on the risks being faced. The capacity of the BPBDs need strengthening by the government to manage risk information and communication.

Trans-boundary Risks

Indonesia is committed to joint management of cross-border risks especially tsunami and smoke hazards. ASEAN, South Asian and other countries within the Asia Pacific region are actively participating in the Indian Ocean Tsunami Warning System (IOTWS). Trans-boundary risks are managed through the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) with Indonesia performing a lead role. The Government of Indonesia supports the Pacific Tsunami Warning and Mitigation System and the ASEAN Earthquake Information Center.

Disaster Messaging

The government is considering messaging options such as Twitter to inform the nation of natural disaster emergencies. Recently, Indonesian Vice President Jusuf Kalla met with the Twitter Chief to discuss the company's plan to work with the government to use their site to warn people of these natural disasters. Indonesian Information Technology Minister Rudiantara would like Twitter to develop an information system which could provide regular updates in the event of emergencies.¹⁷² A completed case study showed that Twitter was just an effective tool to alert citizens as radio and television communication. Twitter does have some negatives, mainly its character maximum which results in tweets being unclear. Despite this drawback, the study concluded that Twitter would be a complementary tool to use as an early warning system. It also found that its impact could be amplified if agencies worked together to improve the accuracy of the messages.¹⁷³

Media

The Indonesian media has been proactive in disseminating disaster-related data and information as conveyed by the Government in the 2013-2015 National Progress on HFA report. One of the most difficult challenges involves the ability to reach people in remote parts of the country where only some of the people have access to television and radio.¹⁷⁴ Trainings on natural disaster reporting have been conducted for Indonesian journalists hosted by the Australia-Indonesia Facility for Disaster Reduction (AIFDR). These trainings taught ways to manage challenges associated with disaster reporting, ethics, and the important role of media during disasters. The co-director of AIFDR says that media plays a crucial role once a disaster strikes.¹⁷⁵

Indonesia's Ministry of Communication and Information (KOMINFO) is responsible for all mass media and telecommunications providers. The ministry's role is important for promoting public awareness on disasters by providing warning dissemination through television, news media and radio. KOMINFO works with provincial and regional offices for information and communication. Media licenses which are separate from the government such as privately owned television stations are controlled by KOMINFO. BMKG has been collaborating with private television stations to disseminate tsunami early warning through running text or a headline news display for a few minutes along with a sound

warning signal. Precise warning signals have been prepared for the media to inform the public and media agencies developed standard operating procedures (SOPs) for disseminating them.¹⁷⁶

The media's role is a part of each of the natural disaster phases because people turn to media outlets for confirmation and further information regarding disasters.¹⁷⁷ During the 2004 tsunami, the media played a vital role, becoming the link between the government and the citizens by broadcasting early warning reports about repeated earthquakes and tsunamis. Images of damages were shown and pointed out safety efforts being provided post disaster.¹⁷⁸ For the Mt. Merapi eruption in 2010, the Indonesian news media created public concern because of the way information was being reported. During the recent Mt. Kelud eruption in 2014, social media was used to keep people up to date on the situation not only nationally but internationally. Information was posted on the latest information on the eruption, airport openings, volcanic ash and prayers. Social media was also a way to enhance people's unity and compassion to help each other.

In Indonesia, the major news medium is television as 97 percent of the population watches television each month which is around 240 million people. The television plays a large role in providing information from politics to consumer trends. Private news channels provide more comprehensive local news coverage over the government stations. The government television station Televisi Republik Indonesia (TVRI) is widely available throughout the country, but private stations have limited broadcast areas. There are 11 national television stations, 10 private owned stations and one public station along with over 300 local television stations. The internet is the next largest medium with 57 percent of the population followed by newspapers and radio. Indonesia gained the title of social media capital of the world – the country is Facebook's and Twitter's largest global markets. There are 69 million Facebook users in Indonesia. Indonesians are active social media users, 9 out of 10 internet users use social media.¹⁷⁹ Government and private television stations broadcast their own news programs.

Summary of some of the major media sources:

The Press	The Jakarta Post	Widely circulated English-language newspaper in Indonesia
	The Jakarta Globe	English-language newspaper
	The Bali Times	English-language newspaper in Bali
	Kompas	Largest circulation at 500,000, widely read newspaper in Indonesia
	Jawa Pos	One of the leading newspapers
	Bisnis Indonesia	Indonesia's business and financial newspaper
	Suara Merdeka	Daily newspaper
Television	Televisi Republik Indonesia (TVRI)	Government-run station
	SCTV	Private, Bahasa Indonesia
	RCTI	Private, Bahasa Indonesia
	Metro TV	News programming on the hour, considered the CNN of Indonesia; English and Mandarin
Radio	Radio Republik of Indonesia (RRI)	Public broadcasting; national radio station that broadcasts across the nation
	Voice of Indonesia	Division under RRI; broadcasts all over Indonesia and abroad
Internet 42.3 million users as of 2014 ¹⁸⁰	Daily Indonesia	State run
	Bali Daily	Private on-line news
	Facebook ¹⁸¹	69 million monthly users
	Twitter	13.6 million users

Military Role in Disaster Relief^{182 183 184 185}

The Indonesian National Armed Forces (Tentara Nasional Indonesia or TNI) fulfill a critical responsibility in disaster management as evidenced in their deployment for nearly every major disaster experienced by the country. In 2010, TNI had been deployed to provide search and rescue assistance and other major emergency relief support in the multiple disasters of flooding in Papua, tsunami in Mentawai Islands, and volcanic eruption in Central Java. Several battle-sized units from the Army Strategic Reserve Command, Marines, Air Force Special Forces and others assisted in disaster response. TNI is touted as a natural first responder due to their operational preparedness and extensive territorial structure.

TNI has a higher level of disaster readiness due to the organizational structure, military practices, clear chain of command and coordination combined with the ability for rapid deployment.

Personnel readiness: Due to continuous training in a military organization, the TNI personnel are physically and mentally ready for disaster relief.

Material readiness: TNI materials are well-managed with maintenance and repair and ready for deployment. TNI materials are used in the forefront of disasters especially during the emergency response phase.

High mobility: TNI's force equipment is used to support the rapid deployment for disaster relief. Ground, sea, and air transportation equipment are provided by TNI and can be deployed on short notice and used for distribution of aid.

The disaster management responsibilities are written into laws to ensure the Armed Forces are able to actively support in times of emergencies.

Republic of Indonesia Law No 34 Year 2004 Article 7 stipulates TNI has the ability to actively participate in disaster response and humanitarian crisis as a part of their Military Operations Other Than War (MOOTW). The law states:

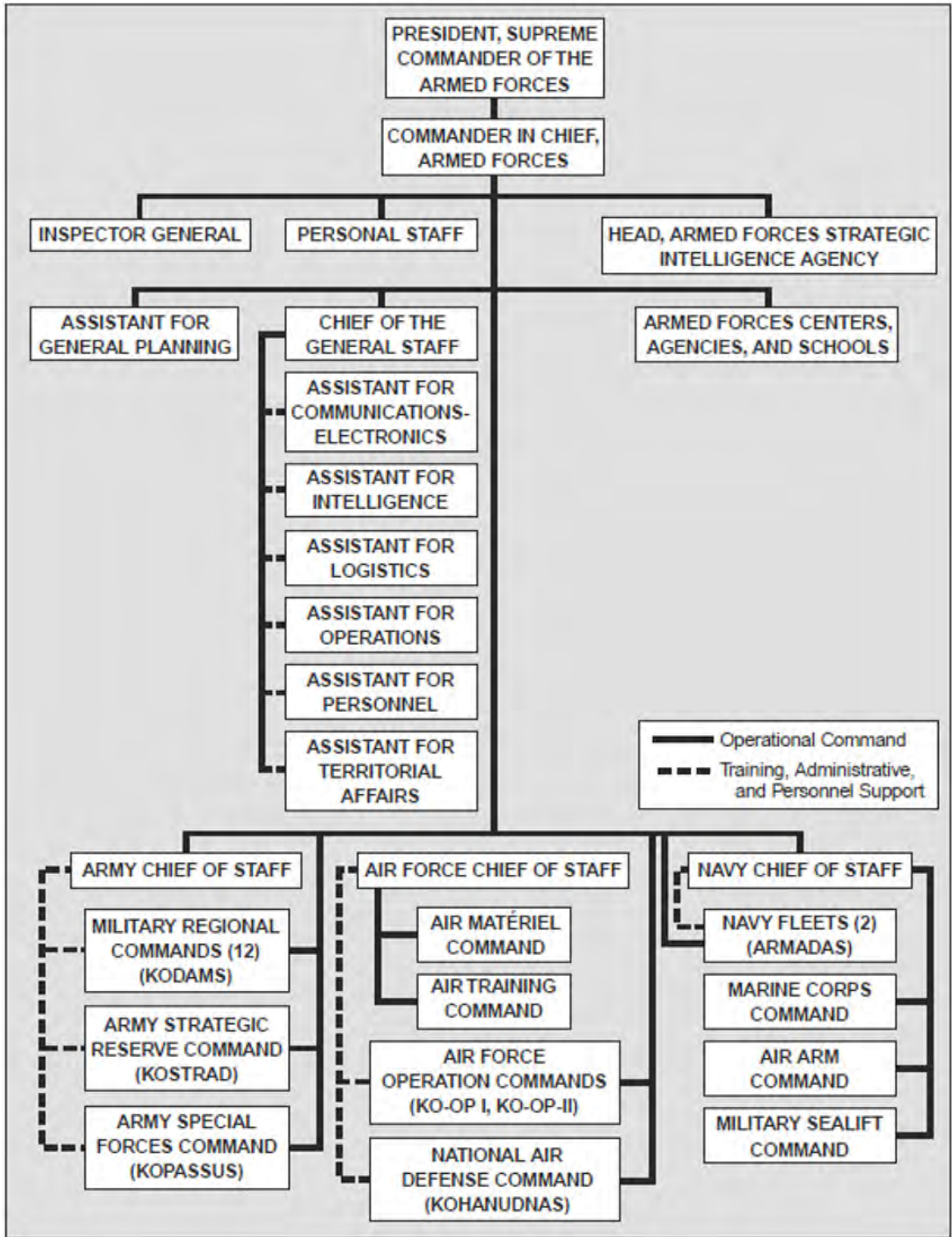
“Assist in responding to the impacts of natural disasters, IDPs Management and Humanitarian Assistance distribution.”

Republic of Indonesia Law No 24 Year 2007 on Disaster Management and the President of Republic of Indonesia, Regulation No 8 Year 2008 on National Disaster Management Agency, Article 11 says:

“TNI is one of the directing elements in national disaster response management.”

The Guideline on the Role of the International Organizations and Foreign Non-Government Organizations During Emergency Response provides detailed information to facilitate support during emergency response as well as clarify the roles and responsibilities of the Indonesian Government. Within the document, the roles and responsibilities of the military are explained during the Initiation of International Assistance stage.

1. Establish a Supporting Post at each military base that is already set-up as the entry point for international assistance.
2. At the Supporting Post, a representative from the Ministry of Defence will be present.
3. At the Registration Center of the Supporting Post, the Indonesian National Military (TNI) supports registration together with the National Police and National Intelligence Agency together with the local government.
4. Under the Permit and General Provisions section, the Indonesian Military Forces Headquarters (Mabes TNI) is responsible for providing the security clearance for requests from states willing to bring in military assistance and for equipment such as planes or ships that the states would request to be used.
5. Under the Organization and Personnel section, the state requesting approval to bring in military assistance must obtain the Ministry of Defence's approval by submitting the written request to the Ministry and the National Army in coordination with BNPB.
6. For foreign military assets, entry permits are provided based on the applicable regulation at the TNI Headquarters.



Indonesia Armed Forces

Key Elements of TNI Engagement in Disaster Response:

- TNI supports disaster emergency response overall and provides leadership (such as Incident Commander role)
- TNI is involved in the SRCPB/INDRRA – Civil/Military forces
- The National Armed Forces assists in Search and Rescue activities

Major Roles and Responsibilities:

- Military personnel are deployed (force/capabilities) for the:
 - Search and rescue and evacuation of disaster victims
 - Prevention/Mitigation and Rehabilitation/Reconstruction support
 - Medical team and other emergency response efforts
- Leadership in managing the event (as Incident Commander) during the emergency response phase
- Deployment of equipment and facilities (field hospital, public kitchen, and transportation vehicles)
- The Incident Command System is implemented during the emergency response phase (within 7 until 14 days)
- An Incident Commander (IC) is appointed as the On-site Coordinator who answers to the local government head. The IC has the authority to deploy all available resources
- The Command Post is established and the operation control center activated.

U.S. Military Support

The United States and Indonesia share common bilateral and regional goals. The two countries work together on an extensive range of issues such as counterterrorism, maritime security along with humanitarian assistance and disaster relief. A defining moment in this relationship occurred after the 2004 Indian Ocean tsunami when U.S. military forces provided assistance through the delivery of supplies and military sales. Operation Unified Assistance was the name the military used for their response to the 2004 tsunami. A year later, the U.S. lifted the embargo of military sales to Indonesia and approved grants and loans for weapons, other military equipment, and training for the Indonesian Navy for maritime security. Over the past decade, the United States has provided vital disaster response assistance to Indonesia and assisted the Indonesian Navy and Air Force with capacity building.¹⁸⁶

Through the years, a strong military bond was developed leading to both countries cooperation in a range of issues as stated above. However, the value of their military relationship is shown strongly when it comes to disaster relief as both militaries worked together during the 2004 tsunami relief efforts. Joint training between the United States and Indonesia has helped grow the Indonesian military's capacity to respond to natural disasters. In 2014, roughly 500 joint exchange exercises and other defense activities occurred between the United States and Indonesia. Recently, the two countries signed an action plan to expand military cooperation and improve Indonesia's defense readiness which is expected to lead to additional joint activities.¹⁸⁷

Foreign Assistance and International Partners

Foreign Humanitarian Assistance^{188 189}

190 191 192 193

Indonesia is recognized for maintaining significant national expertise and resources for disaster response. The Government exercises the choice to request or accept assistance from international agencies already presiding in country for disaster response and coordination efforts. In 2010, the country experienced two medium-scale disasters and the Government accepted but did not request for international assistance. The Mentawai Islands earthquake and tsunami and the Mt. Merapi eruption disaster response included support from international agencies already working in country. In the previous year, the Padang earthquake struck and the Indonesian Government requested aid.

In 1967, the Foreign Minister of Indonesia signed the document founding the Association of Southeast Asian Nations (ASEAN) together with the Foreign Ministers of Malaysia, Philippines, Singapore and Thailand. Indonesia abides by the ASEAN Agreement on Disaster Management and Emergency response (AADMER), the regional framework for cooperation, coordination, technical assistance, and resource mobilization in all aspects of disaster management. The Government follows the Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP).

Disaster Management Law 24/2007 and the implementing regulations provide the legal structure for the foreign aid process in Indonesia. As discussed in the Laws and Policies section, the disaster management law allows international institutions and foreign non-government organizations to join in disaster management activities and receive protection for the workers from the Indonesian Government. The implementation of disaster management activities by assisting institutions are ruled by Government regulations.

Government Regulation 23/2008 provides the procedures for international institutions and foreign non-governmental organizations to participate in disaster management in the country. International institutions or foreign non-governmental organizations are able to participate in disaster management in Indonesia by preparing a **proposal, memorandum of understanding or work plan**.

Proposal: The proposal is prepared by the international institution or foreign non-governmental organization in consultation of the overseas representative of the Republic of Indonesia

Memorandum of Understanding: The memorandum of understanding is written between the international institution or foreign NGO and the foreign affairs agencies together with the BNPB.

Work Plan: The work plan is jointly written with BNPB and the international institutions or foreign NGO and other related agencies.

While the regulation requires a proposal, MOU or work plan, it also states in an emergency response, the international institution or foreign NGO can directly provide aid without following this process.

A list of personnel, logistics, equipment, and location of activities is requested from the institution or foreign NGO before, on, or immediately after arrival in Indonesia. BNPB grants approval after review of the information dependent on the disaster response requirements.

Funding is accepted as aid and should be delivered or sent directly to the BNPB.

The disaster management policy should be followed during pre-disaster and post-disaster assistance by the institutions or organization. BNPB will coordinate the assistance for all stages of disaster management.

The **Government guarantees to provide protection for the workers** from the international institutions and foreign NGOs who are providing disaster management. The institutions and organizations are allowed to provide aid individually, jointly, or in conjunction with an Indonesian working partner.

The international institutions and foreign NGOs are **prohibited from engaging in activities with political or national security background**. The head of BNPB will coordinate with agencies that have responsibilities in the intelligence service and national security fields to help determine if the activities fall within the political or national security realms.

The institutions and organizations are expected to **respect the local community social, cultural, and religious backgrounds** while participating in disaster management.

Accountability reports on activities are due periodically to BNPB, at the end of the service term, or when requested.

In Regulation 21/2008, there are two specific sections which address foreign aid relative to 1) Immigration, Excise, and Quarantine and 2) Licensing.

Paragraph 2 - Immigration, Excise, and Quarantine contains several sections addressing access of foreign personnel and facilitated processes.

Article 32 is summarized as:

- Foreign aid in the form of **foreign personnel, equipment, or logistics** shall have **easy access to** the process and service of **immigration, excise or quarantine**

Article 33 is summarized as:

- Foreign personnel assisting with disaster management in Indonesia shall have easy access in **immigration** related to the **visa process, entry permit, stay permit, and exit permit**
- Foreign personnel are allowed the **work assignment** from the Government dependent on the original assignment from the international institution or nongovernmental foreign institution
- **Visa, entry permit, limited stay permit, and exit permits** are recommended by the BNPB head. Limited stay permits are allowed for the disaster emergency response time frame

Article 34 is summarized as:

- Access to the disaster area is determined by the BNPB or BPBD leads according to the location and level

Article 35 is summarized as:

- Foreign personnel with passports instead of diplomatic or official passports issued by an international institution of the United Nations report to the agency that handles foreign relations.

Article 36 is summarized as:

- Equipment or logistics assisting in DM are exempt from import duty and other import taxes
- Exemption is recommended by the BNPB head

Article 37 is summarized as:

- Equipment or logistics assisting in DM have easy access for quarantine unless there is potential danger

Paragraph 3 – Licensing addresses expediting licenses for entry of personnel and equipment

- Licensing for foreign personnel and/or equipment are facilitated by the BNPB Head

Then BNPB prepared the Guideline on the Role of the International Organizations and Foreign Non-Government Organizations during Emergency Response as a reference document for stakeholders on the management of international assistance during emergency response according to the disaster management law. Three keys stages of international assistance for the initiation, management, and termination are described in detail. The guideline also incorporates the Cluster system/approach in the country's disaster management process.

I. Initiation of the International Assistance Process

The onset of international assistance to Indonesia during emergency response will trigger processes for the entry of international assistance which involves mechanisms, and permits for organizations and goods. Goods are defined as logistics and equipment which are donated or used operationally by the international organizations/ foreign non-government organizations to conduct disaster response. Note for this section: References to organization means international organization or foreign non-government organization.

Initiation: The Initiation process is summarized from the guideline:

1. Triggers for the Entry of International Assistance:

Humanitarian assistance from international organizations and foreign non-government organizations may be accepted under the following situation:

- a. The magnitude of the disaster exceeds the government's ability to respond and requires assistance
- b. A government statement to accept offers of assistance from international organizations and foreign non-government organizations in compliance with the affected area's needs

2. Mechanism for the Entry of the International Assistance

- a. A formal statement from the government to accept international assistance begins the entry of international aid
- b. The type and amount of aid is based on the results of rapid assessments completed by BNPB and/or BPBD
- c. BNPB will send an initiation letter of international aid to the organizations
- d. BNPB established an Emergency Response Command Post or Main Command Post to respond to an emergency in cooperation with different administrative levels of government
- e. To facilitate international assistance entry, BNPB in coordination with relevant levels of government will:
 - 1) Determine the military base,

airport, and seaport as the entry point

- 2) Establish a Supporting Post at each military base, airport, and seaport entry point with representatives from:
 - a. BNPB
 - b. Ministry of Defence
 - c. Ministry of Health
 - d. Ministry of Agriculture (Quarantine Division)
 - e. Ministry of Law and Human Rights (Directorate General of Immigration)
 - f. Ministry of Finance (Directorate General of Duties and Excises)
 - g. Ministry of Foreign Affairs
 - h. The National Police of the Republic of Indonesia (POLR)
 - i. Ministry of Trade (Director General of Foreign Trade)
 - j. Ministry of Transportation
 - k. National Intelligence Agency (BIN)
 - l. Food and Drugs Surveillance Agency
 - m. Local Governments/ Local Agency for Disaster Management
- 3) Supporting Post functions include:
 - a. Registration Center: To register foreign personnel entry and egress, and exit of goods for re-exporting to the assisting country
 - b. Handle permits, immigration, excise, security clearance of personnel and equipment and quarantine
 - c. Issuance of identity cards
 - d. Logistics and equipment center prior to distribution

Management of International Assistance

The guideline on international assistance states the aid should intend to help the disaster management authorities during the response period in rapid assessment, rescue and evacuation, provision of basic needs, protection of vulnerable groups, and immediate rehabilitation of vital facilities and infrastructure.

The management process as supported by international organizations and foreign non-government organizations is summarized from the guideline:

1. Conduct of rapid and accurate assessments on the location, damages, and resources available
 - a. The assisting organizations are recommended to obtain assessment results and information from the BNPB and district governments before deciding to conduct individual assessments
 - b. The assisting organizations are asked to coordinate with the Rapid Assessment Team from BNPB/BPBD to conduct their own assessment to avoid burdening the communities with too many surveys
 - c. Assessment results from separate assessments by the assisting organizations must be reported to BNPB/BPBD to contribute to the rapid assessment input and per authorities
2. Rescue and Evacuation
 - a. Assistance to rescue disaster impacted people
 - b. The Indonesian Government will issue a statement to terminate rescue assistance
3. Provision of Basic Needs
 - a. Basic needs include shelters, temporary accommodations/shelter, food, nonfood items, clothing, water, sanitation, and medical services
 - b. Standard basic needs are described in BNPB Regulation Number 7 Year 2008 on Procedures of Basic Needs Assistance

4. Protection of Vulnerable Groups
 - a. Vulnerable groups include infants, children under the age of five, pregnant and lactating mothers, invalids, and the elderly
 - b. The categorization of vulnerable group can be added to in accordance with rules and regulations
5. Immediate Rehabilitation of Vital Facilities and Infrastructure
 - a. Activities in this category involve clearance of debris, toxic materials, and repair of critical facilities and infrastructure

Types of Assistance

The Government of Indonesia accepts assistance from international organizations and foreign non-government organizations in the form of funding and grants, goods, and subject matter expert support.

1. Funding and Grant Assistance
 - a. Funding assistance provided for humanitarian support can be donated directly to the BNPB which will be recorded according to government regulations.
 - b. Grant assistance can be provided utilizing the BNPB mechanisms for grant management and will be recorded by the Ministry of Finance Grant Accounting System (SIKUBAH).
 - c. Fund raising in country by international organizations and foreign non-government organizations is not allowed.
2. Goods
 - a. Goods provided according to the required needs should be packed, categorized, and marked with the address for distribution.
 - b. If there are selected beneficiaries dependent on specific criteria, the selection process should be coordinated with the local government to the grass roots level. As much as possible, communities should be involved with the criteria and distribution of in kind assistance.

- c. Distribution of in kind assistance should not cause or increase conflict between community members.
- 3. Expert
 - a. Experts supporting response from the international organizations are expected to meet the required government qualifications dependent on the technical ministries.
 - b. Whenever possible, the assisting experts should be accompanied by Indonesian counterparts to help build capacity.

Permits

Organizations providing international aid must obtain permission from the government. The Government appointed Supporting Posts will process the permits. If the international aid is provided after the emergency response period, permission will be provided according the applicable rules and regulations.

- 1. General Provisions (grouped in sub-categories for ease of use in this report)
 - a. Access
 - 1) International assistance or foreign non-government organizations are able to provide support during the emergency response phase without applying the submission of proposal procedure, MOUs, or work plans.
 - 2) The Government of Indonesia has the authority to accept or refuse entry of personnel from countries.
 - 3) Personnel without diplomatic relations are not allowed to carry out humanitarian assistance in Indonesia.
 - b. Provisions from Government of Indonesia
 - 1) Foreign assistance in the form of foreign personnel, equipment, or logistics are afforded easy access and processing in immigration, excise, and quarantine.
 - 2) The government ministries and institutions may extend service hours to facilitate humanitarian assistance from the organizations.

- 3) The government may provide a legal domestic facility for use of international aid activities
- c. Currency and Banking
 - 1) Assistance providers may carry foreign and rupiah currency in and out of the country according to monetary regulations and obtain legal exchange value in relation to the disaster operations.
 - 2) Foreign personnel should coordinate with respective embassies in Indonesia if personal accounts need to be opened for operational needs during humanitarian activities.
- d. Security Clearance
 - 1) The state providing military assistance must obtain a Security Clearance from the Indonesia Military Forces Headquarters (Mabes TNI).
 - 2) Equipment to be used by the assisting state in form of a plane or ship must obtain a Security Clearance from Mabes TNI.

2. Process

The Supporting Post grants permits for organizations, personnel, and logistics using the following summarized process:

- a. Organization and Personnel (sub-categories were used for this report to describe the requirement)
 - 1) Requirements
 - Aid providers should submit the list of personnel and operational support facilities before, during, and or just after the assistance arrives in country.
 - Incoming personnel must meet qualifications according to government requirements stated in the initiation letter for foreign assistance such as health, SAR, construction, communications, water experts, liaison officer, and any other expert needed. International organizations

- and country of origin recommend and assign the staff.
- Organizations must register by submitting the personnel and equipment list, expertise of their personnel/specific professionals, location of activities, and documentation for each person listed. There should be copies of the passport, visa, two color photographs (4 x 6 cm) for each individual deployed to Indonesia.
- 2) Military Assistance
 - States wishing to provide military assistance must obtain approval from the Ministry of Defence (MoD) by submitting a written request to the MoD, National Army, and BNPB. The request letter should state the personnel, logistics, and/or funds.
 - 3) Approval Process
 - BNPB provides approval of incoming personnel and provides recommendations for the visa, entry permits, limited stay permits and exit permits through the Supporting Post. The limited stay permit is for the duration of the emergency response period.
 - Identity cards are issued to the foreign personnel by the Supporting Post for use in the disaster affected areas and should be returned at the completion of tasks.
 - Permits are only valid for the emergency period.
- b. Goods
- 1) Organizations must register by submitting a list of types and amounts of goods and location of activity.
 - 2) BNPB will provide approval for the goods dependent on the emergency response and coordinate with the relevant agencies.
- 3) For foreign military assets, the entry permit will refer to the applicable regulation at Mabes TNI.
 - 4) Request for entry permit for goods should be accompanied with the certificate for supplies assistance and quarantine documents.
 - 5) Goods for emergency response imported by organizations receive the following considerations after a request is submitted:
 - Exemption or waiver for import duties and excise according to prevailing customs and excise regulations
 - Exemption of import tax (PDRI – Pajak Dalam Rangka Impor) according to the prevailing tax law
 - Provision for permit procedure on imported goods restriction
 - Support on import and export procedures
 - 6) Providers for goods requested for consideration in step 5 should follow these steps:
 - Appoint recipient of the goods as the responsible party in Indonesia
 - Follow agreed international standards
 - Pack goods according to the terms and conditions for the goods
 - Categorize and mark all goods
 - Include manifests, invoice, airway bill or Bill of Lading, grant letter (gift certificate or certificate of donation),
 - Certificates:
 - Certificate of analysis (specifically for medical supplies and equipment)
 - Certificate of analysis, health certificate, certificate of free sale (for food items)

- Certificate of type testing from originating country (for motor vehicles)
- 7) Imported goods that are damaged, unused, and/or no longer needed, or not meet requirements can be re-exported. A letter of statement indicating when the goods will be re-exported is needed. Re-export will follow Indonesia and country of origin regulations.
- 8) The Government may provide permits to the organizations for the temporary use of road, sea, and air transport during the emergency response period within the disaster affected areas.
- 9) Aid providers must guarantee the quality, compatibility, and safety of imported food, medicine/ drugs, consumable medical supplies, and equipment. Food and drugs shall have:
 - Minimum of 6 months for food from the time of delivery
 - Minimum of 2 years for drugs/medicines
 - Labels should be in Bahasa Indonesia/Melayu or in English
 - Check, consign, protect, and guarantee good conditions to maintain safety and quality
- 10) Inspections are conducted on all goods to ensure quality and compatibility with the needs of the affected communities and in line with national and international legal standards.
- 11) Quarantine
 - Quarantine criteria is followed for any carrier of plant and animal disease or plant infecting organisms
 - Shipments that meet quarantine criteria should have a completed health certificate from country of origin and transit for animals or plants, and substances derived from animals or

plants. Pass through will be through predetermined entry and exit points. Report and submit to quarantine officials.

Goods Distribution

The Local Government has the responsibility of distribution of goods and there are three approaches that could be applied.

1. Relief goods are given to Government or Local Government upon arrival and permission has been granted
2. Work with Indonesian partners
3. Direct distribution to beneficiaries through the international and foreign non-government organizations as coordinated with the Supporting Post. Individual efforts or joint efforts between the organizations are allowed

II. Management of International Assistance

Coordination

The guidelines provide the mechanism for coordination for the international organizations and foreign non-government organizations providing assistance.

1. BNPB coordinated rapid assessment with the appropriate agencies and international organizations
2. The Commander of Emergency Response Command develops the operational plan with relevant institutions and organizations
3. Routine cluster meetings are held to report activities for the humanitarian operation for each cluster following the operation plan from the Commander. The national, provincial, and field levels are involved in providing evaluation results of the activities being conducted.
4. Each cluster lead is encouraged to share information through the information management process/system.

Protection and Security

The Protection and Security section provides information to ensure the international assistance is accepted by the direct beneficiaries and is in line with their needs.

1. Personnel from the organizations providing assistance during the emergency activities are protected by the Indonesian government.
2. Movement of goods (storage and distribution) of the assisting organizations are provided security by the government.
3. Organizations supporting disaster management are prohibited from conducting political or security breaching activities. If there is a breach, BNPB will coordinate with intelligence and security agencies.
4. Organizations providing aid must respect the social, cultural, and religious background of the local communities and help to maintain its security.

Costs

Costs associated with the provision of emergency response assistance, ground handling for logistics, personnel, and equipment, packaging operations, labelling, distribution of assistance and destruction of non-compliant materials are handled by the respective aid provider.

Immunity

The Government of Indonesia shall not be held responsible for any loss suffered by the organizations as result of acts of violation or neglect during conduct of humanitarian assistance in country.

Monitoring, Reporting, and Evaluation

1. Monitoring, reporting, and evaluation of international assistance is conducted by the government and community.
2. Organizations should prepare brief reports on the implementation of emergency response activities and provided to BNPB and local government in writing during coordination meetings to evaluate the progress of activities.
3. Reports to be submitted to BNPB and local government include periodic, final, and as requested reports.

4. Each cluster is obligated to routinely evaluate their activities involving related institutions and community including beneficiary.
5. BNPB will report to the public assistance received from international organizations and foreign non-government organizations.
6. The monitoring and reporting mechanisms follow rules and regulations.

III. Termination of International Assistance

The guidelines provide the termination process for international organizations and foreign non-government organizations to follow to end assistance in country.

1. The Government issues a termination statement on the emergency response phase.
2. A deadline is set at the initiation of international assistance however the Government may decide to select a different time frame dependent on the situation of the disaster affected areas and the national situation.
3. When the emergency response phase ends, BNPB will issue a circulation letter terminating international assistance which contains:
 - a. Summary report of the latest situation and condition
 - b. Progress of the emergency response conducted by the Indonesian government and the assisting organizations
 - c. Fixed date signifying the end of the emergency response phase and decision to end humanitarian assistance
 - d. Letter of appreciation to the assisting organizations

Foreign Assistance Logistics

Humanitarian Transportation

In accordance with Article 194 of the Indonesian Aviation Law of 2009, airports shall assist in disaster situations. A policy was adopted that airports shall be built in natural hazard-prone areas in order to assist if a disaster were to occur. The Minister of Transport issued Decree No.11 2010 called a National Master Plan. This decree states requirements for airports which are dedicated to support disaster preparedness and response. According to the National Master Plan, 11 airports in 22 disaster-prone areas have been identified as disaster-focused airports. Each of these airports should have a runway at least 1400 meters and able to handle aircrafts such as the Fokker 27 or Hercules C-130 during disaster situations. These following are site-airports:¹⁹⁴

- Tardamu Airport
- Kuala Batee Airport
- Teuku Cut Ali Airport
- Hamzah Fanzuri Airport
- Muko-Muko Airport
- Gewayantana Airport
- Namrole Airport
- Emalamo Airport
- Dobo Airport
- Tual Baru Airport
- S. Condronegoro Airport
- Tojo Una-Una Airport
- Wunopitu Airport
- Bula Airport
- Namlea Airport
- Muting Airport
- Sami Airport
- Miangas Airport
- Wahai Airport
- Tolikara Airport
- Falabisahaya Airport
- Numfor Airport

The Directorate General of Civil Aviation (DGCA) also determined hub-airports for disasters. The criteria for these airports are: (1) be able to be reached in one-hour flight duration from site-airport disaster and (2) be able to become on-site airport if a disaster occurs in its area. These hub-airports are mainly a large airport located in the capital of a province and spread across the country. The following are identified hub-airports:

- Sultan Iskandar Muda Airport
- Polonia Airport
- Sultan Syarif Kasim II Airport
- Hang Nadim Airport
- Fatmawati Airport
- Sultan Mahmud Badaruddin II Airport
- Soekarno Hatta Airport
- Adi Soemarmo Airport
- Juanda Airport
- Adi Sutjipto Airport
- Tarakan Airport
- Sepinggan Airport
- Mutiara Airport
- Sultan Hasanuddin Airport
- El Tari Airport
- Baabullah Airport
- Pattimura Airport
- Saumlaki Airport
- Torea Airport
- Rendani Airport
- Mopah Airport

The United Nations Development Programme (UNDP) and Deutsche Post DHL launched the GARD Program (Get Airports Ready for Disaster) to prepare airports and people for disaster situations and to increase the efficiency of aid delivery. The program assists to evaluate and improve their surge capacity and to better handle international support the country receives after a disaster. GARD is currently implemented in Indonesia along with Bangladesh and Nepal with plans to expand to more countries.¹⁹⁵



Indonesian sailors and Australian Defence offload humanitarian aid in Indonesia 2005. Photo: Australian Defence

Regular and International Driver's License

The Department of Motor Vehicles is responsible for issuing driver's licenses for residents of Jakarta, Tangerang, Depok and Bekasi. International driver's licenses are called SIM Internasional and are issued by Mabes POLRI in Jakarta with validity periods of one, five or ten years. Indonesia recognizes the International Driving Permit (IDP), but the application for the IDP must be processed in their home country. The following are steps are used to obtain an IDP:

Step 1: Complete the application for the IDP

Step 2: Visit a local office if you would like the IDP processed immediately. Submit the completed application along with two passport size photos, valid driver's license and USD \$15 permit fee.

Step 3: Mail the completed application if there is no local office or if you have already arrived in Indonesia. Include two passport size photos, photocopies of your driver's license and USD \$15 permit fee.

Step 4: Send payments in U.S. currency only.

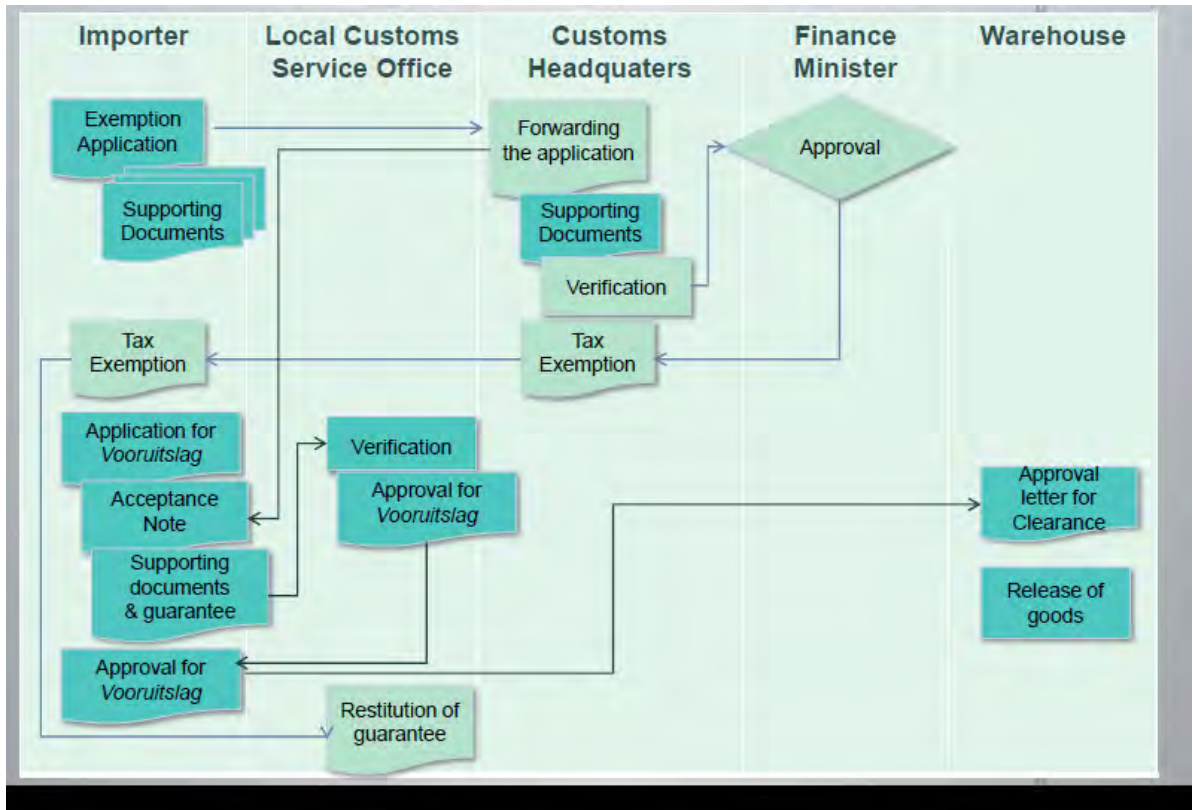
Step 5: Provide AAA or the National Auto Club approximately six weeks to process and return the approved IDP. Include additional funds to expedite the process. Select this option if you are already in Indonesia.

Customs¹⁹⁶

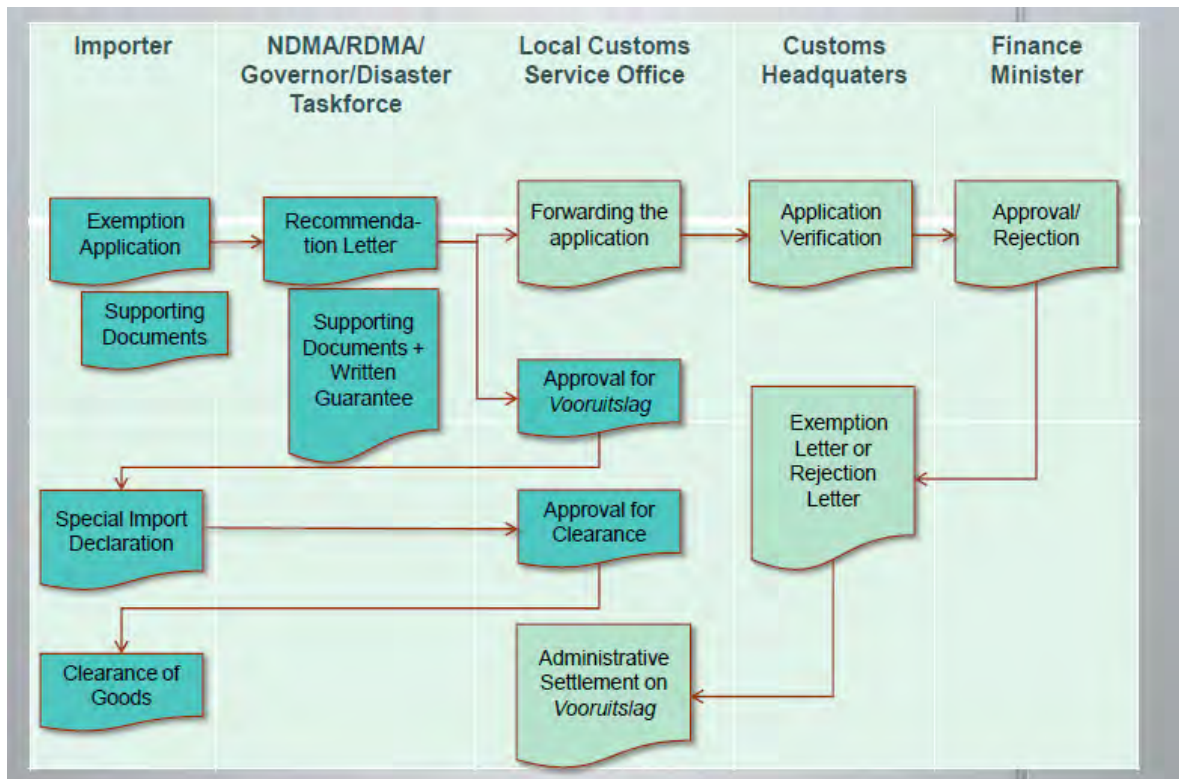
The Directorate General of Customs and Excise is responsible for customs and excise in Indonesia. International organizations and foreign non-government organizations will be granted special privileges when importing goods for emergency response after submitting a request to BNPB. Regulation 21/2008 states that "foreign aid, whether in the form of foreign personnel, equipment or logistics shall have 'easy access to immigration, excise and quarantine.'" In terms of disaster relief personnel, this refers to granting visas, entry permits, limited stay permits and exit permits. The head of BNPB grants these visas and permits. Foreign aid personnel will only have access to the disaster area which will be determined by BNPB. Logistics and equipment are exempt from import duties, import taxes, along with fees associated with entry permits and re-fueling. Inspections on goods are conducted to ensure quality and compatibility with the needs of the affected communities, and meet national and international standards. Quarantine procedures are exempt unless there is potential danger involved. BNPB may obtain "easy access" licensing to bring certain equipment or personnel into Indonesia including foreign personnel (includes foreign military with no diplomatic relations with Indonesia) and equipment to assist during emergency response. If goods are re-exported, the aid provider needs to include a letter of statement specifying the goods will be re-exported within a set amount of time.

Regulations for Importing Humanitarian Aid into Indonesia¹⁹⁷

<p>Required Documents</p>	<p>Approval letter for donation goods from National Coordination Agency for National Disaster and Refugees Relief; List of donation goods completed with:</p> <ul style="list-style-type: none"> • Description of goods • Mark of goods • Type of goods • Valuation of goods • Transportation • The donor of goods • The Gift Certificate; In addition, the following documents are needed: <ul style="list-style-type: none"> • Bill of landing/airway bill • Commercial invoice • Packing list • Certificate of origin in order to release the goods; special declaration for home use (PIBT) is needed
<p>Prohibited Goods</p>	<p>No specific goods are listed as prohibited. However, the following lists the goods which are acceptable as gifts to be used for charity, public worship, social or cultural purposes:</p> <ul style="list-style-type: none"> • Foods, medicines and clothes for free distribution to needy communities, including aid to natural disaster victims • Surgery instruments, therapeutic devices and dressing materials for social organizations • Goods needed for the construction or repair of worship buildings, hospitals, polyclinics and schools or goods which constitute fixed assets • Clinic cars, patient transport facilities, public worship officer transport facilities, health officer transport facilities • Study and teaching equipment for educational institutes and provided free of charge to promote intelligence of society • Goods needed for permanent use by associations and organizations for cultural purposes
<p>Tax Exemption</p>	<p>According to the Indonesian Customs Law No. 10/1995, exemption of Import Duty shall be granted for import duty of goods donated for charitable and social purposes. The organizations or institutions engaged in charity, public worship, social or cultural activities, which are entitled to this tax exemption, shall be appointed by the Minister of Finance (decree of the Minister of Finance No. 144/KMK 05/1997)</p>
<p>Pre Shipment Application</p>	<p>Tax exemption should be obtained from the Director General of Customs and Excise on behalf of the Minister of Finance. The following attachments are required:</p> <ul style="list-style-type: none"> • Quantitative details and types of goods for which tax exemption is requested and their customs value • Gift certificates from overseas contributors declaring that the goods are granted and their procurement uses no Indonesian foreign exchange • Recommendations from relevant technical ministries



Customs Formalities to Obtain Import Duty and Taxes Exemption for Donated Goods¹⁹⁸



Customs Formalities to Obtain Import Duty and Taxes Exemption for Relief Consignments¹⁹⁹

The following are relief consignment regulations and guidelines:²⁰⁰

Indonesia Customs	<ul style="list-style-type: none"> • Customs Law No. 17/2006 (Article 25 para 1) • Minister of Finance Regulation No. 64/PMK.04/2007 • Letter of Dir Gen of Customs & Excise No. S1208/2009 & S1259/2009
National	<ul style="list-style-type: none"> • Law No. 24/2007 concerning Disaster Management • Government Regulation No. 21/2008 concerning the Arrangement of Disaster Management • Presidential Regulation No. 8/2008 concerning National Disaster Management Agency
International	<ul style="list-style-type: none"> • Revised Kyoto Convention, Specific Annex J5 • Annex B9 to the Istanbul Convention • Recommendation of The Customs Cooperation Council to expedite the forwarding of relief consignments in the event of disaster • IDRL Guidelines Resolution 4, 30th International Conference of the Red Cross and Red Crescent, 2007

Medicine and Medical Equipment²⁰¹

The National Drug and Food Control Agency (BPOM) is responsible for the regulation of food and drugs in Indonesia. Regulation No.27/2013, the Supervision of Drugs and Food Imports into Indonesian territory came into effect on 28 May 2013. The regulation replaces the previous regulation on imports of processed foods, cosmetics and drugs. Importers of drugs and food require approval from the head of BPOM and an import certificate (Surat Keterangan Impor “SKI”) which is valid for one import. This requirement also applies to imports in free trade areas and ports. Imports of medical equipment require the consignee to obtain a permit from the Health Department.

Imported products must meet the following storage time requirements:

1. At least 1/3 of storage life for drugs, traditional medicines, quasi drugs, health sup and cosmetics;
2. At least 9 months before the expiration date for biological products; and
3. At least 2/3 of the storage life for processed food

Aid providers must guarantee the quality, compatibility and safety of imported foods, medicines/drugs, and consumable medical supplies and equipment, and guarantee the foods and drugs given have.²⁰²

1. Expiration period of at least 2 years for drugs/medicines, and a minimum of 6 months for foods at time of delivery;
2. Labels in English if not available in Bahasa Indonesia
3. Check, consign, protect and guarantee good conditions to maintain its safety and quality.

Telecommunications Equipment

Imports of radio equipment, wireless and mobile telecommunication devices and equipment all require a permit from the Ministry of Post and Telecommunications.²⁰³



INDONESIA

Infrastructure

Indonesia Disaster Management Reference Handbook | 2015



Infrastructure

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Indonesia's infrastructure is in a state of flux and in past years the government has not invested sufficiently to support continued strong economic growth. However, recent efforts to jump start new projects appear likely to lead to significant new growth. This growth should boost the country's resilience with more efficient shipping routes and better ways to move the country's very large population. The current infrastructure reflects a mix of legacy Dutch projects, second-run Japanese equipment, and recently financed projects.²⁰⁴ Infrastructure spending is currently at 4 percent of GDP, which is lower than that of neighboring countries.²⁰⁵ Prior to the Asian Financial Crisis, Indonesia's infrastructure spending accounted for 8 percent of GDP.²⁰⁶ Spending, both public and private, will need to return to these levels in order to maintain economic growth and resilient systems. The head of Indonesia's National Disaster Management Agency Badan Nasional Penanggulangan Bencana (BNPB) indicated that the government plans to spend 5 percent of the country's GDP on infrastructure in 2015 which will directly impact Indonesia's preparedness for future disasters.²⁰⁷

The current quality of Indonesia's infrastructure varies by sector. The World Economic Forum (WEF) ranks economies by economic competitiveness annually based on a variety of infrastructure related factors.²⁰⁸ The country's inadequate infrastructure ranked 5th in problematic factors for conducting business, behind corruption and inflation and ahead of policy instability and tax rates.²⁰⁹

Overall Infrastructure and Road Quality	72nd
Railroad Infrastructure Quality	41st
Port Infrastructure Quality	77th
Air Transport Infrastructure Quality	64th
Electricity Supply Quality (of 144)	84th

Source: The World Economic Forum, 2014

The Global Fund for Disaster Risk Reduction (GFDRR) estimates the potential cost of a major disaster in Indonesia could exceed 3 percent of GDP and a major earthquake could cause USD \$30 billion in damage. Housing would account for most of the reconstruction need, followed by public infrastructure which includes roads, schools, and health facilities.²¹⁰ Further, Indonesia's public infrastructure is for the most part uninsured, creating a large burden on the Government of Indonesia (GoI) following a major disaster.²¹¹

The Ministry of Transportation is the primary policy, planning, programming, coordinating, implementing and administrative body of the executive branch of the government to promote, develop and regulate a dependable and organized transportation and communications system network.²¹² Directorates within the Ministry include Land Transportation, Sea Transportation, Civil Aviation, and Railways Directorates General.

Airports

There are over 250 airports in Indonesia which are distributed relatively equally across the country with 52 on Sumatra, 37 on Java, 45 on Kalimantan, 20 Nusa Tenggara Barat (NTB), 44 in Sulawesi and much of the Malukus, and 50 on Papua.²¹³ The Directorate of Air Transport prepares the formulation of policies, standardization, norms, guidance, criteria and procedures, licensing, observing, operating and law enforcement/corrective action. The organization is also responsible for evaluation and regulatory on the data system and standardization of air transport service, scheduled air transport service, unscheduled air transport service and non-commercial air transport, air transport cooperation and air transport business development and management.²¹⁴

International Airports – Airports capable of handling international flights. Airports in this category include airports that currently have or have previously served international destinations.

Airports of Indonesia²¹⁵

City	Province	Airport Name	Runway
Sumatra			
Banda Aceh	Aceh	Sultan Iskandarmuda International Airport (Blang Bintang Airport)	8200 ft
Batam	Riau Islands	Hang Nadim International Airport	13200 ft
Padang	West Sumatra	Minangkabau International Airport	7000 ft
Medan	North Sumatra	Kuala Namu International Airport	9500 ft
Palembang	South Sumatra	Sultan Mahmud Badaruddin II International Airport	7200 ft
Pekanbaru	Riau	Sultan Syarif Kasim II International Airport	7000 ft
Java			
Bandung	West Java	Husein Sastranegara International Airport	6400 ft
Jakarta	Jakarta	Halim Perdanakusuma International Airport	9800 ft
Jakarta	Jakarta	Soekarno–Hatta International Airport	12000 ft
Semarang	Central Java	Achmad Yani International Airport	6000 ft
Surabaya	East Java	Juanda International Airport	9800 ft
Surakarta	Central Java	Adisumarmo International Airport	7200 ft
Yogyakarta	Yogyakarta	Adisucipto International Airport	7200 ft
Kalimantan			
Balikpapan	East Kalimantan	Sultan Aji Muhamad Sulaiman Airport	8200 ft
Tarakan	North Kalimantan	Juwata International Airport	5300 ft
Sulawesi			
Makassar	South Sulawesi	Sultan Hasanuddin International Airport	N/A
Manado	North Sulawesi	Sam Ratulangi International Airport	8200 ft
NTB			
Denpasar	Bali	Ngurah Rai International Airport (Bali International Airport)	9800 ft
Mataram	West Nusa Tenggara	Lombok Praya International Airport	6800 ft

Seaports

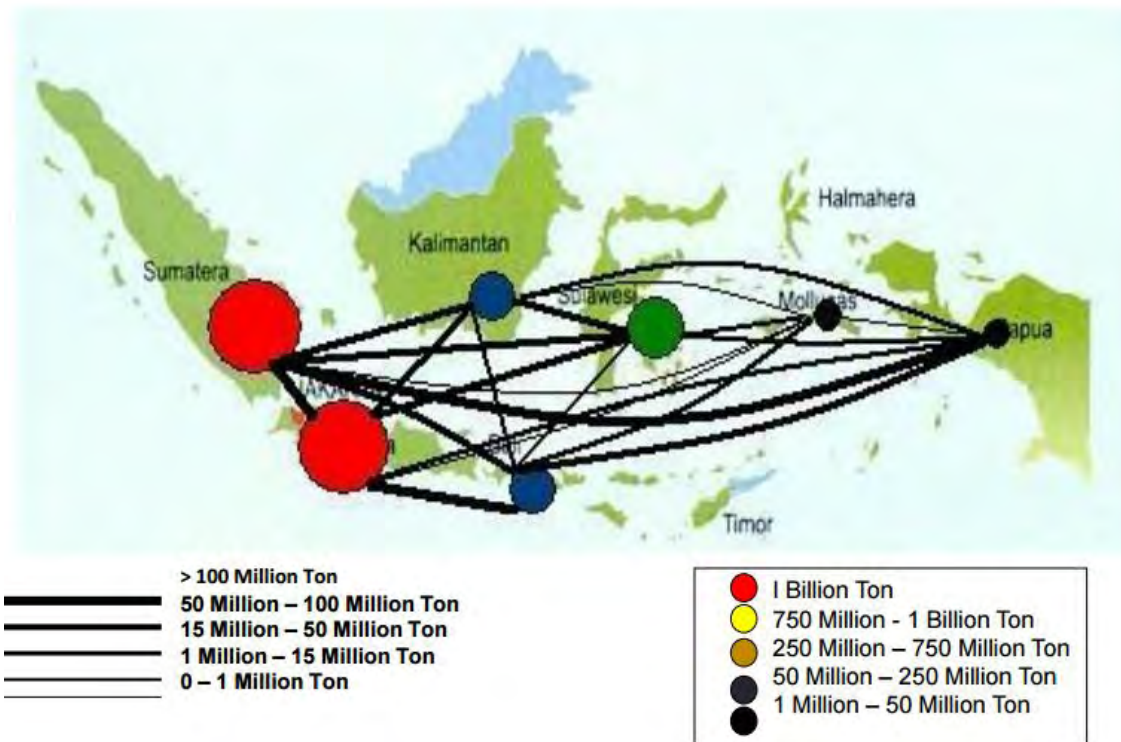
Indonesia highly depends on its seaports to move domestic and international commerce. As mentioned earlier, the country ranks 77 out of 144 countries in the quality of port infrastructure, higher than the Philippines and Vietnam, but lower than Malaysia and Singapore.²¹⁶ The quality of port infrastructure is widely acknowledged to be limiting Indonesia's economic growth due to long processing times and the high costs at ports.²¹⁷ As of November 2014, the government planned to build or upgrade 24 ports in five years.²¹⁸ These port improvements are expected to improve resiliency in remote areas and facilitate quicker movement of needed supplies post

disaster. In particular, islands located in eastern Indonesia (Maluku and East Maluku) should reap the benefits of natural trade due to the improved connectivity.²¹⁹ Refer to the map of freight flow within Indonesia.²²⁰

The recently formed Indonesian Coast Guard is tasked with enforcing all laws within Indonesian waters, conducting maritime security operations, and safeguarding life and property at sea. The organization's effectiveness is still unknown as it reaches initial operating capacity. Indonesia's Malacca Strait struggles with piracy, and efforts to control piracy are ongoing.^{221 222}

Port corporations serve as landlords and operators of port facilities. These state owned enterprises (SOEs) corporations are responsible for vessel traffic movement, berthing, pilotage services, facilities, and port medical centers.

Indonesia has a variety of port types and sizes and the largest ports are capable of moving over 72 million tons of cargo annually.²²³ Ninety-four percent of international shipping is handled by five ports: Tanjung Priok, Tanjung Perak, Belawan, Tanjung Emas, and Panjang.²²⁴



Inter-Island Freight Flow

Port	Description
Samarinda	Busiest port for export – specializes in dry bulk goods
Tanjung Priok	Handles large amounts of international trade – mostly non-bulk, services Jakarta
Tanjung Perak	Very busy port for domestic shipping, services Surabaya
Bontang	Large export function – specializes in liquid bulk goods
Pontianak	Very busy port for domestic shipping

Land Routes

Roads

Indonesia relies on roadways for an overwhelming majority of transport. However, spending on road construction and maintenance declined from 22 percent of the national development budget in 1993 to 11 percent in 2005.²²⁵ This prolonged under resourcing has occurred while road usage has skyrocketed. Due to population growth, economic growth, and fuel subsidies, the roadway system suffers from extreme congestion, overloading, and distortions. Recently, infrastructure spending has increased to 40 percent annually and fuel subsidies have been cut, but it will take several years before measurable gains in road quality and traffic are seen.²²⁶ The Indonesian government is pursuing public-private partnerships for roadway development, these partnerships will allow for private financing of new projects in exchange for the ability to collect road tolls once built. The US State Department estimates that subnational roads in Indonesia comprise of 91 percent of the total primary road network.²²⁷ The trans-Java and trans-Sumatra highway systems are both currently

under development. Once built, they should decrease travel times, decrease logistics costs, and increase resiliency as moving supplies quickly from international ports will become much easier.

The underdeveloped road system also suffers from persistent damage from flooding, rain, and stagnant water which continuously erode the asphalt cover. Road infrastructure inefficiencies are more evident in Jakarta, a city that is currently contributing 17 percent to Indonesia's total economic growth. Traffic in Jakarta has become one of the slowest in Asia as more and more people enter the consuming middle class and can afford to buy new cars or motorcycles. According to data compiled by the nation's biggest car seller PT Astra International, domestic vehicle sales rose 23 percent to 1.1 million units in 2012.²²⁸

Road quality and capacity vary throughout Indonesia. For example, the Asian Development Bank estimates that Jakarta, Jawa Timur, and Banten all experience constrained economic growth due to road capacity, while Maluku, Sulawesi, and Kalimantan have GDPs too small to support the cost of road maintenance.²²⁹ The unbalanced nature of the transport network in these areas is detrimental to their capacity to absorb disaster related shocks.



Complete gridlock in Jalan M.H. Thamrin, Jakarta. Photo: Charles Wiriawan



Current Railway Lines In Indonesia

Railways

Railways in Indonesia are operated by the State Owned Enterprise (SOE) PT Kereta Api Indonesia (PT KAI) or its subsidiary PT KAI Commuter Jabodetabek (KCJ) and are generally for passenger and commuter use. There are four unconnected lines in the country, three on Sumatra and one on Java. More rail lines are planned on other islands, but financing is not yet in place. The majority of rail passengers are located on Java – of the annual 202 million passengers, 198 million ride the trains on Java.²³⁰ See the map for a detailed picture of current service areas.²³¹

The rail system is likely not set up for use in disaster response. The lines are constructed out of particularly light grade materials that leave them generally unsuitable for freight movement. Additionally, the cars are mostly second hand and refurbished.²³²



Dwellers live at the edge of a rail track in Pasar Kebalen, Malang, Java, Indonesia. Photo: Danumurthi Mahendra

Schools

Indonesia's schools have repeatedly suffered damages in recent disasters. More than 2,000 school buildings were damaged or destroyed by the Indian Ocean tsunami in 2004. In 2009, an earthquake in Yogyakarta caused 2,900 schools to collapse. And in 2011, an earthquake in West Sumatera damaged 2,800 schools with 40 percent of those sustaining heavy damage.²³³

Indonesia actively works to reduce disaster risk for schools, but progress is yet to be completed. A BNPB study found that 75 percent of school buildings in Indonesia are located in hazard prone areas, but there are activities underway to help mitigate risk.²³⁴ The National

Disaster Management Plan now includes disaster preparedness for schools. The Safe School program rehabilitates schools damaged by disasters and ensures they are rebuilt to code. Additionally, the program includes an education component. In 2012, the program upgraded 180 schools.²³⁵ The Global Fund for Disaster Risk Reduction (GFDRR) has also worked with the Government of Indonesia to issue the document "A Practical Guideline to Making School Safer from Natural Disaster" which will assist local governments to design and build earthquake resistant schools.²³⁶ See the chart for an example of the type of risk assessment schools are being encouraged to undertake:²³⁷

Simple School Disaster Risk Analysis		Y	N
Please answer the questions with Yes (Y) or NO (N)			
Earthquake	Our school is located on earthquake prone area		
	Our school is located on earthquake impacted area		
	Our school building is not earthquake resilient building		
	The door and gate of our school are not wide enough to evacuate in an event of earthquake		
	Our school has not constructed the evacuation route and the assembly point for earthquake disaster event		
	Our school has not implemented drill and simulation for earthquake disaster event		
Tsunami	Our school is located at tsunami prone area		
	Our school is located at tsunami impacted area		
	Our school building has not adopted tsunami resilient building design		
	The door and gate of our school are not wide enough to evacuate in an event of tsunami		
	Our school has not constructed evacuation route and assembly point for tsunami disaster event		

School Disaster Risk Analysis Checklist

Communications

Indonesia's telecommunication sector is both highly competitive and dynamic. The communications industry has sky rocketed since the de-monopolization of the communications industry by SOEs in the late nineties. Because the nation was so far behind the communications development curve, fixed telephone lines never gained the market saturation they have in other countries. Then, between 1997 and 2002, the number of cellular telephone subscribers increased from 1 million to 11 million.²³⁸ The cellular phone sector continued to grow dramatically, reaching 211 million customers by 2011.²³⁹ A 2011 Pew Global study found that most users in Indonesia used their cellular phones for texting and talking, while few used them for internet browsing.²⁴⁰ Today the Indonesian mobile network is strong and has room for more capacity with over one hundred cell phone subscriptions for every hundred people.²⁴¹

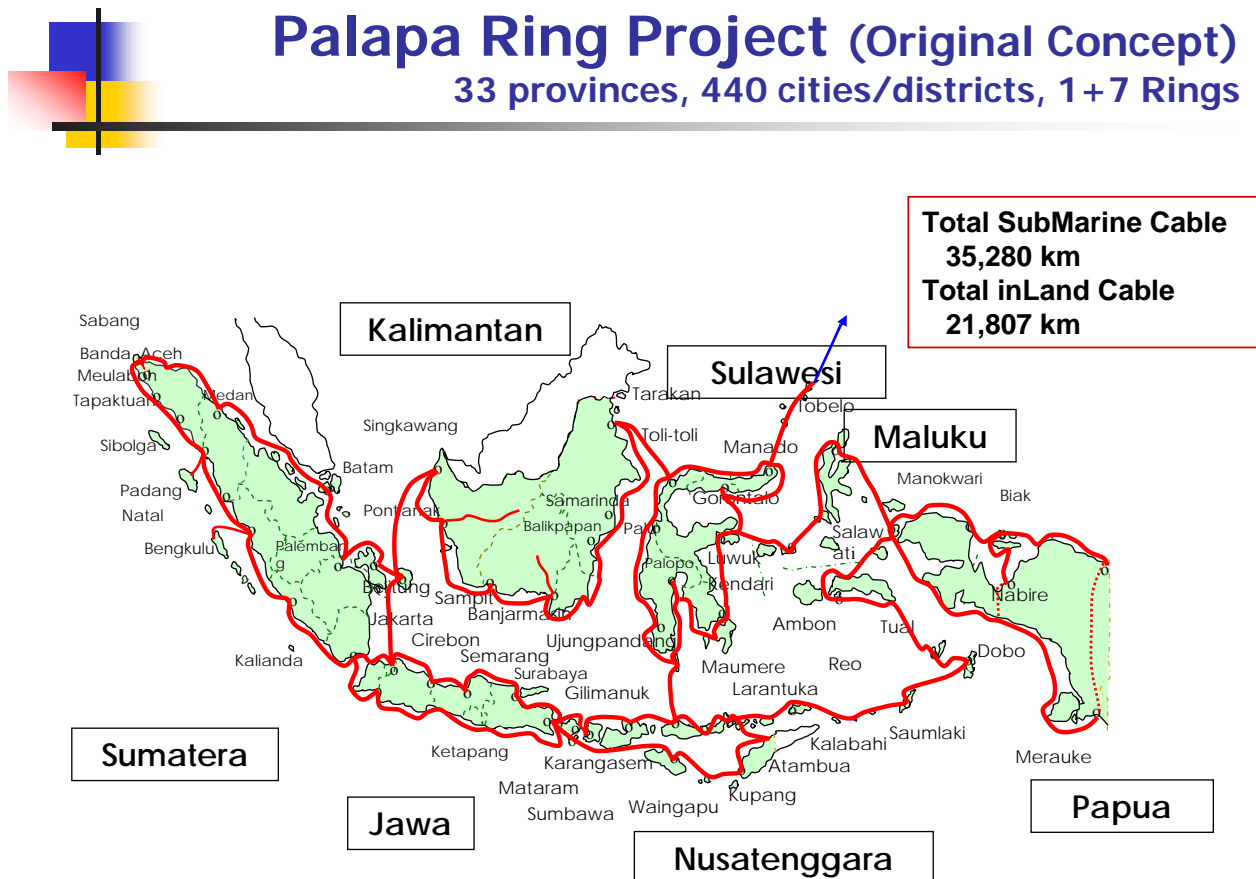
The internet infrastructure is much weaker, use is heavily concentrated in Jakarta and several secondary cities located on Java and Sumatra. The

majority of users access the internet through DSL connection and mobile internet, while only 2.2 percent use fixed broadband.²⁴² A review of crisis communication in Indonesia found that more than 60 percent of Indonesians access the internet primarily in cafes which will invariably be cut off in a disaster.²⁴³ Due to this posing challenge, a program is underway to expand internet infrastructure in Indonesia. Known as the Palapa Ring, undersea cables will connect more remote parts of the country to Jakarta and Singapore.

Disasters with small death tolls can cause great damage on the communications infrastructure network. During the 2013 Jakarta floods, communications systems failed repeatedly due to blackouts. More than half of residents lost electricity and data capacity was overloaded for the networks that remained operational.²⁴⁴ The delivery of flood warnings was also problematic – only half of the population received flood warnings. This was likely due to a dam break that sped up the flooding process and a reliance on television for news, which has some necessary lead time.²⁴⁵

Palapa Ring Project (Original Concept)

33 provinces, 440 cities/districts, 1 + 7 Rings





Utilities

Indonesia has moved forward with advancing some development within the country, but they are facing certain obstacles. The challenge of improving environmental performance, keeping costs down, and maintaining a reliable system is hindering growth. Energy related infrastructure is covered by the Ministry of Energy and Mineral Resources, including traditional energy generation from coal-fired power plants, along with planning and strategy for renewable energy resources and power generation.²⁴⁶

Power

Indonesia's electrical infrastructure lags particularly behind other infrastructure in the country and the economy. Electrification rates in Indonesia are just 65 percent – lower than any other ASEAN country. The Philippines has an electrification rate of almost 90 percent and Thailand has an electrification rate of 99 percent.²⁴⁷ Their per capita megawatt generation is among the lowest in the region and power outages at homes and businesses are frequent occurrences.²⁴⁸ The current electrical grid is limiting economic development in Indonesia. The government is actively working to upgrade the electrical system, but is struggling to find private investors to help defray the upfront cost.

The electricity sector is dominated by the state-owned company Perusahaan Listrik Negara (PLN). The company charges tariffs for all users and residential use is generally subsidized by larger corporations. The system is convoluted and inefficient. As a result of its impaired financial status, PLN has been unable to fund new investment, expand electrification in rural areas,

and maintain facilities in some cases.²⁴⁹ This will hopefully change as the government begins a more systematic attempt at attracting private infrastructure investment and matching funding. Today, two thirds of electricity is generated from oil. Most private electricity providers, which are dwarfed by the SOE, use coal in their plants as oil is subject to tariffs.²⁵⁰

Power outages are common in disasters around the world, and Indonesia is no exception. However, because the country's electrification rate is already so low, it is possible that areas affected by disaster would have little expectation of a usable grid after a disaster. For example, the electricity supply in Aceh after the 2004 tsunami was disrupted because of damage to the distribution network for several months. The generation plants, however, were not damaged and this helped in the recovery.²⁵¹

Renewable and Alternative Energy

Renewable energy is still evolving in Indonesia. The underdeveloped electrical infrastructure leaves the country far behind its neighbors and finding capital for renewables in the resource rich country is difficult. However, 20 percent of private power plants run off renewables (15 percent geothermal, 5 percent hydroelectric), and nine percent of SOE power plants run off of renewables (2 percent geothermal, 7 percent hydroelectric).²⁵² There is potential for hydropower to play a bigger role in electricity generation in Indonesia. The International Institute for Sustainable Development estimates that hydropower could potentially generate 75 GW annually, about a third of the country's annual use.²⁵³ There is currently no installed nuclear power generation in Indonesia.

Water and Sanitation

Like most infrastructure in Indonesia, the water and sanitation infrastructure is underdeveloped. Stress on water resources in urban areas of the two main islands of Java and Sumatra, where over 80% of the current population lives, is especially high. The significant increase in water demand has resulted in the demand exceeding the natural availability of the supply. Similarly, the problems of pollution, erosion of the landscape, and damage to groundwater are growing.²⁵⁴

As of 2009, 47 percent of households (urban and rural combined) has access to an improved water source and 51 percent had access to basic sanitation. The UN Millennium Development goals call for improvement to 69 percent and 62 percent of households by 2015 respectively. However, this is vastly improved from about 30 percent of households with access to water a sanitation infrastructure in 1990.²⁵⁵

Water resources in Indonesia are under pressure due to rapid population growth, increasing demand for food production, urbanization, pollution, extreme and inefficient use of water, and climate change. To ensure adequate water in the future, the country will need to protect its water sources by improving catchment areas and watershed protection. Some issues identified by the central government include:²⁵⁶

1. Inadequate regulatory framework for water supply and sanitation.
2. Inadequate cross-sector policy coordination on the provision of improved facilities for water supply and sanitation; too many institutions and organizations are involved in development of water supply and sanitation and more intensive coordination is required.
3. Decline in the quality and quantity of drinking water in urban areas.
4. Rapid growth of urban population has been greater than the development of improved water and sanitation infrastructure.
5. Low community awareness on the importance of clean water use and sanitation practices remains.

	Population
Use of Drinking Water Sources – Improved (percentage of population)	85%
Use of Sanitation Facilities – Improved (percentage of population)	71%

According to the Indonesian Chamber of Commerce, flooding in mid-January of 2013 cost businesses in Jakarta around \$3 billion. According to the Indonesia World Bank country director, dredging the canals would help reduce the incidents of flooding by 40 percent, but the government has not yet fully focused its efforts here.²⁵⁷

Building Codes²⁵⁸

The Ministry of Public Works (PU) oversees building standards in the form of law, regulations and guidelines while the National Standardization Agency (BSN) is responsible for government standards. Local government regulations are issued and enforced at the local level. The Indonesian Seismic Code for Building Design was ratified in 1989 as one of the Indonesian National Standards (SNI) which is based on the New Zealand Code. The SNI requires a lateral-resisting system of the building to be flexible and sets out mandatory requirements for design and detailing. Currently, the seismic code in Indonesia (2002) is based on the international Uniform Building Code of 1997. Although SNI's are in place, unreinforced clay brick masonry housing is found in rural areas comprising of one-story buildings using traditional construction methods. During earthquakes, these types of buildings experience severe damage.



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Health

Indonesia Disaster Management Reference Handbook | 2015



Health

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Overview

Health in Indonesia is in a state of transition. The country's government is implementing widespread programs to address the health needs of Indonesia's socio-economically diverse population against a backdrop of previously mixed health outcomes. It is too early to know if these ambitious new programs will achieve their intended results, but the context in which these changes are taking place is important. Indonesia has been steadily increasing its government health expenditure per capita, tripling its expenditures between 2000 and 2011 to USD \$50 in purchasing power parity (PPP) adjusted dollars.²⁵⁹

Previously, the country's population health had not quite kept up with its rapidly developing economy. Trends in maternal mortality, life expectancy, and other health indicators are positive, but only average for an Association of Southeast Asian Nations (ASEAN) country. For example, Indonesia's maternal mortality ratio has decreased more than 50 percent since 1990, but is still 190/100,000 live births. This is on par with Burma (Myanmar), India, and Nepal, and much higher than in China, Vietnam, and Thailand.²⁶⁰ Additionally, non-communicable

disease (NCDs) incidence rates are rising rapidly and communicable disease outbreaks continue to occur on a large scale. More than 50 percent of Indonesian men use tobacco daily, twice the rate of tobacco use in the Philippines and Japan, and three times the rate of use in India.²⁶¹ This is set off by Indonesia's highest quartile ranking for morbidity due to communicable diseases like tuberculosis (TB), diarrheal diseases, and typhoid fever when measured against gross domestic product (GDP) per capita peer countries.²⁶²

The Indonesian government has identified several areas of concentration for its health sector strategy in the coming years. They are:

- Mobilizing and empowering communities for healthy living;
- Improving public access to qualified healthcare;
- Improve surveillance system, monitoring and health information; and
- Improving health financing.

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 Indonesian government will focus on together include: preventing and controlling the spread of communicable diseases, promoting public health approaches to controlling non-communicable diseases, promoting child, adolescent, and reproductive health, and strengthening preparedness, surveillance, and effective response to acute public health emergencies.²⁶³ The agenda is very specific in comparison to agendas in other Asia-Pacific nations, so this could indicate that Indonesia's basic healthcare delivery system is functional with specific beneficial interventions.

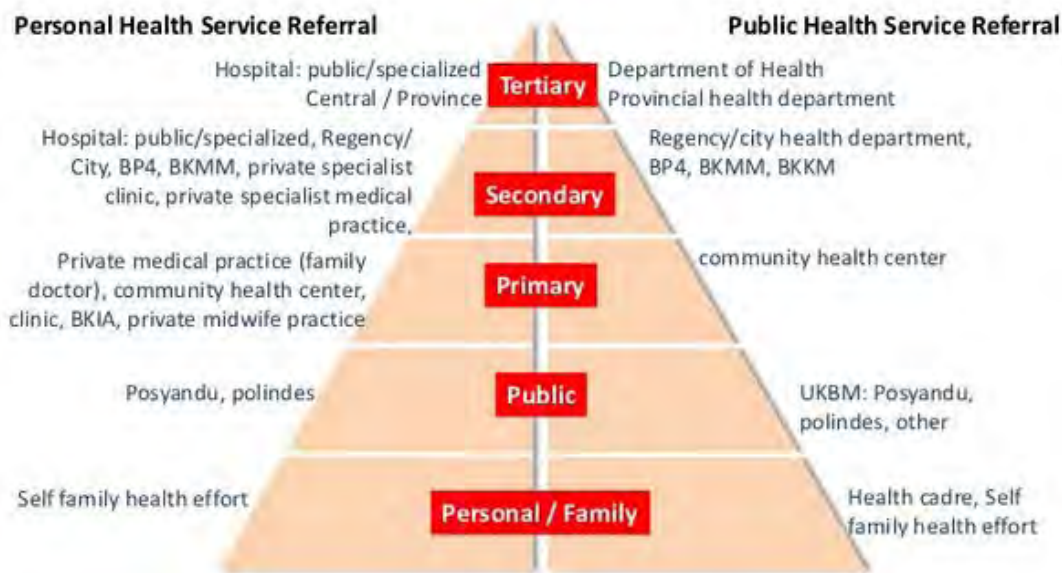
The Strategic Plan 2010-2014 is the policy setting plan, it envisions self-reliance and fairness in healthy communities. The plan recommends “enhancing health status by implementing community empowerment involving private sector and civil society and by making provisions for equitable health services and resources that are maintained by good governance.”²⁶⁶ This recommendation is now being implemented by the Universal Health Service (UHS) program – a single payer health insurance scheme that provides medical insurance coverage for every person legally residing in Indonesia. See the health access section for further information.

Structure

The Ministry of Health (MoH) is the primary health agency in Indonesia and is led by the Minister of Health. The MoH is responsible for national policy formulation, policy implementation, and technical policies in the field of health. The department also manages public medical facilities and evaluates medical service delivery in the country.²⁶⁴ Compared to health ministries of other nations, the MoH has little influence due to a nationwide decentralization initiative which took place in early 2000. When regional and district governments were given latitude to determine their priorities, health programs were often de-prioritized resulting in a health delivery system that does not connect coherently to national policymaking levels.²⁶⁵

Health System

Indonesia's health system is comprised of a large, fragmented public system and a diverse, growing private system. Indonesians living in rural areas frequently seek care from community based activities and village clinics administered through the public system. Indonesians living in urban areas may also utilize the public system however they also have access to a vast network of private healthcare providers. Doctors and nurses staff community health centers, hospitals (both public and private) and specialty institutes, with care available through a referral or direct service in major cities such as Jakarta. It is common for doctors and nurses to work in both private practice and the public sector simultaneously, which further complicates the understanding of the Indonesian healthcare delivery model. Refer to the graphic for a representation of the dual tracks for healthcare delivery.²⁶⁷



Public And Private Health Delivery System

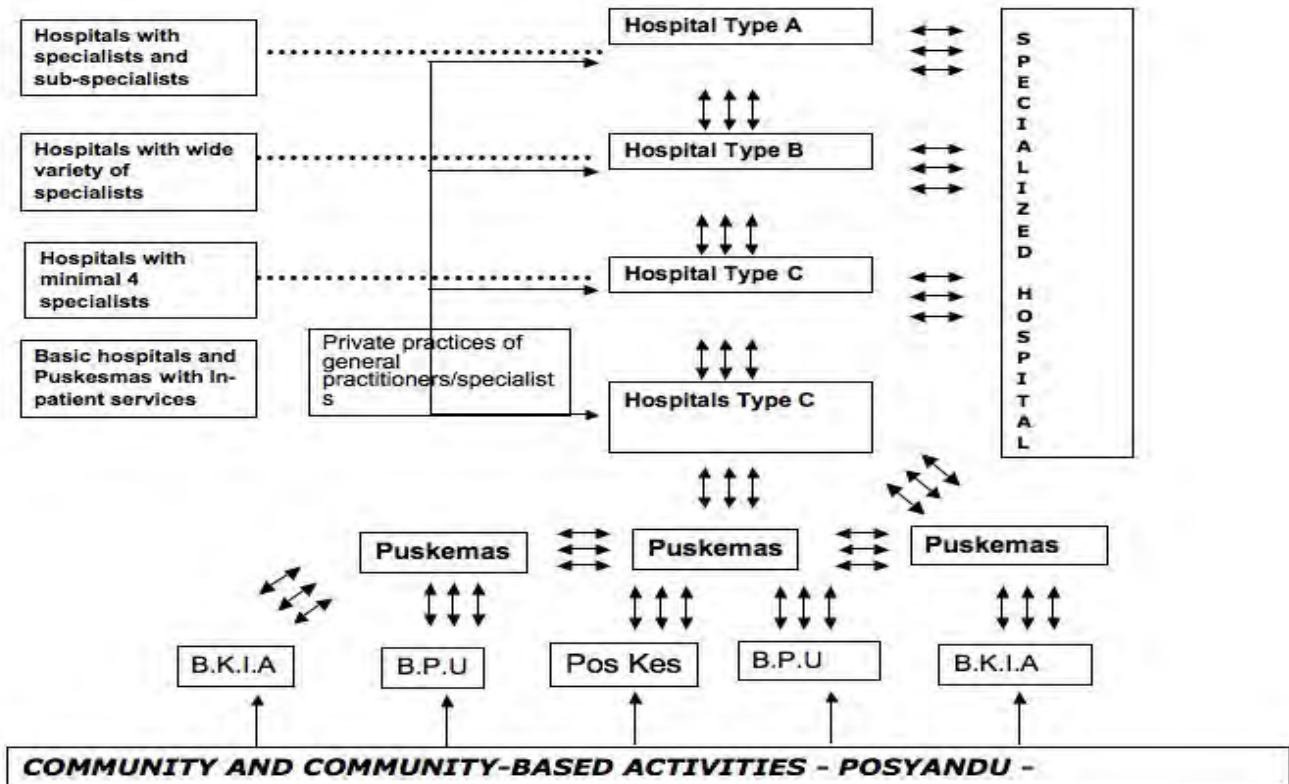
Public Healthcare

Public primary health care services begin at the village level through assistant and mobile community health clinics (pustus/posyandus), which serve approximately 3,000 people. These small facilities monitor health and staff one nurse and one midwife on average.²⁶⁸ The pustus also provide referrals to puskesmas (community health centers), which staff at least one doctor and serve approximately 30,000 people. Village midwife clinics assist women with pre- and ante-natal care. Referrals continue up the chain as needed until patients are seen by specialists at reference hospitals. Refer to the graphic for a representation of the public health delivery system in Indonesia.²⁶⁹

Additionally, the Indonesian government and international donors have expanded the Alert Village (Desa Siaga) program. The program includes basic health services, maternal health services, disease surveillance and disaster preparedness for villages.²⁷⁰ If this initiative works,

it could significantly reduce the burden of both communicable diseases and non-communicable diseases (NCDs) through improved monitoring and early intervention.

The public healthcare system has delivered decent results for the Indonesian people however it is fragmented as a result of decentralization policies implemented between 1990 and 2000. The central government pushed decision making and administrative authority down to districts, including the health delivery system and its budget. In some districts, health was de-prioritized, and variation in quality and accessibility of care exists across the country. There are indicators the situation is improving with the implementation of universal healthcare and increased levels of government spending (see health access section for more information), but there are no definitive solutions at this point in time.



Public Healthcare System In Indonesia

Private Healthcare

The private healthcare system in Indonesia is wide ranging in its scope. The system includes unregulated tribal or traditional healers, vast pharmacy networks, private hospitals and clinics, and NGO programs. In each of these categories, the quality of care varies wildly. It is very difficult to quantify the impacts of the private sector as monitoring and evaluation suffers from the Indonesian government's decentralization efforts. For example, doctors and nurses commonly work in private practices in addition to their duties in the public healthcare system. This skews practice counts of medical professionals working in the country and the relative influence of the public and private sectors. In the absence of uniform reporting, it is difficult to accurately summarize the range and extent of coverage of non-state services overall.²⁷¹ However, there is a clear trend in the number of private hospitals compared to public hospitals. Between 1995 and 2006, private hospitals accounted for virtually all of the growth in hospitals overall and 40 percent of all hospitals are now privately run.²⁷²

Legal

The government of Indonesia has written key laws and policies to define the legal environment and oversee the operations of the health sector. The constitution guarantees all citizens the right to good health and stipulates the government's obligation to ensure that right.

Laws

The Health Law 23/1992 is the legal basis for all health sector activities. It decentralized healthcare activities and specified the overall goals of healthcare in Indonesia.

National Social Security System Law 40/2004: This law is the backbone of Indonesia's plan to provide health insurance to the entire population. While it was passed in 2004, the program created by the law did not begin implementation until 2011.

2011 BPJS (Badan Penyelenggara Jaminan Sosial/Social Security Administration) Law (Law 24/2011): Law 24/2011 unified separate health insurance schemes, and operationalized the plan to provide universal healthcare by 2014.

Law on Health 36/2009: This law regulates tobacco advertisement, adds warnings on cigarette packs, and mandates smoke free places. It also controls use of smokeless tobacco. This act is intended to curb the prevalent use of tobacco and its effects on increased rates of NCDs.

Hospitals are controlled by Ministry of Health regulations.

Regulation 922/2008 sets facility licensing requirements including construction standards, numbers of specialist doctors required, and occupancy requirements.

Policies

Roadmap Toward Universal Health Care (UHC) – Peta Jalan Jaminan Kesehatan Nasional 2012 -2019: This policy sets the agenda for healthcare in Indonesia. It specifies implementing regulations to place the 2004 law into practice and created an action plan.

2010–2014 National Medium Term Development Plan: The plan covers the entirety of the Indonesian government's medium term agenda, and health is a named priority. The plan focuses on curative, community, and environmental health. to improve the country's overall health status. Specific goals include drastically increasing the proportion of infants receiving immunizations to 90 percent, increasing the proportion of the population with access to clean water to 75 percent, enhancing five internationally accredited hospitals, and implementing the National Health Insurance program.

Ministry of Health Strategic Plan 2010 – 2014: This plan addresses the desired health outcomes from the 2010 – 2014 National Medium Term Development Plan. Its vision includes fairness and self-reliance in community health. The plan's objectives include decreasing morbidity caused by communicable diseases, controlling non-communicable diseases, and increasing the government budget for healthcare.

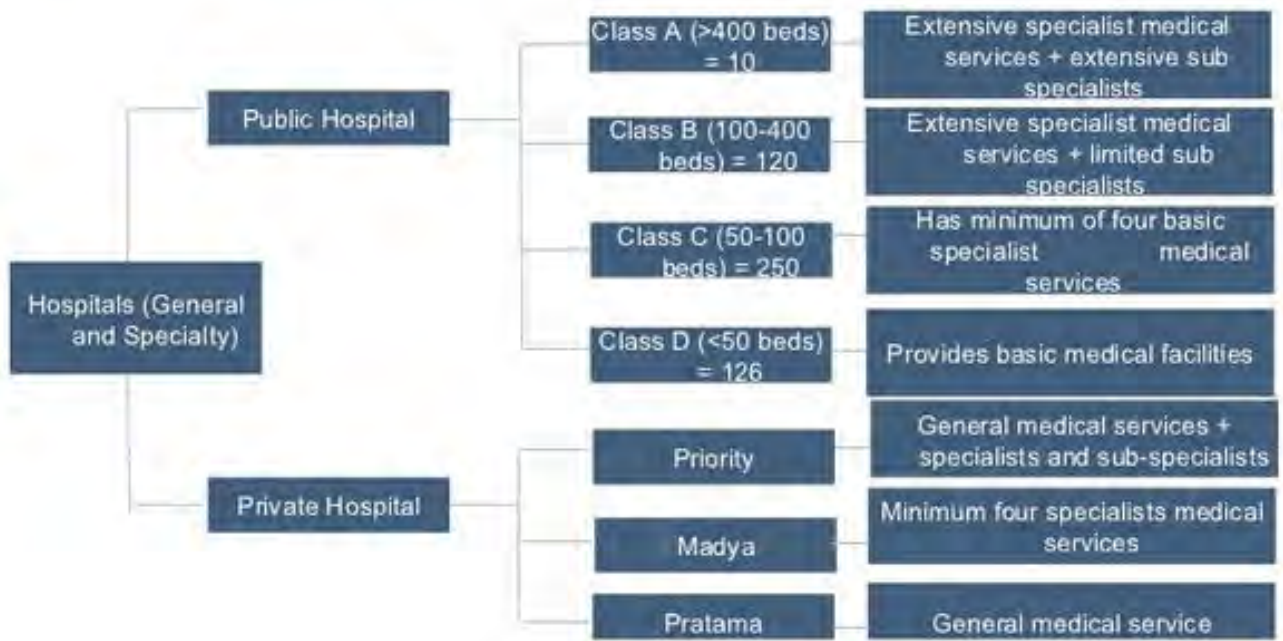
Hospitals

The Indonesian hospital system is robust and well-regulated however there are significant problems with accessibility in remote areas and availability of specialist doctors. Indonesia's hospital capacity ratio is 11 hospital beds to 10,000 people. This ratio is significantly lower than the worldwide ratio of 30/10,000.^{273 274} The country's bed occupancy rate is only 60 percent, indicating that there is not a lack of capacity in Indonesia's hospital system. Experts identified several reasons for this paradox, one reason being the population's use of medical alternatives including international travel for specialized care at one end of the economic spectrum and visiting traditional healers at the other end.²⁷⁵

Indonesia classifies its hospital system by number of beds, degree of capability, and ownership.²⁷⁶ Most publicly available counts of

hospital facilities break the hospitals down by ownership with counts varying widely. In August 2012, a University of Indonesia professor found there were 781 public hospitals and 1,092 private hospitals.²⁷⁷ Another study in 2011 found private hospitals made up half of the 1,320 of hospitals in Indonesia.²⁷⁸ Despite the varied counts, there is a clear pattern over time - hospitals in Indonesia are privatizing, and more and more are being run for profit. This is likely correlated with Indonesia's rapidly expanding health insurance coverage.

Indonesia classifies its hospitals into four types in the event of a disaster. Types A and B are tertiary care facilities with both internal and external disaster plans. Types C and D are secondary health facilities and have internal disaster plans.²⁷⁹ Health centers (puskesmas) are not classified and are likely to not have disaster contingency plans in place.



Hospital Classification In Indonesia

Laboratories

Indonesia's laboratories serve a diverse client base, and the country's exposure to naturally occurring dangerous pathogens like plague, avian influenza, and nipah make it a focus of laboratory safety in the region. As of 2010, Indonesia had seven Bio Safety Level (BSL) 3 laboratories – three for animal specimens and four for human.²⁸⁰ The labs are capable of storing and working with pathogens which may cause lethal disease if inhaled. There

are at a minimum 12 BSL 2 labs capable of meeting most of the immediate health needs of the population.²⁸¹ Biosecurity risks in Indonesia include a large proportion of the population living in poverty and at increased likelihood for disease transmission and possibly extremist groups.²⁸² There is a robust train-the-trainer program in place to ensure safety in Indonesia's BSL 3 labs and the Indonesian Biorisk Association is working to promote collaboration among BSL 3 facilities to maintain best practices.^{283 284}

Health Access

As of 2014, every Indonesian had the ability to access health insurance coverage due to the government's ambitious plan to provide the world's largest single payer health coverage program. By 2019, every Indonesian should be enrolled, and all will have little or no out of pocket cost for medical care. However, access to medical care is not everywhere. Multiple sources cited a very large socio-economic divide between rich and poor Indonesians.^{285 286}

Wealthier patients tend to live in urban areas where specialized care is available while poorer patients tend to live in rural areas with limited access to specialized secondary and tertiary care.²⁸⁷ The top earners in Indonesia are more likely to visit both inpatient and outpatient facilities and to receive private sector care. This gap will become more important as Indonesia continues to undergo its epidemiological transition towards NCDs – diseases that tend to be chronic, requiring longer term medical intervention.

Economic Decile Group	Outpatient Utilization (in past 30 days)			Inpatient Utilization (in past year)		
	Total (%)	Public Share (%)	Private Share (%)	Total (%)	Public Share (%)	Private Share (%)
Bottom 3 deciles	12.1	49.1	51.6	1.5	69.3	30
Middle 4 deciles	14.3	42	59.3	2.5	60	39.5
Top 3 deciles	15.0	31.5	69.5	4.1	47.1	53.4
National	13.7	41.3	59.8	2.5	56.7	43.3

Source: SUSENAS.

Care Seeking Behavior By Economic Status, 2010

Challenges in the Healthcare System

Indonesia's challenges in the healthcare system stem from a combination of limited resources and earlier decentralization. Decentralization played a pivotal role in much of Indonesia's development, but the health sector was left behind. The healthcare sector benefits from adherence to standards and repeatable, consistent monitoring, and treatment protocols. In the absence of that, funding remained very low, and health human resources have not been fully developed.

Healthcare funding is the largest hurdle the Indonesian government will face in implementing its universal health coverage insurance scheme. Currently, Indonesia spends between USD \$77 and \$126 per capita annually on health care which is much lower than its neighboring Southeast Asian countries.^{288 289} Further, only 40 percent of that spending was from the government – the remaining is accounted for by private spending on health. The new universal insurance scheme will require higher levels of overall spending and the World Bank has estimated the scheme will require USD \$13 billion annually to operate.²⁹⁰

Human resource adequacy and service delivery are a fundamental challenge. While Indonesia overall has an adequate number of health workers, they are not distributed equally across the country and there are not enough specialized health workers. For example, Indonesia created the Human Resources for Health (HRH) Development Plan that specifies the country's aim to double the number of specialist and general practitioner medical doctors between 2014 and 2019.²⁹¹ Increasing the quantity of qualified medical professionals will make access easier and eventually less costly as NCD risks will be identified earlier.

Outbreaks

Communicable Diseases

Indonesia experiences sustained transmission of many key communicable diseases including diarrheal diseases, malaria, tuberculosis (TB), typhoid fever, dengue fever, and selected neglected tropical diseases (NTDs).²⁹² In any given year, several pronounced outbreaks of these diseases occur with problems occurring during disaster events. Disaster events such as floods, earthquakes, and tsunamis can lead to contaminated water sources that cut communities off from healthcare resources leading to further spread of disease. Additionally, diseases of pandemic potential are a concern in Indonesia. The country was a buzz of activity during the 2008 Avian Influenza and reservoirs of infectious diseases are present. HIV is also a concern. Although the country's overall incidence is low (.27 percent) it is experiencing a high growth rate in affected key populations.²⁹³

A pressing concern is the current childhood vaccination rate which is much lower than comparably developed countries and could lead to resurgences of communicable diseases. For example, Indonesia's DPT3 immunization rate is 70 percent while Bangladesh has a rate of 88 percent and Nepal's is 75 percent.²⁹⁴

Non-Communicable Diseases

Non-communicable diseases (NCDs) are a growing challenge in Indonesia as better diagnostic tools become available and more of the population exhibits behaviors leading to NCD risk. Disease mortality has changed significantly over time. The number of deaths attributable to communicable and non-communicable diseases was about even in 1995. By 2007, NCDs accounted for twice as many deaths as communicable diseases.²⁹⁵ Hypertension is the most prevalent NCD, followed by heart disease, diabetes and depressive disorder.²⁹⁶ While alcohol use is low, tobacco use among men is problematic and contributes to cancer and respiratory illness deaths.

Indonesia's healthcare system is limited in its ability to prevent, diagnose, or treat NCDs on a large scale. For example, as of 2012, there were no oncologists in Indonesia's Eastern provinces (Maluku, East Nusa Tenggara, and Papua) and only 932 total oncologists for a population of more than 240 million.²⁹⁷ The MoH identified the following challenges in addressing NCDs:

- Efforts to control NCDs are fragmented and unfocused;
- Access to care is limited in rural and poor areas;
- Budget allocations for health are insufficient; and
- Policy is still decentralized to district governments.²⁹⁸

Training for Health Professionals

Training for health professionals in Indonesia varies based on level of care provided. Doctors enter medical school after graduating from high school. Training of the doctor is comprised of three and a half years of undergraduate studies and two years of professional training. Approximately 10,000 new doctors graduate annually. Nurses fall into two categories, vocational/midwives and registered nurses. Vocational nurses and midwives complete three years of post-high school training. Registered nurses complete four years of undergraduate studies and one year of professional training. Roughly 34,000 new nurses graduate annually combined from the different categories.²⁹⁹ There are many community health workers, however their statistics are not tracked on their total numbers and no nationwide education standards exist.³⁰⁰

Indonesia's government plans to increase the doctor to general population ration to 1:1,000 by 2019 from its current level of .5:1,000.³⁰¹ The mechanism to achieve this is not immediately clear. In many cases, the gap between current and ideal numbers of health providers could be filled by new nurses and midwives. The dual public-private system which health professionals commonly work in both sectors at once may also alleviate the shortage as medical professionals have an incentive to maximize patient loads.

However, Indonesia's health workforce has other challenges it must overcome. A 2010 World Bank study found that "improvements in quality—measured as ability to diagnose and treat—were marginal, and overall quality remains low, with health workers only responding correctly to about half of the standard questions and procedures in the diagnostic vignettes presented in the most recent Indonesia Family Life Survey (IFLS)."³⁰² The perceived quality deficit could greatly impact the health system as the country transitions towards a long term NCD burden and more complicated disease management.

Health and Disaster

Many of the challenges that Indonesia faces in preparing its health system for disasters originate from decentralization. As discussed previously in this section, decentralization helped much of the Indonesian economy and government move forward in development, but caused the health sector to struggle. This is even more noticeable when disasters occur. Standards are not consistently applied and there are disparities in pre-existing health sector quality. During a disaster, these issues are magnified with difficulties in communication between responders and patient care quality suffers.

Indonesia's experience with the 2004 Indian Ocean earthquake and tsunami has shaped efforts to prepare their healthcare delivery system for future disasters. Prior to the tsunami, there was no specific nationwide healthcare emergency plan in place and any pre-organized response system or stockpiled supplies. The catastrophic nature of the tsunami created challenges in both the response and recovery phases of the disaster. Challenges included a large number of destroyed or otherwise unusable healthcare facilities and large number of fatalities that complicated mortuary management and reduced the health workforce.³⁰³

The country experienced its next health disaster in 2006 when a 6.3 M earthquake hit Yogyakarta where at least 5,749 people were killed, 38,568 were injured and as many as 600,000 people were displaced.³⁰⁴ While the 2004 tsunami presented health challenges related to mortuary management, health system recovery, and disease surveillance, the 2006 earthquake had a comparatively high injury to death ratio. This tested the healthcare delivery system's resiliency and ability to triage and care for tens of thousands of people at once. For example, hospitals in the affected area recorded 4,115 operations the day after the earthquake and 14,220 operations 2 days after the earthquake.³⁰⁵ Within 2 weeks of the earthquake, immunization, nutrition, and surveillance became the focus of the effort. The recovery effort began a month later and focused on restoring health services and mental health provision.³⁰⁶

A WHO assessment observed the following regarding the health system's response to the Yogyakarta earthquake:

- The response was government-led and well-coordinated;
- Public health needs were addressed according to the local context and resources;
- Guidelines from the tsunami were quickly mobilized and used in communicable disease surveillance and environmental health;
- The affected community was involved as a partner.³⁰⁷

The WHO also observed the following lessons learned from the tsunami which was applied in Yogyakarta:

- Preparedness and contingency planning included health facility preparation – the MoH was involved in planning and training and the health response command organization was led by the Minister of Health.
- Logistics and supply management included transportation, communication, and human resources in addition to the supplies themselves.
- The cluster system was used to coordinate with other sectors and facilitated intra-sector coordination from the national to the local level.
- Hospital needs were addressed promptly and specialists were mobilized from other districts.³⁰⁸

However, the WHO noted areas for improvement:

- Improving building standards for hospitals in earthquake prone areas;
- Screening of health professionals, supplies, and donor support;
- Mass casualty training for health professionals; and
- Specific standard operating procedures.³⁰⁹

Based on lessons learned from both the Aceh and Yogyakarta disasters, the Indonesian government worked with the World Health Organization (WHO) to improve health related responses to disasters. The results can be found in the document entitled Technical Guidelines for Health Crisis Response on Disaster prepared jointly by the Ministry of Health and the WHO. The guidelines provide practical instructions for management of the healthcare system in disaster and conform to international standards. The document includes sections on organizational management, information management, technical response guidelines, mortuary affairs, and monitoring and evaluation. Useful specifics include drug assistance request and provisioning processes, suggested medical team compositions, and expected medical needs resulting from different types of disasters.³¹⁰



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Conclusion



Conclusion

The CFE-DMHA Indonesia Country Handbook revealed a number of significant findings in the Indonesia 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 Indonesia and to identify Indonesia's strengths and vulnerabilities for future disaster responses and capability-building engagements.

Finding #1

Indonesia has a robust disaster management legal framework and ability to effectively respond to disasters employing the internal structure in coordination with support from the military.

The Government of Indonesia has established an extensive legal framework with laws, regulations and guidelines to institutionalize disaster management at all levels of government since 2007, and systemized the process to receive international assistance. The creation of the Disaster Management Law (24/2007), supporting regulations and guidelines on the national disaster management agency, disaster management, disaster financing, and process for international institutions and foreign non-government institutions to provide response (PP 8/2008, PP 21/2008, PP 22/2008, guideline 22/2010) developed a resilient government structure for disaster risk reduction. The Government has progressively advanced and achieved recognition

in 2010, becoming one of the first countries in the world to adopt a legal framework with components that defined the role of international actors in disaster management and response. The Indonesian Armed Forces fulfills a critical role in DM, is involved in the Rapid Response and Assistance force (INDRRA), and has been deployed for nearly every major disaster. The challenge for the government (as identified in the 2015 HFA report) lies in the financial resources and/or operational capacities. While the legal structure is present, the capabilities at the district/city levels need strengthening. Coordination between the stakeholders to address the commonly shared issues and taking action together is another area to confront.

Finding #2

The country's weak infrastructure creates vulnerabilities in a disaster event.

Statistics have shown earthquakes as the hazard causing the most fatalities. An independent assessment found building design, codes, and practices contributed to the death toll and damages in the 2009 earthquake. Studies conducted in 2012 indicate that the lessons learned or advances in earthquake hazard science have not been incorporated into maps used for building codes. To address this issue, projects are underway to update earthquake risk maps and contingency planning centers around medium to high impact earthquake scenarios. On a broader

scale, Indonesia's current overall infrastructure is ranked 72nd in the World Economic Forum's global ranking. However, recent efforts by the government to invest in infrastructure are a positive step in the right direction to help Indonesia better prepare for future disasters. According to BNPB, the country's national disaster management agency, the government is planning to invest 5 percent of GDP in 2015 on infrastructure which will in turn influence Indonesia's preparedness for future disasters.

Finding #3

Indonesia is susceptible to climate change impacts and is working to mitigate the effects expected to affect the economy and frequency of hazards

Indonesia is one of the largest emitters of greenhouse gases in the world and is expected to be extremely susceptible to the effects of climate change. The government is aggressively taking action in climate change mitigation and adaptation. The nation is working to reduce the carbon dioxide release caused by deforestation, forest fires, and peat land degradation through sustainable land management and renewable energy promotion. Meteorologists have already observed patterns of decreasing or increasing rainfall which could

lead to drought or flooding situations. The negative impact on crop production affects the agriculture sector which is still the mainstay of income of many Indonesians. The government is already researching alternative crop varieties in anticipation of the climate change effect. From a hazard perspective, increased flooding from the change and intensity of rainfall, or from the sea level rising exacerbates the flooding issue in Jakarta and other areas.



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Appendices

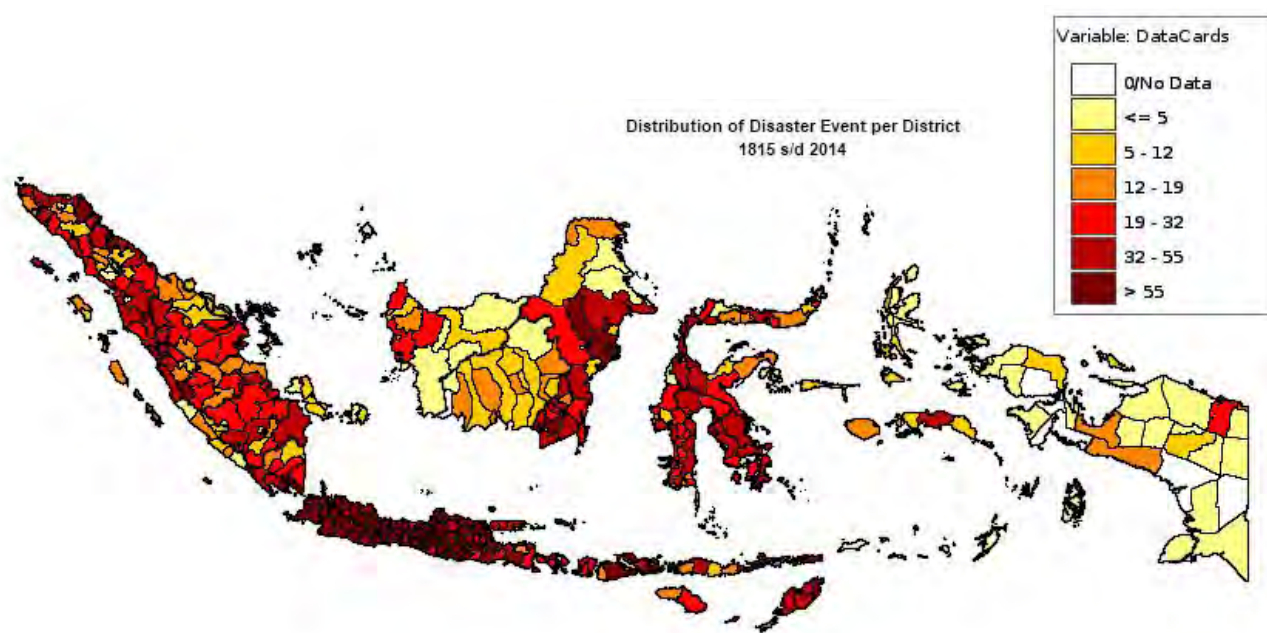
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Disaster Statistics

Statistical Disaster Information for Indonesia from 2006 to 2015

Disaster type	Occurrence	Deaths	Total affected	Total damage (USD \$ x 1,000)
Earthquake	25	7,316	6,733,140	\$6,316,850
Tsunami	3	1,333	47,502	\$55,000
Flood	68	1,991	2,885,311	\$4,557,033
Landslide	16	428	15,545	\$37,943
Storm	2	21	10,550	\$1,000
Volcanic activity	12	365	361,727	\$186,000
Wildfire	1	-	200	\$14,000
Epidemic	3	22	357	-
Total	130	11,476	10,054,332	\$11,167,826



Distribution of disasters by district between 1815 and 2014 (Source: BNPB)

Disaster Management Laws and Guidelines

Law of the Republic of Indonesia, Number 24 of 2007 Concerning Disaster Management

The Law of the Republic of Indonesia, Number 24 of 2007, Concerning Disaster Management (Law 24/2007) establishes the basis of the disaster management legal framework in the country.

Regulation Number 8 (2008) on National Disaster Management Agency

Presidential Regulation 8/2008 on National Disaster Management Agency founded the BNPB as a non-departmental government institution on a level equal to the national ministries.

Regulation Number 21 (2008) Concerning Disaster Management

Presidential Regulation 21/2008 focuses on disaster management and the related activities from a broad perspective.

Regulation Number 22 (2008) Disaster Aid Financing and Management

Presidential Regulation 22/2008 provides guidance on disaster management fund sources and fund use, disaster aid management, financing, supervision, reporting and accountability.

Regulation Number 23 (2008) on the Participation of International Institutions and Foreign Non-Government Institutions in Disaster Management

Presidential Regulation 23/2008 concentrates on the responsibilities of international institutions and foreign non-governmental organizations in disaster management and response.

Guideline Number 22 (2010) on the Role of International Organizations and Foreign Non-Government Institutions during Emergency Response

The National Agency for Disaster Management developed Guideline 22/2010 which specifically details the roles of the assisting international actors in disaster response.

National Long-Term Development Plan

The National Long-Term Development Plan (RPJPN 2005-2025) is developed in accordance with Article 4 of Law Number 25 Year 2004 on National Development Planning.

National Disaster Management Plan 2010-2014

The Government of Indonesia published the National Disaster Management Plan (Renas PB) 2010-2014 in 2012. The plan encompasses policies, strategies, program priorities and concentrates on disaster management and disaster risk reduction for the five year time period.

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

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

FY14

#	Date	Name	Sponsoring Agency	Location
1	19 Aug – 1 Sep 2014	GPOI Capstone 14	USPACOM J7	Indonesia
2	4 – 8 Aug 2014	USARPAC G2 – Indonesian Army G2 SMEE	USARPAC	Indonesia
3	23 – 27 Jun 2014	Gema Bhakti Exercise	CFE, MARFORPAC	Indonesia
4	1 – 30 Jun 2014	MTWS (Indonesia KORMAR)	MARFORPAC	Indonesia
5	22 – 25 Apr 2014	AHA Center Exercise Development Training	CFE	Indonesia
6	17 – 21 Mar 2014	Mentawai Megathrust DiREx	CFE	Indonesia

FY13

#	Date	Name	Sponsoring Agency	Location
1	24 – 31 Jul 2013	Indonesia Logistics SMEE	USARPAC	Indonesia
2	20 Jun 2013	AHA Center Training	CFE	Indonesia
3	17 – 28 Jun 2013	MTWS – 13 (Indonesia KORMAR)	MARFORPAC	Indonesia
4	10 -21 Jun 2013	Garuda Shield 2013	USARPAC	Indonesia
5	19 – 27 May 2013	CARAT IDN 2013 (GROUND)	MARFORPAC	Indonesia
6	22 – 27 Apr 2013	PAC ANGEL 13-2 Indonesia SMEE	PACAF	Indonesia
7	22 – 24 Apr 2013	Indonesia G2 SMEE	USARPAC	Indonesia
8	1 Apr – 30 Jun 2013	Indonesia G2 SMEE	USARPAC	Indonesia
9	11 – 12 Mar 2013	ARF ISM Disaster Relief Meeting	CFE	Indonesia
10	21 – 23 Jan 2013	AHA Center Assessment	CFE	Indonesia
11	5 – 9 Oct 2012	ID FST ESV/EXPED Demo Carita Bay	PACFLT	Indonesia

FY12

#	Date	Name	Sponsoring Agency	Location
1	3 – 14 Sep 2012	UN PKO Instructor's Course	USPACOM J7	Indonesia
2	3 – 14 Sep 2012	PKO Contingent Commanders Course ID	USPACOM J7	Indonesia
3	30 – 31 Aug 2012	Optimizing Collaborative Health Response	CFE	Indonesia
4	27 – 29 Aug 2012	Asia Pacific Multilat PI Planning Conference	CFE	Indonesia
5	20 Aug – 9 Sep 2012	Symposium on East Asia Security	USPACOM J9	Indonesia
6	16 – 19 Jul 2013	Indonesia Logistics SMEE	USARPAC	Indonesia
7	18 – 23 Jun 2012	TENDON VALIANT 12	USARPAC	Indonesia
8	11 – 23 Jun 2012	C-IED Training at Garuda Shield 2012	USARPAC	Indonesia
9	10 – 30 Jun 2012	Garuda Shield 12 Exercise	USARPAC	Indonesia
10	1 Jun – 31 Jul 2012	CARAT IDN – GROUND 2012	MARFORPAC	Indonesia
11	29 May – 7 Jun 2012	Indonesia SALVEX	PACFLT	Indonesia
12	21 – 24 May 2012	DREE 2012	USARPAC	Indonesia
13	8 – 17 May 2012	MTWS – 12 (Indonesia KORMAR)	MARFORPAC	Indonesia
14	6 – 11 May 2012	LVT7A1 Maintenance SMEE	MARFORPAC	Indonesia
15	23 Apr – 4 May 2012	UN Logistics Course – ID	USPACOM J7	Indonesia
16	23 Apr – 4 May 2012	UN Staff Officer's Course – ID	USPACOM J7	Indonesia
17	5 – 9 Dec 2011	IED SMEE	PACFLT	Indonesia
18	29 Nov – 2 Dec 2011	Indonesia G-2 OSINT SMEE	USARPAC	Indonesia
19	9 – 12 Oct 2011	PI SLS	CFE	Indonesia
20	11 Sep – 7 Oct 2011	(9) Flash Iron 11-3	SOCPAC	Indonesia

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FY11

#	Date	Name	Sponsoring Agency	Location
1	26 – 28 Sep 2011	Joint Planning Group	CFE	Indonesia
2	11 Sep – 7 Oct 2011	(9) Flash Iron 11-3	SOCPAC	Indonesia
3	24 – 31 Jul 2011	Indonesia Logistics SMEE	USARPAC	Indonesia
4	21 Jun – 8 Jul 2011	Teak Iron 11-1	SOCPAC	Indonesia
5	12 – 17 Jun 2011	Pacific Angel 11-3	PACAF	Indonesia
6	25 May – 1 Jun 2011	CARAT IDN – Ground	MARFORPAC	Indonesia
7	18 May – 27 Jul 2011	AVN MTT	SOCPAC	Indonesia
8	13 – 27 May 2011	MTWS – 11	MARFORPAC	Indonesia
9	13 – 27 May 2011	LVT7A1 Maintenance SMEE	MARFORPAC	Indonesia
10	4 – 5 May 2011	13 AF Jakarta Int Aerospace Med Symposium	PACAF	Indonesia
11	13 – 15 Apr 2011	KORMAR MFP G4 Log Staff Talks	MARFORPAC	Indonesia
12	11 – 22 Apr 2011	UN Staff Officer's Course – ID	USPACOM J7	Indonesia
13	11 – 22 Apr 2011	UN Logistics Course – ID	USPACOM J7	Indonesia
14	29 Mar – 2 Apr 2011	CPF Intel SMEE	PACFLT	Indonesia
15	14 – 19 Mar 2011	ASEAN Regional Forum DiREx	CFE	Indonesia
16	14 – 17 Feb 2011	National PI Planning Workshop	CFE	Indonesia
17	31 Jan – 28 Feb 2011	Flash Iron 11-2	SOCPAC	Indonesia
18	10 – 13 Jan 2011	Indonesia G2 SMEE	USARPAC	Indonesia
19	14 – 16 Dec 2010	Comprehensive Crisis Management	APCSS	Indonesia
20	8 Nov – 3 Dec 2010	Flash Iron 11-1	SOCPAC	Indonesia
21	18 Oct – 5 Nov 2010	VBal Iron 11-1	SOCPAC	Indonesia

FY10

#	Date	Name	Sponsoring Agency	Location
1	5 – 6 Aug 2010	77 Humanitarian Partnership Workshop	CFE	Indonesia
2	26 – 28 Jul 2010	Regional Health Sys Strength	CFE	Indonesia
3	7 Jul 2010	Mercy BSP Jakarta	PACFLT	Indonesia
4	19 – 28 Jun 2010	MAREX 10	MARFORPAC	Indonesia
5	13 – 27 Jun 2010	Garuda Shield 2010 Exercise	USARPAC	Indonesia
6	11 – 18 Jun 2010	HA/DR (Tendon Valiant)	USARPAC	Indonesia
7	3 – 22 Jun 2010	Peace Support Operations	USPACOM J7	Indonesia
8	31 May – 11 Sep 2010	HCA – Pacific Partnership	PACFLT	Indonesia
9	26 May – 2 Jun 2010	NEA 10	MARFORPAC	Indonesia
10	25 – 28 May 2010	Indonesia DREE	USARPAC	Indonesia
11	17 – 20 May 2010	CMO Subject Matter Expert Exchange	USARPAC	Indonesia
12	4 – 6 May 2010	APMMC Veterinary Public Health Workshop	USPACOM J07	Indonesia
13	3 – 7 May 2010	44 Asia Pacific Military Medicine Conference	CFE	Indonesia
14	19 – 23 Apr 2010	40 Multinational Communications	CFE	Indonesia
15	19 – 23 Apr 2010	Garuda Shield IO SMEE	USARPAC	Indonesia
16	19 – 30 Apr 2010	PSO Train the Trainer	USPACOM J7	Indonesia
17	15 – 30 Apr 2010	MTWS – 10	MARFORPAC	Indonesia
18	29 Mar – 2 Apr 2010	CPF Intel SMEE	PACFLT	Indonesia
19	25 Jan – 5 Feb 2010	Flash Iron 10-3	SOCPAC	Indonesia
20	1 Jan – 31 Mar 2010	Indonesia-US Maritime HA/DR TTX II	PACFLT	Indonesia
21	16 Nov – 11 Dec 2009	Flash Iron 10-1	SOCPAC	Indonesia
22	9 – 13 Nov 2009	Indonesia-US Maritime HA/DR TTX	PACFLT	Indonesia
23	19 – 23 Oct 2009	USAR and TNI Information Operations SMEE	USARPAC	Indonesia
24	1 – 17 Oct 2009	Disaster Relief Operations	PACFLT	Indonesia
25	1 – 30 Oct 2009	HA Relief Operations	MARFORPAC	Indonesia
26	28 Sep – 8 Oct 2009	Teak Iron 09-1	SOCPAC	Indonesia
27	28 Sep – 25 Oct 2009	IIP-MARX 09	MARFORPAC	Indonesia
28	26 Sep – 4 Oct 2009	Indonesia Aviation Maintenance SMEE	USARPAC	Indonesia

Disaster Management Partners in Indonesia






The following contact list is included with the intent to provide planners and deploying personnel initial contacts for disaster management-related organizations in Indonesia. 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
Adventist Development and Relief Agency	Country Office	info@adraindonesia.org	62 21 83703185	ADRA concentrates its efforts in community-based development activities and disaster preparedness, while also cooperating with other governmental and non-governmental agencies and organizations in fulfilling this goal. Areas of concentration include building civil society, economic development, food security, health, education; and disaster response and management. Disaster preparedness activities include earthquake and tsunami awareness and preparedness, especially with early warning systems. ³¹¹	
Asia Development Bank	Resident Mission		62 21 2512721	Since 1987, the ADB has been critical to attaining and sustaining socioeconomic development. Assistance covers many sectors but focuses on policy dialogues, developing economic data, and coordinating aid. ³¹²	
Australia-Indonesia Facility for Disaster Reduction	Bilateral organization	info@aifdr.gov.au	62 21 39830088	Through the Australia–Indonesia Facility for Disaster Reduction (AIFDR), Australia provides international best practice disaster science with Australia’s robust disaster preparedness systems and experience in community-based disaster risk management. In partnership with Indonesia’s National Disaster Management Agency (BNPB), this has produced world-class technological tools for disaster managers, helped to develop national policy and DRM systems, and supported innovative programs for safer communities. ³¹³	

Organization	Office	Email	Phone	Description	Logo
CARE Indonesia	Country Office	info@careindonesia.or.id		CARE has been operating in Indonesia since 1967, initially working in food distribution, small infrastructure projects, health, environment, and water and sanitation. In the wake of a series of shocks in the late 1990s that included the 1997 financial crisis and widespread drought, CARE Indonesia redirected its focus towards emergency programming. ³¹⁴	
Food and Agriculture Organization	Representative Office	FAO-ID@fao.org	62 29 802300	Indonesia became a member of FAO in 1948 and established the FAO Representation in 1979. By now, over 650 programs and projects have been implemented by FAO throughout Indonesia with the assistance of more than 1600 experts and consultants (national and international). ³¹⁵	
German Development Cooperation	Country Office	giz-indonesien@giz.de		On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), GIZ has been working in Indonesia since 1975 and opened its office in Jakarta the same year. GIZ concentrates on energy and climate change, inclusive growth, and good governance and global networks. ³¹⁶	
International Federation of Red Cross and Red Crescent Societies	Indonesia Red Cross Society (Palang Merah Indonesia)	pmi@pmi.or.id	62 21 7992325	The Indonesia Red Cross provides six major services: Blood Services, Disaster Management Services, Safety Services, Health Services, Social Services, Red Cross Youth and Volunteer Services. There are 7 branch offices throughout the country. ³¹⁷	
International Labour Organization	Country Office for Indonesia and Timor-Leste	JAKARTA@ilo.org	62 21 3913112	The ILO Country Office for Indonesia (CO-Jakarta) is responsible for the ILO's programs and activities in Indonesia and Timor-Leste. Labor and employment issues are at the top of the development agenda in both countries, calling for substantive ILO support. ³¹⁸	
International Monetary Fund	Resident Representative	RR-IDN@imf.org	62 21 2311884	The IMF maintains a country office in Indonesia, but has no current loans. Instead, the organization provides consultation. ³¹⁹	

Organization	Office	Email	Phone	Description	Logo
Save the Children	Country Office	Indonesia@savethechildren.org	62 21 7812336	Save the Children has worked in Indonesia since 1976 and quickly delivers humanitarian relief after the nation's disasters. Their work is focused on: education, child protection, child rights governance, health and nutrition, livelihoods and food security. Save the Children has 14 satellite offices in Indonesia. ³²⁶	
United Nations Children's Fund	Country Office	jakarta@unicef.org	62 21 2996 8000	In Indonesia, UNICEF looks back at a history of more than 50 years of partnering with government and other institutions, reaching millions of children with development and humanitarian assistance. In response to the country's increasing capacities and economic growth, the areas of collaboration have gradually shifted from service delivery at community level towards more strategic policy engagement with government partners, both at national and sub-national level. ³²⁷	
United Nations Development Programme	Country Office	communications.id@undp.org	62 21 29802300	UNDP works to support Indonesia's fight against poverty, promote inclusive economic growth, reduce inequalities between groups and regions, and help achieve the eight Millennium Development Goals by 2015 across the country. ³²⁸	
United Nations Office for Disaster Risk Reduction			66 022882894	No country office exists, covered by the UNISDR Asia and Pacific office in Bangkok.	
United Nations Population Fund	Country Office	Indonesia@unfpa.org	62 21 2980 2300	UNFPA began its partnership with Indonesia in 1972 to deliver strengthened family planning services, demographic research, and population education programs at schools. Today, UNFPA is one of Indonesia's most important partners in addressing reproductive health, gender and population issues. ³²⁹	

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Organization	Office	Email	Phone	Description	Logo
United States Agency for International Development	Country Mission	jiinfo@usaid.gov	62 21 3435 9000	USAID works with the Indonesian government, local leaders, academia, the private sector, civil society and development partners to help Indonesia realize its national development goals and emerge as a stronger partner in addressing fundamental global challenges. The close bilateral relationship is reflected in the U.S.-Indonesia Comprehensive Partnership signed in 2010 to deepen ties between the two nations. ³³⁰	
The World Bank	Country Office	wbindonesia@worldbank.org	62 21 52993000	The partnership between Indonesia and the World Bank Group has evolved over six decades to become one of our most significant in terms of lending, knowledge services and implementation support. Since 2004, World Bank support for Indonesia has moved towards supporting a country-led and owned policy agenda, consistent with Indonesia's emerging status as a middle-income country. ³³¹	
World Food Programme	Country Office	WFP.Indonesia@wfp.org	62 21 5709001	Under the 2012-2015 Country Programme, WFP plays a catalytic role of support for the Government of Indonesia in achieving food and nutrition security for all and to build the foundations for Indonesia to become one of our global champions in defeating hunger and under nutrition. There are 2 satellite offices in country. ³³²	
World Health Organization	Country Representative	whoindonesia@searo.who.int	62 21 5204349	WHO and the Indonesian government have been working together to improve the health of people. The Country Cooperation Strategy provides an in-depth analysis of the key challenges and key strengths, and takes into account the objectives of the MOH while detailing how WHO will support the national health development strategies. ³³³	
World Vision	Country Office	Comms_indonesia@wvi.org	62 21 31927467	World Vision provides emergency assistance to children and families affected by natural disasters and civil conflicts, work with communities to develop long-term solutions to alleviate poverty and advocates for justice on behalf of the poor. ³³⁴	

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 Indonesia and with two blank pages. Visitors from the United States are eligible for visitor (tourist) visas on arrival. Holders of a regular passport who are traveling for tourism, business or social purposes may apply for a 30-day visitor Visa-on-Arrival at airports in Jakarta, Bali, Surabaya, Banda Aceh, Medan, Padang, Pekanbaru, Manado, Biak, Ambon, Balikpapan, Pontianak, Kupang, Batam, and South Sumatra.. Visas on arrival cost USD \$35. The Indonesian Embassy website indicates that Visa-on-Arrival is not available to government travelers who want to enter Indonesia on a diplomatic or official passport for an official purpose or mission. For the most up-to-date visa information, visit <http://www.embassyofindonesia.org/wordpress/>

Emergency Contact Information

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

Jl. Medan Merdeka Selatan No. 3 - 5
Jakarta 10110, Indonesia

Telephone: +(62)(21) 3435-9000
Emergency After-Hours Telephone: +(62)(21) 385-7189
Fax: +(62)(21) 386-2259

E-Mail address: jakconsul@state.gov

Currency Information

The currency in Indonesia is the Rupiah. Money exchange counter and ATM machines are located past the immigration counter in the airport. ATMs are located within or near hotels and at the U.S. Embassy.

Additional Information

- Before visiting Indonesia, the CDC advises travelers obtain the following vaccinations:
 - Hepatitis A
 - Typhoid fever
 - Hepatitis B
 - Japanese encephalitis
 - Rabies
 - Malaria prophylaxis
- Indonesia Calling Code: +62 (21) (Jakarta)
- Indonesia Time Zones: UTC/GMT +7-9 hours

Indonesia Characteristics

Country Name: Republic of Indonesia

Conventional short form: Indonesia

Language: Bahasa, English

Geography: 17,000 islands spread over 3,400 miles along the Equator. The main islands are Java, Sumatra, Bali, Kalimantan (Borneo), Sulawesi (Celebes), Papua, Halmahera, and Seram. The capital city of Jakarta is located on the north coast of western Java, the most populated island. The country has approximately 246 million people representing more than 300 ethnic groups.

Indonesia's geographic location is on the "Ring of Fire," an arc of volcanoes and fault lines encircling the Pacific Basin. As well as its topography make the country prone to natural disasters, especially seismic upheaval. Indonesia is a developing country with a growing economy and many infrastructural shortcomings, especially in rural areas.

People: There are more than 240 million people living in Indonesia. The ethnic groups comprising the Indonesian population are Javanese 40.1%, Sundanese 15.5%, Malay 3.7%, Batak 3.6%, Madurese 3%, Betawi 2.9%, Minangkabau 2.7%, Buginese 2.7%, Bantenese 2%, Banjarese 1.7%, Balinese 1.7%, Acehnese 1.4%, Dayak 1.4%, Sasak 1.3%, Chinese 1.2%, other 15% (2010 est.). Indonesia is a primarily Muslim country.

Military Branches: Indonesian Armed Forces (Tentara Nasional Indonesia, TNI): Army (TNI-Angkatan Darat (TNI-AD)), Navy (TNI-Angkatan Laut (TNI-AL); includes Marines (Korps Marinir, KorMar), naval air arm), Air Force (TNI-Angkatan Udara (TNI-AU)), National Air Defense Command (Kommando Pertahanan Udara Nasional (Kohanudnas)) (2013)

Risks and vulnerabilities

- Extremists may target both official and private establishments, including hotels, nightclubs, shopping areas, and restaurants. Whether at work, pursuing daily activities, or traveling, you should be vigilant and prudent at all times. Monitor local news reports, vary your routes and times, and maintain a low profile. Be sure to consider the security and safety preparedness of venues that you frequent.
- Demonstrations are common throughout Indonesia. Common areas for protest activity in Jakarta include both the Hotel Indonesia traffic circle and the U.S. Embassy. While these demonstrations are usually peaceful and police presence is normally sufficient to maintain order, demonstrations have occasionally become large and violent, particularly when involving issues related to religion.

Health Information

Medicines/Items:

- Have enough of 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
AIFDR	Australia-Indonesia Facility For Disaster Reduction
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BIN	National Intelligence Agency
BMKG	Meteorology, Climatology and Geophysical Agency
BMZ	Economic Cooperation and Development
BNPB	Bedan Nasional Penanggulangan Bencana
BPBD	Regional Disaster Management Agencies
BPOM	Drug and Food Control Agency
BSL	Bio Safety Level
BSN	National Standardization Agency
CCA	Common Country Assessment
CCS	Country Collaboration Strategy
CPI	Corruption Perception Index
DGCA	Directorate General of Civil Aviation
DIMS	Disaster Information Management System
DPR	Dewan Perwakilan Rakyat
DRM	Disaster Risk Management
EAS	East Asia Summit
EERI	Earthquake Engineering Research Institute
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization
FDRS	Fire Danger Rating System
GDP	Gross Domestic Product
GFDRR	Global Fund For Disaster Risk Reduction
GHG	Greenhouse Gasses
GITEWS	German-Indonesian Tsunami Early Warning System
HCT	Humanitarian Country Teams
HDI	Human Development Index
HFA	Hyogo Framework For Action
HRH	Human Resources For Health
IC	Incident Commander
ICG	Intergovernmental Coordination Group

Acronym	Definition
ICITAP	International Criminal Investigative Training Assistance Program
ICS	Incident Command System
IDP	Internally Displaced People
IDP	International Driving Permit
IDR	Indonesian Rupiah
IDRL	International Disaster Response Law
IFLS	Indonesia Family Life Survey
IFRC	International Federation of Red Cross and Red Crescent Societies
IMDFF-DR	Indonesia Multi-Donor Fund Facility For Disaster Recovery
INDRRA	Indonesia Rapid Response and Assistance
IOC-UNESCO	Intergovernmental Oceanographic Commission of United Nations Educational, Scientific and Cultural Organization
IOTWOS	Indian Ocean Tsunami Warning and Mitigation System
IOTWS	Indian Ocean Tsunami Warning System
JE	Japanese Encephalitis
JICA	Japanese International Cooperation Agency
KCJ	KAI Commuter Jabodetabek
KOMINFO	Indonesia's Ministry of Communication and Information
LAPAN	National Institute of Aeronautics and Space
MOOTW	Military Operations Other Than War
NTB	Nusa Tenggara Barat
NTD	Neglected Tropical Diseases
PAT	PACOM Augmentation Team
PIBT	Declaration For Home Use
PLN	Perusahaan Listrik Negara
POLR	the Republic of Indonesia
PP	Peraturan Pemerintah
PPP	Purchasing Power Parity
PU	Public Works
RENAKSI	Implementation of Indonesia's Rehabilitation and Reconstruction Action Plans
RPJMN	National Medium Term Development Plan
RRI	Republik of Indonesia
RTWP	Regional Tsunami Watch Provider
SASOP	Disaster Relief and Emergency Response Operations
SEA	Southeast Asian
SIKUBAH	the Ministry of Finance Grant Accounting System

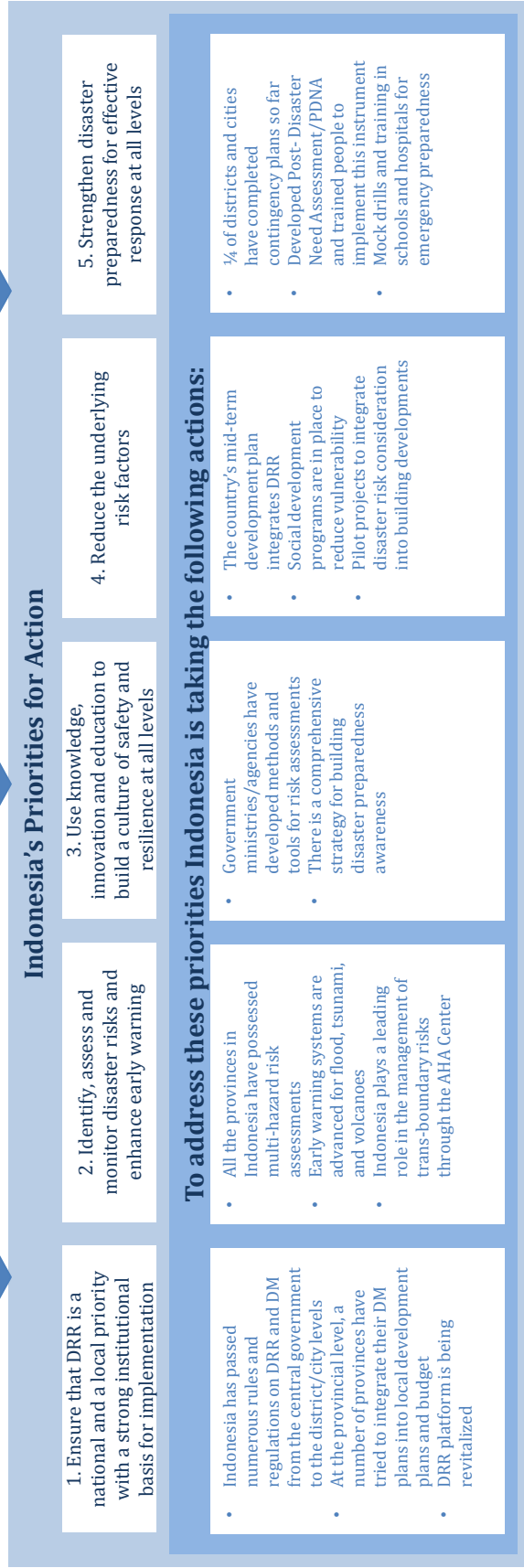
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Acronym	Definition
SNI	Indonesian National Standards
SOE	State Owned Enterprise
TB	Tuberculosis
TIP	Trafficking In Persons
TNI	Indonesian National Military
TNI-AD	Tentara Nasional Indonesia-Angkatan Darat
TNI-AL	Tentara Nasional Indonesia-Angkatan Laut
TNI-AU	Tentara Nasional Indonesia-Angkatan Udara
TTX	Table Top Exercise
TVRI	Televisi Republik Indonesia
UHC	Universal Health Care
UHS	Universal Health Service
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner For Refugees
UNOCHA	United Nations Office for the Coordination of Humanitarian Assistance
USG	United States Government
WEF	World Economic Forum
WFP	World Food Programme
WHO	World Health Organization
WMO	World Meteorological Organization
WTO	World Trade 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 2013-2015 results of the HFA for Indonesia. The full report is available at http://www.preventionweb.net/files/41507_IDN_NationalHFAProgress_2013-15.pdf.

Indonesia Summary of the Hyogo Framework for Action (2013-2015): Building the Resilience of Nations and Communities to Disasters (Hyogo Framework)



Indonesia's lessons learned in implementing the HFA:

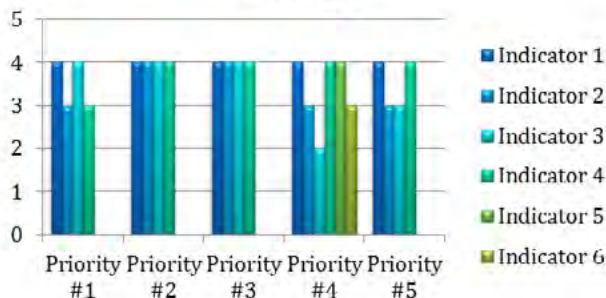
Disaster risk reduction must be integrated at all levels of government; Synchronization between stakeholders is key to achieving desired results; Capacity development at the local level will have the greatest DRR dividends

Summarization of Indonesia’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 2013-2015 interim results of the HFA for Indonesia. The full report is available at http://www.preventionweb.net/files/41507_IDN_NationalHFAprogress_2013-15.pdf.

Overall, the level of HFA progress reported for Indonesia exceeded regional averages for the Asia-Pacific. Indonesia scored substantially higher than the average score in early warning systems, risk assessment, DRR policy, and education and information. Indonesia equaled the average regional score for reducing underlying risk factors and preparedness for effective response.

Level of Progress* Achieved for HFA Priorities



Future Outlook Area 1: Integration of disaster risk considerations into sustainable development policies, planning and programming at all levels.

Challenges:	Challenges abound with the lack of synchronization between DM regulations and rules that regulate other sectors. Rules and policies that regulate investment and economic development often outweigh those regulating DRR. Disharmony also exists between regulation and policies made at different levels of government.
Future Outlook Priorities:	With the formulation of the new middle-term development plan 2015-2019 the Government of Indonesia will implement DRR programs that are relatively integrated into the sectors. It is expected that the local governments, particularly district/city governments will be also incorporated DRR and environmental concerns into local development plans.

Future Outlook Area 2: Development and strengthening of institutions, mechanisms, and capacities at all levels to build resilience to hazards.

Challenges:	Resiliency efforts are challenged by the scale of villages that are located in hazard prone areas and the lack of coordination between ministries. Hence, it will be difficult to assess the effectiveness of resilience building programs implemented by different government institutions all over the country.
Future Outlook Priorities:	The newly elected government has strongly maintained that they will focus the national development at the village level. Greater budget has been allocated to villages, and it is expected that DRR will become one of the priority programs.

Future Outlook Area 3: Incorporation of risk reduction approaches in the preparedness, response, and recovery programs during the reconstruction of affected communities.

Challenges:	Challenges include a lack of capacity and technical know-how of responsible agencies. Also, the capacity of human resources needs to be enhanced particularly in incorporating risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programs.
Future Outlook Priorities:	In the future BNPB will need to provide strengthened technical and financial support to BPBDs to formulate contingency plans and engage in risk-sensitive post-disaster rehabilitation and reconstruction.

Indonesia National Progress Report on the Implementation of Hyogo Framework for Action (2013-2015) - Interim

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 2013-2015 results of the HFA for Indonesia:

Priority for Action #1: Making disaster risk reduction a policy priority, institutional strengthening			
<i>Core Indicator</i>	<i>Indicator Description</i>	<i>Level of Progress Achieved*</i>	<i>Regional Average Score</i>
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.	3	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.	4	3.14
2	Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.	4	3.07
3	Early warning systems are in place for all major hazards, with outreach to communities.	4	3.29
4	National and local risk assessments take account of regional / trans-boundary risks, with a view to regional cooperation on risk reduction.	4	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.	4	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.	4	3.0
6	Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.	3	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.	3	3.42
3	Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.	3	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.³³⁵

Introduction: Indonesia

Background:

The Dutch began to colonize Indonesia in the early 17th century; Japan occupied the islands from 1942 to 1945. Indonesia declared its independence shortly before Japan's surrender, but it required four years of sometimes brutal fighting, intermittent negotiations, and UN mediation before the Netherlands agreed to transfer sovereignty in 1949. A period of sometimes unruly parliamentary democracy ended in 1957 when President SOEKARNO declared martial law and instituted "Guided Democracy." After an abortive coup in 1965 by alleged communist sympathizers, SOEKARNO was gradually eased from power. From 1967 until 1988, President SUHARTO ruled Indonesia with his "New Order" government. After rioting toppled Suharto in 1998, free and fair legislative elections took place in 1999. Indonesia is now the world's third most populous democracy, the world's largest archipelagic state, and the world's largest Muslim-majority nation. Current issues include: alleviating poverty, improving education, preventing terrorism, consolidating democracy after four decades of authoritarianism, implementing economic and financial reforms, stemming corruption, reforming the criminal justice system, holding the military and police accountable for human rights violations, addressing climate change, and controlling infectious diseases, particularly those of global and regional importance. In 2005, Indonesia reached a historic peace agreement with armed separatists in Aceh, which led to democratic elections in Aceh in December 2006. Indonesia continues to face low intensity armed resistance in Papua by the separatist Free Papua Movement.

Geography: Indonesia

Location:

Southeastern Asia, archipelago between the Indian Ocean and the Pacific Ocean

Geographic coordinates:

5 00 S, 120 00 E

Map references:

Southeast Asia

Area:

Total: 1,904,569 sq km
Country comparison to the world: 15
Land: 1,811,569 sq km
Water: 93,000 sq km

Land boundaries:

Total: 2,958 km
Border countries: Timor-Leste 253 km, Malaysia 1,881 km, Papua New Guinea 824 km

Coastline:

54,716 km

Maritime claims:

Territorial sea: 12 nm
Exclusive economic zone: 200 nm

Climate:

Tropical; hot, humid; more moderate in highlands

Terrain:

Mostly coastal lowlands; larger islands have interior mountains

Elevation extremes:

Lowest point: Indian Ocean 0 m
Highest point: Puncak Jaya 4,884 m

Natural resources:

Petroleum, tin, natural gas, nickel, timber, bauxite, copper, fertile soils, coal, gold, silver

Land use:

Arable land: 12.34%
Permanent crops: 10.5%
Other: 77.16% (2011)

Irrigated land:

67,220 sq km (2005)

Total renewable water resources:

2,019 cu km (2011)

Freshwater withdrawal (domestic/ industrial/agricultural):

Total: 113.3 cu km/yr (11%/19%/71%)
Per capita: 517.3 cu m/yr (2005)

Natural hazards:

Occasional floods; severe droughts; tsunamis; earthquakes; volcanoes; forest fires

Volcanism: Indonesia contains the most volcanoes of any country in the world - some 76 are historically active; significant volcanic activity occurs on Java, Sumatra, the Sunda Islands, Halmahera Island, Sulawesi Island, Sangihe Island, and in the Banda Sea; Merapi (elev. 2,968 m), Indonesia's most active volcano and in eruption since 2010, has been deemed a Decade Volcano by the International Association of Volcanology and Chemistry of the Earth's Interior, worthy of study due to its explosive history and close proximity to human populations; other notable historically active volcanoes include Agung, Awu, Karangetang, Krakatau (Krakatoa), Makian, Raung, and Tambora

Environment - current issues:

Deforestation; water pollution from industrial wastes, sewage; air pollution in urban areas; smoke and haze from forest fires

Environment - international agreements:

Party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Law of the Sea, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands

Geography - note:

Archipelago of 17,508 islands, some 6,000 of which are inhabited (Indonesia is the world's largest country comprised solely of islands); straddles equator; strategic location astride or along major sea lanes from Indian Ocean to Pacific Ocean

People and Society: Indonesia

Nationality:

Noun: Indonesian(s)
Adjective: Indonesian

Ethnic groups:

Javanese 40.1%, Sundanese 15.5%, Malay 3.7%, Batak 3.6%, Madurese 3%, Betawi 2.9%, Minangkabau 2.7%, Buginese 2.7%, Bantenese 2%, Banjarese 1.7%, Balinese 1.7%, Acehese 1.4%, Dayak 1.4%, Sasak 1.3%, Chinese 1.2%, other 15% (2010 est.)

Languages:

Bahasa Indonesia (official, modified form of Malay), English, Dutch, local dialects (of which the most widely spoken is Javanese)

Note: more than 700 languages are used in Indonesia

Religions:

Muslim 87.2%, Christian 7%, Roman Catholic 2.9%, Hindu 1.7%, other 0.9% (includes Buddhist and Confucian), unspecified 0.4% (2010 est.)

Population:

253,609,643 (July 2014 est.)

Country comparison to the world: 5

Age structure:

0-14 years:
26.2% (male 33,854,520/female 32,648,568)

15-24 years:
17.1% (male 22,067,716/female 21,291,548)

25-54 years:
42.3% (male 54,500,650/female 52,723,359)

55-64 years:
7.9% (male 9,257,637/female 10,780,724)

65 years and over:
6.4% (male 7,176,865/female 9,308,056) (2014 est.)

Dependency ratios:

Total dependency ratio: 51 %
Youth dependency ratio: 43 %
Elderly dependency ratio: 8 %
Potential support ratio: 12.5 (2014 est.)

Median age:

Total: 29.2 years
Male: 28.7 years
Female: 29.8 years (2014 est.)

Population growth rate:

0.95% (2014 est.)
Country comparison to the world: 124

Birth rate:

17.04 births/1,000 population (2014 est.)
Country comparison to the world: 108

Death rate:

6.34 deaths/1,000 population (2014 est.)
Country comparison to the world: 156

Net migration rate:

-1.18 migrant(s)/1,000 population (2014 est.)
Country comparison to the world: 154

Urbanization:

Urban population: 50.7% of total population (2011)
Rate of urbanization: 2.45% annual rate of change (2010-15 est.)

Major urban areas - population:

JAKARTA (capital) 9.769 million; Surabaya 2.787 million; Bandung 2.429 million; Medan 2.118 million; Semarang 1.573 million; Palembang 1.455 million (2011)

Sex ratio:

At birth: 1.05 male(s)/female
0-14 years: 1.04 male(s)/female
15-24 years: 1.04 male(s)/female
25-54 years: 1.03 male(s)/female
55-64 years: 1 male(s)/female
65 years and over: 0.78 male(s)/female
Total population: 1 male(s)/female (2014 est.)

Maternal mortality rate:

220 deaths/100,000 live births (2010)
Country comparison to the world: 52

Infant mortality rate:

Total: 25.16 deaths/1,000 live births
Country comparison to the world: 71
Male: 29.45 deaths/1,000 live births
Female: 20.66 deaths/1,000 live births (2014 est.)

Life expectancy at birth:

Total population: 72.17 years
Country comparison to the world: 137
Male: 69.59 years
Female: 74.88 years (2014 est.)

Total fertility rate:

2.18 children born/woman (2014 est.)
Country comparison to the world: 102

Contraceptive prevalence rate:

61.9% (2012)

Health expenditures:

2.7% of GDP (2011)
Country comparison to the world: 181

Physicians density:

0.2 physicians/1,000 population (2012)

Hospital bed density:

0.6 beds/1,000 population (2010)

Drinking water source:

Improved:

Urban: 93% of population

Rural: 76.4% of population

Total: 84.9% of population

Unimproved:

Urban: 7% of population

Rural: 23.6% of population

Total: 15.1% of population (2012 est.)

Sanitation facility access:

Improved:

Urban: 71.4% of population

Rural: 45.5% of population

Total: 58.8% of population

Unimproved:

Urban: 28.6% of population

Rural: 54.5% of population

Total: 41.2% of population (2012 est.)

HIV/AIDS - adult prevalence rate:

0.4% (2012 est.)

Country comparison to the world: 74

HIV/AIDS - people living with HIV/AIDS:

605,500 (2012 est.)

Country comparison to the world: 15

HIV/AIDS - deaths:

26,800 (2012 est.)

Country comparison to the world: 15

Major infectious diseases:

Degree of risk: very high

Food or waterborne diseases: bacterial diarrhea, hepatitis a, and typhoid fever

Vectorborne diseases: dengue fever and malaria

Note: highly pathogenic H5N1 avian influenza has been identified in this country; it poses a negligible risk with extremely rare cases possible among US citizens who have close contact with birds (2013)

Obesity - adult prevalence rate:

4.8% (2008)

Country comparison to the world: 160

Children under the age of 5 years underweight:

18.6% (2010)

Country comparison to the world: 36

Education expenditures:

2.8% of GDP (2011)

Country comparison to the world: 143

Literacy:

Definition: age 15 and over can read and write

Total population: 92.8%

Male: 95.6%

Female: 90.1% (2011 est.)

School life expectancy (primary to tertiary education):

Total: 13 years

Male: 13 years

Female: 13 years (2011)

Child labor - children ages 5-14:

Total number: 4,026,285

Percentage: 7 %

Note: data represents children ages 5-17 (2009 est.)

Unemployment, youth ages 15-24:

Total: 22.2%

Country comparison to the world: 52

Male: 21.6%

Female: 23% (2009)

Government: Indonesia

Country name:

Conventional long form: Republic of Indonesia
Conventional short form: Indonesia
Local long form: Republik Indonesia
Local short form: Indonesia
Former: Netherlands East Indies, Dutch East Indies

Government type:

Republic

Capital:

Name: Jakarta
Geographic coordinates: 6 10 S, 106 49 E
Time difference: UTC+7 (12 hours ahead of Washington, DC, during Standard Time)
Note: Indonesia has three time zones

Administrative divisions:

31 provinces (provinsi-provinsi, singular - provinsi), 1 autonomous province*, 1 special region** (daerah-daerah istimewa, singular - daerah istimewa), and 1 national capital district*** (daerah khusus ibukota); Aceh*, Bali, Banten, Bengkulu, Gorontalo, Jakarta Raya***, Jambi, Jawa Barat (West Java), Jawa Tengah (Central Java), Jawa Timur (East Java), Kalimantan Barat (West Kalimantan), Kalimantan Selatan (South Kalimantan), Kalimantan Utara (North Kalimantan), Kalimantan Tengah (Central Kalimantan), Kalimantan Timur (East Kalimantan), Kepulauan Bangka Belitung (Bangka Belitung Islands), Kepulauan Riau (Riau Islands), Lampung, Maluku, Maluku Utara (North Maluku), Nusa Tenggara Barat (West Nusa Tenggara), Nusa Tenggara Timur (East Nusa Tenggara), Papua, Papua Barat (West Papua), Riau, Sulawesi Barat (West Sulawesi), Sulawesi Selatan (South Sulawesi), Sulawesi Tengah (Central Sulawesi), Sulawesi Tenggara (Southeast Sulawesi), Sulawesi Utara (North Sulawesi), Sumatera Barat (West Sumatra), Sumatera Selatan (South Sumatra), Sumatera Utara (North Sumatra), Yogyakarta**

Note: following the implementation of decentralization beginning on 1 January 2001, regencies and municipalities have become the key administrative units responsible for providing most government services

Independence:

17 August 1945 (declared)

National holiday(S):

Month	Holiday(s)
January	New Year's Day, Birth of the Prophet
February	Chinese New Year
March	Day of Silence
April	Good Friday
May	Labor Day, Ascension day, Ascension of the Prophet
June	Buddha's Birthday
July	Lebaran
August	Lebaran, Independence Day
September	Feast of the Sacrifice
October	Idul Adha, Islamic New Year
November	None
December	Christmas

Constitution:

Drafted July to August 1945, effective 17 August 1945, abrogated by 1949 and 1950 constitutions, 1945 constitution restored 5 July 1959; amended several times, last in 2002 (2013)

Legal system:

Civil law system based on the Roman-Dutch model and influenced by customary law

International law organization participation:

Has not submitted an ICJ jurisdiction declaration; non-party state to the ICCT

Suffrage:

17 years of age; universal and married persons regardless of age

Executive branch:

Chief of state: President Susilo Bambang YUDHOYONO (since 20 October 2004); Vice President BOEDIONO (since 20 October 2009); note - the president is both chief of state and head of government

Head of government: President Susilo Bambang YUDHOYONO (since 20 October 2004); Vice President BOEDIONO (since 20 October 2009)

Cabinet: Cabinet appointed by the president

Elections: president and vice president elected for five-year terms (eligible for a second term) by direct vote; presidential election last held on 8 July 2009 (next to be held in 2014)

Election results: Susilo Bambang YUDHOYONO elected president; percent of vote - Susilo Bambang YUDHOYONO 60.8%, MEGAWATI Sukarnoputri 26.8%, Jusuf KALLA 12.4%

Legislative branch:

People's Consultative Assembly (Majelis Permusyawaratan Rakyat or MPR) is the upper house; it consists of members of the DPR and DPD and has role in inaugurating and impeaching the president and in amending the constitution but does not formulate national policy; House of Representatives or Dewan Perwakilan Rakyat (DPR) (560 seats, members elected to serve five-year terms), formulates and passes legislation at the national level; House of Regional Representatives (Dewan Perwakilan Daerah or DPD), constitutionally mandated role includes providing legislative input to DPR on issues affecting regions (132 members, four from each of Indonesia's original 30 provinces, two special regions, and one special capital city district)

Elections: last held on 9 April 2009 (next to be held in 2014)

Election results: percent of vote by party - PD 20.9%, GOLKAR 14.5%, PDI-P 14.0%, PKS 7.9%, PAN 6.0%, PPP 5.3%, PKB 4.9%, GERINDRA 4.5%, HANURA 3.8%, others 18.2%; seats by party - PD 148, GOLKAR 107, PDI-P 94, PKS 57, PAN 46, PPP 37, PKB 28, GERINDRA 26, HANURA 17

Note: 29 other parties received less than 2.5% of the vote so did not obtain any seats; because of election rules, the number of seats won does not always follow the percentage of votes received by parties

Judicial branch:

Highest court(s): Supreme Court or Mahkamah Agung (51 judges divided into 8 chambers); Constitutional Court (consists of 9 judges)

Judge selection and term of office: Supreme Court judges nominated by Judicial Commission, appointed by president with concurrence of parliament; judges serve until retirement age; Constitutional Court judges - 3 nominated by president, 3 by Supreme Court, and 3 by parliament; judges appointed by the president; judges serve until mandatory retirement at age 70

Subordinate courts: High Courts of Appeal, district courts, religious courts

Political parties and leaders:

Democrat Party or PD [Susilo Bambang YUDHOYONO]

Functional Groups Party or GOLKAR [Aburizal BAKRIE]

Great Indonesia Movement Party or GERINDRA [SUHARDI]

Indonesia Democratic Party-Struggle or PDI-P [MEGAWATI Sukarnoputri]

National Awakening Party or PKB [Muhaiman ISKANDAR]

National Mandate Party or PAN [Hatta RAJASA]

People's Conscience Party or HANURA [WIRANTO]

Prosperous Justice Party or PKS [Anis MATTA]

United Development Party or PPP [Suryadharma ALI]

Political pressure groups and leaders:

Commission for the “Disappeared” and Victims of Violence or KontraS

Indonesia Corruption Watch or ICW

Indonesian Forum for the Environment or WALHI

International organization participation:

ADB, APEC, ARF, ASEAN, BIS, CD, CICA (observer), CP, D-8, EAS, EITI (candidate country), FAO, G-11, G-15, G-20, G-77, IAEA, IBRD, ICAO, ICC (national committees), ICRM, IDA, IDB, IFAD, IFC, IFRCs, IHO, ILO, IMF, IMO, IMSO, Interpol, IOC, IOM (observer), IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, MONUSCO, NAM, OECD (Enhanced Engagement, OIC, OPCW, PIF (partner), UN, UNAMID, UNCTAD, UNESCO, UNIDO, UNIFIL, UNISFA, UNMIL, UNMISS, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO

Diplomatic representation in the US:

Chief of Mission: Ambassador Budi BOWOLEKSONO (since 21 May 2014)

Chancery: 2020 Massachusetts Avenue NW, Washington, DC 20036

Telephone: [1] (202) 775-5200

FAX: [1] (202) 775-5365

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

Diplomatic representation from the US:

Chief of Mission: Ambassador-designate Robert O. BLAKE (since 21 November 2013); Charge d’Affaires Kristen F. BAUER (since 18 July 2013)

Embassy: Jalan Medan Merdeka Selatan 3-5, Jakarta 10110

Mailing address: Unit 8129, Box 1, FPO AP 96520

Telephone: [62] (21) 3435-9000

FAX: [62] (21) 386-2259

Consulate general: Surabaya

Presence post: Medan

Consular agency: Bali

Flag description:

Two equal horizontal bands of red (top) and white; the colors derive from the banner of the Majapahit Empire of the 13th-15th centuries; red symbolizes courage, white represents purity

Note: similar to the flag of Monaco, which is shorter; also similar to the flag of Poland, which is white (top) and red

National symbol(s):

Garuda (mythical bird)

National anthem:

Name: “Indonesia Raya” (Great Indonesia)

Economy: Indonesia

Economy - overview:

Indonesia, a vast polyglot nation, has grown strongly since 2010. During the global financial crisis, Indonesia outperformed its regional neighbors and joined China and India as the only G20 members posting growth. The government has promoted fiscally conservative policies, resulting in a debt-to-GDP ratio of less than 25% and historically low rates of inflation. Fitch and Moody’s upgraded Indonesia’s credit rating to investment grade in December 2011. Indonesia still struggles with poverty and unemployment, inadequate infrastructure, corruption, a complex regulatory environment, and unequal resource distribution among regions. The government also faces the challenges of quelling labor unrest and reducing fuel subsidies in the face of high oil prices.

GDP (purchasing power parity):

\$1.285 trillion (2013 est.)

Country comparison to the world: 16

\$1.22 trillion (2012 est.)

\$1.149 trillion (2011 est.)

Note: data are in 2013 US dollars

GDP (official exchange rate):

\$867.5 billion (2013 est.)

GDP - real growth rate:

5.3% (2013 est.)
Country comparison to the world: 49
6.2% (2012 est.)
6.5% (2011 est.)

GDP - per capita (PPP):

\$5,200 (2013 est.)
Country comparison to the world: 158
\$5,000 (2012 est.)
\$4,800 (2011 est.)

Note: data are in 2013 US dollars

Gross national saving:

31.5% of GDP (2013 est.)
Country comparison to the world: 24
32.6% of GDP (2012 est.)
33.1% of GDP (2011 est.)

GDP - composition, by end use:

Household consumption: 56%
Government consumption: 9.4%
Investment in fixed capital: 32.7%
Investment in inventories: 2%
Exports of goods and services: 23.5%
Imports of goods and services: -25.8%
(2013 est.)

GDP - composition, by sector of origin:

Agriculture: 14.3%
Industry: 46.6%
Services: 39.1% (2013 est.)

Agriculture - products:

Rubber and similar products, palm oil, poultry, beef, forest products, shrimp, cocoa, coffee, medicinal herbs, essential oil, fish and its similar products, and spices

Industries:

Petroleum and natural gas, textiles, automotive, electrical appliances, apparel, footwear, mining, cement, medical instruments and appliances, handicrafts, chemical fertilizers, plywood, rubber, processed food, jewelry, and tourism

Industrial production growth rate:

4.3% (2013 est.)
Country comparison to the world: 67

Labor force:

120 million (2013 est.)
Country comparison to the world: 5

Labor force - by occupation:

Agriculture: 38.9%
Industry: 13.2%
Services: 47.9% (2012 est.)

Unemployment rate:

6.6% (2013 est.)
Country comparison to the world: 70
6.1% (2012 est.)

Population below poverty line:

11.7% (2012 est.)

Household income or consumption by percentage share:

Lowest 10%: 3.3%
Highest 10%: 29.9% (2009)

Distribution of family income - Gini index:

36.8 (2009)
Country comparison to the world: 82
39.4 (2005)

Budget:

Revenues: \$137.5 billion
Expenditures: \$166 billion (2013 est.)

Taxes and other revenues:

15.8% of GDP (2013 est.)
Country comparison to the world: 190

Budget surplus (+) or deficit (-):

-3.3% of GDP (2013 est.)
Country comparison to the world: 133

Public debt:

24.2% of GDP (2013 est.)
Country comparison to the world: 129
23% of GDP (2012 est.)

Fiscal year:

Calendar year

Inflation rate (consumer prices):

7.7% (2013 est.)
Country comparison to the world: 193
4.3% (2012 est.)

Central bank discount rate:

6.37% (31 December 2010)
Country comparison to the world: 57
6.46% (31 December 2009)

Note: this figure represents the 3-month SBI rate; the Bank of Indonesia has not employed the one-month SBI since September 2010

Commercial bank prime lending rate:

12.1% (31 December 2013 est.)
Country comparison to the world: 67
11.8% (31 December 2012 est.)

Note: these figures represent the average annualized rate on working capital loans

Stock of narrow money:

\$82.99 billion (31 December 2013 est.)
Country comparison to the world: 39
\$87.04 billion (31 December 2012 est.)

Stock of broad money:

\$325 billion (31 December 2013 est.)
Country comparison to the world: 29
\$342 billion (31 December 2012 est.)

Stock of domestic credit:

\$336.2 billion (31 December 2013 est.)
Country comparison to the world: 33
\$350 billion (31 December 2012 est.)

Market value of publicly traded shares:

\$396.8 billion (31 December 2012 est.)
Country comparison to the world: 24
\$390.1 billion (31 December 2011)
\$360.4 billion (31 December 2010 est.)

Current account balance:

-\$28.72 billion (2013 est.)
Country comparison to the world: 184
-\$24.07 billion (2012 est.)

Exports:

\$178.9 billion (2013 est.)
Country comparison to the world: 29
\$187.3 billion (2012 est.)

Exports - commodities:

Oil and gas, electrical appliances, plywood, textiles, rubber

Exports - partners:

Japan 15.9%, China 11.4%, Singapore 9%, South Korea 7.9%, US 7.8%, India 6.6%, Malaysia 5.9% (2012)

Imports:

\$178.6 billion (2013 est.)
Country comparison to the world: 28
\$178.7 billion (2012 est.)

Imports - commodities:

Machinery and equipment, chemicals, fuels, foodstuffs

Imports - partners:

China 15.3%, Singapore 13.6%, Japan 11.9%, Malaysia 6.4%, South Korea 6.2%, US 6.1%, Thailand 6% (2012)

Reserves of foreign exchange and gold:

\$83.45 billion (31 December 2013 est.)
Country comparison to the world: 27
\$112.8 billion (31 December 2012 est.)

Debt - external:

\$223.8 billion (31 December 2013 est.)
Country comparison to the world: 33
\$224.1 billion (31 December 2012 est.)

Stock of direct foreign investment - at home:

\$207.2 billion (31 December 2013 est.)
Country comparison to the world: 27
\$192.7 billion (31 December 2012 est.)

Stock of direct foreign investment - abroad:

\$17.41 billion (31 December 2013 est.)
Country comparison to the world: 48
\$14.81 billion (31 December 2012 est.)

Exchange rates:

Indonesian rupiah (IDR) per US dollar -
10,341.6 (2013 est.)
9,386.63 (2012 est.)
9,090.4 (2010 est.)
10,389.9 (2009)
9,698.9 (2008)

Energy: Indonesia

Electricity - production:

173.8 billion kWh (2011 est.)
Country comparison to the world: 23

Electricity - consumption:

158 billion kWh (2011 est.)
Country comparison to the world: 24

Electricity - exports:

0 kWh (2012 est.)
Country comparison to the world: 150

Electricity - imports:

2.542 billion kWh (2011 est.)
Country comparison to the world: 51

Electricity - installed generating capacity:

39.9 million kW (2011 est.)
Country comparison to the world: 23

Electricity - from fossil fuels:

87% of total installed capacity (2011 est.)
Country comparison to the world: 86

Electricity - from nuclear fuels:

0% of total installed capacity (2011 est.)
Country comparison to the world: 108

Electricity - from hydroelectric plants:

9.9% of total installed capacity (2011 est.)
Country comparison to the world: 114

Electricity - from other renewable sources:

3.1% of total installed capacity (2011 est.)
Country comparison to the world: 60

Crude oil - production:

974,300 bbl/day (2012 est.)
Country comparison to the world: 22

Crude oil - exports:

338,100 bbl/day (2010 est.)
Country comparison to the world: 23

Crude oil - imports:

388,400 bbl/day (2010 est.)
Country comparison to the world: 22

Crude oil - proved reserves:

4.03 billion bbl (1 January 2013 est.)
Country comparison to the world: 27

Refined petroleum products - production:

935,300 bbl/day (2011 est.)
Country comparison to the world: 20

Refined petroleum products - consumption:

1.322 million bbl/day (2011 est.)
Country comparison to the world: 18

Refined petroleum products - exports:

142,400 bbl/day (2010 est.)
Country comparison to the world: 39

Refined petroleum products - imports:

473,400 bbl/day (2011 est.)
Country comparison to the world: 13

Natural gas - production:

76.25 billion cu m (2011 est.)
Country comparison to the world: 12

Natural gas - consumption:

39.56 billion cu m (2010 est.)
Country comparison to the world: 24

Natural gas - exports:

38.67 billion cu m (2011 est.)
Country comparison to the world: 12

Natural gas - imports:

0 cu m (2011 est.)
Country comparison to the world: 207

Natural gas - proved reserves:

3.069 trillion cu m (1 January 2013 est.)
Country comparison to the world: 13

Communications: Indonesia**Telephones - main lines in use:**

37.983 million (2012)
Country comparison to the world: 8

Telephones - mobile cellular:

281.96 million (2012)
Country comparison to the world: 4

Telephone system:

General assessment: domestic service includes an interisland microwave system, an HF radio police net, and a domestic satellite communications system; international service good

Domestic: coverage provided by existing network has been expanded by use of over 200,000 telephone kiosks many located in remote areas; mobile-cellular subscribership growing rapidly

International: country code - 62; landing point for both the SEA-ME-WE-3 and SEA-ME-WE-4 submarine cable networks that provide links throughout Asia, the Middle East, and Europe; satellite earth stations - 2 Intelsat (1 Indian Ocean and 1 Pacific Ocean) (2011)

Broadcast media:

Mixture of about a dozen national TV networks - 2 public broadcasters, the remainder private broadcasters - each with multiple transmitters; more than 100 local TV stations; widespread use of satellite and cable TV systems; public radio broadcaster operates 6 national networks as well as regional and local stations; overall, more than 700 radio stations with more than 650 privately operated (2008)

Internet country code:

.id

Internet hosts:

1.344 million (2012)
Country comparison to the world: 42

Internet users:

20 million (2009)
Country comparison to the world: 22

Transportation: Indonesia**Airports:**

673 (2013)
Country comparison to the world: 10

Airports - with paved runways:

Total: 186
Over 3,047 m: 5
2,438 to 3,047 m: 21
1,524 to 2,437 m: 51
914 to 1,523 m: 72
Under 914 m: 37 (2013)

Airports - with unpaved runways:

Total: 487
1,524 to 2,437 m: 4
914 to 1,523 m: 23
Under 914 m:
460 (2013)

Heliports:

76 (2013)

Pipelines:

Condensate 1,064 km; condensate/gas 150 km; gas 11,702 km; liquid petroleum gas 119 km; oil 7,767 km; oil/gas/water 77 km; refined products 728 km; unknown 53 km; water 44 km (2013)

Railways:

Total: 5,042 km
Country comparison to the world: 35
Narrow gauge: 5,042 km 1.067-m gauge (565 km electrified) (2008)

Roadways:

Total: 496,607 km
 Country comparison to the world: 13
 Paved: 283,102 km
 Unpaved: 213,505 km (2011)

Waterways:

21,579 km (2011)
 Country comparison to the world: 7

Merchant marine:

Total: 1,340

Country comparison to the world: 8

By type: bulk carrier 105, cargo 618, chemical tanker 69, container 120, liquefied gas 28, passenger 49, passenger/cargo 77, petroleum tanker 244, refrigerated cargo 6, roll on/roll off 12, specialized tanker 1, vehicle carrier 11

Foreign-owned: 69 (China 1, France 1, Greece 1, Japan 8, Jordan 1, Malaysia 1, Norway 3, Singapore 46, South Korea 2, Taiwan 1, UK 2, US 2)

Registered in other countries: 95 (Bahamas 2, Cambodia 2, China 2, Hong Kong 10, Liberia 4, Marshall Islands 1, Mongolia 2, Panama 10, Singapore 60, Tuvalu 1, unknown 1) (2010)

Ports and terminals:

Major seaport(s): Banjarmasin, Belawan, Kotabaru, Krueg Geukueh, Palembang, Panjang, Sungai Pakning, Tanjung Perak, Tanjung Priok

Container port(s) (TEUs): Tanjung Priok (5,617,562)

Transportation - note:

The International Maritime Bureau continues to report the territorial and offshore waters in the Strait of Malacca and South China Sea as high risk for piracy and armed robbery against ships; attacks have increased yearly since 2009; in 2012, 73 commercial vessels were boarded and 47 crew members taken hostage; hijacked vessels are often disguised and cargo diverted to ports in East Asia; crews have been murdered or cast adrift

Military: Indonesia

Military branches:

Indonesian Armed Forces (Tentara Nasional Indonesia, TNI): Army (TNI-Angkatan Darat (TNI-AD)), Navy (TNI-Angkatan Laut (TNI-AL); includes marines (Korps Marinir, KorMar), naval air arm), Air Force (TNI-Angkatan Udara (TNI-AU)), National Air Defense Command (Kommando Pertahanan Udara Nasional (Kohanudnas)) (2013)

Military service age and obligation:

18-45 years of age for voluntary military service, with selective conscription authorized; 2-year service obligation, with reserve obligation to age 45 (officers); Indonesian citizens only (2012)

Manpower available for military service:

Males age 16-49: 65,847,171
 Females age 16-49: 63,228,017 (2010 est.)

Manpower fit for military service:

Males age 16-49: 54,264,299
 Females age 16-49: 53,274,361 (2010 est.)

Manpower reaching militarily significant age annually:

Male: 2,263,892
 Female: 2,191,267 (2010 est.)

Military expenditures:

0.78% of GDP (2012)
 Country comparison to the world: 116
 0.67% of GDP (2011)
 0.78% of GDP (2010)

Transnational Issues: Indonesia

Disputes - international:

Indonesia has a stated foreign policy objective of establishing stable fixed land and maritime boundaries with all of its neighbors; three stretches of land borders with Timor-Leste have yet to be delimited, two of which are in the Oecussi exclave area, and no maritime or Exclusive Economic Zone (EEZ) boundaries have been established between the countries; many refugees from Timor-Leste who left in 2003 still reside in Indonesia and

refuse repatriation; all borders between Indonesia and Australia have been agreed upon bilaterally, but a 1997 treaty that would settle the last of their maritime and EEZ boundary has yet to be ratified by Indonesia's legislature; Indonesian groups challenge Australia's claim to Ashmore Reef; Australia has closed parts of the Ashmore and Cartier Reserve to Indonesian traditional fishing and placed restrictions on certain catches; land and maritime negotiations with Malaysia are ongoing, and disputed areas include the controversial Tanjung Datu and Camar Wulan border area in Borneo and the maritime boundary in the Ambalat oil block in the Celebes Sea; Indonesia and Singapore continue to work on finalizing their 1973 maritime boundary agreement by defining unresolved areas north of Indonesia's Batam Island; Indonesian secessionists, squatters, and illegal migrants create repatriation problems for Papua New Guinea; maritime delimitation talks continue with Palau; EEZ negotiations with Vietnam are ongoing, and the two countries in Fall 2011 agreed to work together to reduce illegal fishing along their maritime boundary.

Refugees and internally displaced persons:

IDPs: at least 90,000 (inter-communal, inter-faith, and separatist violence between 1998 and 2004 in Aceh and Papua; religious attacks and land conflicts in 2012 and 2013; most IDPs in Aceh, Papua, West Papua, Central Kalimantan, Central Sulawesi Provinces, Maluku, North Maluku) (2014) (2011)

Illicit drugs:

Illicit producer of cannabis largely for domestic use; producer of methamphetamine and ecstasy

Indices

Health

- In 2000, the World Health Organization ranked Indonesia's health system 92 out of 191.³³⁶
- Indonesia's ranking for life expectancy at birth is 109/180.³³⁷
- Regarding mortality under the age of five, Indonesia ranks 72nd out of 193 countries.³³⁸

Government

- According to Transparency International, Indonesia's Corruption Perceptions Index rank is 107/175.³³⁹

Education

- Indonesia has a very high literacy rate, 98.9% in 2014.³⁴⁰

Other

- According to the World Economic Forum's gender gap index, Indonesia placed 97th out of 142 countries for gender equality.³⁴¹
- According to the Human Development Index, which measures longevity, education, and standard of living, Indonesia ranked 108th.³⁴²
- When considering exposure, vulnerability, susceptibility, coping capabilities, and adaptive capabilities, the World Risk Index places Indonesia at number 34.³⁴³

End Notes

- 1 BBC News Asia, Indonesia Country Profile. <http://www.bbc.com/news/world-asia-pacific-14921238>
- 2 Every Culture, Indonesia. <http://www.everyculture.com/Ge-It/Indonesia.html>
- 3 U.S. Department of State, U.S. Relations with Indonesia. <http://www.state.gov/r/pa/ei/bgn/2748.htm>
- 4 Embassy of the Republic of Indonesia, The Philosophical Basis of Human Rights in Indonesia. http://www.indonesianembassy.org.uk/human_right-2.htm
- 5 Stimson, Identity and Indonesia's Democratization. <http://www.stimson.org/spotlight/identity-and-indonesias-democratization-/>
- 6 The Hindu, A Language that Built a Nation. <http://www.thehindu.com/opinion/op-ed/a-language-that-built-a-nation/article5135344.ece>
- 7 Pew Research Center, Muslim Population of Indonesia. <http://www.pewforum.org/2010/11/04/muslim-population-of-indonesia/>
- 8 Pew Research Center, Muslim Population of Indonesia. <http://www.pewforum.org/2010/11/04/muslim-population-of-indonesia/>
- 9 Georgetown University, Religious Freedom in Indonesia. <http://berkleycenter.georgetown.edu/essays/religious-freedom-in-indonesia>
- 10 The Asia Foundation, What Women's Growing Political Representation Means in Indonesia. <http://asiafoundation.org/in-asia/2013/10/23/what-womens-growing-political-representation-means-in-indonesia/>
- 11 The Asia Foundation, What Women's Growing Political Representation Means in Indonesia. <http://asiafoundation.org/in-asia/2013/10/23/what-womens-growing-political-representation-means-in-indonesia/>
- 12 Transparency International, Corruption Perceptions Index 2014. <http://www.transparency.org/cpi2014/results#myAnchor1>
- 13 The World Bank, Combating Corruption in Indonesia. <http://siteresources.worldbank.org/INTINDONESIA/Resources/Publication/03-Publication/Combating+Corruption+in+Indonesia-Oct15.pdf>
- 14 Changing Ethnic Composition: Indonesia, 2000-2010. http://iussp.org/sites/default/files/event_call_for_papers/IUSSP%20Ethnicity%20Indonesia%20Poster%20Section%20G%202708%202013%20revised.pdf
- 15 Changing Ethnic Composition: Indonesia, 2000-2010. http://iussp.org/sites/default/files/event_call_for_papers/IUSSP%20Ethnicity%20Indonesia%20Poster%20Section%20G%202708%202013%20revised.pdf
- 16 The World Bank, Transmigration in Indonesia. <http://lnweb90.worldbank.org/oed/oeddoclib.nsf/DocUNIDViewForJavaScript/4B8B0E01445D8351852567F5005D87B8>
- 17 ISEAS, A New Classification of Indonesia's Ethnic Groups. http://www.iseas.edu.sg/documents/publication/ISEAS_Working%20Paper_%20No%201.pdf
- 18 ISEAS, A New Classification of Indonesia's Ethnic Groups. http://www.iseas.edu.sg/documents/publication/ISEAS_Working%20Paper_%20No%201.pdf
- 19 The Jakarta Post, Urbanization and urban development patterns. May 12, 2012. <http://www.thejakartapost.com/news/2012/05/12/urbanization-and-urban-development-patterns.html>
- 20 Firman, Tommy, Institute of Technology Bandung. Demographic Patterns of Indonesia's Urbanization, 2000-2010: Continuity and Change at the Macro Level. August 2013. http://iussp.org/sites/default/files/event_call_for_papers/IUSSP,%20Ppt,%20August%202013.pdf
- 21 The World Bank, The Rise of Metropolitan Regions: Towards Inclusive and Sustainable Regional Development. August 13, 2012. <http://www.worldbank.org/en/news/feature/2012/08/13/towards-inclusive-and-sustainable-regional-development>
- 22 NASA Socioeconomic Data and Applications Center (SEDAC). <http://sedac.ciesin.columbia.edu>
- 23 UN Data. Data.un.org

- 24 Science Direct, Sea Level Rise Flood Zones: Mitigating Floods in Surabaya Coastal Area. <http://www.sciencedirect.com/science/article/pii/S1877042814042633>
- 25 Suhendar, Rudy. Identification of the Natural Hazards in the Bandung Basin. [http://pag.bgl.esdm.go.id/sites/default/files/buletin/Identification%20Of%20the%20Natural%20Hazard%20In%20The%20Bandung%20Basin%20\(%20Rudi%20Suhendar%20\)%20Hal%20%2064-69.pdf](http://pag.bgl.esdm.go.id/sites/default/files/buletin/Identification%20Of%20the%20Natural%20Hazard%20In%20The%20Bandung%20Basin%20(%20Rudi%20Suhendar%20)%20Hal%20%2064-69.pdf)
- 26 Terra Daily, Police arrest city sanitation director over deadly Indonesian landslide. February 27, 2005. <http://www.terradaily.com/2005/050227034756.mrxh57pa.html>
- 27 ForUm, The Effects of Natural Hazards: Migration and Dynamics of Development in Medan City. [http://www.forum-urban-futures.net/activities/papers/effects-natural-hazards-\(tsunami-disaster\)%3A-migration-and-dynamics-development-med](http://www.forum-urban-futures.net/activities/papers/effects-natural-hazards-(tsunami-disaster)%3A-migration-and-dynamics-development-med)
- 28 The Freeman, Vulnerable groups and disasters. November 2013.
- 29 Trafficking in Persons Report, 2014. <http://www.state.gov/documents/organization/226846.pdf>.
- 30 The World Bank, Reducing Extreme Poverty in Indonesia, October 22, 2014. <http://www.worldbank.org/en/country/indonesia/brief/reducing-extreme-poverty-in-indonesia>
- 31 East Asia Forum, Reaching Indonesia's Poor and Vulnerable, January 2, 2013. <http://www.eastasiaforum.org/2013/01/02/reaching-indonesias-poor-and-vulnerable/>
- 32 <http://www.unhcr.or.id/images/pdf/publications/indonesiafactsheetsept14.pdf>
- 33 <http://www.irinnews.org/report/99908/asylum-seekers-left-high-and-dry-in-indonesia>
- 34 The Guardian, Australia is blocking refugees registered in Indonesia. November 19, 2014. <http://www.theguardian.com/australia-news/2014/nov/19/-sp-what-impact-will-banning-refugees-registered-in-indonesia-really-have>
- 35 Refworld, People internally displaced by conflict and violence-Indonesia. May 14, 2014. <http://www.refworld.org/docid/5374748114.html>
- 36 BBC News, Indonesia's flashpoints. July 1, 2004. <http://news.bbc.co.uk/2/hi/asia-pacific/3813139.stm>
- 37 iDMC, Indonesia: durable solutions needed for protracted IDPs as new displacement occurs in Papua. May 13, 2014. <http://www.internal-displacement.org/south-and-south-east-asia/indonesia/2014/indonesia-durable-solutions-needed-for-protracted-idps-as-new-displacement-occurs-in-papua/>
- 38 UNDP, Human Development Index and its Components. <http://hdr.undp.org/en/content/table-1-human-development-index-and-its-components>
- 39 The World Bank, GINI index. http://data.worldbank.org/indicator/SI.POV.GINI?order=wbapi_data_value_2011+wbapi_data_value&sort=asc
- 40 The World Bank, Indonesia. <http://data.worldbank.org/country/indonesia>
- 41 The World Bank, Reducing extreme poverty in Indonesia. October 22, 2014. <http://www.worldbank.org/en/country/indonesia/brief/reducing-extreme-poverty-in-indonesia>
- 42 The Economist, To make a million people unpoor. August 3, 2011. <http://www.economist.com/blogs/banyan/2011/08/indonesias-poverty-line>
- 43 The Economist, A good scrap. January 8, 2015. <http://www.economist.com/news/asia/21638179-jokowi-abandons-wasteful-fuel-subsidies-fiscal-prospects-brighten-good-scrap>
- 44 East Asia Forum, Reaching Indonesia's poor and vulnerable. January 2, 2013. <http://www.eastasiaforum.org/2013/01/02/reaching-indonesias-poor-and-vulnerable/>
- 45 The World Bank. <http://www.worldbank.org/en/publication/global-economic-prospects/regional-outlooks/eap>
- 46 The World Bank. <http://www.worldbank.org/en/publication/global-economic-prospects/regional-outlooks/eap>
- 47 The Heritage Foundation, 2014 Index of Economic Freedom.
- 48 Central Intelligence Agency, The World Factbook, Indonesia. <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/id.html>

- 49 Central Intelligence Agency, The World Factbook, Indonesia. <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/id.html>
- 50 U.S. Department of State, Limits in the Seas, Indonesia Archipelagic and Other Maritime Claims and Boundaries. September 15, 2014. <http://www.state.gov/documents/organization/231912.pdf>
- 51 <http://www.state.gov/documents/organization/231912.pdf>
- 52 Central Intelligence Agency, The World Factbook, Indonesia. <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/id.html>
- 53 Country Studies, Indonesia Geography. <http://countrystudies.us/indonesia/28.htm>
- 54 National Geographic, Indonesia Facts. <http://travel.nationalgeographic.com/travel/countries/indonesia-facts/>
- 55 Library of Congress, Country Profile: Indonesia. December 2004. <http://lcweb2.loc.gov/frd/cs/profiles/Indonesia.pdf>
- 56 Smithsonian Institute, USGS Weekly Volcanic Activity Report. http://www.volcano.si.edu/reports_weekly.cfm
- 57 FAO, Country Pasture/Forage Resource Profiles, Indonesia. <http://www.fao.org/ag/AGP/AGPC/doc/Counprof/Indonesia/Indones.htm>
- 58 FAO, Aquastat Indonesia. http://www.fao.org/nr/water/aquastat/countries_regions/IDN/index.stm
- 59 Library of Congress, Country Profile: Indonesia. December 2004. <http://lcweb2.loc.gov/frd/cs/profiles/Indonesia.pdf>
- 60 FAO, Aquastat Indonesia. http://www.fao.org/nr/water/aquastat/countries_regions/IDN/index.stm
- 61 Country Studies, Indonesia Geography. <http://countrystudies.us/indonesia/29.htm>
- 62 Country Studies, Indonesia Geography. <http://countrystudies.us/indonesia/29.htm>
- 63 Department for International Development and The World Bank, Indonesia and Climate Change. March 2007. <http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/3428109-1174614780539/PEACEClimateChange.pdf>
- 64 Indonesian Climate Change Initiatives and Green Economy. January 17, 2011. http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@ilo-jakarta/documents/presentation/wcms_171874.pdf
- 65 UNFCCC, Indonesia Second National Communication. http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/indonesia_snc.pdf
- 66 UNFCCC, Indonesia Second National Communication. http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/indonesia_snc.pdf
- 67 Thamrin, Syamsidar. Indonesia's National Mitigation Actions: Paving the Way Towards NAMAs. March 2011. <http://www.oecd.org/env/cc/48304156.pdf>
- 68 Institute for Environment and Human Security-United Nations University. <http://www.ehs.unu.edu/file/get/11895.pdf>
- 69 The World Bank and GFDRR, Indonesia Advancing a National Disaster Risk Financing Strategy – Options for Consideration. http://reliefweb.int/sites/reliefweb.int/files/resources/INDONESIA_DRFI_M9.pdf
- 70 UNISDR, Synthesis Report on Ten ASEAN Countries Disaster Risks Assessment. December 2010. http://www.unisdr.org/files/18872_asean.pdf
- 71 Humanitarian Country Team Indonesia, Indonesia Contingency Plan. October 14, 2011. <http://www.humanitarianresponse.info/system/files/documents/files/Contingency%20Plan.pdf>
- 72 EM-DAT, The International Disaster Database. <http://www.emdat.be/>
- 73 EM-DAT, The International Disaster Database. <http://www.emdat.be/>
- 74 UNOCHA. <http://www.unocha.org/roap/maps-graphics/national-hazard-maps?page=1>
- 75 UNHCR eCentre. <http://www.the-ecentre.net/resources/workshop/materials/349/INDONESIA%20BNPB.pdf>

- 76 The World Bank and GFDRR, Indonesia Advancing a National Disaster Risk Financing Strategy – Options for Consideration. http://reliefweb.int/sites/reliefweb.int/files/resources/INDONESIA_DRFI_M9.pdf
- 77 UNISDR, Synthesis Report on Ten ASEAN Countries Disaster Risks Assessment. December 2010. http://www.unisdr.org/files/18872_asean.pdf
- 78 <http://inatews.bmkg.go.id/rss/capatomlast40event.xml>
- 79 Australian Government, Department of Foreign Affairs and Trade. Development assistance in Indonesia. <http://aid.dfat.gov.au/countries/eastasia/indonesia/Documents/aifdr-ipr-ipm.pdf>
- 80 Humanitarian Country Team Indonesia, Indonesia Contingency Plan. October 14, 2011. <http://www.humanitarianresponse.info/system/files/documents/files/Contingency%20Plan.pdf>
- 81 Ibid.
- 82 Relief Web, Indonesia: West Sumatra Earthquake 2009. <http://reliefweb.int/report/indonesia/indonesia-west-sumatra-earthquake-2009>
- 83 CalTech, The Next Giant Sumatran Megathrust Earthquake: From Science to Human Welfare. <http://www.tectonics.caltech.edu/sumatra/downloads/papers/A05p.pdf>
- 84 EERI, The 7.6 Western Sumatra Earthquake. September 30, 2009. https://www.eeri.org/site/images/eeri_newsletter/2009_pdf/Padang-eq-report-NL-insert.pdf
- 85 United Nations, West Sumatra Earthquake, Humanitarian Response Plan in Coordination with the Government of Indonesia. 2009. http://www.who.int/hac/crises/idn/indonesia_response_plan_2009.pdf
- 86 EERI, The 7.6 Western Sumatra Earthquake. September 30, 2009. https://www.eeri.org/site/images/eeri_newsletter/2009_pdf/Padang-eq-report-NL-insert.pdf
- 87 United Nations, West Sumatra Earthquake, Humanitarian Response Plan in Coordination with the Government of Indonesia. 2009. http://www.who.int/hac/crises/idn/indonesia_response_plan_2009.pdf
- 88 Japan International Cooperation Agency, Disaster form Earthquake Off the Coast of Padang in West Sumatra. September 30, 2009. http://www.jica.go.jp/english/our_work/types_of_assistance/jdr/indonesia.html
- 89 EM-DAT, The International Disaster Database. <http://www.emdat.be/>
- 90 BMKG, Indonesia Tsunami Early Warning System. https://inatews.bmkg.go.id/new/tentang_tsunami.php
- 91 http://www.aifdr.org/wp-content/uploads/pdf/PTHA_Report_Final_EN.pdf
- 92 The 17 July 2006 Tsunami Earthquake in West Java, Indonesia. http://escweb.wr.usgs.gov/share/mooney/2007_SRL_Tsunami.pdf
- 93 The 17 July 2006 Tsunami Earthquake in West Java, Indonesia. http://escweb.wr.usgs.gov/share/mooney/2007_SRL_Tsunami.pdf
- 94 Development of Indonesia Tsunami Early Warning System toward Regional Tsunami Watch Provider. <http://gfzpublic.gfz-potsdam.de/pubman/item/escidoc:8171:4/component/escidoc:8170/3%20-%20Development%20of%20Indonesia%20Tsunami%20Early%20Warning%20System.pdf>
- 95 Meteorological Climatological and Geophysical Agency Indonesia, CAP in BMKG Planning and its Implementation. April 2013. <https://www.wmo.int/pages/prog/amp/pwsp/documents/CAP-IW-2013-p03-19-ID-BMKG.ppt>
- 96 AIPA, Indonesia's Country Report on Disaster Response Management. http://www.aipasecretariat.org/wp-content/uploads/2011/07/Indonesia_Disaster-Response-Management.pdf
- 97 USGS, Major Volcanoes of Indonesia. http://web.archive.org/web/20050104091516/http://vulcan.wr.usgs.gov/Volcanoes/Indonesia/Maps/map_indonesia_volcanoes.html

- 98 Smithsonian Institute, USGS Weekly Volcanic Activity Report. http://www.volcano.si.edu/reports_weekly.cfm
- 99 Oregon State, Krakatu, Sunda Strait, Indonesia. <http://volcano.oregonstate.edu/oldroot/volcanoes/krakatau/krakatau.html>
- 100 IFRC, Indonesia: Mt. Merapi Volcanic Eruption. October 27, 2010. <http://www.ifrc.org/docs/appeals/rpts10/IDvc27101001.pdf>
- 101 Kings College London, Private sector engagement and collaboration with civil-military actors in disaster management in Indonesia. December 2013. <http://reliefweb.int/sites/reliefweb.int/files/resources/indonesia-report-final.pdf>
- 102 Kings College London, Private sector engagement and collaboration with civil-military actors in disaster management in Indonesia. December 2013. <http://reliefweb.int/sites/reliefweb.int/files/resources/indonesia-report-final.pdf>
- 103 EM-DAT, The International Disaster Database. <http://www.emdat.be/>
- 104 AIPA, Indonesia's Country Report on Disaster Response Management. http://www.aipasecretariat.org/wp-content/uploads/2011/07/Indonesia_Disaster-Response-Management.pdf
- 105 AIPA, Indonesia's Country Report on Disaster Response Management. http://www.aipasecretariat.org/wp-content/uploads/2011/07/Indonesia_Disaster-Response-Management.pdf
- 106 Jakarta Flood Hazard Mapping Framework. http://www.hkv.nl/site/hkv/upload/publication/Jakarta_Flood_Hazard_Mapping_Framework_MH.pdf
- 107 Malole, Yos. Critical Causes Analysis of Jakarta Floods. <http://start.org/download/2012/ai-irdr/concepts/malole.pdf>
- 108 InaSAFE. <http://inasafe.org/en/>
- 109 Jakarta Flood Hazard Mapping Framework. http://www.hkv.nl/site/hkv/upload/publication/Jakarta_Flood_Hazard_Mapping_Framework_MH.pdf
- 110 World Bank. Jakarta Floods, <http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/jakarta.floods.ppt>
- 111 EM-DAT, The International Disaster Database. <http://www.emdat.be/>
- 112 OCHA, Tropical Storms in Asia-Pacific: 1956-2009. http://reliefweb.int/sites/reliefweb.int/files/resources/OCHA_ROAP_StormTracks_v5_110520.pdf
- 113 Global Assessment Report on Disaster Risk Reduction, Landslide Risk in Indonesia. October 2010. http://www.preventionweb.net/english/hyogo/gar/2011/en/bgdocs/Cepeda_et_al_2010.pdf
- 114 AIPA, Indonesia's Country Report on Disaster Response Management. http://www.aipasecretariat.org/wp-content/uploads/2011/07/Indonesia_Disaster-Response-Management.pdf
- 115 Asian Disaster Preparedness Center, Indonesia Country Study. October 2000. <http://archive.unu.edu/env/govern/EINIno/CountryReports/pdf/indonesia.pdf>
- 116 Relief Web, Indonesia Drought Situation Report No 5. May 6, 1998. <http://reliefweb.int/report/indonesia/indonesia-drought-situation-report-no-5>
- 117 EM-DAT, The International Disaster Database. <http://www.emdat.be/>
- 118 AIPA, Indonesia's Country Report on Disaster Response Management. http://www.aipasecretariat.org/wp-content/uploads/2011/07/Indonesia_Disaster-Response-Management.pdf
- 119 INFORM, Index for Risk Management Results 2015. <http://www.inform-index.org/Portals/0/InfoRM/INFORM%202015%20Report%20Print.pdf>
- 120 AIPA, Indonesia's Country Report on Disaster Response Management. http://www.aipasecretariat.org/wp-content/uploads/2011/07/Indonesia_Disaster-Response-Management.pdf
- 121 World Health Organization, Country Cooperation Strategy Indonesia. http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_idn_en.pdf

- 122 Indonesian National Aids Commission 2012, Country Report on the Follow up to the Declaration of Commitment on HIV/AIDS Reporting Period 2010-2011. http://www.unaids.org/sites/default/files/en/dataanalysis/knowyourresponse/countryprogressreports/2012countries/ce_ID_Narrative_Report.pdf
- 123 World Health Organization, Estimated global incidence of Japanese encephalitis. October 2010. <http://www.who.int/bulletin/volumes/89/10/BLT-10-085233-table-T3.html>
- 124 BMC Infectious Diseases, The changing incidence of dengue Haemorrhagic Fever in Indonesia. <http://www.biomedcentral.com/1471-2334/14/412>
- 125 Malaria Atlas Project, Eliminating malaria in Indonesia. <http://apmen.org/storage/country-briefings/Indonesia.pdf>
- 126 Malaria Atlas Project, The spatial distribution of Plasmodium falciparum malaria endemicity map in 2010 in Indonesia. http://www.map.ox.ac.uk/browse-resources/endemicity/Pf_mean/IDN/
- 127 Ministry of Health-Republic of Indonesia, Epidemiology of Dengue in Indonesia. April 2013. http://www.denguevaccines.org/sites/default/files/files/Day%201_5_6_1_Indonesia_AMuhadir.pdf
- 128 GBD Profile: Indonesia. http://www.healthdata.org/sites/default/files/files/country_profiles/GBD/ihme_gbd_country_report_indonesia.pdf
- 129 World Health Organization, Human Resources for Health Country Profile Indonesia. http://www.searo.who.int/entity/human_resources/data/Indonesia_profile.pdf
- 130 Indonesia: An Emerging Market Economy Beset by Neglected Tropical Diseases. February 27, 2014. <http://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0002449>
- 131 Indonesia: An Emerging Market Economy Beset by Neglected Tropical Diseases. February 27, 2014. <http://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0002449>
- 132 World Health Organization, Country Cooperation Strategy Indonesia. http://www.who.int/countryfocus/cooperation_strategy/ccs_indonesia_2007_2011_en.pdf
- 133 International Disaster Response Law (IDRL) in Indonesia, IFRC, Palang Merah Indonesia, Australian Red Cross, and Australian Government, 2014, <http://www.ifrc.org/PageFiles/124509/IDRL%20in%20Indonesia%20-%20Workshop%20Report%20-%20Final.pdf>
- 134 International Disaster Response Law (IDRL) in Indonesia, IFRC, Palang Merah Indonesia, Australian Red Cross, and Australian Government, 2014, <http://www.ifrc.org/PageFiles/124509/IDRL%20in%20Indonesia%20-%20Workshop%20Report%20-%20Final.pdf>
- 135 Law of the Republic of Indonesia Number 24 of 2007 Concerning Disaster Management, <http://www.ifrc.org/docs/IDRL/956EN.pdf>
- 136 Presidential Regulation of the Republic of Indonesia Number 8 of 2008 Concerning National Agency Disaster Management, BNPB.
- 137 The Role of Defence Force in Humanitarian Assistance and Disaster Relief, Lt Col Erwin S. Aldedharma, Indonesia Navy.
- 138 Jorry Koloay, Strategic Issues of Civil Military Cooperation in a Disaster Relief Operation, August 2011.
- 139 Indonesia. National Disaster Management Agency (BNPB). Jakarta: BNPB, 2015.
- 140 National Platform for Disaster Risk Reduction Indonesia (Planas PRB Indonesia), <http://planasprb.net/>
- 141 National Progress Report on the Implementation of the Hyogo Framework for Action (2013-2015), Indonesian National Agency for Disaster Management (BNPB), December 20, 2014, www.preventionweb.net/english/hyogo/progress/reports/
- 142 International Disaster Response Law (IDRL) in Indonesia, IFRC, Palang Merah Indonesia, Australian Red Cross, and Australian Government, 2014, <http://www.ifrc.org/PageFiles/124509/IDRL%20in%20Indonesia%20-%20Workshop%20Report%20-%20Final.pdf>

- 143 Law of the Republic of Indonesia Number 24 of 2007 Concerning Disaster Management, <http://www.ifrc.org/docs/IDRL/956EN.pdf>
- 144 Law of the Republic of Indonesia Number 24 of 2007 Concerning Disaster Management, <http://www.ifrc.org/docs/IDRL/956EN.pdf>
- 145 Government Regulation of the Republic of Indonesia Number 21 of 2008 Concerning Disaster Management, BNPB.
- 146 National Progress Report on the Implementation of the Hyogo Framework for Action (2013-2015), Indonesian National Agency for Disaster Management (BNBP), December 20, 2014, www.preventionweb.net/english/hyogo/progress/reports/
- 147 International Disaster Response Law (IDRL) in Indonesia, IFRC, Palang Merah Indonesia, Australian Red Cross, and Australian Government, 2014, <http://www.ifrc.org/PageFiles/124509/IDRL%20in%20Indonesia%20-%20Workshop%20Report%20-%20Final.pdf>
- 148 Law of the Republic of Indonesia Number 24 of 2007 Concerning Disaster Management, <http://www.ifrc.org/docs/IDRL/956EN.pdf>
- 149 Government Regulation of the Republic of Indonesia Number 21 of 2008 Concerning Disaster Management, BNPB.
- 150 United Nations website on disaster management in Indonesia, <http://www.un.or.id/en/what-we-do/partnership-for-development/disaster-management>
- 151 Indonesia Investments website, <http://www.indonesia-investments.com/projects/government-development-plans/national-long-term-development-plan-rpjpn-2005-2025/item308>
- 152 United Nations website: <http://www.un.or.id/en/what-we-do/partnership-for-development/disaster-management>
- 153 Medium Term Development Plan RPJMN 2015-2019, Director of Forestry and Water Resources Conservation Bappenas, Jakarta, 9 March 2015. http://www.unorcid.org/upload/BAPPENAS_Forestry_and_Water_Ressources_UNORCID_Dialogue_Series_9_March_2015.pdf
- 154 Prevention Web, <http://www.preventionweb.net/English/professional/policies/v.php?id=26349>
- 155 National Progress Report on the Implementation of the Hyogo Framework for Action (2013-2015), Indonesian National Agency for Disaster Management (BNBP), December 20, 2014, www.preventionweb.net/english/hyogo/progress/reports/
- 156 National Progress Report on the Implementation of the Hyogo Framework for Action (2013-2015), Indonesian National Agency for Disaster Management (BNBP), December 20, 2014, www.preventionweb.net/english/hyogo/progress/reports/
- 157 UNDP, Institutional and Legislative Systems for Early Warning and Disaster Risk Reduction.
- 158 UNDP, Institutional and Legislative Systems for Early Warning and Disaster Risk Reduction.
- 159 United Nations. <http://www.un.or.id/en/what-we-do/partnership-for-development/disaster-management>
- 160 Survey Reports from Civil Military Support Element Team as of 2015, Team Leader Matthew Finnie.
- 161 <http://www.preventionweb.net/english/professional/contacts/profile.php?id=10405>
- 162 UNDP, Institutional and Legislative Systems for Early Warning and Disaster Risk Reduction.
- 163 German Research Centre for Geosciences, Ten years after the disaster: Tsunami-Early Warning System for the Indian Ocean. December 19, 2014. <http://www.gfz-potsdam.de/en/media-communication/press-releases/details/article/zehn-jahre-nach-der-katastrophe-tsunami-fruehwarnsystem-fuer-den-indischen-ozean/>
- 164 UNESCO, Intergovernmental Oceanographic Commission Tsunami Programme. http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=8:indian-ocean-home&catid=11&Itemid=13

- 165 UNESCO, Indian Ocean Tsunami Warning System: An Intergovernmental Endeavor. <http://www.unesco.org/new/en/unesco/themes/pcpd/unesco-in-post-crisis-situations/tsunami-warning-system/>
- 166 Fujitsu, BPBD DKI Jakarta Uses Fujitsu DIMS to Help with Disaster Mitigation. <http://www.fujitsu.com/global/about/resources/case-studies/030414-cs-bpbd-dki-jakarta.html>
- 167 Fujitsu, Fujitsu Deploys Smartphone-Based Participatory Disaster Information-Sharing System for Jakarta. March 23, 2015. <http://www.fujitsu.com/global/about/resources/news/press-releases/2015/0323-01.html>
- 168 Relief Web, Flood-monitoring website launched. December 3, 2014. <http://reliefweb.int/report/indonesia/flood-monitoring-website-launched>
- 169 The Operation of Jakarta Tropical Cyclone Warning Centre (Jakarta TCWC)
- 170 National Hurricane Center. <http://www.nhc.noaa.gov/aboutrsmc.shtml>
- 171 National Progress Report on the Implementation of the Hyogo Framework for Action (2013-2015), Indonesian National Agency for Disaster Management (BNBP), December 20, 2014, www.preventionweb.net/english/hyogo/progress/reports/
- 172 PHYS Org, Twitter Chief vows to help Indonesia fight disasters. March 26, 2015. <http://phys.org/news/2015-03-twitter-chief-vows-indonesia-disasters.html>
- 173 The Institute, Twitter: An Early Disaster-Warning System. September 2013. <http://theinstitute.ieee.org/ieee-roundup/opinions/ieee-roundup/twitter-an-early-disasterwarning-system>
- 174 Indonesia HFA 2013-2015.
- 175 Australian Embassy Indonesia, Strengthening disaster reporting this Disaster Risk Reduction month. October 28, 2011. http://indonesia.embassy.gov.au/jakt/MR11_082.html
- 176 UNDP, Institutional and Legislative Systems for Early Warning and Disaster Risk Reduction.
- 177 The Jakarta Post, Media's role in times of natural disasters. June 3, 2011. <http://www.thejakartapost.com/news/2011/06/03/media%E2%80%99s-role-times-natural-disasters.html>
- 178 JAMCO, The Roles of Broadcasters in Disaster Reportage: A Lesson Learned from Tsunami Reportage in Indonesia. 2013. <http://www.jamco.or.jp/en/symposium/21/5/>
- 179 Redwing, Indonesia's US\$10 Billion Media Market. <http://redwing-asia.com/market-data/market-data-media/>
- 180 Internet Users by Country (2014). <http://www.internetlivestats.com/internet-users-by-country/>
- 181 Wall Street Journal, Facebook Users in Indonesia Rise to 69 million. June 27, 2014. <http://blogs.wsj.com/digits/2014/06/27/facebook-users-in-indonesia-rise-to-69-million/>
- 182 Koloay, Jorry, Strategic Issues of Civil Military Cooperation in a Disaster Relief Operation, August 2011.
- 183 Geopolitical Monitor website, <http://www.geopoliticalmonitor.com/indonesian-disaster-relief-4239>.
- 184 The Role of Defence Force in Humanitarian Assistance and Disaster Relief, Lt Col Erwin S. Aldedharma, Indonesia Navy.
- 185 U.S. Library of Congress. Federal Research Division. Country Profile: Indonesia.
- 186 A U.S.-Indonesia Partnership for 2020. <http://www.thejakartapost.com/news/2015/01/08/us-get-involved-ri-military.html>
- 187 <http://www.thejakartapost.com/news/2015/01/08/us-get-involved-ri-military.html>
- 188 Law of the Republic of Indonesia Number 24 of 2007 Concerning Disaster Management, <http://www.ifrc.org/docs/IDRL/956EN.pdf>.
- 189 Government Regulation of the Republic of Indonesia Number 21 of 2008 Concerning Disaster Management, BNBP
- 190 Government Regulation of the Republic of Indonesia Number 23 of 2008 Concerning Participation of International Institutions and Foreign Non-Governmental Organizations in Disaster Management , BNBP

- 191 Guideline on the Role of the International Organizations and Foreign Non-Government Organizations During Emergency Response, BNPB, 21/2010.
- 192 United Nations website, <http://www.un.or.id/en/what-we-do/partnership-for-development/disaster-management>.
- 193 ASEAN website, www.asean.org
- 194 ICAO, Get Airport Ready for Disaster Programme. http://www.icao.int/Meetings/a38/Documents/WP/wp149_en.pdf
- 195 United Nations, Get Airports Ready for Disaster Program. <http://business.un.org/en/documents/10232>
- 196 International Disaster Response Law in Indonesia.
- 197 Global Hand. <http://www.globalhand.org>
- 198 Directorate General of Indonesian Customs and Excise.
- 199 Directorate General of Indonesian Customs and Excise.
- 200 Directorate General of Indonesian Customs and Excise.
- 201 Mondaq, Indonesia: New BPOM regulation on importing drugs and food into Indonesia. <http://www.mondaq.com/x/258914/international+trade+investment/New+BPO M+regulation+on+importing+drugs+and+food+into+Indonesia>
- 202 BNPB, Guideline of The Role of the International Organization and Foreign Non-Government Organizations during Emergency Response.
- 203 Indonesia Focus, General Import Requirements into Indonesia. http://www.gbgindonesia.com/en/main/useful_resources/documents/publications/Indonesia%20General%20Import%20Requirements.pdf
- 204 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 205 The World Bank, Indonesia: More infrastructure, skills, better market regulation needed for higher growth. June 23, 2014. <http://www.worldbank.org/en/news/press-release/2014/06/23/indonesia-more-infrastructure-skills-better-market-regulation-needed-for-higher-growth>
- 206 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 207 The Jakarta Post, Infrastructure spending essential for disaster resilience. March 17, 2015. <http://www.thejakartapost.com/news/2015/03/17/infrastructure-spending-essential-disaster-resilience.html>
- 208 World Economic Forum, The Global Competitiveness Report 2014-2015. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf
- 209 World Economic Forum, The Global Competitiveness Report 2014-2015. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf
- 210 The World Bank and GFDRR, Indonesia Advancing a National Disaster Risk Financing Strategy-Options for Consideration. October 2011. http://www.gfdr.org/sites/gfdr/files/publication/Indonesia_DRFI_Report_FINALOct11.pdf
- 211 The World Bank and GFDRR, Indonesia Advancing a National Disaster Risk Financing Strategy-Options for Consideration. October 2011. http://www.gfdr.org/sites/gfdr/files/publication/Indonesia_DRFI_Report_FINALOct11.pdf
- 212 Ministry of Transportation Indonesia. <http://www.indonesia.go.id/en/ministries/ministers/ministry-of-transportation/1670-profile/183-kementerian-perhubungan>
- 213 INDOAVIS NUSANTARA, Indonesia Airport/Facility Directory. July 2012. <http://indoavis.co.id/main/PRODUCTs/AFD-2012/PROPOSAL%20AFD-2012-ENGLISH.pdf>
- 214 Directorate General of Air Transport Indonesia. <http://hubud.dephub.go.id/?en/page/detail/19>
- 215 Airports in Indonesia. <http://www.aircraft-charter-world.com/airports/asia/indonesia.htm>

- 216 World Economic Forum, The Global Competitiveness Report 2014-2015. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf
- 217 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 218 Global Business Guide Indonesia, Indonesia's Maritime Ambitions Require Massive Upgrade of Seaports. http://www.gbgindonesia.com/en/services/article/2015/indonesia_s_maritime_ambitions_require_massive_upgrade_of_seaports_11120.php
- 219 Brookings, Indonesia as a Maritime Power: Jokowi's Vision, Strategies, and Obstacles Ahead. November 2014. <http://www.brookings.edu/research/articles/2014/11/indonesia-maritime-liow-shekhar>
- 220 Ministry of National Development Planning, Infrastructure Development Strategy in Indonesia. January 13, 2011. <http://www.oecd.org/gov/regulatory-policy/47377678.pdf>
- 221 Reuters, Indonesia to create new coastguard, boost defense spending. November 13, 2014. <http://www.reuters.com/article/2014/11/13/us-indonesia-security-idUSKCN0IX10220141113>
- 222 The Jakarta Post, The dilemma of Indonesia's coast guard. February 11, 2015. <http://www.thejakartapost.com/news/2015/02/11/the-dilemma-indonesia-s-coast-guard.html>
- 223 OECD, Indonesia Regulatory and Competition Issues in Ports, Rail and Shipping. September 2012. <http://www.oecd.org/indonesia/Chap%205%20-%20Ports%20Rail%20and%20Shipping.pdf>
- 224 OECD, Indonesia Regulatory and Competition Issues in Ports, Rail and Shipping. September 2012. <http://www.oecd.org/indonesia/Chap%205%20-%20Ports%20Rail%20and%20Shipping.pdf>
- 225 The World Bank, Indonesia Averting an Infrastructure Crisis: A Framework for Policy and Action. <http://www.worldbank.org/transport/transportresults/regions/eap/ind-infra-crisis.pdf>
- 226 The World Bank, Investing in Indonesia's Roads: Improving Efficiency and Closing the Financing Gap - road sector public expenditure review 2012. <http://www.worldbank.org/en/news/feature/2013/02/12/investing-in-indonesia-roads-improving-efficiency-and-closing-the-financing-gap-road-sector-public-expenditure-review-2012>
- 227 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 228 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 229 Asian Development Bank, Indonesia Transport Sector Assessment, Strategy, and Road Map. July 2012. <http://www.adb.org/sites/default/files/institutional-document/33652/files/ino-transport-assessment.pdf>
- 230 Umi Asia, Indonesia's Railway Industry- Overview and Opportunities for foreign business. February 2014. http://www.s-ge.com/en/filefield-private/files/77615/field_blog_public_files/40057
- 231 Australia Indonesia Partnership, National Railway Master Plan, Indonesia Infrastructure Initiative. http://www.indii.co.id/images/dx_publication_file/8358/national-railway-master-plan-consolidated-background-papers.pdf
- 232 Australia Indonesia Partnership, National Railway Master Plan, Indonesia Infrastructure Initiative. http://www.indii.co.id/images/dx_publication_file/8358/national-railway-master-plan-consolidated-background-papers.pdf
- 233 Ministry of Education and Culture Indonesia, Achievement of the Indonesian Safe School Implementation. December 2014. <http://www.worldbank.org/content/dam/Worldbank/Feature%20Story/japan/pdf/event/2014/121014-GogotSuharwoto.pdf>

- 234 A Practical Guideline to Making School Safer from Natural Disaster. <https://www.gfdrr.org/sites/gfdrr/files/Safer%20School%20Guide%20Indonesia.pdf>
- 235 The World Bank, Indonesia: Helping Build Resilient Communities. April 26, 2014. <http://www.worldbank.org/en/results/2014/04/14/indonesia-helping-build-resilient-communities>
- 236 A Practical Guideline to Making School Safer from Natural Disaster. <https://www.gfdrr.org/sites/gfdrr/files/Safer%20School%20Guide%20Indonesia.pdf>
- 237 A Practical Guideline to Making School Safer from Natural Disaster. <https://www.gfdrr.org/sites/gfdrr/files/Safer%20School%20Guide%20Indonesia.pdf>
- 238 Global Business Guide Indonesia, An Overview of Indonesia's Telecommunication Sector. http://www.gbgingonesia.com/en/services/article/2012/an_overview_of_indonesia_s_telecommunication_sector.php
- 239 Directorate General of Post and Telecommunications
- 240 Pew Research Center, Global Digital Communication: Texting, Social Networking Popular Worldwide. February 29, 2012. <http://www.pewglobal.org/2011/12/20/global-digital-communication-texting-social-networking-popular-worldwide/>
- 241 An Overview of Indonesian Internet Infrastructure and Governance. October 25, 2013. <https://citizenlab.org/2013/10/igf-2013-an-overview-of-indonesian-internet-infrastructure-and-governance/>
- 242 Global Business Guide Indonesia, Improving Internet Access in Indonesia. http://www.gbgingonesia.com/en/services/article/2012/improving_internet_access_in_indonesia.php
- 243 Internews, Indonesia: Crisis Communication Channels. 2013. https://www.internews.org/sites/default/files/resources/2013-11-04_InternewsWPGoogle_indonesiaR1web.pdf
- 244 Internews, Indonesia: Crisis Communication Channels. 2013. https://www.internews.org/sites/default/files/resources/2013-11-04_InternewsWPGoogle_indonesiaR1web.pdf
- 245 Internews, Indonesia: Crisis Communication Channels. 2013. https://www.internews.org/sites/default/files/resources/2013-11-04_InternewsWPGoogle_indonesiaR1web.pdf
- 246 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 247 PWC, Power in Indonesia. April 2013. <http://www.pwc.com/id/en/publications/assets/electricity-guide-2013.pdf>
- 248 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 249 OECD, Tackling the Infrastructure Challenge in Indonesia. October 26, 2010. <http://www.oecd-ilibrary.org/docserver/download/5km5xvc1kk47.pdf?expires=1430416054&id=id&accname=guest&checksum=FA2EAC8BC8B12E7461EB9B7C4A78DF2E>
- 250 IISD, Investment Incentives for Renewable Energy: case Study for Indonesia. December 2012. http://www.iisd.org/tkn/pdf/investment_incentives_indonesia.pdf
- 251 <https://www.nae.edu/Publications/Bridge/engineeringfortheThreatofNaturalDisasters/Effectsofthe2004Sumatra-AndamanEarthquakeandIndianOceanTsunamiinAcehProvince.aspx>
- 252 IISD, Investment Incentives for Renewable Energy: case Study for Indonesia. December 2012. http://www.iisd.org/tkn/pdf/investment_incentives_indonesia.pdf
- 253 IISD, Investment Incentives for Renewable Energy: case Study for Indonesia. December 2012. http://www.iisd.org/tkn/pdf/investment_incentives_indonesia.pdf
- 254 Asian Development Bank, Indonesia Water Supply and Sanitation Sector Assessment, Strategy, and Road Map. December 2012. <http://www.adb.org/sites/default/files/institutional-document/33808/files/indonesia-water-supply-sector-assessment.pdf>

- 255 Asian Development Bank, Indonesia Water Supply and Sanitation Sector Assessment, Strategy, and Road Map. December 2012. <http://www.adb.org/sites/default/files/institutional-document/33808/files/indonesia-water-supply-sector-assessment.pdf>
- 256 Asian Development Bank, Indonesia-Water Supply and Sanitation Sector Assessment, Strategy, and Road Map. January 2013.
- 257 U.S. Department of State, Accelerating Indonesia's Infrastructure Development. 2013. http://photos.state.gov/libraries/indonesia/890636/pdf_001/business_infrastructure.pdf
- 258 UNDP, Institutional and Legislative Systems for Early Warning and Disaster Risk Reduction.
- 259 World Health Organization, World Health Statistics 2014. http://apps.who.int/iris/istream/10665/112738/1/9789240692671_eng.pdf?ua=1
- 260 WHO and OECD, Health at a Glance Asia/Pacific 2014, Indonesia. <http://www.oecd.org/health/health-systems/Health-at-a-Glance-Asia-Pacific-2014-Note-INDONESIA.pdf>
- 261 WHO and OECD, Health at a Glance Asia/Pacific 2014, Indonesia. <http://www.oecd.org/health/health-systems/Health-at-a-Glance-Asia-Pacific-2014-Note-INDONESIA.pdf>
- 262 GBD Profile Indonesia. http://www.healthdata.org/sites/default/files/files/country_profiles/GBD/ihme_gbd_country_report_indonesia.pdf
- 263 World Health Organization, Country Cooperation Strategy Indonesia. http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_idn_en.pdf
- 264 Ministry of Health Republic of Indonesia. <http://www.indonesia.go.id/en/ministries/ministers/ministry-of-health/1659-profile/176-kementerian-kesehatan>
- 265 INTREC, Indonesia Country Report. October 2012. <http://www.intrec.info/Country%20reports/INTREC%20-%20Indonesia.pdf>
- 266 INTREC, Indonesia Country Report. October 2012. <http://www.intrec.info/Country%20reports/INTREC%20-%20Indonesia.pdf>
- 267 Indonesia: Health Delivery and Financing System. November 17, 2012. <http://www.slideshare.net/deniiskandar/indonesia-health-delivery-and-financing-sys>
- 268 World Health Organization, Indonesia Case Study. http://www.who.int/workforcealliance/knowledge/resources/MLHWCountryCaseStudies_annex10_Indonesia.pdf
- 269 Presentation by Mulya Asmi, Direktur Bina Pelayanan Medik Spesialistik, Dirjen Yanmed on the Annual Social Obgyn Convention, Malang, 4 April 2008. <http://aid.dfat.gov.au/Publications/Documents/aus-indo-healthsystems-annexes.doc>
- 270 U.S. National Library of Medicine National Institutes of Health, Desa SIAGA, the Alert Village: the evolution of an iconic brand in Indonesian public health strategies. July 29, 2014. <http://www.ncbi.nlm.nih.gov/pubmed/23650333>
- 271 The World Bank, Health Financing in Indonesia. <http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/Peer-Reviewed-Publications/HealthFinancinginIndonesiaAREformRoadMap2009.pdf>
- 272 The World Bank, Health Financing in Indonesia. <http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/Peer-Reviewed-Publications/HealthFinancinginIndonesiaAREformRoadMap2009.pdf>
- 273 Journal of Hospital Administration, Exploring Indonesia's low hospital bed utilization-low bed occupancy-high disease burden paradox. 2013. <http://dx.doi.org/10.5430/jha.v2n1p49>
- 274 Japan-World Bank Partnership Program for Universal Health Coverage, Universal Health Coverage for Inclusive and Sustainable Development Indonesia. August 2014. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/08/000470435_20141008105309/Rendered/PDF/912170WP0UHC0C0Box385329B00PUBLIC0.pdf

- 275 Journal of Hospital Administration, Exploring Indonesia's low hospital bed utilization-low bed occupancy-high disease burden paradox. 2013. <http://dx.doi.org/10.5430/jha.v2n1p49>
- 276 Indonesian Ministry of Health, access via <http://www.slideshare.net/FrostandSullivan/indonesia-and-vietnam-healthcare-outlook-20122015>
- 277 Thabrany, Hasbullah-University of Indonesia, Indonesian Health Care System, Policy and The Road to Universal Health Coverage. 2012. http://www.ispor.org/conferences/Taipei0912/ReleasedPresentations/third_plenary_session_Hasbullah_Thabrany.pdf
- 278 Health Policy and Health Finance Knowledge Hub, The Growth of Non-State Hospital in Indonesia: Implications for policy and regulatory options. September 2011. http://community.eldis.org/.5b0c5e57/HPHF_Hub_WP12_The_Growth_Of_Non_State_Hospitals_in_Indonesia_-_Implications_for_policy_and_regulatory_options.pdf
- 279 Health Facilities Safe from Disasters. http://www.saarc-sadkn.org/downloads/hospital/Hospitals_Safe_from_Disasters_Document11.pdf
- 280 Eijkman Institute for Molecular Biology/Ministry for Research and Technology, Current Strategies, initiatives and challenges to mitigate biorisk: Indonesia's experience. <http://aseanregionalforum.asean.org/files/Archive/12%20ARF%5BIndonesia%5D.pdf>
- 281 Biosafety and Biosecurity in Health Laboratories. July 2008. http://apps.searo.who.int/PDS_DOCS/B3217.pdf
- 282 Ministry of Health Republic of Indonesia, Laboratory Biosafety and Biosecurity in Indonesia. April 2005. <http://www.biosecurity.sandia.gov/ibtr/subpages/pastConf/20032005/redi/frans-halim.pdf>
- 283 Indonesian Research Center for Veterinary Science, Ministry of Agriculture Indonesia, The Development of Biosafety and Biosecurity in an Indonesian Veterinary Laboratory. <http://www.absaconference.org/pdf54/SessionIV-SendowGriffin.pdf>
- 284 <http://indonesian-biorisk.org/news/>
- 285 U.S. National Library of Medicine National Institutes of Health, Priorities and realities: addressing the rich-poor gaps in health status and service access in Indonesia. November 9, 2011. <http://www.ncbi.nlm.nih.gov/pubmed/22067727>
- 286 IRIN News, Hopes and Fears as Indonesia Rolls out Universal Healthcare. January 14, 2014. <http://www.irinnews.org/report/99463/hopes-and-fears-as-indonesia-rolls-out-universal-healthcare>
- 287 The World Bank, Indonesia's Government-Financed Health Coverage Program. <https://openknowledge.worldbank.org/bitstream/handle/10986/13304/74996.pdf?sequence=1>
- 288 The World Bank, Indonesia's Government-Financed Health Coverage Program. <https://openknowledge.worldbank.org/bitstream/handle/10986/13304/74996.pdf?sequence=1>
- 289 Japan-World Bank Partnership Program for Universal Health Coverage, Universal Health Coverage for Inclusive and Sustainable Development Indonesia. August 2014. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/08/000470435_20141008105309/Rendered/PDF/912170WP0UHC0C0Box385329B00PUBLIC0.pdf
- 290 The World Bank, Indonesia's Government-Financed Health Coverage Program. <https://openknowledge.worldbank.org/bitstream/handle/10986/13304/74996.pdf?sequence=1>
- 291 Global Health Workforce Alliance and GIZ, Indonesia Human Resources for Health Development Plan Year 2011-2025. http://www.who.int/workforcealliance/countries/indonesia_hrhplan_summary_en.pdf?ua=1
- 292 World Health Organization, Country Cooperation Strategy Indonesia. http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_idn_en.pdf
- 293 Indonesian National Aids Commission 2012, Country Follow Up Report to the Declaration of Commitment on HIV/AIDS. Reporting Period 2010-2011. http://www.unaids.org/sites/default/files/en/dataanalysis/knowyourresponse/countryprogressreports/2012countries/ce_ID_Narrative_Report.pdf

- 294 <http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1176706430507/3681211-1294800720919/HSR.pptx>
- 295 http://fk.ugm.ac.id/wp-content/uploads/2013/09/NCD-in-Indonesia-Engl_UGM__Prima_rev-Compatibility-Mode.pdf
- 296 GBD Profile Indonesia, Global Burden of Disease, Injuries, and Risk Factors Study 2010. http://www.healthdata.org/sites/default/files/files/country_profiles/GBD/ihme_gbd_country_report_indonesia.pdf
- 297 Journal of Hospital Administration, Exploring Indonesia's low hospital bed utilization-low bed occupancy-high disease burden paradox. 2013. <http://dx.doi.org/10.5430/jha.v2n1p49>
- 298 http://fk.ugm.ac.id/wp-content/uploads/2013/09/NCD-in-Indonesia-Engl_UGM__Prima_rev-Compatibility-Mode.pdf
- 299 Japan-World Bank Partnership Program for Universal Health Coverage, Universal Health Coverage for Inclusive and Sustainable Development Indonesia. August 2014. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/08/000470435_20141008105309/Rendered/PDF/912170WP0UHC0C0Box385329B00PUBLIC0.pdf
- 300 Japan-World Bank Partnership Program for Universal Health Coverage, Universal Health Coverage for Inclusive and Sustainable Development Indonesia. August 2014. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/08/000470435_20141008105309/Rendered/PDF/912170WP0UHC0C0Box385329B00PUBLIC0.pdf
- 301 Japan-World Bank Partnership Program for Universal Health Coverage, Universal Health Coverage for Inclusive and Sustainable Development Indonesia. August 2014. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/08/000470435_20141008105309/Rendered/PDF/912170WP0UHC0C0Box385329B00PUBLIC0.pdf
- 302 The World Bank, Indonesia's Government-Financed Health Coverage Program. <https://openknowledge.worldbank.org/bitstream/handle/10986/2434/538830PUB0Heal101Official0Use0Only1.pdf?sequence=1>
- 303 Health Facilities Safe from Disasters. http://www.saarc-sadkn.org/downloads/hospital/Hospitals_Safe_from_Disasters_Document11.pdf
- 304 USGS, Magnitude 6.3 – Java, Indonesia. <http://earthquake.usgs.gov/earthquakes/eqinthenews/2006/usneb6/#summary>
- 305 Emergency Preparedness and Response: From Lessons to Action. June 2006. http://www.preventionweb.net/files/2006_VL206703.pdf
- 306 Primary Health Centre disaster preparedness after the earthquake in Padang Pariaman, West Sumatra, Indonesia. <http://www.biomedcentral.com/content/pdf/1756-0500-4-81.pdf>
- 307 Emergency Preparedness and Response: From Lessons to Action. June 2006. http://www.preventionweb.net/files/2006_VL206703.pdf
- 308 Emergency Preparedness and Response: From Lessons to Action. June 2006. http://www.preventionweb.net/files/2006_VL206703.pdf
- 309 Emergency Preparedness and Response: From Lessons to Action. June 2006. http://www.preventionweb.net/files/2006_VL206703.pdf
- 310 Indonesian Ministry of Health and WHO. Technical Guidelines for Health Crisis Responses on Disaster. 2007. Indonesia.
- 311 Adventist Development and Relief Agency. <http://www.adraindonesia.org/en/>
- 312 Asian Development Bank. <http://www.adb.org/countries/indonesia/main>
- 313 Australia-Indonesia Facility for Disaster Reduction. <http://www.dfat.gov.au/geo/indonesia/development-assistance/Pages/disaster-risk-management-in-indonesia.aspx>
- 314 CARE. <http://www.care.org/country/indonesia>

- 315 Food and Agriculture Organization. <http://coin.fao.org/cms/do/en/office.html?officeCode=FAINS>
- 316 German Development Cooperation. <http://www.giz.de/en/worldwide/352.html>
- 317 International Federation of Red Cross and Red Crescent Societies. <http://pmi.or.id/>
- 318 International Labour Organization. <http://www.ilo.org/jakarta/lang--en/index.htm>
- 319 International Monetary Fund. <http://www.imf.org/external/country/IDN/rr/index.htm>
- 320 International Organization for Migration. <http://www.iom.or.id/where-we-work/iom-indonesia-list-branch-offices>
- 321 Islamic Relief. <http://www.islamic-relief.or.id/>
- 322 Japan International Cooperation Agency. <http://www.jica.go.jp/indonesia/english/office/index.html>
- 323 Joint United Nations Programme on HIV/AIDS. http://www.unaids.org/sites/default/files/country/documents//ce_ID_Narrative_Report.pdf
- 324 Office for the Coordination of Humanitarian Affairs. <http://www.unocha.org/roap/about-us/about-ocha-roap/indonesia>
- 325 Plan International. <https://plan-international.org/where-we-work/asia/indonesia/>
- 326 Save the Children. <http://Indonesia.savethechildren.net/>
- 327 United Nations Children's Fund. <http://www.unicef.org/indonesia/>
- 328 United Nations Development Programme. <http://www.id.undp.org/>
- 329 United Nations Population Fund. <http://indonesia.unfpa.org/>
- 330 United States Agency for International Development. <http://www.usaid.gov/Indonesia>
- 331 The World Bank. <http://www.worldbank.org/en/country/indonesia>
- 332 World Food Programme. <http://www.wfp.org/countries/Indonesia>
- 333 World Health Organization. <http://www.who.int/countries/idn/en/>
- 334 World Vision. <http://www.wvi.org/Indonesia>
- 335 CIA Factbook, Indonesia. <https://www.cia.gov/library/publications/the-world-factbook/geos/id.html>
- 336 World Health Organization. <http://www.who.int/healthinfo/paper30.pdf>
- 337 Indonesia-Life expectancy at birth. 2011. <http://countryeconomy.com/demography/life-expectancy>
- 338 UNICEF (2012). "The State of the World's Children 2012". New York. <http://www.unicef.org/sowc2012/pdfs/UNDER-FIVE-MORTALITY-RANKINGS.pdf>
- 339 Transparency International. <http://www.transparency.org/cpi2014/results>
- 340 UNESCO. http://data.uis.unesco.org/Index.aspx?DataSetCode=EDULIT_DS&popupcustomise=true&lang=en
- 341 World Economic Forum, Gender Gap Index 2014 <http://reports.weforum.org/global-gender-gap-report-2014/rankings/>
- 342 UNDP. <http://hdr.undp.org/en/content/table-1-human-development-index-and-its-components>
- 343 World Risk Report 2012. <http://worldriskreport.entwicklung-hilft.de/Report.435.0.html>