



BRUNEI

Disaster Management Reference Handbook

August 2022

Disaster Management Reference Handbook Series

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Acknowledgements

CFE-DM would like to thank the following people for their knowledge and support in developing this resource:

Wing Commander Hatem Abiad (Royal Australian Air Force), Deputy Staff Judge Advocate – Joint Operational Law Team, and the Office of the Staff Judge Advocate at U.S. Indo-Pacific Command;

LCDR Samuel Kim (U.S. Navy), Chief, Office of Defense Cooperation, U.S. Embassy Bandar Seri Begawan, Brunei; and

Ganesh Navaratnam, Regional Civil-Military Relations Coordinator at the International Federation of Red Cross and Red Crescent Societies' Asia-Pacific Regional Office, Health, Disaster, Climate and Crisis Unit.

Front Cover

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Letter from the Director

Brunei is located in a disaster-prone region and confronts regular, small-scale emergencies – i.e., floods and fires. Although it is generally seen as at low risk of major hazards, the country lies along a coastline where there is both the long-term risk of sea level rise and the potential risk of tsunami. The country's already high exposure to heavy but unpredictable rainfall and the impacts of global climate change threaten to increase the severity of hazards confronting Brunei.

In the past two decades, Brunei has institutionalized its national disaster risk reduction and disaster management processes under the National Disaster Management Centre (NDMC), and there is close collaboration and coordination among government ministries and security forces. Moreover, Brunei is an active member-state of the Association of Southeast Asian Nations (ASEAN), which has developed mechanisms and tools for responding to disasters in a unified and coordinated way. NDMC also actively cooperates with other regional centers, including those based in the United States (U.S.) such as the Pacific Tsunami Warning Center and the Pacific Disaster Center.

In addition to U.S. support for ASEAN initiatives, U.S. and Bruneian armed forces units undertake annual, bilateral exercises, such as Pahlawan Warrior and Cooperation Afloat Readiness and Training (CARAT), which allow the two countries' militaries to build familiarity with each other long before an emergency calls them into cooperation in the field. As climate change exacerbates the hazards Brunei confronts, this relationship will help support Brunei's risk reduction-oriented adaptations at home and within ASEAN frameworks.

The present, updated Brunei Disaster Management Reference Handbook provides a baseline of understanding of factors that influence disaster management within the country. It is intended to help inform persons who are planning or executing a disaster response mission in Brunei or who will be working alongside Bruneian responders and international humanitarians.



Sincerely,

Joseph D. Martin, SES
Director

About the Center for Excellence in Disaster Management & Humanitarian Assistance

Overview

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) is a United States (U.S.) Department of Defense (DoD) organization comprised of nearly 30 subject matter experts that provide academic research, civil-military coordination training, and operational insights to support decision making before, during, and after crises. The Center is designed to bridge understanding between humanitarians, civilian, and military responders. CFE-DM partners with a diverse group of governmental and nongovernmental actors, as well as academic institutions to increase collaborations and capabilities in humanitarian assistance and disaster response. While maintaining a global mandate, the Indo-Pacific region is our priority of effort and collaboration is the cornerstone of our operational practice. The Center is a direct reporting unit to U.S. Indo-Pacific Command (USINDOPACOM) and is located on Ford Island, Joint Base Pearl Harbor-Hickam, Hawaii.

Vision

The Joint Force, allies, and partners are fully prepared to conduct and support foreign humanitarian assistance.

Mission

CFE-DM builds crisis response capacity in U.S. and partner militaries, enhances coordination and collaboration with civilian and foreign partners, and strengthens those relationships to save lives and alleviate human suffering before, during, and after humanitarian crises.

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EXECUTIVE SUMMARY

Located on the northwest coast of the island of Borneo, Brunei Darussalam (hereafter “Brunei”) is a geographically small Sultanate, made up of two parts separated by a strip of Malaysian land. The country has varied terrain and a tropical climate. There are fewer than 500,000 people living in the country, and an estimated 75% of the population lives in urban areas, mostly in the coastal plains. More than 70% of the land is forested.

Despite its location in a disaster-prone region, Brunei itself is at generally low risk for natural disasters. There are floods during the northeast monsoon and transitional rainy season, but the country is not located in a typhoon path and has not suffered from large-scale flood damage. Low-level earthquakes have been recorded, although earthquake-related disasters are not common. The country lies along a coastline, and it is at risk of tsunami although there is no historic record of a tsunami striking it. Despite overall insulation from the region’s major hazards, given the country’s already high exposure to heavy but unpredictable rainfall, the impacts of global climate change do threaten to increase the severity of hazards confronting Brunei as sea levels rise and precipitation patterns shift.

Brunei has institutionalized its national disaster risk reduction and disaster management processes under the National Disaster Management Centre (NDMC), which is responsible for overseeing all phases of disaster management from risk assessment and adaptation to mitigation and recovery. Under Brunei’s whole-of-nation approach, there is close collaboration and coordination among government line ministries and security authorities such as the Royal Brunei Police Force and Royal Brunei Armed Forces. Moreover, Brunei is an active and integrated member-state of the Association of Southeast Asian Nations (ASEAN), which has developed mechanisms and tools for responding to disasters in a unified and coordinated way.

NDMC operates the nerve center for disaster

operations at the national level and supports operations, planning, and logistics for national-level emergencies while each of the country’s four administrative districts also has a disaster management committee and operates a district emergency operations center. At all levels, Brunei has adopted use of an Incident Command System to command, control, and coordinate emergency response. In times of national emergency, the National Standard Operating Procedures (NaSOP) requires the Information Department of the Prime Minister’s Office to take the lead for risk communication and to coordinate with other relevant agencies and stakeholders. It communicates disaster-related information to the public via mass media, government websites, and social media channels.

Although the government provides most of the disaster risk reduction and disaster response personnel and assets, some civil society initiatives have developed. Among the key community-based risk management partners is Brunei’s national Red Crescent Society whose 1,500 volunteers are located in all four of the country’s administrative districts. The organization’s youth cadets are a well-organized and resourced group supporting the country’s disaster management programming in schools. Moreover, the Red Crescent and its youth have regular interaction with the police and armed forces who are first responders.

As climate change exacerbates the hazards Brunei confronts, the government’s and people’s ability to implement risk reduction-oriented adaptations can be expected to become the focus of disaster management activities. Alongside its ASEAN partners, Brunei appears set to back multilateral action even as it attempts to mitigate its own contributions to sea level rise and warming trends linked to its petroleum production industry. The potential dislocations caused by changes in this major revenue earner will challenge the country’s leadership as it continues to diversify its economy while ensuring high standards of living.

COUNTRY OVERVIEW

Brunei is a geographically small Sultanate located on the northwestern coast of the island of Borneo. It is surrounded by Malaysia's Sarawak state but has a small coastline on the South China Sea. Since its independence in 1984, the country has been ruled by the same Sultan, and its fewer than 500,000 people enjoy one of the top ten highest per capita incomes in the world. The economy is based on fossil fuel production and export although there have been efforts to diversify due not only to concern about overreliance on one industry but also as part of a policy of reducing contributions to global climate change. A generally hot and humid place, the country already experiences regular floods, driven by torrential rains, alongside landslides along its steep slopes and wild-/forest fires driven by occasional drought. Increasing variability of rainfall and rising sea levels put the country's coastal and riverside settlements at risk.

History

Modern Brunei is a small sultanate on the island of Borneo. It is what remains of a larger Malay sultanate, the deep history of which is obscure. The historic Brunei was known as a trading kingdom with which Chinese traders had built ties at least as early as the 6th century CE. Over the succeeding two or three centuries, the kingdom built ties with Arabic traders, and Islam made inroads among elite families of the Malay Burunay people of Borneo. By the 14th century, the kingdom had come under the sway of the Hindu Majapahit Empire, based on Java, although it is doubtful the Empire ever actually held political control over what is today Brunei. Rather, Majapahit likely asserted control over most of the commerce that flowed through the region. Thus, when Majapahit influence waned in the late 14th century, Brunei was able to reclaim its own primacy via trade. Four sultans would reign between this period and 1485, during which time, they expanded their relationships with other regional Sultanates and

became a major regional commercial hub.

The fifth sultan, Bolkiah, controlled most of Borneo, the Sulu Archipelago, coastal areas of Sarawak and Sabah, and neighboring islands during his reign (1485-1521), and his family would go on to rule the Sultanate up through the present day. In 1521, at the very end of Bolkiah's reign, Ferdinand Magellan's expedition reached Brunei, and Brunei and Portugal would have a fruitful trading relationship. Toward the end of the 16th century, however, a combination of internal strife and military conquest by Spanish powers based in the Philippines would hasten the decline of the Sultanate. When the reign of the ninth sultan, Hassan, ended in 1598, a 12-year war of succession erupted, further weakening Brunei even as European colonial projects were expanding in the region. Europe's influence all but destroyed Brunei's economic base, and internal conflict continued such that, by 1839, the then-sultan would accept the assistance of an English adventurer, James Brooke, in putting down rebellion.¹ In exchange, the sultan ceded Sarawak to Brooke in 1841; Brooke would steadily expand his holdings and even seek control over all of Brunei although he never gained it. Additional territorial cessions to Great Britain diminished Brunei's power such that, by the end of the 19th century, Brunei had been limited to the two, small, separate territories that comprise it today.

In 1888, along with other northern and coastal areas of Borneo, Brunei became a British Protectorate. After 1905, a British Resident was appointed to advise the sultan on all matters of external relations and internal administration, with the exception of religious affairs; the sultan was compelled to follow the Resident's advice. The next two decades would see Brunei struggle to build its economy, but its outlook improved considerably after the start of petroleum production in 1929 and oil export in 1932. During World War II, Brunei was occupied by Japanese forces² and administratively

incorporated into Japan's imperial project with a Japanese Governor installed to lead the country. In 1945, Australian forces, backed by United States (U.S.) military units, ousted the Japanese from Brunei after heavy fighting. A British Military Administration, largely staffed by Australians, took immediate control of Brunei, but after 1946,³ the British began negotiations with locals for Brunei's future independence. In 1959, Brunei became self-governing, and the British Resident was replaced with a High Commissioner. In 1962, a written constitution was adopted and a partly elected Legislative Council was installed. Later that year, a revolt took place. The British helped suppress the revolt, and the Sultan declared a state of emergency, suspending much of the newly written constitution. The United Kingdom (UK) and Brunei signed a 1979 treaty that stated that Brunei would become fully independent in 1984, and both Malaysia and Indonesia gave assurances they would recognize Brunei's status.⁴

On 1 January 1984, Brunei became independent and was proclaimed an Islamic sultanate. The Legislative Council was suspended and replaced by a ministerial government wherein Sultan Hassanal Bolkiah held many ministerial positions, including prime minister, and his family members held many others. For example, the sultan's father was defense minister; when he died in 1986, the sultan also took up the post of defense minister. In 1990, the sultan encouraged his people to adopt the country's official ideology, *Melayu Islam Beraja* (Malay Islamic Monarchy, sometimes referred to as "MIB"), which, among other things, called for a stricter compliance with traditional Islamic principles. Although two restricted political parties were legalized in the mid-1980s, both were eventually banned. In 1995, the Brunei National United Party was allowed to operate; it was joined by the People's Awareness Party and the National Development Party in the early 21st century. In 2004, the sultan reinstituted the Legislative Council to discuss constitutional amendments, but moves toward reintroducing elections were swiftly scrapped. By 2007, two of

the three political parties were deregistered with only the National Development Party remaining.⁵ Sultan Hassanal Bolkiah, the 29th sultan in his line, remains in power as one of the world's longest-reigning monarchs and one of the few absolute monarchs remaining.⁶

Culture and Demographics

Brunei's 2020 population was 453,600 people.⁷ The population growth rate is estimated at 1.45%, and this already small country's total fertility rate has been steadily declining over the last few decades, from over 3.5 in the 1980s to below replacement level at nearly 1.8 in 2022. Nonetheless, the population continues to grow because of the large number of women of reproductive age and a reliance on foreign labor – mainly from Malaysia, Thailand, the Philippines, Indonesia, and South Asian countries – to fill low-skilled jobs.

Malay Islamic Monarchy is Brunei's official national ideology that covers areas of language and culture, values, and the political and government structures. On the cultural front, only seven of Brunei's native groups are recognized in the constitution; these groups – i.e., Brunei Malays, Belait, Bisayah, Dusun, Kedayan, Murut, and Tutong – are referred to as the "Bumiputera" and are entitled to official privileges. The most significant impact of this set of laws and preferences is that members of Brunei's large, ethnic Chinese community are denied citizenship and, therefore, the right to own property, access subsidized health care, or enjoy some free educational opportunities. Bruneian Chinese are officially stateless although their family roots in Brunei may stretch back many generations. Additional native ethnic groups that are not included in the Bumiputera are not officially identified as "Malay" or automatically granted citizenship.⁸

While Islam is the primary influence over social mores and customs, the culture of Brunei also derives from culture of the Malay world. Individual families are considered the building

blocks of society, and each person, including members of the extended family, holds a position in the familial hierarchy. Elders are considered most important while children are taught early on to set aside their own wishes for the benefit of the entire family. Members of the extended family are expected to remain loyal to each other and the family.

Although Islamic practices restrict many activities, the people of Brunei perform traditional music and unique folk dances, steeped in Malay roots. The Jipin is a performance carried out by a group of six men and women. The music is produced by percussion instruments such as gongs, coconut shells, rebana tambourines, and dombak drums, as well as the gambus dan biola, a stringed instrument. The Aduk Aduk, performed by children wearing warrior clothing to celebrate birthdays and the end of harvest season, is a popular music and dance ritual. The Adai Adai is a song performed by fishermen while they work; it is made up of vocals and percussion instruments.⁹

Beginning in the mid-20th century, the government took an active part promoting art. Production and sales of painting, architecture, jewelry, textiles, metal works, and baskets increased. Some peculiarities of the artistic scene are that women tend to use textiles and beads in their work while men use metals. Brunei has a reputation for fine fabrics dyed in the batik style and for silver ornaments. Literature is another important component of Bruneian culture. The epic poem, Sya'ir Awang Simawn, tells the history of the Sultanate through the adventures of the hero Simawn. Children are particularly familiar with the sajak style of poetry as it was first used to teach children about history and civil studies. The sajak style is read as prose and may be accompanied by hand movements.

As in many cultures, food brings Brunei's people together. The food of Brunei has been influenced by its neighboring countries and by its immigrant communities. The Islamic religion prohibits the consumption of certain foods and drinks, such as pork and alcohol. Rice and noodles are the main component of most

meals and may be served with a side of meat and vegetables. Ambuyat is the national dish and consists of a sticky dough made of starch from the sago palm; shaped into a ball, the dough is dipped into various sauces and then eaten.¹⁰

Ethnic Makeup

Officially, nearly two-thirds (65.8%) of the population of Brunei is ethnically Malay. This grouping includes the Dusun, Belait, Kedayan, Murut, and Bisaya (Bisayak) indigenous peoples. Non-Malay indigenous peoples, like the Iban (Sea Dayak) are counted in the country's "Other" census category along with a variety of peoples of South Asian descent and temporary workers, primarily from Asia and Europe. The "Other" group makes up 23.9% of the population. About one-tenth (10.3%) of the population is ethnically Chinese. Figure 1 displays the ethnic make-up of Brunei's society by percentage.¹¹

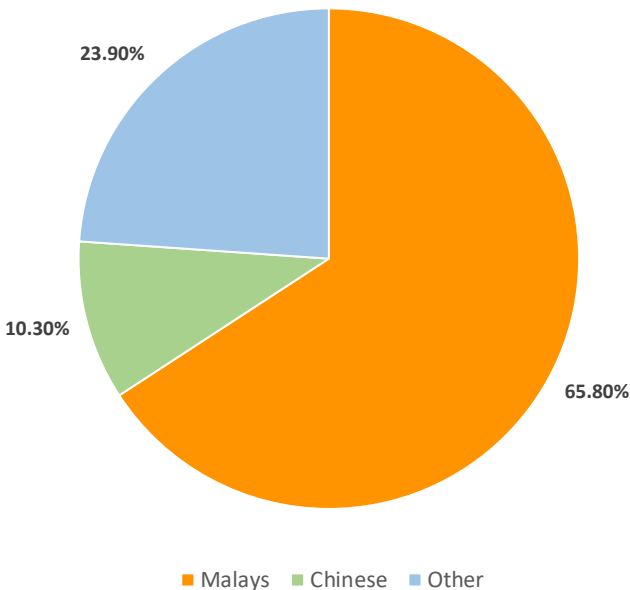


Figure 1: Brunei Ethnic Composition (2019)

Key Population Centers

The four districts of Brunei Darussalam are Brunei-Muara, Tutong, Belait, and Temburong. Bandar Seri Begawan, the country's capital, is located in the Brunei-Muara district and is the center of government and business. All major towns are within a two-hour driving distance of Bandar Seri Begawan.¹² Only Bandar Seri Begawan, Kuala Belait, and Seria are home to

more than 10,000 people, and only Bandar Seri Begawan is home to more than 100,000. Table 1 gives the populations of Brunei's major cities, based on the most recent country census from 2016.¹³

City Name	Population
Bandar Seri Begawan	246,277
Kuala Belait	30,226
Seria	18, 936

Table 1: Population of Brunei's Major Cities

Language

The official language of Brunei is Bahasa Melayu (Standard Malay) although there is a Brunei Malay dialect that is the first spoken language of some two-thirds of the population. Brunei Malay has steadily replaced the indigenous languages (Belait, Bisaya, Iban, and Tutong) of the country's people.

Written Malay may be in the local Jawi script (derived from the Arabic script) although Jawi is less common than the Roman alphabet with spelling mostly standardized in line with Malaysian and Indonesian Malay orthography. English is the major second language with many Bruneians undergoing schooling in English-medium schools. Indeed, a constitutional provision requires official documents to be rendered in English although the Malay version remains the official one. Many Bruneians learn some Arabic in Islamic schools. Finally, various dialects of Chinese are used by the country's ethnic Chinese residents.¹⁴

Religion

The Constitution enshrines the Shafi'i school of Sunni Islam as the official religion, and more than 80% of Bruneians adhere to this faith. The Christian and Buddhist communities are both approximately 7.1% of the population, and people following other systems, including indigenous beliefs, make up about 5% of the population.¹⁵

People who follow religions other than Islam are allowed to practice "in peace and harmony,"

but the government continues its official ban on religious groups it considers "deviant," including Ahmadi Islam, Baha'i, and Jehovah's Witnesses. Since 2019, the Sharia Penal Code (SPC) has been in force and applies to Muslims and non-Muslims equally although, in practice, non-Muslims are exempt from certain sections. The upshot of the dominance of conservative Islamic thinking is that even non-Muslims feel pressure to conform to Islamic practices, including by excluding women from many positions of authority. Additionally, under the SPC, no Muslim is allowed to renounce his/her faith, and no one is allowed to promote religions other than Islam in the country.¹⁶

Vulnerable Groups

Disasters are characterized by their effects on every aspect of life – physical, psychological, and economic – which may be experienced for extended periods of time. The concept of vulnerability offers a partial explanation for the disproportionate and negative socioeconomic impacts that disasters have on particular groups. Because pre-existing social structures heighten vulnerability, already socioeconomically and physically disadvantaged groups such as the elderly, young children, persons with disabilities, migrant workers, and women have fewer resources to enable them to recover.

Brunei has traditionally struggled to ensure minority rights, and Malay Islamic Monarchy ideology overtly limits the role of non-Muslims and non-Malays in social structures. Although some progress has been made in recent decades to address integration and protection of children, women, and persons with disabilities, integration is incomplete. Marginalization has a tendency to distance these groups from disaster risk reduction (DRR) projects, disaster response planning, and delivery of aid to disaster-affected communities. Thus, vulnerable people will have worse outcomes after a disaster or emergency and may experience life-long impacts.

Children

There is a particular vision for children

in Brunei, whose government policies and social principles support Islamic values, which government officials frequently reference as protective for children. Since 2005, religious education and general, technical, and higher education have been housed separately with the Ministry of Religious Affairs (MORA) having oversight over religious education while the Ministry of Education (MOE) has oversight over the remainder. To a great extent, MOE's primacy reflects the foundation of the National Education System for the 21st Century (SPN21) wherein the country is intent on preparing its people to participate in a modern economy that requires familiarity with up-to-date tools and methods (e.g., information and communications technology; ICT) and globalized structures. Nonetheless, SPN21 does advocate the "intensification" of Islamization in all subjects.¹⁷

Brunei defines a "child" as a person who has not attained the age of 14, a "juvenile" as a person who has attained the age of 7 but not reached the age of 18, and a "young person" as a person who has attained the age of 14 but not reached the age of 18.¹⁸ As of 2022, some 22% of the population are under the age of 14,¹⁹ and an estimated 93% of children attend schooling at least up through the first nine years of school. School is free and mandatory up through the ninth grade, and the following three years are free but not mandatory.²⁰ Since 1997, the MOE has attempted to ensure accessibility to children with special educational needs by including Special Education Needs Assistants in the normal school environment.²¹ All the same, many children with disabilities may have less physical access to school facilities while those who do may not have dedicated inclusive education plans as discussed in the "Persons with Disabilities" section.

The definition of a child in Brunei, as cited above, is technically at odds with the United Nations (UN) Convention on the Rights of Children (UNCRC) of which Brunei is a signatory. The UNCRC defines a child as being under the age of 18 unless majority is attained earlier according to laws applicable to the child.²² In February 2016, the UN Committee on the

Rights of the Child urged the government of Brunei to raise the minimum age for marriage, to repeal SPC amendments that nominally impose the death penalty and corporal punishment on children, and to prepare a comprehensive policy on children.²³ Of these issues, the age of consent for marriage varies across ethnic and religious communities; for Muslims, the minimum age for marriage is 16 for girls and 18 for boys while girls in the Chinese community must have reached 15 years of age, and non-Muslims may marry at the age of 14.²⁴ Although there is presently a moratorium on the death penalty and no capital punishments have been carried out since 1957²⁵ children who clash with the law are vulnerable. According to the SPC, no one can be held criminally responsible for an offence committed while under the age of 7. Children older than 7 but younger than 12 can only be held criminally responsible where they have sufficient maturity of understanding to judge the nature and consequences of their actions at the time of the offence. Children who are able to understand these consequences but who have not reached puberty cannot be sentenced to punishments.²⁶

In cases wherein civil society is disrupted due to an emergency, children at risk of or who are victims of exploitation or abuse will experience even greater marginalization. Moreover, given societal mores that view children as subordinate, there is little indication of widespread acceptance of children or youth becoming involved in community DRR initiatives.

Women

In recent years, the opportunities available to women in Brunei have expanded. While as of February 2021, only 9.1% of seats in parliament were held by women,²⁷ the ratio of girls to boys in primary and secondary education hovers around 1:1, and half of ICT and engineering students in universities are female.²⁸

Despite these statistics, the women of Brunei live under the SPC, which has a wide range of provisions that discriminate against women and girls. It punishes extramarital sex and imposes death by stoning as punishment. Brunei is a

party state to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), but in 2014, the Committee on the Elimination of Discrimination against Women reported that portions of the SPC discriminate against women.²⁹

As of 2019, there were neither gender disaggregated disaster vulnerability and capacity assessments nor formal and institutionalized measures to address gender-based issues in recovery or contingency planning; no post-disaster needs assessment methodologies include guidance on gender aspects. The community-based disaster risk management (CDBRM) program highlights the role of women, primarily for household safety and fire prevention, and women are taught basic life-saving skills and even firefighting. In addition, every year, more and more women are working in the armed forces and the fire brigade. The NDMC did conduct a forum entitled “Women Roles in Disaster Risk Management” in 2013; however, the exercise underscored health and religious obligations rather than roles in DRR, preparedness, or planning.

Because of the small scale and local family networks that prevail in Bruneian communities, all family members are integrated into disaster response. Each family member will have a task with women most frequently tasked with packing and securing a household’s valuables, minding children during evacuations or returns, and then cleaning up households after a disaster. Women have reported that in cases of floods – the most commonly-encountered hazard in the country – mobility either to evacuate or to protect oneself from dangerous aquatic wildlife (e.g., crocodiles or snakes) is one of the most pressing problems. Moreover, they cite the practice of delivering relief goods to a centralized location as an ineffective practice. By incorporating this feedback into large-scale responses, authorities can better address the needs of the most vulnerable among their communities.

The Community Development Department (Jabatan Pembangunan Masyarakat; JAPEM),

under the Ministry of Culture, Youth, and Sport (MCYS), provides protection and advice to women and girls victimized by marital and sexual abuse, drug abuse, and other social problems. Charged with relief distribution after disasters, JAPEM’s central office only has nine staff members. Each district has its own JAPEM staff, but in most cases, there will be too few of them to undertake relief projects that reach all members of a community.³⁰

LGBTI Community

In Brunei, Lesbian, Gay, Bisexual, Transgender, and Intersex (LGBTI) persons, either Muslim or non-Muslim, feel social pressure to conform to Islamic guidelines regarding behavior. They have voiced fears about openly expressing their sexual or gender identity for fear it would bring shame on their families for violating religious mores. Some members of the LGBTI community have reported that the MORA has summoned transsexual individuals to its offices and demanded that they maintain the gender listed on their birth certificate. Other members of the LGBTI community report that MORA has contacted family members and questioned them regarding individuals’ sexuality.³¹

The SPC imposes criminal liability and punishes “indecent dressing” and cross dressing, establishing a form of discrimination on the basis of gender expression. Extramarital sex and sodomy are both punishable by stoning to death under the penal code. Any form of “lesbianism” is punishable by up to 40 strokes with whips and up to 10 years in prison.³² After the announcement of the SPC’s final implementation in 2019, Brunei had to backtrack on enforcing some of the Code’s provisions. In response to a global outcry over laws that would have made sex between men and adultery punishable by stoning to death, the Sultan extended a moratorium on the death penalty to cover the new legislation.³³ Nonetheless, the penalties and prohibitions remain on the books and effectively limit the participation of any LGBTI person in society.

Persons with Disabilities

Approximately 9,000 people (1.06% of Brunei's total population) are registered as living with a disability. In 2018, only 56 disabled citizens were in full-time employment.³⁴ In 2019, the Sultan announced the establishment of the Persons with Disabilities Order 2021, Old Age Pensions and Disability Allowances Act. This act addresses many previous concerns regarding persons with disabilities, including the expansion of categories of disability for those who apply for benefits, increased punishments for the abuse of the disabled, and the removal of the "unable to work" condition from the law. Persons with disabilities and who are able to work in some capacity can now be employed and simultaneously receive a disability benefit from the government.³⁵

The UN General Assembly's Committee on the Rights of the Child has expressed concern at the lack of specific information on children with disabilities in Brunei. The Committee recommended that the country adopt a comprehensive strategy for the inclusion of children with disabilities by establishing a data collection system focusing on types of disability and early detection and diagnosis. The Committee was also concerned that many children with disabilities did not have educational opportunities; most schools were not accessible or did not provide inclusive education.³⁶

Among those initiatives triggered by the Sultan's 2019 announcement, the following are on-going:

- Regulations under the Building Control Order through the Different Abilities Design Guidelines to ensure all new buildings provide facilities and access for persons with disabilities
- Programs and opportunities to undergo skills development courses, promote and market products made by persons with disabilities, and provide entrepreneurial spaces in premises including government buildings
- Inclusive communication programs, such as through the implementation of Braille, mobility workshops, and sign language-based workshops

The Council for the Welfare of Persons with Different Abilities and various non-government organizations (NGO) play a role in educating and raising public awareness to support the rights of persons with disabilities. Moving forward, the country is conducting a two-phase survey of persons with disabilities. The first phase is expected to gather information about the persons with disabilities employed in the government and private sectors, and the second phase will collect information on the involvement of persons with disabilities in the community.³⁷ Based on the outcomes of these surveys, the country may have the opportunity to understand how Bruneians with disabilities view DRR and disaster preparedness as well as how they may receive assistance if they are impacted by disasters.

The Elderly

Effective in October 2021, the Persons with Disabilities Order 2021, Old Age Pensions and Disability Allowances Act improved benefits for both persons with disabilities and the elderly. In Brunei, a person is eligible for old age benefits at the age of 60. In order to receive benefits, an elderly person must be a citizen or permanent resident and must not claim residency in any other country.³⁸

The actual size of the elderly population is about 40,000 or 9% of the total population. "Young old" people (60-70 years of age) are the largest portion of this population at nearly 70% while those between 71 and 80 years of age make up less than one-quarter of the "elderly" population and those over 80 number only about 3,500 people. Based on a 2018 survey, some 78% of the country's elderly live in urban areas; however, most cite a lack of suitable facilities for them to frequently get out of the house, leading to high rates of sedentarism and exacerbating health conditions that come with age.³⁹

By some estimates, the share of the population older than 65 is set to reach 13.5% by 2035.⁴⁰ Brunei's ageing population is set to become one of the most significant drivers of social transformation for the sultanate as it will have spillover effects on financial markets, transportation, social welfare, and healthcare.

Given the concentration of older Bruneians in urban areas and the strong, multi-generational family structures that prevail, the elderly are commonly integrated into family plans for emergencies. However, without integrating elders into planning or improving accessibility for elders with physical limitations to refuge sites, DRR and disaster preparedness risks exacerbating disaster impacts on affected elders.

Stateless Persons and Minorities

At independence in 1984, non-Malays were at a disadvantage when it came to applying for citizenship in Brunei. According to the Nationality Act 1961, which predated independence but is still in effect, a person residing in Brunei would be eligible for registration as a Bruneian national if the person had a proficient knowledge of the Malay language, had been examined by a Language Board on the Malay language, was of good character, and had taken the oath of allegiance. The language standards are considered the biggest obstacle to non-Malay people gaining citizenship as the multiple criteria allow for various points at which an applicant's competency claims may be rejected.⁴¹ Applicants who fail to meet these requirements are deemed stateless although many receive permanent residency.

Stateless persons may apply for citizenship if they are adults born in the country and resident for 12 of the last 15 years, provided they pass the language and culture test. Members of the stateless community who passed the Malay culture and language test have for years reported a de facto suspension of citizenship approvals for stateless adult residents, with many reporting that they still had not been granted citizenship although 5-10 years had elapsed since they passed their language test.⁴² Stateless persons who are permanent residents do receive an International Certificate of Identity that enables them to travel overseas and do anything for which identification is required – e.g., accessing education or healthcare. Moreover, the Brunei government has instituted a birth registration

program for stateless children. The program establishes a record of where and to whom a child is born to prevent children from slipping through the cracks of the legal system and to ensure children get education, healthcare, and employment when they are adults.⁴³

Stateless persons who are not registered as permanent residents are not entitled to Government-issued identity documentation, the lack of which is a barrier to accessing healthcare and education, as well as access to employment in the formal economy.

A 2017 estimate by the Government of Brunei suggested that the country was home to about 20,500 stateless persons although the authorities were unable to provide a breakdown of that population. Unofficial assessments of the population suggest the number of stateless persons may be higher.⁴⁴ Close to half of the ethnic Chinese community (perhaps 20,000 people) remain temporary residents while less than one-quarter (perhaps 10,000) are citizens. There are many stateless aboriginal Bruneians. Indigenous people who do not belong to specific, constitutionally defined groups may not have land demarcated and have no designated representation in government bodies. Those indigenous Bruneians living in rural areas frequently have no government identification as they were not registered at birth. Moreover, they have little say over the disposition of the lands and natural resources found where they live.⁴⁵

Some Chinese Bruneians report that it is easier to obtain permanent residency and citizenship if the applicant converts to Islam. Thus, some Chinese Bruneians are slowly being assimilated into the Malay-Muslim community while others choose to emigrate. Minority groups confront policies that restrict their freedom of religion and limit the areas where their languages can be used. Christian Chinese Bruneians in particular face difficulties in trying to practice their faith. The government refuses work permits for foreign priests and denies permission to build churches. Many Christians are, thus, forced to use shops and houses as churches. Similar problems are faced by Chinese Bruneians who

practice traditional religions (e.g., Taoism or Buddhism).⁴⁶

There is great pressure for indigenous people to convert from animism and ancestor worship to Islam. They are offered incentives such as financial aid, new homes, and water pumps, to convert. Indigenous peoples are also encouraged to move away from many aspects of their cultures and languages. There is no active attempt to limit the private use of indigenous languages; however, the government’s exclusive official use of Malay or English all but ensures that the use of indigenous languages continues to decrease. Traditional economic activities and lifestyles of indigenous peoples are declining due to increasing urbanization.⁴⁷

Access barriers – particularly language – to non-citizens’ and non-permanent residents’ participation in government-led emergency preparedness indicates that the outcomes for these groups in the wake of a disaster will be worse than the outcomes for citizens and permanent residents. Stateless persons may have difficulty relocating because their identification paperwork is not recognized, and they may encounter obstacles to accessing aid if they remain in place if authorities chose to limit aid distribution to citizens or permanent residents.

Economics

The Gross Domestic Product (GDP) of Brunei was worth US\$12.02 billion in 2020, according to World Bank data. The GDP value of Brunei

represents 0.01% of the world economy.⁴⁸ The economy contracted by 1.5% in 2021 after growing by 1.1% in 2020. Much of the slowdown in growth was linked to weaker oil and gas production and a resurgence in Coronavirus Disease 2019 (COVID-19) infections in August 2021. The services and agriculture sectors are expected to keep pace, while oil and gas output is expected to expand over the next several years, reversing the decline in 2021. Overall, GDP is expected to grow by 4.2% in 2022 and ease to 3.6% in 2023.⁴⁹ Figure 2 shows Brunei’s GDP from 1997 to projected 2022.⁵⁰

Of the more than 200,000 people working within the sultanate, more than 60% work in industry, 33% in services, and the remainder in agriculture.⁵¹ A 2016 report from the Organisation for Economic Co-operation and Development (OECD) and Asian Development Bank (ADB) estimated that about one-half of the labor force was employed in the public sector.⁵² Brunei relies heavily on foreign labor in lower-skill and lower-pay positions, with approximately 25% of the total labor force coming in from abroad to fulfill specific contracts. The largest percentage of foreign employees work in construction, followed by wholesale and retail trade, with the balance serving in professional, technical, administrative, and support roles. Most unskilled laborers in Brunei are from Bangladesh, Indonesia, and the Philippines, and they enter the country on renewable two-year contracts. In 2016, the Department of Labor under the Ministry of Home Affairs introduced

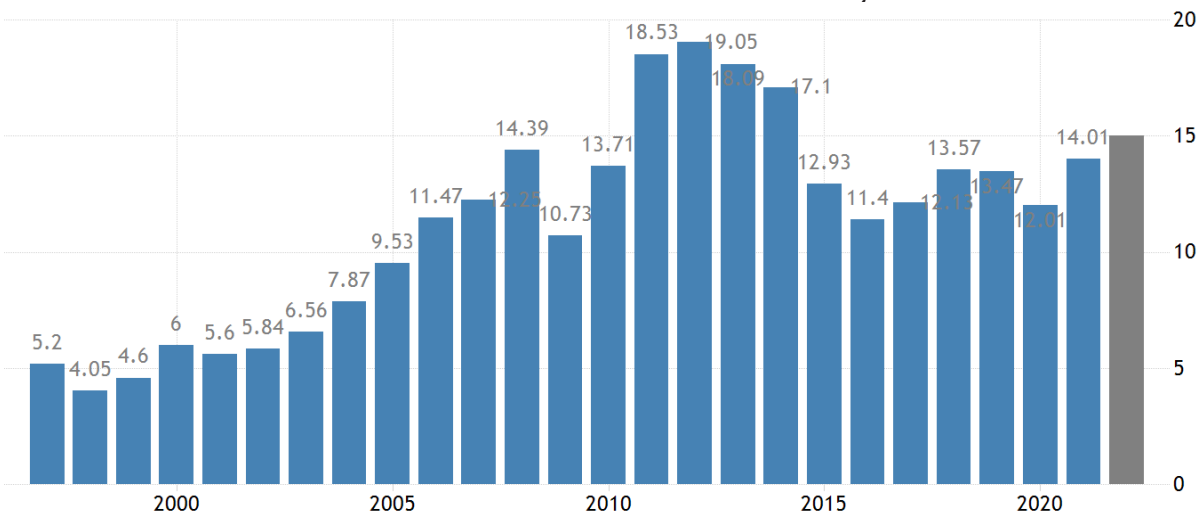


Figure 2: GDP of Brunei, in US\$ billions (1997-2022, projected)

an improved Foreign Workers License process with stricter policies to create more employment opportunities for Brunei citizens.⁵³

The country as a whole enjoys relatively high standards of living with an annual per capita GDP of US\$62,200.⁵⁴ The government provides access to services for all citizens, but this wealth rests on revenue from the continued export of oil and gas, which makes up an estimated 70% of GDP and, given the volatility of the global oil market, rests on a shaky foundation.⁵⁵ The International Monetary Fund (IMF) reports that unemployment in 2017 stood at 9.3%, having ticked upward from 6.9% in 2014 when the Labour Force Survey was last conducted. The youth unemployment rate also increased from 25.3% to 28.9%.⁵⁶ A key challenge to reducing unemployment, especially among young Bruneians, is to improve the matchup of skills learned in school to employers' needs as the country expands its private, non-fossil fuels sectors. As the country tries to diversify public revenue, many eyes will be on the impoverished people of the country. As of 2020, an estimated 20,000 people (5% of the population) were living in poverty and relied on zakat (charity) to round out their spending.⁵⁷

More than half of Brunei's GDP and nearly all of its export revenues are generated through the fossil fuels industry (including the manufacture of liquefied natural gas [LNG]). However, the industry employs a very small portion of the labor force. Offshore fields located off the western segment of Brunei produce nearly all of the country's petroleum and natural gas, which is exported to mostly Asian countries. A local refinery supplies domestic needs, and Brunei's energy demand is met almost entirely by fossil fuels.

The first production of oil was in 1929, and large natural gas deposits were discovered in the 1960s. The subsequent construction of a gas liquefaction plant in the 1970s made LNG a major source of Brunei's export earnings. Oil output peaked in the late 1970s, and production was subsequently reduced in order to conserve reserves. The country has rich deposits of white

quartz sand – highly prized for production of solar photovoltaic (PV) panels that will be crucial for the global clean energy revolution; however, those deposits remain mostly undeveloped as Brunei continues to rely on its hydrocarbon reserves.⁵⁸

With the discovery of petroleum resources, agriculture, fishing, and forestry (once the mainstays of Brunei's economy) declined. By the end of the 20th century, these three activities accounted for a small fraction of the GDP and employed a relatively small percentage of the workforce. In addition, for much of the 20th century, Brunei imported nearly all manufactured goods and most of its food. The government, recognizing a need to diversify the economy away from petroleum production, began to develop the agricultural industry. By the early 21st century, Brunei had become self-sufficient in the production of poultry and eggs and was approaching self-sufficiency in vegetables; production of rice had increased markedly, although it still falls short of domestic demand.⁵⁹ Brunei is among the largest consumers of fish per capita in the world. To curb imports after the 1990s, the government implemented programs to stimulate local fisheries. In less than a decade, the country was producing more fish domestically than it imported. However, overfishing has become a growing concern.

Brunei enacted legislation in the late 20th century to restrict logging in order to preserve its abundant forests. Programs have been implemented to provide enough sawed wood from plantations for the local market only. There is no exporting of timber. A key goal of this conservation policy is to bolster the country's tourism sector. Although not historically focused on the tourism industry for economic growth, Brunei views this sector as a means to move away from dependence on the petroleum industry. Efforts moving forward focus on high-end and low volume tourism with a minimum impact on the environment and local culture.⁶⁰ Indeed, Brunei is at the center of the ecotourism industry. Tourists have visited Brunei to experience the country's wilderness areas. Seventy percent

(70%) of the country’s land is made up of pristine rainforests with abundant biodiversity that has been conserved. There are many untouched natural spots, undisturbed jungles, and wildlife.⁶¹

As in other tourism destinations globally, international travel to Brunei fell precipitously during the COVID-19 pandemic. International cruise arrivals were reduced to zero. Table 2 shows the number of international visitors arriving in Brunei for the period 2016-2021; it includes totals for land border crossings, cruise ship arrivals, and total arrivals by air.⁶²

Revenues from petroleum and natural gas make up nearly all of Brunei’s export earnings, and exports of these commodities have generally resulted in a trade surplus since the early 1970s. China, Japan, India, Malaysia, Singapore, and South Korea are the country’s principal trading partners in Asia. Brunei also trades with Australia, New Zealand, the U.S., and members of the European Union (EU) to varying degrees. Figure 3 shows Brunei’s major import sources.⁶³ Figure 4 shows Brunei’s major export destinations.⁶⁴

Government

Brunei Darussalam, sometimes locally known as “Negara Brunei Darussalam,” is an absolute monarchy with the sultan exercising executive power. With its capital at Bandar Seri Begawan, Brunei is divided into four administrative districts – Belait, Brunei-Muara, Temburong, and Tutong.⁶⁵ The four districts’ heads, along with counterparts from three municipal boards, manage local concerns, particularly concerns or disputes among communities that cannot be resolved by village heads who are selected by village residents. These concerns lie primarily in the welfare and well-being realms as all services of public safety, education, health, housing, transport, sanitation, culture, utilities, and economic development are the sole preserve of the central government.⁶⁶

The Constitution was first drafted in the mid-1950s, and it was signed on 29 September 1959. Some constitutional provisions have been suspended since 1962 when the country (then a colony) came under a State of Emergency, and others have been suspended since independence

Entry	2016	2017	2018	2019	2020	2021
BORDER	4,013,325	4,046,143	4,224,440	4,100,635	1,006,763	106,848
By CRUISE	25,055	10,886	18,760	15,149	1,526	0
By AIR	218,809	258,955	278,136	333,244	62,325	3,543

Table 2: International Travelers to Brunei (2016-2021)

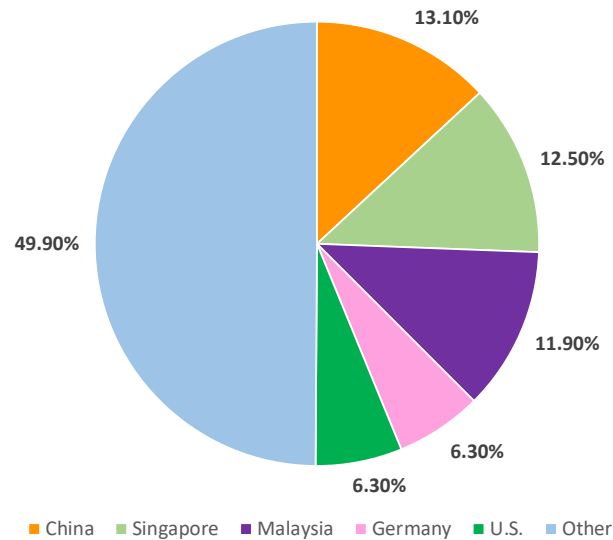


Figure 3: Brunei Major Import Sources (2019)

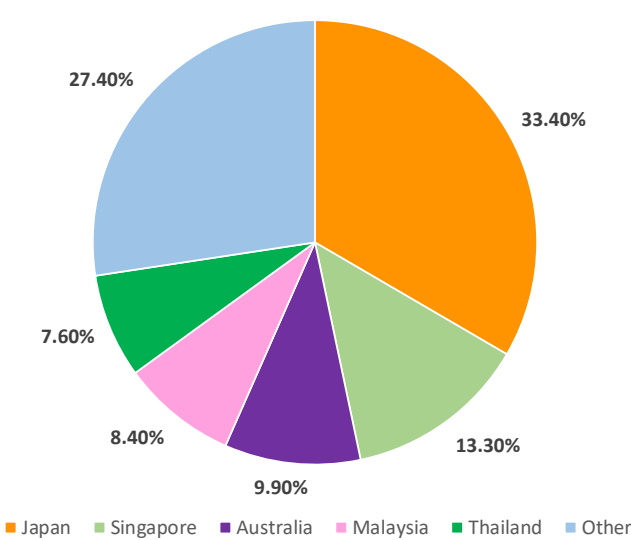


Figure 4: Brunei Major Export Destinations (2019)

in 1984. Amendments to the Constitution may be proposed by the sultan; passage requires submission to the Privy Council for Legislative Council review, and finalization takes place by proclamation. The present Constitution has been amended several times, most recently in 2010.⁶⁷

The Sultan of Brunei Darussalam is appointed by the Council of Succession; the monarchy is hereditary with the sultan's immediate succession laid out in writing with various provisions to guide selection in case of abdication or death before the sultan has appointed a successor.⁶⁸ He is assisted and advised by six councils – i.e., the Privy Council, the Religious Council, the Council of Ministers, the Adat Istiadat Council, the Legislative Council, and the Council of Succession. The sultan appoints and presides over the Council of Ministers, which handles executive matters. The Privy Council advises His Majesty on the appointment of people to customary ranks, titles, honors, and positions. The remaining four councils advise on other state matters.⁶⁹ Sultan Hassanal Bolkiah is both chief of state and head of government, and the current Sultan has retained the ministerial portfolios for Defense, Finance, and Foreign Affairs and Trade.⁷⁰

The Constitution lays out a unicameral Legislative Council, the Majlis Mesyuarat Negara Brunei. Its makeup and size are flexible but should nominally not exceed 45 members.⁷¹ The current Council has 33 seats, all filled by appointment by the sultan; 20 members were appointed from among ex-officio cabinet ministers, titled people, and prominent citizens in public service and various professional fields, 13 members represent four multi-seat constituencies, and three are ex-officio members.⁷² Potential Legislative Council members must have attained the age of 21 years, be in good legal and financial standing, and not have left the Islamic faith. There is no set time for a Councilor's term, and there are no term limits. The Speaker and Deputy Speakers are named by the sultan.⁷³ After being dissolved in 1985, the Legislative Council was re-established in 2004.⁷⁴ Despite the expectation that some 15 members of

the Legislative Council would be directly elected, there have been no elections since 1962, and there is no timetable for such an election.⁷⁵

The country operates a legal system based on English common law and Islamic law. In April 2019, the full SPC came into force after a several-year interim period. The SPC applies to Muslims and partly to non-Muslims in parallel with present common law codes.⁷⁶ There are two justice systems, which run parallel to each other; one is presided over by the Supreme Court and the other by the Sharia courts. The Supreme Court comprises the Court of Appeal and the High Court. Criminal cases that do not carry a death sentence and less serious civil cases are conducted by the intermediate courts before judges or the subordinate courts before magistrates. Appeals are heard by the Court of Appeal, which in criminal cases is the final court of appeal. In civil cases, appeals may be made to the Privy Council of the UK.⁷⁷ Judges in both court systems are appointed by the sultan either until age 65 or for life.⁷⁸

Party politics does not occur in Brunei. The official ideology of the country is Melayu Islam Beraja (Malay Muslim Monarchy), which explicitly equates sovereignty and political legitimacy with the Sultanate, Islam, and Malay identity. It locates all authority over law, politics, and religion within the person of the sultan.⁷⁹ The National Development Party was permitted to register in 2005 after pledging to work as a partner with the government and swearing loyalty to the sultan; it is the only registered party and has no formal political role.⁸⁰

Environment

Brunei geographically includes two parts separated by a strip of Malaysian land. It is located on the northwestern coast of Borneo and has a varied terrain and tropical climate. More than 70% of the land is forested, and forest conservation is increasingly a goal, facilitated by the fact that more than 75% of the population resides in urban areas rather than rural spaces. Figure 5 is a map of Brunei, showing main settlements and the two separate geographical

parts, including the eastern Temburong exclave (designated in pink), which houses the highest point in the country.⁸¹

Geography

The country covers a total of 5,765 square kilometers (km²; 2,226 square miles), of which 5,265 km² (2,033 square miles) is land and 500 km² (193 square miles) is surface water.⁸² The country has hilly lowlands and peat swamp forests in the west, rugged mountains in the east, and swampy, flat plains along the coast. The southern part largely comprises mountains with summits ranging 700-900 meters (m; 2,296-2,953 feet).⁸³ The country's highest point, Bukit Pagon, stands 1,850 m (6,070 feet) high in the country's southeast.⁸⁴ The land is drained by the Belait, Tutong, and Brunei rivers in the western segment and by the Pandaruan and Temburong rivers in the east; all flow generally northward to the South China Sea.⁸⁵

Brunei Bay is an inlet of the South China Sea. It is where the Brunei River lets out after flowing from Brunei's capital, Bandar Seri Begawan. Most of the lower reaches of the Brunei River are mangroves, and these mangroves merge with the mudflats and mangroves at the mouth of Malaysia's Limbang River as they both enter Brunei Bay.⁸⁶ Until March 2020, Bruneians traveling across the Bay, between Temburong and Bandar Seri Begawan, had to transit through Malaysia's Sarawak; the new 26.3 km (16.3 mile) Sultan Haji Omar 'Ali Saifuddien (SOAS) Bridge now connects the two parts of Brunei with four lanes of traffic.⁸⁷

The soils of Brunei are weathered and generally infertile although some richer, alluvial soils are found along the rivers and in some parts of the coastal floodplain where the best agricultural potential exists. About three-fifths of the country is covered with virgin tropical rainforest, and another one-fifth is under



Figure 5: Map of Brunei

secondary forest. The undisturbed rainforest consists mainly of hardwoods. The lowlands of the Belait and Tutong river valleys include large expanses of freshwater and peat swamps, while mangrove swamps are common along lower riverine reaches and sheltered coastal areas.⁸⁸

Borders

Brunei shares 266 km (165 miles) of border, all with Malaysia, and has 161 km (100 miles) of coastline,⁸⁹ all on the South China Sea and Brunei Bay.

There are some regional border and territorial disputes in which Brunei is involved. Brunei's claimed 200-nautical mile exclusive economic zone (EEZ) overlaps with China's "nine-dash line,"⁹⁰ which draws a line around hundreds of small islands, reefs, and atolls, almost all uninhabited and uninhabitable, within a 3.6 million km² (1.4 million square mile) area, asserts sovereignty over all of them, and makes ambiguous claims about rights to waters within the line.⁹¹ Brunei asserts maritime jurisdiction over these areas based on a claim to Louisa Reef, which is within Brunei's EEZ and is part of the Spratly Islands archipelago; Louisa Reef is also claimed by China, Taiwan, and Vietnam.⁹²

Climate

Temperatures in Brunei are warm throughout the year, and the daily temperature ranges from a low of about 23 degrees Celsius (°C; 73.4 degrees Fahrenheit [°F]) to a high of about 32°C (90°F). Precipitation averages about 2,900 millimeters (mm; 115 inches) annually in the coastal areas but can exceed 3,800 mm (150 inches) farther inland. Rainfall is generally heavier from October to January and lighter from March to August.⁹³

The climate is generally hot and wet throughout the year; the weather is governed by the wind systems of Southeast Asia, which result from the atmospheric pressure distribution over the region. In general, there is an area of

low pressure at the Equator, with areas of high pressure over the subtropics in each hemisphere. The Equatorial low pressure "trough," the Inter Tropical Convergence Zone (ITCZ), is the area where air masses from the northern and southern hemispheres converge. The ITCZ position oscillates with respect to the sun, lagging about two months behind, and the magnitude of the latitudinal oscillation is about half that of the sun. The annual movements of the ITCZ and the associated "trade" wind fields produce two main seasons in Brunei, separated by two transitional periods.

From December to March, the northeast monsoon winds affect the South China Sea and Borneo, curving through the ITCZ to become northwesterly winds. The average position of the ITCZ is 5-10° South latitude after having moved southwards across Borneo in late December. During the months from June to September, the ITCZ is situated at a latitude of around 15° North, and the southeast trades from the southern hemisphere re-curve across the Equator to become the broad southwesterly monsoon. The transitional periods occur in April-May and October-November.

The mean monthly rainfall follows seasonal patterns with two maximum periods and two minimum periods. This seasonality reflects the two monsoon seasons and the influence of the localized land-sea circulations. The first maximum is from late October to early January with December being the wettest month. The second maximum is from May to July with May being relatively wetter. The lowest minimum starts in late January and runs into March, and the other minimum is from June to August.

On an inter-annual timescale (3-7 years) the climate of Brunei is influenced by the El Niño Southern Oscillation (ENSO). The warm El Niño is normally associated with prolonged dry conditions while the cold La Niña is associated with wetter than normal conditions in Brunei.⁹⁴

DISASTER OVERVIEW

Brunei is at generally low risk for natural disasters. There are floods during the northeast monsoon and transitional rainy season, but the country is not located in a typhoon path and has not suffered from large-scale flood damage. Low-level earthquakes have been recorded, although earthquake-related disasters are not common. While the country is at nominal risk of tsunamis, there is no historical evidence of one ever hitting the country. Similarly, there is one active volcano north of Borneo, but there is no record of any impact from a volcanic eruption on Brunei.

Climate Change

Brunei has medium to high exposure to the risks associated with climate change. The key impacts to which the country will be exposed are expected to be rising temperatures, rising sea levels, extreme weather events, and ocean warming and acidification. Additional challenges will come from persistently higher heat, pollution, and expansion of the habitats of dengue and malaria vectors, particularly the *Aedes* mosquito, all of which threaten the health of Bruneians. Finally, the socio-economic effects of climate change are expected to include a loss of biodiversity and a loss of agriculture and fisheries production.

Climate change has created a variability in weather trends, intensified the global water cycle, and increased the frequency and severity of natural disasters. Hydrology experts perceive risks such as flood and drought as the most severe impacts from climate change that threaten Brunei. With a high proportion of settlements located along Brunei Bay in particular, it is expected that the area will be under threat from flooding and change in river flow by 2040. Elevated temperatures have resulted in increased forest and bush fire events. With the rapid increase of global warming trends, the situation creates hotter and drier conditions, which aggravate the intensity and severity of heatwaves, resulting in devastating fires in forests and peat

swamps.

The observed climate trend suggests a rise in mean temperature increasing at a rate of 0.25°C (0.45°F) per decade. Rainfall patterns show an intensifying trend in the total rainfall amount, increasing at a rate of 100 mm (3.9 inches) per decade. Recent years have seen changes in average total annual rainfall alongside greater irregularity in terms of the monthly rainfall trend. Climate change is expected to aggravate weather-related disasters (e.g., drought and floods) due to the trends in extreme high temperature and rainfall.⁹⁵

A study by the ADB concluded that climate variability and extreme weather events would become more significant within the “Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area” in the coming decades. A preliminary study by the Brunei Darussalam Meteorological Department (BDMD) concluded that the country experienced a total rise in average temperature of 0.6°C (1.08°F) between 1970 and 2014. An increase in the average annual rainfall was also recorded between 2005 and 2015. Key results of climate change studies in the region are:

- An average mean surface temperature rise of 1-1.5°C (1.8-2.7°F) by mid-century (2040-2060)
- An increased risk of the occurrence of heat waves and considerable increase in the frequency of ‘hot’ days; and
- An overall increase in rainfall, enhanced variability of rainfall that could increase the occurrence and duration of dry periods, and higher intensities of rainfall that could increase the risk of flooding and landslides.

In its Second National Communication to the Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in 2017, Brunei recognized both its vulnerability to the effects of climate change and its responsibilities as a fossil fuel

producer and exporter.

The country has identified three key elements that characterize both its contributions to greenhouse gas (GHG) emissions and its ability to mitigate GHG effects. With large conventional energy resources relative to its population, Brunei's oil and gas sector plays a dominant role. Consequently, emissions from the production, processing, and transport of oil and natural gas represent an important source of GHG emissions. Moreover, as a relatively affluent society that has low prices for energy, the country has very high demand for energy services. Emissions from the consumption of energy are much higher than those from extraction, transport, and processing of oil and gas resources. As a measure to reduce consumption and emissions of GHGs, the country has policies in place to promote energy efficiency and conservation and increase the share of alternative energy sources. However, the main challenge is finding a balance between pricing reforms and incentive mechanisms without affecting the overall welfare of consumers. This challenge dovetails with the broad political and social consensus that Brunei must diversify away from over-reliance on fossil fuel production and export both for economic reasons and climate reasons.

Aside from energy resources, the country also possesses a diverse and complex forest ecosystem. Between 2010 and 2017, the country ceased forest land conversions and maintained around 75% of the land area with forest cover. Moreover, 41% of the entire land area is protected forest reserve, a resource considered important as a carbon sink, the preservation of which is critical to mitigate climate change.

In its 2014 data survey ahead of the Second National Communication to the COP, Brunei reported that its gross GHG emissions amounted to 11,192.11 Gigagrams (Gg) of carbon dioxide equivalent (CO₂e). Forest land under the category "Agriculture, Forestry, and Land Use," on the other hand, removed 2,839.80 Gg CO₂e from the atmosphere, resulting in a net emission of 8,352.31 Gg CO₂e. Compared with the emissions and removals in 2010, gross emissions had increased by 10.2% while the net emissions

grew by 12.5%. During the same period, CO₂ emissions rose on the basis of rising fossil fuel consumption while methane emissions fell due to a decline in domestic oil and gas production. The energy sector was, by far, the biggest emitter of GHG amounting to 98% of the total.

Under the energy sector, electricity generation, fugitive emissions (leaks or other unintentional releases of gas or vapor from a pressurized system, particularly in industrial and petroleum production processes), and land transportation were the dominant subsectors contributing, respectively, 48.7%, 34.5%, and 12.6% of the total energy sector emissions. Emissions from electricity generation were rising while emissions from the land transport sector and fugitive emissions declined.⁹⁶

In 2020, Brunei's Nationally Determined Contribution (NDC) submission under Paris Agreement obligations committed the country to reducing GHG emissions by 20% compared to the business-as-usual scenario by 2030. The country has established multi-sectoral climate change institutional governance to address challenges and opportunities at a national level, consistent with its overall centralized administrative structure and economy. The climate change governance structure incorporates:

- The Brunei Darussalam National Council on Climate Change, which comprises four key ministers and a deputy minister
- The Executive Committee on Climate Change, composed of Permanent Secretaries of key government agencies, Chief Executive Officers and Managing Directors of industry operators, Presidents of professional associations, academia, and NGOs to drive national climate mitigation, adaptation, and support efforts; and
- The Mitigation Working Group, Adaptation and Resilience Working Group, and Support Framework Working Group, respectively consisting of members from the private and public sectors, NGOs, and academic institutions to execute climate action in each respective area.

As an integral part of preparation of the NDC, the country launched development of the Brunei National Climate Change Policy (BNCCP), published in July 2020. The BNCCP outlines the principles, values, and strategies needed to pave the way for a low carbon and climate-resilient country. The BNCCP process identified core national strategies to be achieved in line with Wawasan (Vision) Brunei 2035 and cover areas pertaining to industrial emissions, forest cover, electric vehicles, renewable energy, power management, carbon pricing,

waste management, carbon inventory, climate resilience and adaptation, and climate awareness and education. Table 3 displays and defines the core strategies of BNCCP.⁹⁷ A total of 39 agencies, consisting of government bodies, private sector agencies, research and academic institutions, and NGOs were members of the BNCCP Drafting Committee. In addition, a group of 51 youth (25-40 years of age) representatives were invited to review the BNCCP draft. Youths and NGOs are also regularly engaged in climate change dialogues with ministers and policymakers.

Strategy	Description
1 - Industrial Emissions - Reduce overall emissions in the Industrial Sector	Brunei aims to lower carbon intensity from industry by limiting gas and oil-associated flaring, in part via rejuvenation projects within oil and gas industry facilities for GHG abatement, both onshore and offshore.
2 - Forest Cover - Increase carbon sink through afforestation and reforestation with a target of planting 500,000 new trees.	Increasing forest cover will increase the national carbon sequestration potential and have positive effects on habitats, biodiversity, and ecosystems. The present 72.1% of land area (380,000 hectares) that is forested accounts for a carbon sequestration value of 11.4 Metric tons CO2e. Brunei aims to increase its forest protected reserves from 41% to 55% of total land area. Other, on-going efforts seek to increase Brunei's carbon sink through reforestation with 500,000 trees to be planted by 2035.
3 - Electric Vehicles (EV) - Increase total share of EVs to 60% of the total annual vehicle sales by 2035.	This strategy seeks to promote the ownership of EVs through policy-related issues such as addressing the price of fuel and electricity; lowering EV prices (e.g., through excise duty incentives); managing annual Vehicle License fees; and boosting availability of infrastructures (e.g., charging stations). The 2019 establishment of the Electric Vehicle Joint Task Force was intended to support implementation of EV policy. In 2020, land transportation contributed about 13.6% of the total GHG emissions from the energy sector, and there were over 253,000 active private vehicles after over a decade of steady increase in the number of gasoline and diesel vehicles on Brunei's roads.
4 - Renewable Energy - Increase total share of renewable energy to at least 30% of total capacity in the power generation mix by 2035.	The country aims to smooth its transition towards nationwide adoption and use of renewable energy technologies, mainly solar PV. As of 2020, the only renewable energy source was a 1.2 Megawatt (MW) solar PV power plant, Tenaga Suria Brunei, located in Seria, Belait District, and accounting for about 0.14% of the total power generation mix.
5 - Power Management - Reduce GHG emissions by at least 10% through better supply and demand management of electricity consumption by 2035.	Reducing GHG emissions from the power sector would be achieved by increasing energy efficiency and conservation on both supply and demand sides. Increasing the efficiency in power generation can be done through the reduction of partial load operation, improvement of transmission and distribution losses, implementation of minimum efficiency of 48% for all new power plants, and reduction of gas consumption through the integration of renewable and alternative energy for domestic power.
6 - Carbon Pricing - Impose price on carbon emissions for industrial sector.	The country plans to introduce carbon pricing applicable to all industrial facilities emitting beyond a carbon emissions limit threshold at a carbon price per CO2e by 2025. This strategy also seeks to establish a Monitoring, Reporting, and Verification system to ensure accuracy and credibility in baseline emissions data for imposing carbon pricing.
7 - Waste Management - Reduce municipal waste to landfills to 1 kilogram (2.2 pounds)/person/day by 2035.	To minimize the amount of waste that needs disposed, policies will encourage the adoption of best practices and innovative technologies.
8 - Carbon Inventory - Mandatory monthly and annual reporting of carbon inventory.	To develop and implement a national directive to all facilities and agents that emit and absorb GHG to report their GHG data to promote transparency and robustness in the national GHG emissions and sinks data.

Table 3: Brunei's National Climate Change Policy Strategies

As part of Brunei's National Development Plan projects, the Public Works Department (PWD) through the Department of Drainage and Sewerage of the Ministry of Development has implemented a series of flood mitigation works along the coastal area. More than 50 km (31 miles) of coastal protection structures have been constructed to protect against strong waves and erosion. Additional climate change adaptation (CCA) and DRR initiatives are led by the NDMC, which organizes community-based activities that aim to strengthen institutional capacity and policy frameworks, establish ASEAN youth leadership in CCA and DRR, increase replicable programs and models of building community resilience, and strengthen awareness-building programs for a disaster resilient and climate change adaptive ASEAN Community.⁹⁸ Indeed, on the ASEAN level, during its 2021 chairmanship, Brunei launched an initiative to found the ASEAN Centre for Climate Change, slated to launch in Brunei some time in September 2022, pending approval from the other ASEAN member-states. The Centre would be expected to become a hub for research, scientific data, and capacity building and to export knowledge and research, not just within ASEAN but also outside the region, according to the head of Brunei's Climate Change Secretariat.⁹⁹

Hazards

Brunei confronts the following hazards: drought, cyclone, earthquake, epidemic, flooding, forest- and wildfire, land- and mudslides, and tsunami.

Flooding and landslides are the two most frequent natural disasters that occur annually in Brunei and are common during the northeast monsoon, generally October to January. December and January are the wettest months and generally see high intensity rainfall that can cause flash flooding in low-lying areas as well as flooding in most flood plain areas, particularly in Tutong and Belait Districts. These flood plain inundations normally recede after about two weeks. Although Brunei is not in the typhoon-

belt zone, strong winds can occur regularly due to the tail-end effect of typhoon activities during the southwest monsoon. Strong winds are also common during cold surges and heavy thunderstorms.¹⁰⁰

Despite its location in Southeast Asia, a hazard and disaster hotspot, Brunei has historically been perceived as one of the countries least prone to natural hazards. This perception of low hazard risk is somewhat counteracted by the regular occurrence of small-scale but cumulatively destructive floods. Total annual losses and percentage of annual social expenditure from multiple hazards amount to about US\$37.31 million and 3.62% respectively, and of these totals, up to US\$31 million worth of losses and 3.0% of social expenditure are incurred from floods. Meanwhile, the occurrence and impacts of landslides have remained largely under-reported.¹⁰¹

Table 4 shows Brunei's Average Annual Loss from all hazards in US dollars (\$) and percent of GDP as reported by the UN Economic and Social Commission for Asia and the Pacific (ESCAP).¹⁰²

Hazard	US\$ (million)	% of GDP
Flood	26.1	0.2
Drought	22.5	0.2
Indirect Loss	16.9	0.1
Extensive Risk	9.7	0.1
Earthquake	5.9	0.0
Tsunami	0.4	0.0
Biological	0.0	0.0
Tropical Cyclone	0.0	0.0
All Hazard	81.6	0.6

Table 4: Average Annual Loss from All Hazards

Drought

The risk of drought is generally considered low, but it is not absent. In the 1960s, the sultanate experienced a long drought that triggered water rationing and a reconfiguration of the water supply network. Then, in 1997-98, Brunei was hit by prolonged dry weather due to that season's El Niño. From 1964, the Tasek Dam has been the main source of water supply to Bandar Seri Begawan. In the past two decades,

several other dam projects have been undertaken to increase water storage capacity as a hedge against prolonged drought.¹⁰³

Earthquake

Earthquake disasters are not common. There is no record of significant damage caused by earthquakes.¹⁰⁴ Based on the Modified Mercalli Intensity Scale that classifies earthquakes based on how people respond to a quake and observed damage after a seismic event,¹⁰⁵ all quakes in the general vicinity of Brunei have been categorized as “VI,”¹⁰⁶ the lowest level, wherein the shaking is not felt except by very few people under especially favorable conditions.¹⁰⁷

Epidemic

The country has historically suffered minimal impact from epidemics and pandemics, and the World Health Organization (WHO) certified Brunei as having eliminated or eradicated malaria in 1987, poliomyelitis in 2000, and measles in 2015.¹⁰⁸ Based on a Joint External Evaluation that measures a country’s ability to find, stop, prevent, and protect during an epidemic, Brunei is working to improve preparedness. As of 2022, it has strong immunization rates and a strong reporting system but has shortfalls in biosecurity and in linking public health and other authorities.¹⁰⁹ Brunei actively participates in dealing with Southeast Asia’s trans-boundary haze issues, and it addresses communicable disease issues by developing a pandemic preparedness and response system such as the Influenza-like Surveillance System operated by the Ministry of Health (MOH). This system gives warning of emerging threats from novel strains of viruses such as Influenza H1N1 (swine flu) and H5N1 (bird flu).¹¹⁰ The country’s immediate implementation of strict travel and quarantine measures in the early days of the COVID-19 pandemic held off significant transmission until late in 2021 after the national vaccination campaign had commenced.

Flooding

Various types of floods – e.g., riverine, coastal, and urban – are common and are becoming more frequent as climate change leads to higher sea levels and drives cycles of more intense rainfall. Floods generally occur between October and May but may occur any time of year. Heavy rainfalls have caused local inundation in urban areas. For example, storms in January 2009 and 2010 caused inundation damage in Bandar Seri Begawan. Most residential areas are located on coastal plains and may be easily inundated, and transportation facilities are affected by local inundation.¹¹¹ Kampong (Kg; village) Ayer (a cluster of settlements built on the Brunei River) houses about 25% of the capital’s population of 246,000 and is at high risk of inundation. Several areas in Tutong and Belait Districts are considered flood-prone areas, and flooding in these areas can last for up to one week.¹¹²

Forest- and Wildfire

Elevated temperatures and drier spells related to more variable rainy seasons indicate that Brunei’s experience of forest fires will increase in the coming decades as climate change effects take hold. In addition to the impacts of fires on Brunei’s own territory, the incidence of forest fire in Indonesia has also been extremely high for the past 25 years, and Indonesia’s neighbors, including Brunei, are victims of haze and air pollution resulting from these fires. Persistent haze and air pollution carry high risks for the health of residents.

Extensive forest fires that resulted in haze in 1998 were a driving force for the Brunei Fire and Rescue Department (BFRD) to rethink and reassess how they dealt with fire. Brunei has witnessed an increased number of forest fires during dry seasons in recent years. The BFRD recorded a total of 1,116 incidents of forest and grass fires in 2015 alone.¹¹³ More recently, BFRD reported more than 550 forest and bush fires in 2021 with a total of about 300 hectares of land affected.¹¹⁴ Fire intensity can be exacerbated by strong dry winds that lead to uncontrollable fire

spread. In most cases, forest fire in Brunei is actually “ground fire” because of the consistent burning of peat soil rich in organic contents. Fire in peat soils burns and spreads slowly in comparison to dried leaves, woods, or branches of trees. Ground fires damage the ground cover of the forest floor and decrease the nutrients available in the soil that take hundreds of years to build up.¹¹⁵

Land- and Mudslides

The risk of major landslide is very low although heavy rains frequently cause landslides in hilly areas where they can block roads.¹¹⁶ Although no fatalities have been reported from landslides, slope failure constitutes a real danger to life and property as well as to the sustainable development of the country. Meanwhile, most experts agree that there are no real mitigation strategies for landslides and that current reactive measures are ineffective, inefficient, and unsustainable despite Brunei spending US\$3.6 million of government funds on average annually on slope rectification projects.¹¹⁷

Tsunami

There is no record of significant disaster caused by a tsunami in Brunei. However, tsunami disasters may occur due to large earthquakes occurring outside the country. For example, it is possible that a large earthquake occurring in the Manila Trench may affect the coastal area of Brunei. Tsunamis may be generated by sea floor earthquakes, an undersea volcanic eruption, an undersea landslide, or other disturbances above or below water. There is very low probability that a large earthquake along the coast of Brunei will generate a tsunami and cause a major disaster. The BDMD monitors and receives international tsunami information through existing networks as the country does not have its own tsunami monitoring system.¹¹⁸ The NDMC receives advisories from the South China Sea Tsunami Advisory Center.

Typhoon / Cyclone

Located between the Equator and 10° North latitude, Brunei is not generally affected by typhoons or tropical cyclones. While flash floods do occur due to short-term rainfall, these are not linked to tropical storm systems. Extreme weather events associated with El Niño have been more frequent and more intense during the past 25 years, and a projected sea level rise is likely to result in significant losses of coastal ecosystems and people during coastal flooding and storm surges. BDMD is responsible for meteorological observation and weather forecast and would be responsible in case a cyclonic system or depression forms in a way that could impact Brunei.¹¹⁹

History of Natural Disasters

The following list describes some of the emergencies Brunei has experienced in the last five years. Of note, Brunei does not report most of its floods or fires to centralized humanitarian databases managed by ASEAN or the UN. Thus, many incidents will have passed without being reported except in local media.

Forest Fire – May 2022

On 3 and 4 May 2022, firefighters from BFRD combatted a forest fire near Universiti Brunei Darussalam. They were assisted by a Royal Brunei Air Force helicopter that dropped “water bombs.” The fire scorched about 90 hectares of government land in several patches of forest, accessible only through a local public housing development.¹²⁰ Responding personnel came from the Rimba Fire Station, Lambak Kanan Fire Station, and Women Operation Unit, and four fire engines were involved. Firefighters faced a challenge in reaching the fires, which were some 3 km (1.86 miles) into the forest; they had to use heavy equipment and had difficulty in locating water sources.¹²¹ According to the BFRD, no fatalities were reported.¹²²

Flooding – January 2022

Continuous heavy showers from dawn on 26 January 2022 caused flash floods that left roads in some areas submerged under water. Several accidents were reported due to conditions as people were beginning their commutes to work. A shopping outlet basement car park in Mentiri, areas in Jalan Ong Sum Ping and the Old Airport, and interiors of restaurants were impacted by the flash floods.¹²³

Flooding – November 2021

After heavy rains in early November 2021 caused flooding and landslides in some areas of Belait District, the Combat Engineers Squadron (CES) of the Support Battalion Royal Brunei Land Force (RBLF) and the Third Battalion RBLF, with assistance from the PWD, conducted Humanitarian Assistance and Disaster Relief (HADR) operations. Among those badly affected areas were lowlands in Kg Rampayoh where the CES and Third Battalion personnel were deployed to provide assistance. The troops provided mobility support to residents by fixing eroded roads that connect the main road and a bridge at the village. CES personnel were deployed to build a Medium Girder Bridge with the assistance of the Assault Pioneer Platoon of the Third Battalion as a temporary fix while waiting for the road to be completely repaired. Other aid rendered included the construction of an alternative route for pedestrians.¹²⁴

Flooding – September 2021

Second Battalion RBLF assisted in a natural disaster relief effort in Tutong District in early September 2021. Heavy rain caused flooding in lowland areas and left several residential areas and main roads inaccessible, particularly around the areas of Kg Layong. The RBLF relief efforts included manpower assistance and shuttle transportation assistance for affected residents to help reestablish their daily routines.¹²⁵

Flooding – May 2021

After heavy rains in early May 2021 caused flooding and landslides in some parts of

Tutong and Kuala Belait, the Second and Third Battalions RBLF conducted HADR operations. Among those badly affected were people in Hassanal Bolkiah Mosque in Tutong District and Pekan Seria Mosque in Kuala Belait District, to which personnel from the two battalions were deployed. The aim of the operation was to clear the affected areas including the mosque compounds. RBLF operated alongside BFRD personnel, who were also involved in the operations.¹²⁶

Flooding – January 2021

The Second Battalion RBLF assisted in natural disaster relief efforts in early January 2021 in Tutong District. Heavy downpours caused flooding in lowland areas and left several residential areas and main roads inaccessible, particularly in and around the areas of Kg Layong, Kg Rambai, and Kg Panchong. RBLF relief efforts included manpower assistance and shuttle transportation assistance for local residents impacted by the disaster.¹²⁷

Flooding – November 2020

The Third Battalion RBLF was involved in providing assistance to heavily flooded areas in Bukit Puan, Bukit Sawat, and Kg Kagu in late November 2020. Relief efforts included providing transportation to members of the community who had been stranded. These operations came alongside work by other agencies such as Royal Brunei Police Force (RBPF), BFRD, and Emergency Medical Ambulance Services.¹²⁸

Flooding – December 2019

Flooding struck Tutong district during the first two weeks of December 2019. Heavy rain on 7 December caused rising water and affected 47 families, but evacuations were not required. Twelve houses were flooded in Kg Benutan, Kg Kuala Ungar Benutan, Kg Kuala Ungar Rambai, Kg Panchong, Kg Bang Pangan, Kg Ukong, and Kg Rambai. The downpour also triggered two landslide incidents in Kg Ukong and Kg Lamunin. Seven main roads were inundated and inaccessible to most cars and blocking

access to homes. The Second Battalion RBLF had to transport some residents from their homes via trucks, and RBPF personnel patrolled affected areas. Tutong district officials set up eight temporary shelters with space for 290 people. Tutong provided fiber boats as a mode of transportation for affected residents and identified the RBLF Tutong Camp and Penanjong Camp as additional temporary shelters for flood victims. Personnel from JAPEM provided food rations to affected villagers.¹²⁹

Forest Fires – March 2019

Forest fires raged across Brunei-Muara district from 15 to 18 March 2019 amidst a prolonged dry period. Flames destroyed more than 161 hectares of forest, according to the BFRD, which said the fires were concentrated in Rimba, Tungku Link, Lambak Kanan, and Berakas, with hilly terrain restricting responders' ability to transport water and equipment to affected areas. Strong winds also exacerbated the situation by causing the flames to spread rapidly. No injuries or damage to property was reported. A total of 84 fire and rescue personnel were deployed during the operation.¹³⁰

Flooding – May-June 2018

During late May and early June 2018, Brunei experienced heavy downpours and thundershowers that led to flash floods in lowland areas. The BFRD found that a number of roads in Tutong District were affected by floods including Jalan Keranching, Jalan Benutan in Kg Benutan, and Jalan Kuala Ungar/Rambai and Jalan Bengkuru in Mukim Rambai. The BFRD carried out patrols on land and in coastal areas and advised the public around flood-prone areas to be aware of their safety. Local and international NGOs joined forces to help the needy in Tutong and Kg Sungai Mau, Bukit Sawat, and Merangking in Ulu Belait.¹³¹

Flooding – December 2017

Knock-on effects of Tropical Storm Kai-Tak in the South China Sea brought heavy rains and strong winds to Brunei on 19-20 December

2017. These conditions caused flash floods and landslides. Tutong district was the worst affected area, with 0.5 m (1.6 feet) of water disrupting transportation and inundating residential areas. On 22 December, government agents started to provide assistance to nearly 100 flood victims in Temburong.¹³²

Country Risk Profile

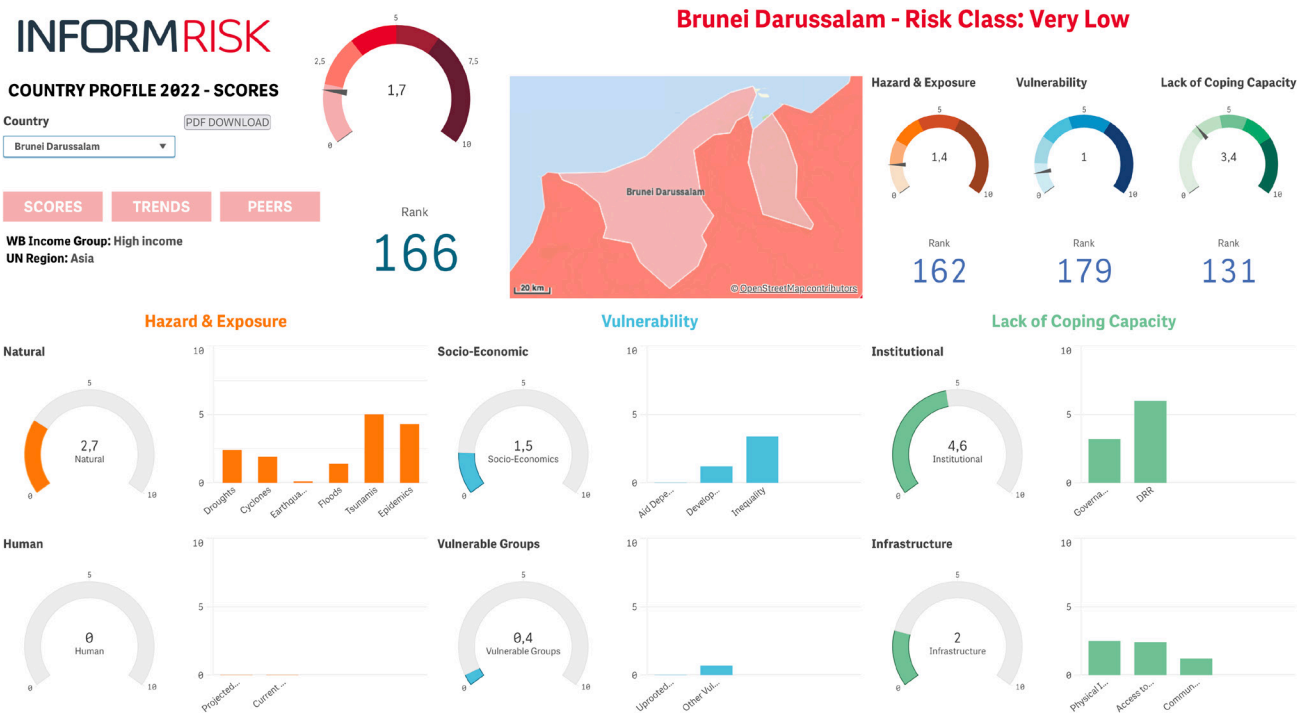
Risk calculation takes into account exposure to hazards, vulnerability, and institutional coping capacity, all of which are important factors in Disaster Risk Management. The Index for Risk Management (INFORM) measures the risk of humanitarian crises and disasters in 191 countries. The INFORM country risk profile supports a proactive crisis management framework. INFORM is helpful for establishing an objective allocation of resources for disaster management as well as for coordinating actions focused on anticipating, mitigating, and preparing for humanitarian emergencies. The INFORM model is based on risk concepts published in scientific literature with three dimensions of risk: Hazards and Exposure, Vulnerability, and Lack of Coping Capacity. The first dimension measures the natural and human hazards that pose the risk. The second and third dimensions cover population factors that can mitigate against or exacerbate the risk. The vulnerability dimension considers the strength of individuals and households relative to a crisis while the lack of coping capacity dimension considers factors of institutional strength.¹³³

The INFORM model is split into different levels to provide a quick overview of the underlying factors leading to humanitarian risk. INFORM gives each country a risk score of 1-10 (1 being the lowest risk and 10 the highest) for each of the dimensions, categories, and components of risk, as well as an overall risk score.¹³⁴ The higher the score the more at risk a country is to disasters. In the 2022 INFORM Risk Index, Brunei had an overall risk of 1.7/10, which INFORM categorizes as the “Very Low” risk class. The Hazards and Exposure dimension

score takes into account a combination of both natural and human hazards, and Brunei rated 1.4/10. The Vulnerability dimension score was 1/10, and the Lack of Coping Capacity dimension score was 3.4/10. Physical exposure to Tsunami (5/10) was the highest risk in the Hazards and Exposure dimension, with Inequality measuring

at a 3.4/10 for the Vulnerability dimension. Disaster Risk Reduction was rated 6/10 in the Lack of Coping Capacity dimension.¹³⁵

Figure 6 shows the INFORM Risk Country Profile dashboard for Brunei Darussalam for 2022.¹³⁶



ORGANIZATIONAL STRUCTURE FOR DISASTER MANAGEMENT

Brunei established the National Disaster Management Centre (NDMC) in 2006. The government, through the NDMC, is the primary provider of assistance to communities affected by a disaster or crisis. The authorities usually allocate significant budgets for disaster recovery and mitigation, and the country has implemented a community-based disaster risk management (CBDRM) program.

Lead Government Agencies in Disaster Response

The National Disaster Council (NDC) is chaired by a Senior Minister within the Prime Minister's Office; members of the NDC are appointed by the sultan. The NDC provides policy and strategic direction and handles any international relations related to disaster management, including decisions to offer or accept international assistance. At the operational level, the implementing authority is the NDMC, housed in the Ministry of Home Affairs,¹³⁷ which serves as the Secretariat of the NDC. NDMC has established the Disaster Command Centre (DCC). Finally, at the tactical level, Brunei's four administrative districts all have a District Disaster Management Centre (DDMC) and District Emergency Operation Centre (DEOC).¹³⁸ Brunei Fire and Rescue Department (BFRD) and the Royal Brunei Police Force (RBPF) are heavily involved in emergency response. Police often manage traffic control and cordon, including to prevent vehicles and people entering affected areas and to allow fire fighters to operate safely and unhindered.¹³⁹ Finally, JAPEM, under the MCYS, is the agency charged with post-disaster assistance and is the office mandated with providing shelter and rations to victims of disaster events.¹⁴⁰ The agencies on the ground will work through an Incident Command

Post (ICP) established within the vicinity of the emergency event. Figure 7 illustrates the strategic, operational, and tactical levels of disaster management in Brunei.¹⁴¹

The NDMC conducts planning and manages policy implementation with oversight over the various agencies that participate in disaster response – e.g., fire and rescue, medical and health services, the police, and the armed forces. NDMC's responsibilities run through the disaster management cycle, from prevention, mitigation, and preparedness, through response, recovery, and policy adaptation based on lessons learned and international best practice.¹⁴² Figure 8 shows the NDMC's organizational structure.¹⁴³

Since its founding in 2006, NDMC has taken a two-pronged approach to enhancing disaster response capacity via formulation of the Strategic National Action Plan (SNAP) for DRR and the National Standard Operating Procedures (NaSOP) for response. SNAP is a comprehensive plan of action aimed at building the capacity of both government and non-government entities in promoting DRR. The NaSOP outlines the agreed procedures that must be followed by all agencies involved in a disaster response. Through NaSOP, the NDMC expects that responses will be more effective, and as part of this effort, NaSOP is constantly revised with updates integrated into responder agencies' individual standard operating procedures (SOP) based on the results of NDMC-led tabletop and simulation exercises.¹⁴⁴

Extensive financial provisions have been made to innovate NDMC's approach through the formulation and updating of the SNAP for DRR and the NaSOP, and for the development of CBDRM. Disaster funds allocated directly to ministries (e.g., Defence or Home Affairs) are available to NDMC for disaster prevention and response operations. At the same time, DRR – especially CBDRM – is allocated special funding

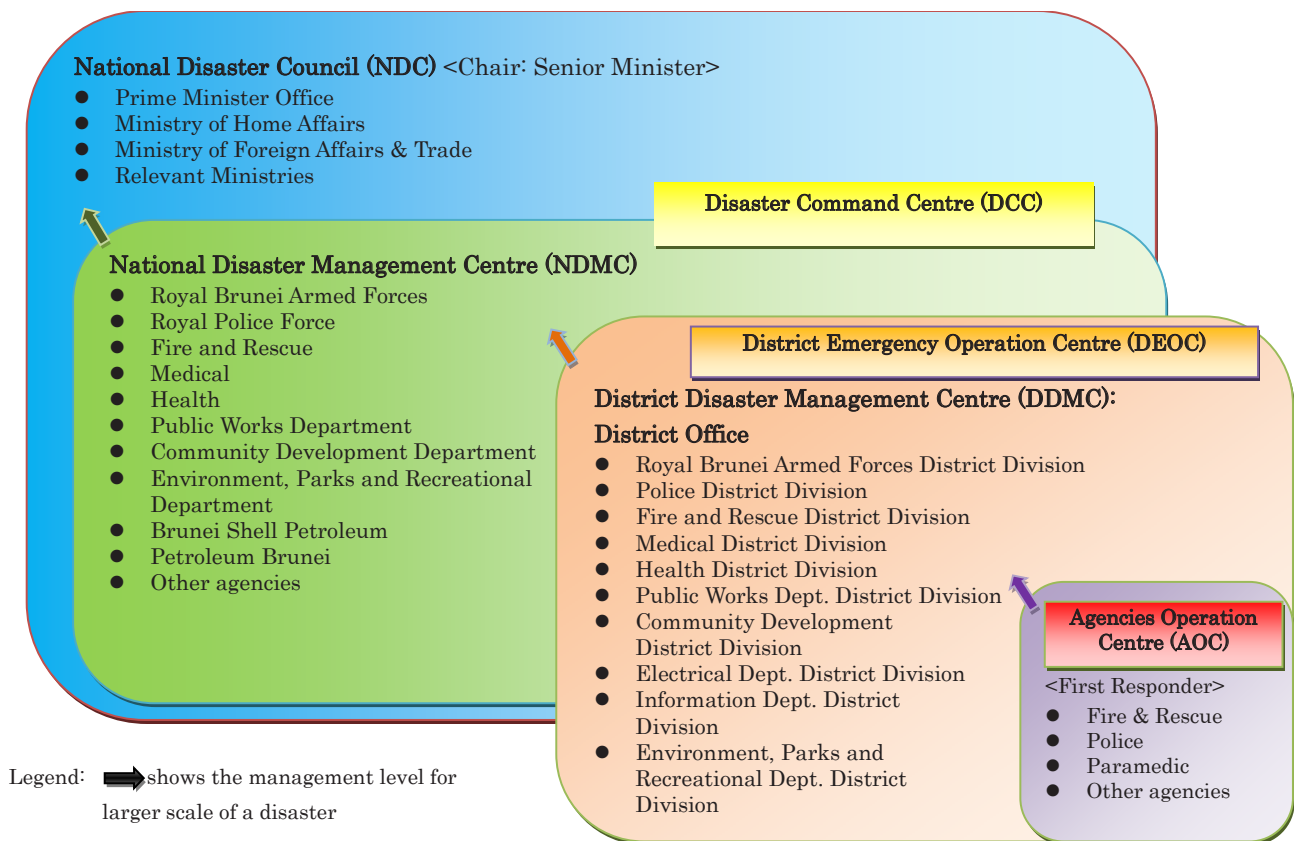


Figure 7: Brunei’s Disaster Management Structure

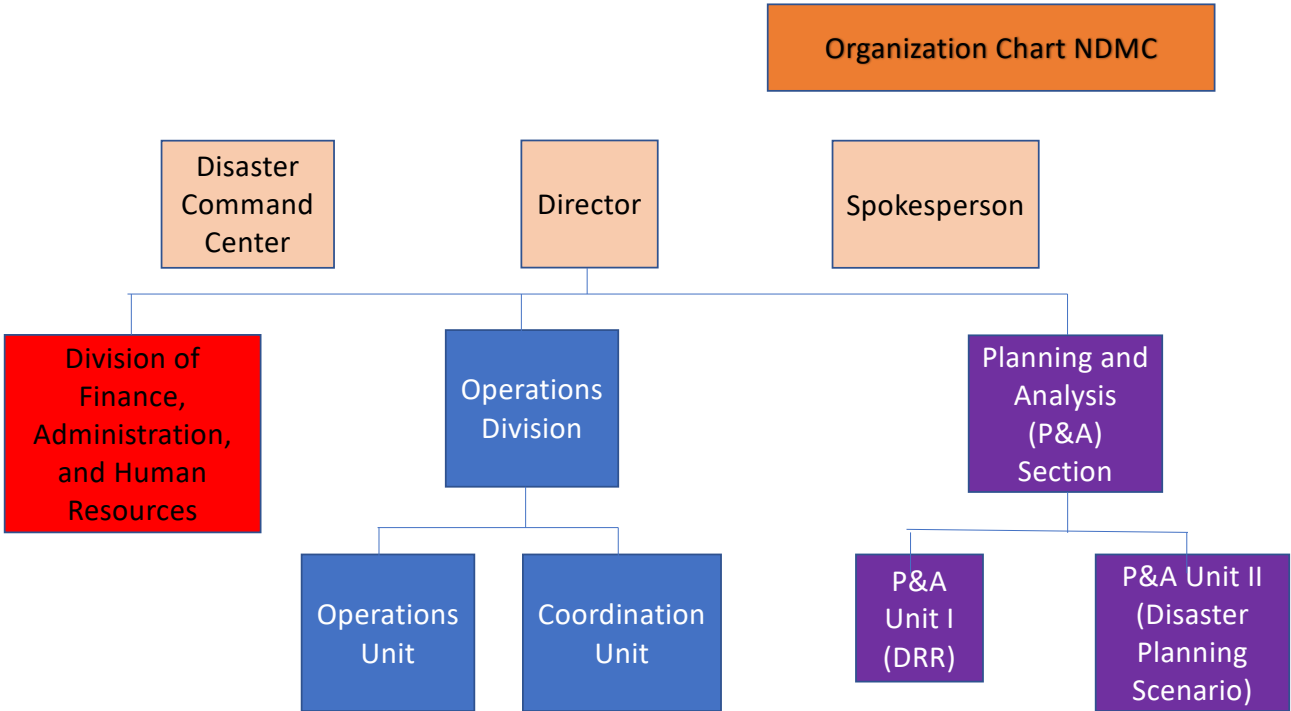


Figure 8: Organization Chart of Brunei’s NDMC

directly to NDMC. Although community participation and decentralization funds are available for focal organizations, preference is still given to funding response, mitigation, and adaptation projects.¹⁴⁵

On the international level, NDMC works closely with the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) in Jakarta. The NDMC Director sits on the AHA Centre governing board, and the NDMC is Brunei's national focal point for ASEAN disaster management communication and coordination.¹⁴⁶ NDMC's DCC is linked with the AHA Centre operations center to facilitate cooperation and coordination among ASEAN member-states and relevant UN agencies and international organizations engaged in disaster response and giving early warning.¹⁴⁷

Disaster Relief and Emergency Response

Under Brunei's whole-of-nation approach, there is close collaboration and coordination among government line ministries and security authorities – i.e., RBPF, Royal Brunei Armed Forces (RBAF), and the National Security Department. This collaboration is coordinated via NDMC, which enables the exchange of information, often in the form of reports distributed to relevant agencies or information exchange during NDC meetings.¹⁴⁸

NDMC operates the DCC 24 hours per day.¹⁴⁹ The DCC is the national-level nerve center for disaster operations and supports operations, planning, and logistics. The DEOC is the district-level implementing entity.¹⁵⁰ Brunei has adopted the Incident Command System (ICS) as practiced and disseminated via training by the U.S. Forest Service. The ICS is a systematic tool for the command, control, and coordination of emergency response; it standardizes coordination among government agencies and ensures that responders are adequately trained and capable in different types of operations.¹⁵¹ Within NDMC's Operations Division, the Operations

and Coordination Units oversee training and readiness as well as movement and operations during emergencies.

The NDMC Operations Unit is responsible for:

- Regular training to test readiness of agencies and to test SOPs
- Gathering disaster lessons and overseeing exercises for the purpose of establishing SOPs
- Identifying training needs based on operational experience and teaching during disaster drills
- Managing an emergency initial assessment team
- Ensuring that all parties involved in operations implement the NaSOP and respective SOPs and that those parties prepare, update, and apply their respective SOPs
- Overseeing operational actions; and
- Coordinating movement of local and foreign initial assessment teams.

The Coordination Unit's responsibilities are:

- Ensuring actions at the scene of an emergency are coordinated during joint operational actions; and
- Other tasks as follows:
 - Improving and strengthening the preparedness of all agencies to deal with all types of disasters
 - Monitoring and controlling the movement of assets used in disaster operations including humans, vehicles, logistics, etc., as well as victims and affected residents
 - Providing a complete inventory and logistics system showing the current location and status of all sources and updating these periodically
 - Anticipating, preparing, and coordinating logistical needs either for the NDMC or for the agencies to be deployed during operations
 - Maintaining a data system that shows the position and status of all deployed assets
 - Preparing and updating the list or

- database of “earmarked assets” – including a list of experts – of the NDMC or other agencies and the private sector for use in disaster operations; and
- Improving and strengthening capabilities in terms of equipment and tools so that the response measures taken are consistent and effective.¹⁵²

With the NDMC as its overall ICS incident commander, the country has established multi-stakeholder DDMCs in all four districts.¹⁵³ All DDMCs have a DEOC and will stand up an ICP to adhere to the ICS and NaSOP. However, there have been shortfalls in integrating NGOs into the ICS at the district level.¹⁵⁴

During a typical response to a small-scale emergency, JAPEM provides food rations and basic necessities sufficient for three days, and it manages two housing estates that, between them, have 100 two- and three-bedroom units that can serve as temporary shelters for persons affected by fires or floods. Other JAPEM services include targeted financial assistance, counseling, and free health and medical treatment, where appropriate. JAPEM staff may go to the site of a disaster, depending on its severity. Historically, post-disaster relief has also been provided by NGOs, private companies, and even individuals, who coordinate with JAPEM.¹⁵⁵

For public health and medical emergency events, the MOH also uses an ICS and has developed and utilized emergency preparedness and response plans such as the Public Health Emergency Operation Plan and major medical emergency plans for all government hospitals. Incident action plans are prepared at all levels, using standardized forms to document response objectives. Ad hoc task forces or committees may be established to coordinate responses. The MOH emergency operations center (EOC) is the national strategic health EOC responsible for coordinating public health emergency responses. MOHEOC activation depends on the type and scope of emergency or the tier of alert from the NDMC. The Permanent Secretary of the MOH

is designated Emergency Commandant upon activation of the MOHEOC. Decision making within this emergency response mechanism is advised by the Director General of Medical and Health Services (DGMHS), who is the Operations Incident Commander. Beneath the MOHEOC, DGMHS has a Departmental EOC that is activated during an emergency and brings together various departments, units, and services to deliver all-inclusive response capacity. There are also smaller EOCs at the operational and technical levels. Each has its own Emergency Operations Plan and Major Medical Emergencies Plan, and these are periodically reviewed and updated.

Industrial incidents and emergencies will incorporate industrial facility personnel alongside RBPF and BFRD units. When dealing with chemical, biological, radiological, and nuclear (CBRN) incidents, the RBPF are the initial responders, and hazardous material (HAZMAT) personnel from BFRD are called in to identify the causative agent, especially if it is thought to be toxic industrial chemicals. For incidents involving CBRN materials of suspected or deliberate origin or materials of a possible explosive nature, the RBLF’s CBRE (chemical/biological/radiological/explosives) Unit is deployed to take the lead. During an industrial chemical event, BFRD’s HAZMAT team is responsible for assisting the affected facility’s emergency response team. SOPs are in place to guide safe approaches, environmental sampling, and response management. If an event is assessed to have the potential for, or is reported to have resulted in, serious impacts to health or the environment, the level of response is escalated to NDMC for multi-sectoral coordination and response from the relevant health departments in MOH, the Ministry of Defence, RBPF, and other agencies. MOH’s laboratory services, including the environmental health, pharmacy, and toxicology laboratories, have the capacity to detect poisoning or chemical intoxication, as well as chemical contamination of humans and the environment.¹⁵⁶

Armed Forces Role in Disaster Relief

The Angkatan Bersenjata Diraja Brunei (Royal Brunei Armed Forces, RBAF) are made up of the Land Force (RBLF), Navy (RBN), and Air Force (RBAirF) as well as a Joint Force Headquarters, Training Institute, and Defence Academy. Among the designated roles of the RBAF is the responsibility to assist in maintenance of public order in support of the Police and Civil Authority, if called upon, including during natural disasters.¹⁵⁷ In particular, RBLF is tasked with conducting and assisting in search and rescue operations,¹⁵⁸ and the RBAirF assists the NDMC in executing tasks linked to search and rescue and delivery of humanitarian aid.¹⁵⁹

In its Defence White Paper (DWP) 2011, Brunei's Ministry of Defence identified defense engagement and building a defense network as key activities for the country's tenure as ASEAN Chair in 2013. Since then, RBAF has maintained bilateral and multilateral engagement both to support overseas operations and to contribute to ASEAN Defence Ministers Meeting (ADMM) and ADMM-Plus mechanisms and initiatives. In its DWP 2021, the Ministry underscored defense engagement as fundamental for the country's continued security, and it called for improved efforts to enhance support activities and operations to deter and counter non-traditional security threats specifically in the areas of peacekeeping and HADR. Moreover, in its assessment of the security threats confronting the country between 2021 and 2035, the Ministry noted that the security risks posed by climate change will be significant and cannot be ignored. Because Brunei will continue to be vulnerable to the consequences of severe weather events, which include flooding, landslides, and storm damage, RBAF will be called upon to help prevent damage to property, loss of life, and population displacement while also potentially having to both deal with and resolve disruptions to transportation, telecommunications, and energy and water supplies. At the same time, RBAF is being warned to take greater consideration of how to monitor its own environmental impact

and to make reductions to its overall carbon footprint. DWP 2021 concludes that to address potential security challenges or national crises that are beyond the capacity of civil agencies, RBAF must ensure sufficient and scalable forces to respond rapidly to threats and be prepared to secure the population during climate change-influenced natural disasters.¹⁶⁰

On a regular basis, RBLF Civil-Military Cooperation Units assist with cleaning up after flooding throughout the country. These operations fall under RBAF's commitment to supporting the NDMC as the nation's lead agency in disaster response. Moreover, the Ministry of Defence considers these operations as means to foster good civil-military relations among RBLF, civilian agencies, and members of the community.¹⁶¹

Externally, RBAF cooperates with its regional counterparts and the AHA Centre to deliver and distribute relief items after a major disaster that strikes any of Brunei's fellow ASEAN member-states. For example, after Typhoon Haiyan struck the Philippines in 2013, Brunei sent personnel to Tacloban to assist AHA Centre personnel. Among the AHA Centre's deployed assessment and support teams were two Bruneian professionals, and the relief team members left the country aboard an RBAF aircraft. Relief items from Brunei were also transported to the Philippines by RBAF by air and sea cargo in November and December 2013.¹⁶² Then, in 2015, RBAF medical personnel joined Singapore Armed Forces personnel in traveling via a Singaporean aircraft to deliver humanitarian relief to Nepal after that country suffered a massive earthquake in April that year. The RBAF personnel joined the Singaporean team via coordination of Singapore's Changi Regional HADR Coordination Centre (RHCC) where Brunei maintains a liaison officer.¹⁶³ Finally, Brunei's armed forces engage in joint exercises, training programs, and other military cooperation with the U.S. Of note is the annual Cooperation Afloat Readiness and Training (CARAT) exercise, initiated in 1995, and in which RBAF were early participants.

CARAT Brunei has evolved to enable the U.S. and Bruneian navies to refine operations and tactics in response to both traditional and non-traditional maritime security challenges.¹⁶⁴

A long-standing special relationship with the UK has seen the British maintain a light infantry battalion in the country since Brunei's independence at the request of the sultan and through a memorandum of understanding, renewed every five years.¹⁶⁵ The British Forces Brunei (BFB) operates as the British Army's acclimatized Far East reserve available for overseas deployments with other elements of the British Armed Forces.¹⁶⁶ In addition to the Headquarters BFB, the force consists of the Resident Infantry Battalion, almost exclusively filled by one of two battalions from the Royal Gurkha Rifles, the 7 Flight (7Fl) Army Air Corps, and the British Army's Jungle Warfare Division.¹⁶⁷ Brunei Garrison consists of three sites: Sittang Camp, just outside Tutong in the middle of the country, and Medicina and Tukur Lines, both in Seria.¹⁶⁸

In addition to training for various combat scenarios worldwide, BFB also trains for non-traditional threats and shares exercises and education opportunities with RBAF and Brunei's other emergency services. Annually, BFB and RBAF take part in Exercise Hikmat Bersatu Enam, which tests operational and tactical actions; in many years, RBPF participates.¹⁶⁹ This training can pay off when BFB is called upon to assist local security personnel. For example, in March 2015, two 7Fl Bell 212 helicopters were mobilized to help support the Belait DDMC in firefighting after a request from the BFRD to the British Defence Adviser to Brunei Darussalam. One helicopter attacked the fire using its sling bucket while the other helicopter provided aerial reconnaissance, including offering the BFRD commander a lift to assess the situation from the air, identify the fire break, and direct operations on the ground.¹⁷⁰ More recently, Gurkhas from the Second Battalion, resident in Brunei, deployed across the country in the second half of 2021 to support efforts in controlling a COVID-19 outbreak. Personnel from both

Brunei's and Britain's Ministries of Health and Defence deployed to various locations as part of military support for swab testing whereby British soldiers operated a swab testing facility serving 700 members of the public daily. BFB personnel were also involved in Brunei's MOH vaccination roll-out.¹⁷¹

Disaster Management Partners

Brunei is an active participant in regional and international disaster management initiatives. The NDMC is Brunei's focal point in the ASEAN Committee on Disaster Management (ACDM), which is composed of the heads of national agencies responsible for disaster management in ASEAN member-states. The NDMC also actively cooperates with other regional centers such as the Asian Disaster Reduction Center, the Asia Disaster Preparedness Center, the Pacific Tsunami Warning Center, and the Pacific Disaster Center (PDC). Finally, the NDMC is an active participant in UN bodies such as the UN Office for Disaster Risk Reduction (UNDRR) and the UN Office for the Coordination of Humanitarian Affairs (UN OCHA).¹⁷²

During a major national emergency, the NDC is activated, and the NDMC can request assistance through the AHA Centre, following precise communication and coordination protocols defined in ASEAN's Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP). With SASOP, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) sanctions the AHA Centre, using the ASEAN Joint Disaster Response Plan, to mobilize standby assets and personnel. This might include sending relief items through the Disaster Emergency Logistic System for ASEAN and deploying the ASEAN Emergency Response and Assessment Team.¹⁷³ ASEAN counterparts will be the first line of international outreach in case of emergency. NDMC's DCC is linked with the AHA Centre to facilitate cooperation and coordination among ASEAN member-states and relevant UN agencies

and international organizations engaged in both early warning and disaster response.¹⁷⁴

The East Asia Summit (EAS) is a process for dialogue and cooperation among participating countries, which include the 10 ASEAN member-states (including Brunei) alongside Australia, China, India, Japan, New Zealand, Russia, South Korea, and the U.S. Among the six EAS priority areas of cooperation,¹⁷⁵ its work on natural disaster management includes support for the AHA Centre and promotion of information-sharing, rapid response, and coordinated action.¹⁷⁶ Among the major developments from the EAS is the Rapid Disaster Response Toolkit, launched in June 2015 as a reference guide for decision-makers when sending or receiving international disaster assistance.¹⁷⁷ The Toolkit contains three Tools:

- TOOL 1: The NATIONAL FOCAL POINT TABLE provides contact information (telephone numbers and e-mail addresses) for EAS participating country officials that have responsibility for managing offers of and requests for international disaster assistance. Each EAS participating country is encouraged to include in its contact information the way in which requests for or offers of assistance flow within a government.
- TOOL 2: The GUIDANCE FOR RAPID DISASTER RESPONSE is a reference booklet intended for DM decision-makers across the EAS. It outlines key issues to consider ahead of or during disaster response; such issues include but are not limited to legal frameworks, diplomatic concerns, the local ability to absorb external assets or personnel, and the appropriateness (or not) of domestic or foreign military assistance. This Tool contains checklists of issues to consider, easy-to-use references, links to templates, and similar documents.
- TOOL 3: The EAS COUNTRY DISASTER RESPONSE ARRANGEMENTS booklet outlines the rapid disaster response arrangements for each EAS participating country. This information includes a detailed inventory of capabilities available and likely

gaps and, in some cases, includes details on acceptable standards for assisting state capabilities (e.g., the International Search and Rescue Advisory Group (INSARAG) Guidelines for USAR Teams).¹⁷⁸

The Toolkit is available either as a box set of hard-copy posters (Tool 1) and booklets (Tools 2 and 3) or in soft-copy on-line (via the following links).

- Tool 1: National Focal Point Table
- <https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2018/01/2015-EAS-Toolkit-1-National-Focal-Point-Table.pdf>
- Tool 2: Guidance for Rapid Disaster Response
- <https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2018/01/2015-EAS-Toolkit-2-Guidance-for-Rapid-Disaster-Response.pdf>
- Tool 3: EAS Country Disaster Response Arrangements
- https://www.asean.org/wp-content/uploads/images/2015/June/EAS_toolkit/EAS-Toolkit-3.pdf

Figure 9 shows Brunei's entry in Tool 3, Country Disaster Response Arrangements.¹⁷⁹

In 2014, NDMC partnered with the CAE-Brunei Multi-Purpose Training Centre (MPTC), a joint venture between a Canadian firm and the Brunei Government, to launch a center to deliver a range of training solutions to defense, aviation, emergency and crisis management, healthcare and energy, and other sectors. CAE-Brunei MPTC established an Emergency and Crisis Management Centre of Excellence to enable the Government to better plan and prepare for emergencies. Using simulation-based training, the Centre offers emergency and crisis management training programs and plans to offer emergency and crisis management training to all of ASEAN.¹⁸⁰

Brunei is covered by the UN's Multi-Country Office (MCO) in Malaysia. The MCO's mandate is to support Brunei, Malaysia, and Singapore in their paths to achieving the 2030 Agenda, including the Sustainable Development

ORGANIZATIONAL STRUCTURE FOR DISASTER MANAGEMENT

Receiving Disaster Response		
Publicly available guideline for receiving international assistance		Brunei National Disaster Management Centre has produced the National Standard Operating Procedure (NaSOP) in Disaster Management for government officers and first responders, this SOP is not available for public consumption.
Signatory to the UN Model Customs Agreement?		No.
Does your country use the UN Cluster Approach? If no, does your country intend to use it in the future?		No.
Immigration and customs	Immigration – Rapid entry or transit arrangements	Visa on Arrival. Facilitation will be granted for country who has no visa waiver agreement with Brunei Darussalam.
	Customs – Rapid entry or transit arrangements	No charges imposed if transit only. Disaster response goods will be put under consideration, to be exempted from taxes subject to MoF approval. List of Control goods need Application Permit (AP).
Food	Food restrictions	Any food listed under <i>food alert</i> and <i>hazardous food</i> is restricted. Restrictions on fresh meat, according to <i>Halal Act</i> . Halal food is encouraged.
	Food expiry timeframes	None.
Medicine	Medicine restrictions	List of restricted medicine are: <ul style="list-style-type: none">• Narcotics• Psychotropic• Human based• Threatened to Extinction animal based• Sibutramina• Dexamethasone• Hydrocortisone• Yohimbine Guiding principal: ASEAN Negative List of Active Ingredients For Traditional Medicines and Health Supplements.
	Medicine expiry timeframes	3 months.
	Medicine labelling requirements	Descriptions of medicine must be submitted prior to arrival. Label must be in English or Malay.
	Medicine approval	Pharmaceutical Service Department, Pharmacy Enforcement Unit, Ministry of Health.
Equipment	Requirements around receiving equipment	Disaster response goods will be put under consideration, to be exempted from taxes subject to MoF approval. List of Control goods needs an Application Permit (AP). Diplomatic clearance is required for response transport.
	Gifting restrictions	Taxations will be imposed. Exemption will be given, subject to Ministry of Finance approval.
Required documents for incoming goods		Forms and applications are available online and under the jurisdiction of the Royal Customs and Excise Department under the Ministry of Finance via eCustoms.
Visas		Visa is required except for countries that have visa exemption arrangement with Brunei Darussalam as attached. Upon arrival: <ul style="list-style-type: none">• Australia - 30 days (Single/Multiple Entry Visa).• China - 14 days (Visa on Arrival, for tourists handled by Travel Agents while for "Business Visit" need Sponsors or "Counterpart" in Brunei Darussalam). List of countries with VISA Waiver Agreement: <ul style="list-style-type: none">• USA – 30 days.• Japan – 14 days.• South Korea – 30 days.• New Zealand – 30 days.• Russia – 14 days (For Diplomatic and Official Passports only).• China – 14 days (For Diplomatic and Services Passports only). Visa prior to arrival: India, China and Russia.
Passport expiry		Requirement is preferably not less than 6 months before the expiry date.
Accreditation		Not provided.
Incoming personnel/teams	USAR teams	Prior acknowledgement must be obtained from the National Disaster Management Centre – coordination for humanitarian assistance with relevant agencies. An arrangement is in place (SASOP) with AHA Centre in Jakarta as the regional coordinator for humanitarian assistance and coordination. Prior acknowledgement must be obtained from the Ministry of Foreign Affairs – for protocols, bilateral, manpower and logistical arrangements. Prior acknowledgement must be obtained from the Royal Customs and Excise Department under the Ministry of Finance – for arrival and logistical arrangements.
	FMT teams	Prior acknowledgement must be obtained from the Ministry of Health – for medicine accreditation.
	Military	Prior acknowledgement must be obtained from the Ministry of Defense – coordination via military to military arrangements the Humanitarian Assistance and Disaster Response (HADR) through the Regional HADR Coordination Centre in Changi.
	Firearms	Prior acknowledgement must be obtained from the Brunei Royal Police Force – for arms clearance and public space security.
	Virtual OSOCC access?	Not provided.
	Search and Rescue/cadaver dogs	Not provided.
	UNDAC teams	Not provided.
	Technical response team	Not provided.
Sending Disaster Response		
INSARAG accredited USAR teams		None.
Niche		Brunei has 6 qualified ASEAN Emergency Response Assessment Team. These trained personnel were mobilized to assess the Bangkok Flooding Situation in 2011, Super Typhoon Haiyan Disaster in 2013.
Other assets or capabilities		None.
Known limitations or restrictions		None.

Figure 9: Brunei’s Details in the EAS Disaster Response Toolkit, Tool 3

Goals (SDG). The Office of the UN Resident Coordinator engages with the Government of Brunei to ensure a coordinated approach between UN development system agencies and the country's authorities. In 2016, the Government created a multi-stakeholder Special Committee for the Implementation of the SDGs comprising senior officials from relevant ministries and agencies to facilitate the inclusion of SDG indicators in development plans as well as to ensure and monitor the implementation of the SDGs in line with national priorities. The cornerstone of these development plans is the Wawasan (Vision) 2035.¹⁸¹

Among the UN system agencies resident at the MCO and that may be involved in any emergency response in Brunei are the International Organization on Migration (IOM / UN-Migration), UN Development Programme (UNDP), the UN Population Fund (UNFPA), the Office of the High Commissioner on Refugees (UNHCR), UN Children's Fund (UNICEF), World Food Programme (WFP), and the WHO. During 2021, the MCO's engagement with Brunei was focused on halting the COVID-19 pandemic and helping the country rebound sustainably. UNICEF was involved primarily in acquiring and distributing rapid antigen testing and personal protective equipment and to facilitate the transfer of vaccines to Brunei via the COVID-19 Vaccines Global Access (COVAX) facility.¹⁸²

Volunteerism has grown as a social effort, often under the auspices of the MCYS. In 2021, MCYS signed a memorandum of understanding with Baiduri Bank to develop and roll out the Mengalinga Volunteer Mobile Application, which provides a platform for event organizers and NGOs to share volunteering opportunities for those who are interested.¹⁸³ The country's ability to mobilize volunteers in times of crisis was illustrated during the COVID-19 pandemic. In part through recruiting via the Mengalinga app, in the first two years of the crisis, 8,000 youth volunteers were registered and assigned to 143 locations with 600-800 volunteers working on a daily basis. The volunteers collected and distributed food rations to 119,082 individuals

with a focus on getting food to individuals under quarantine orders.¹⁸⁴

Council on Social Welfare (MKM; Majlis Kesejahteraan Masyarakat) is among the largest NGOs operating in Brunei. It is funded by donors who include major businesses and private foundations in the country and conducts a variety of poverty alleviation and relief activities. While the main thrust of work is to assist needy residents of Brunei via food, administrative direction, or help financing schooling, MKM also offers temporary help to fire victims and victims of natural disasters.¹⁸⁵

The International Red Cross and Red Crescent Movement

International Committee of the Red Cross

The International Committee of the Red Cross (ICRC) is an independent organization, headquartered in Geneva, Switzerland. The ICRC bases its activities on the provisions of International Humanitarian Law (IHL), and it is neutral in politics, religion, and ideology. The ICRC assists with the protection of civilian victims of armed conflict and internal strife and their direct results. Within these roles, it may take any humanitarian initiative as a neutral and independent intermediary.¹⁸⁶

Since 2012, the ICRC has worked with RBAF to deepen the forces' knowledge of IHL. The ICRC has collaborated to organize and present an IHL workshop at the RBAF's 8th Command and Staff Course, which provides professional skills training for police and security personnel from across the region, including Brunei's own police and internal security staff.¹⁸⁷

International Federation of Red Cross and Red Crescent Societies

The International Federation of Red Cross and Red Crescent Societies (IFRC), founded in 1919, is an international organization that strengthens, coordinates, and represents the humanitarian action of 192 National Red Cross and Red Crescent Societies worldwide. The National Societies are generally statutory auxiliaries to their governments in humanitarian

action, and their volunteers are integral parts of their communities, including in many fragile and crisis-stricken settings. The IFRC Secretariat is headquartered in Geneva, Switzerland, and there are five regional offices and several sub-regional and country delegations worldwide. The Brunei Darussalam Red Crescent Society is supported and serviced by the Kuala Lumpur-based IFRC Asia Pacific Regional Office (APRO) in Malaysia. The APRO Focal Point in Kuala Lumpur supports the Brunei Society on the National Societies' Development Plan in areas of emergency preparedness and response, disaster law promotion, anticipatory actions and preparedness, climate crisis, livelihoods, health interventions, Water, Sanitation, and Hygiene (WASH), community engagement, and accountability. The IFRC plays a key role in global coordination, capacity building, resource mobilization, and representation, and, together with the National Societies, it forms the world's largest, most diverse, and inclusive humanitarian network, which delivers life-saving services before, during, and after disasters and health emergencies and supports long-term programming to build sustainable and resilient communities. The IFRC network is impartial, neutral, and independent.¹⁸⁸

Brunei Darussalam Red Crescent Society

The Brunei Darussalam Red Crescent Society (BDRCS) was initially founded in 1948 as a branch of the British Red Cross. Following independence, the independent National Society was formally established in 1991, was recognized by the ICRC in 1996, and was accepted as a member of IFRC in 1997. BDRCS does not have any paid staff: its leadership works under a task force model to manage the National Society and conduct activities. BDRCS' more than 1,500 members are divided into three groups: cadets, youth volunteers, and general volunteers. Since Brunei does not experience frequent, large-scale disasters, BDRCS focuses on services that include blood donation campaigns, national health awareness campaigns, mobilizing and training youth for various activities, promoting

road safety, delivering first aid, and coordinating with the public health authorities on pandemic preparedness and response.¹⁸⁹ Nonetheless, under the Secretary-General, there is a Disaster Management and Preparedness Department with a Director who works with the District Chairpersons of BDRCS chapters in each of the country's four administrative districts. BDRCS has responded to floods, fires, industrial accidents, and epidemics. Under Brunei's disaster management structure, BDRCS sits at the tactical level of implementation and works within communities to help prepare them to respond in cases of emergency.¹⁹⁰

U.S. Government Agencies in Brunei

The U.S.-Brunei relationship dates to 1845. The two signed a Treaty of Peace, Friendship, Commerce, and Navigation in 1850, and the U.S. briefly maintained a consulate in Brunei from 1865 until 1867. In the modern era, the U.S. opened its Embassy in Bandar Seri Begawan in January 1984, after Brunei Darussalam regained independence. In 1994, the two countries signed a memorandum of understanding on military defense cooperation that resulted in joint exercises, training programs, and other forms of military cooperation. It remains in effect.¹⁹¹

Among the priorities for U.S. engagement with Brunei are:

- Increase the adoption and application of international human rights standards
- Expand bilateral export, investment, and business opportunities
- Encourage regional economic integration and economic diversification through regional trade
- Strengthen Brunei's diplomatic and security cooperation with the U.S. and regional partners to address global challenges such as regional security, violent extremism, trafficking in persons, and climate change; and
- Promote greater understanding of the U.S. and its policies through increased people-to-people interactions and cross-cultural ties.¹⁹²

The Embassy and Brunei's government business incubator, Darussalam Enterprise (DARE), launched the first cohort of the Academy for Women Entrepreneurs in Brunei in 2021. Thirty women were selected to participate in a six-month training and mentoring program to help them start and grow their own businesses. The Embassy and ASEAN, of which Brunei was the Chair in 2021, have declared mutual support for the goal of empowering women to help drive the economy. During the COVID-19 pandemic, many Bruneian women started their own businesses to supplement their income, on top of their regular job, being a mother, a wife, a daughter, or a sister.¹⁹³

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United States Agency for International Development

The U.S. Agency for International Development (USAID) does not have a dedicated presence in Brunei although the USAID Bureau for Humanitarian Assistance (BHA) would be involved should the U.S. government participate in a foreign humanitarian assistance mission in Brunei.

As part of its regional approach to resolving transnational problems, USAID partners with ASEAN – of which Brunei is a member-state – and ASEAN's constituent bodies as well as other multilateral organizations across Southeast Asia. For example, USAID has worked closely with ASEAN and private sector representatives to build ASEAN's capacity around the regional issue of sustainable fisheries, an effort that led to the founding of the ASEAN Secretariat on Sustainable Aquaculture and Fisheries to guide action and reduce the sector's large negative impacts on the environment, communities, and human health. In addition, USAID supports ASEAN member-states to implement the

ASEAN Convention on Trafficking in Persons and works with the ASEAN Working Group on the Convention on International Trade in Endangered Species of Wild Fauna and Flora and Wildlife Enforcement and the ASEAN Inter-Parliamentary Assembly. To promote investments in large-scale, grid connected renewable energy and to promote investments in low emissions land use, USAID projects work closely with the ASEAN Center for Energy and the ASEAN Banking Association, respectively.¹⁹⁴

USAID development work in Southeast Asia also has a component promoting female educational, scientific, and business empowerment. It supports economic initiatives and networks established by the Asia-Pacific Economic Cooperation (APEC) and ASEAN. The Gender Responsive Economic Actions for the Transformation of Women in ASEAN initiative (2015) helps women-led small and medium-sized enterprises to sell products internationally and protect products' intellectual property rights. Also, USAID Green Invest Asia, which identifies and develops promising climate smart business deals, is making the case for increased women's participation in agriculture and forestry. USAID developed an online Gender Sourcebook to ensure that gender equality and female empowerment are incorporated into large-scale climate change adaptation projects.¹⁹⁵

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Laws, Policies, and Plans on Disaster Management

The legal underpinning for DRR and disaster management is the 2006 Disaster Management Order, which has led to the development of plans and SOPs applicable to all hazards and to which all government entities and responding partners are expected to adhere. Overarching strategic frameworks integrate disaster preparedness, resilience, and climate change adaptation.

Brunei Vision 2035

In 2004, the sultan consented to formation of a Council for Long-Term Development Planning to offer a vision for Brunei and to present details of the technical, financial, and strategic requirements to realize it over thirty years. After public consultation, the Council published Wawasan (Vision) Brunei 2035, and in August 2014, the sultan consented to the formation of the Majlis Tertinggi (Supreme Council) Wawasan Brunei 2035 to provide systematic support towards implementing the Vision. Goal #2 of the Vision is to provide a high quality of life, and the projects that fall under this goal include facilities and critical infrastructure, national security, environmental stewardship, and social security and support.¹⁹⁶ Based on these rubrics, then, the Vision offers a strategic framework under which current disaster management activities can be managed.

Disaster Management Order (2006)

The Disaster Management Order (DMO) mandated the establishment of an NDC and assigned it various functions, including developing strategies and policy frameworks, and ensuring that regional and international arrangements are established and maintained. The DMO also provided the legal basis for the establishment of NDMC in August 2006. Under the Order, NDMC will advise and make recommendations to the NDC about matters relating to disaster management.¹⁹⁷ Article 18 of the DMO requires the NDC to prepare a national disaster management plan, and the NDMC has ensured that the Plan is composed of the NaSOP and the SNAP for DRR.¹⁹⁸

Disaster Management Strategic Policy Framework

As of December 2021, the Disaster Management Strategic Policy Framework (DMSPF) was still in draft.¹⁹⁹ It is expected to guide the development and implementation of disaster management policies following an all-hazards, all-agencies approach. It covers events

such as natural disasters, chemical incidents, public health events, and other national emergencies at national and district levels. The various components of the DMSPF are research, policy and governance, risk assessment and mitigation, preparedness, response, relief and recovery, and post-disaster assessment.²⁰⁰

National Disaster Management Plan

The Plan is made up of the SNAP for DRR and the NaSOP.

Strategic National Action Plan (SNAP) for Disaster Risk Reduction 2012-2025

To build a disaster resilient nation with resilient communities, the SNAP for DRR 2012-2025 prioritizes investment in disaster preparedness, mitigation, and response in line with Brunei's commitments under the AADMER and the Sendai Framework.²⁰¹ The NDMC formulated the SNAP to serve as a comprehensive and cohesive plan of action to build the capacity of government and non-government institutions. Figure 10 displays the SNAP objectives, targets, and means to implement DRR.²⁰²

NDMC also initiated the CBDRM program in 2010 in order to operationalize the SNAP. The program is part of NDMC's efforts to increase readiness and preparedness of communities for disasters by identifying hazards and reducing risks associated with them. Under this program, NDMC conducts public awareness exercises, early warning and risk assessment, and safety checks of houses and buildings. NDMC has put together modules used in the National Service Programme and training for trainers primarily focused on teachers. Moreover, it conducts training activities for the different government agencies on radio communications technology, emergency rapid assistance team training in cooperation with Singapore, table-top workshops, and simulation exercises pursuant to the NaSOP. It also ensured use of the ICS in the country's disaster response system.²⁰³

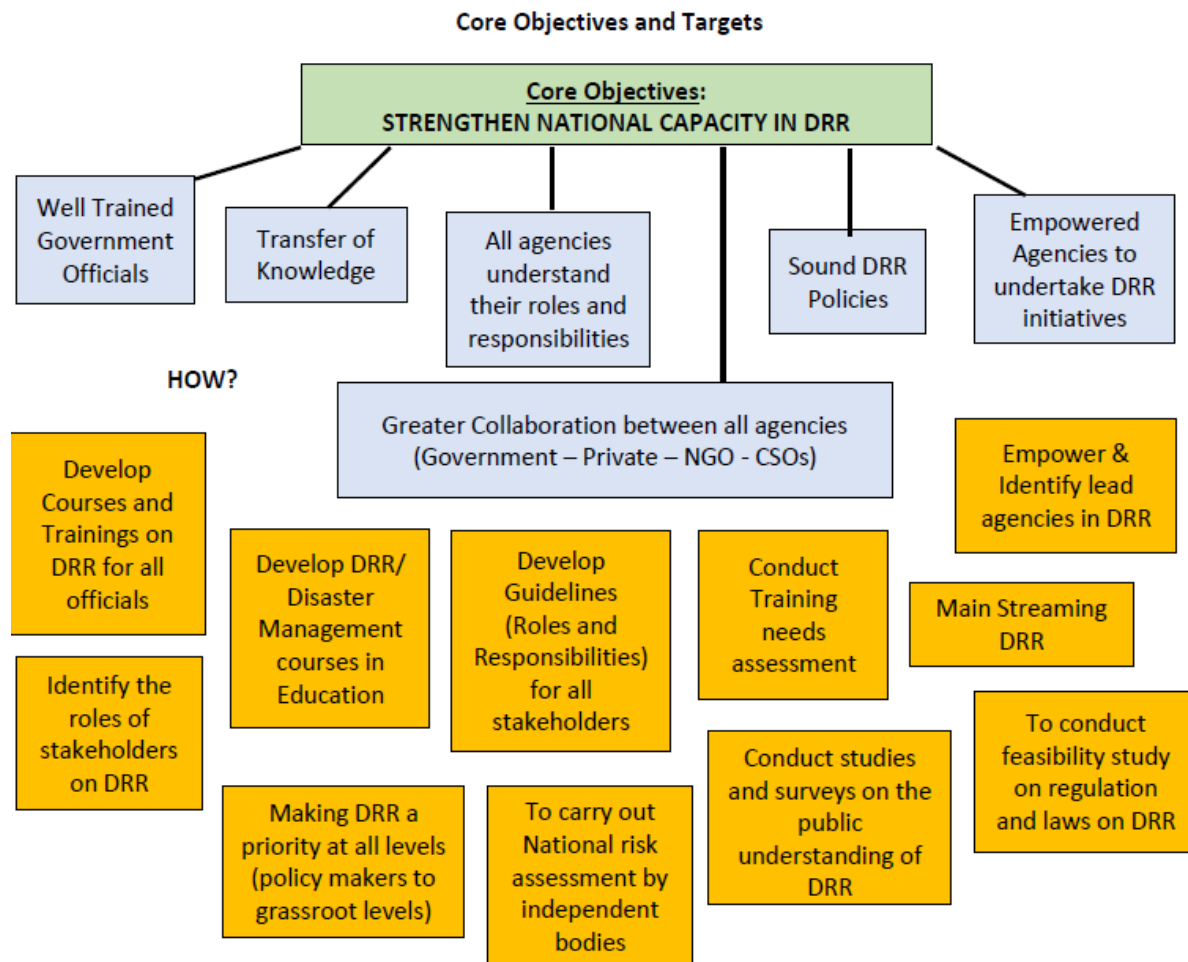


Figure 10: Objective, Targets, and Means to Promote DRR

National Standard Operating Procedures (NaSOP)

The NDMC manages the NaSOP, which was developed by the NDC in 2012; it functions as the central concept of operations document and outlines the roles and responsibilities of all agencies involved in disaster response management under a whole-of-government approach. The NaSOP is a compendium of SOPs for the whole nation and outlines the agreed procedures for all relevant agencies during disaster responses. It includes preparedness measures, response operations, and disaster recovery procedures for all respective agencies. For disaster events such as forest fires and local floods at the district level, the NaSOP lays out emergency preparedness and response measures that are institutionalized through the DDMCs, coordinated by NDMC. The NaSOP therefore provides linkages with the specific SOPs of each

of the relevant response agencies, depending on the type of incident.²⁰⁴

Disaster Management Communications

In times of national emergency, NaSOP requires the Information Department of the Prime Minister's Office to take the lead for risk communication and to coordinate with other relevant agencies and stakeholders. Public communication is done using multiple channels and platforms – e.g., press releases to mainstream media, government websites, and social media channels. A system is in place for the development and clearance of communication products and identifying spokespersons. There is also a well-established relationship with local communities that is used for quick dissemination of information. Communication materials are available in English or Malay.²⁰⁵

Early Warning Systems

Warnings regarding hazards are mainly broadcast through TV, radio, and mobile telephone via short messaging service (SMS). Speakers from mosques may also be utilized to disseminate information, but there remain gaps in getting information to risk-prone communities with particular gaps in reaching fishing communities and vessels in coastal areas. In some cases, police cars with loudspeakers may drive around coastal areas to disseminate warning information.²⁰⁶

The BDMD is responsible for monitoring and forecasting weather and issuing warnings or advisories ahead of a potential emergency. It issues a “weather advisory” to government agencies and the public if there is a likelihood of unsettled weather conditions (e.g., tropical depression or cyclone). If the conditions suggest severe weather within the country, BDMD will issue a “weather warning” that will incorporate a specific timeline for expected weather. The

Department uses a color-coded severe weather warning scale that ranges from yellow (low risk), through amber (medium risk), to red (high risk). The stages refer to the potential for a weather system to cause damage to property or cause disruption to people’s daily lives via rain or winds. Table 5 links the warning stage to the types of impacts expected and the official advice for Bruneians regarding actions to take.²⁰⁷

Flooding is the number one natural hazard in Brunei. With a hot and rainy climate, the country experiences frequent and intense flooding episodes that emerge swiftly. River level monitoring has primarily been based on telemetry technology or, in cases where this technology is not deployed or is inoperable, manual monitoring with significant mobilized manpower. In 2022, Brunei began deploying a smart water device network. The Ministry of Development commissioned ANIAN, an Internet-of-Things solutions company, to develop sensors, network connectivity, and data

Color Alert Stage	Expected Impacts	Advice
Yellow – Be Alert	<ul style="list-style-type: none">Flash floods in low-lying areas and near riverbanksReduced visibilitySlippery roads and pondingLightning strikesLarge tree branches moving	<ul style="list-style-type: none">Keep up to date with informationBe alert when traveling or outdoors as trees, flimsy structures, and water could pose a riskDrivers should be cautious and obey speed limitsBe wary of blowing debrisDo not allow children to play near drains or riversUnplug non-essential appliances to avoid power surges linked to lightning strikes
Amber – Be Prepared	<ul style="list-style-type: none">Whole trees moving with possible smaller branches breakingLocalized power outagesToppled signs or small structuresLandslides on hilly terrainFlooding, landslide, and winds damage buildings	<ul style="list-style-type: none">Keep up to date with informationBe prepared for disruptions to routines and transportationBe prepared to protect self, family, and propertyIf driving becomes unsafe, pull over to the roadside and turn on hazard lightsPrepare valuables to move them to higher land in case of flooding
Red – Take Action	<ul style="list-style-type: none">Severe and widespread floodingBroken tree branchesSevere landslidesOutdoor activities unsafeFlooding, landslides, and winds cause severe damage to buildings and infrastructure	<ul style="list-style-type: none">Take precautionary action and be prepared for significant disruptions to routinesTake action to protect self, family, and propertyFollow orders and advice from authoritiesDrivers should abide by speed limits and avoid routes that are submerged or floodedRemain calm and, if appropriate, indoors, and call the emergency hotline if emergency assistance is required

Table 5: BDMD Color-Coded Weather Warning Guide

management dashboards to monitor water levels in Brunei's rivers. The contracted company deployed ultrasonic sensors connected through Long Range, Wide Area Networking to monitor the water level in flood-prone rivers. The solution combined rainfall volume monitoring with rain gauges and tipping buckets to measure the velocity of water currents.²⁰⁸

Along with Indonesia, Malaysia, Papua New Guinea, Philippines, and Timor-Leste, Brunei is a member of the Southeastern Asia-Oceania Flash Flood Guidance (SAOFFG) System, a subsidiary of the Global Flash Flood Guidance System, designed and developed for interactive use by meteorological and hydrological forecasters. The global effort is managed under a memorandum of understanding signed by the World Meteorological Organization (WMO), USAID, the U.S. National Oceanic and Atmospheric Administration/National Weather Service, and the Hydrologic Research Center. The Flash Flood Guidance system provides products to support development of flash flood warnings from rainfall events using remote-sensed precipitation (i.e., radar and satellite-based rainfall estimates) and hydrological models.²⁰⁹ In the case of the SAOFFG, Indonesia's Agency for Meteorology, Climatology and Geophysics (BMKG) is the regional center, responsible not only for receiving, verifying, and communicating information from participating countries' meteorological services, but also for maintaining the data transfers, servers, and operating systems upon which the network relies.²¹⁰ In Brunei's case, BDMD and the PWD have collected high-frequency river discharge data from four key sites on rivers since 2012, and they feed that information into the SAOFFG modeling scenario to improve forecasting and, therefore, early warning.²¹¹ As of 2022, the SAOFFG is still being completed.

NDMC, as Brunei's Tsunami Warning Focal Point (TWFP), receives advisories from the South China Sea Tsunami Advisory Center (SCSTAC), which became fully operational in November 2019. SCSTAC joins 10 other centers

that are part of the Global Tsunami Warning System of UNESCO's Intergovernmental Oceanographic Commission. SCSTAC's role is to provide timely advisories on potentially destructive tsunamis to officially designated National Tsunami Warning Centers (NTWC) and TWFPs in Brunei, Cambodia, China, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. SCSTAC, as part of the Pacific Tsunami Warning and Mitigation System, provides alerts via the Pacific Tsunami Warning Center (PTWC), hosted by the U.S., and the Northwest Pacific Tsunami Advisory Center, hosted by Japan. SCSTAC is hosted by the National Marine Environmental Forecasting Center of China and supported by China Earthquake Administration that monitors earthquakes from 116 seismic stations available within the region.²¹²

Information Sharing

Understanding how to overcome the information challenges that civilian and military agencies experience during a typical disaster response mission is important. Sharing information is critical since no single responding entity, NGO, International Governmental Organization, assisting country government, or the host government can be the source of all the required information.²¹³ Collaboration, information sharing, and networking have been the backbone of successful disaster response and preparation. Disseminating information not only to those in-country and threatened by disaster, but also to those responding to assist in the emergency has been crucial to timely, efficient, and effective disaster response. Recent technology has advanced to aid predicting and alerting of disasters around the world which has resulted in early warning and evacuation measures as well as opportunities to react and prepare for incoming threats to countries. The following are some of the ways in which information regarding disaster risk management and response are shared.

Brunei Information Sources

Prime Minister's Office, Information Department

The Information Department falls under the Civil Service, Welfare, International, and Media Division, overseen by the Permanent Secretary of the Civil Service, Welfare, International, and Media Section of the Prime Minister's Office. This Department handles all messages and communications strategies relating to hazard information or disaster warnings. In addition to its homepage, the Department posts important information to its social media channels and via its in-house app (Apple and Android), InfoDeptBN.

Department of Information – Prime Minister's Office

Old Airport, Berakas BB3510

Brunei Darussalam

Tel: +673 2383400

Fax: +673 2382242

Facebook: Information Department Prime Minister's Department

Twitter and Instagram: @infodept.bn

Belait District Branch: +673 3224636

Temburong District Branch: +673 5221342

Tutong District Branch: +673 4220290

National Disaster Management Centre

NDMC maintains a Malay-language website with announcements and press releases. It can reach the Bruneian public via mass media or via its own website and social media presences.

Pusat Pengurusan Bencana Kebangsaan

Jalan Landasan Lama

Berakas, BB3510

Tel: +673 2380266 / 2380354 / 2380284 / 2380275

Fax: +673 2380542 / 2380368

E-mail: dcc@ndmc.gov.bn

Facebook: Pusat Pengurusan Bencana Kebangsaan (NDMC)

Brunei Darussalam Meteorological Department (BDMD)

BDMD is responsible for meteorological and climate services. It maintains a weather forecast office that provides warnings, forecast, and advisories for government and non-government agencies as well as for the general public. Its forecasts and warnings are pushed to government and media outlets and are presented on the BDMD homepage or via a dedicated telephone line. Its Brunei WX app is free to download for both Apple and Android platforms.

Weather Line (Mobile Tel): 114

Web: <http://www.met.gov.bn/>

Facebook/Instagram: bruneiweather

Brunei Darussalam Red Crescent Society

BDRCS runs various funding and supply drives and provides assistance to disaster victims as called upon. It publishes most of its information via its social media channels (primarily Facebook and Instagram).

Brunei Darussalam Red Crescent Society

P.O. Box 1080

Bandar Seri Begawan

Tel: +673 877 5002

Email: bdredcrescent@gmail.com

Website: <https://www.rcrc-resilience-southeastasia.org/brunei/>

WhatsApp Hotline: +673 7121989

Facebook: Brunei Red Crescent

Twitter: @Bredcrescent

Instagram: @brunei_redcrescent

Humanitarian Information Sources

UN Office for the Coordination of Humanitarian Affairs (OCHA) Regional Office for Asia and the Pacific (ROAP)

UN OCHA's ROAP seeks to optimize the speed, volume, and quality of humanitarian assistance and coordinates emergency preparedness and response in the world's most disaster-prone region in support of national

governments. ROAP covers 41 countries and partners with them for coordinated and effective international responses to emergency situations. Website: <https://www.unocha.org/roap>
For OCHA situation reports, click on “Subscribe” button on bottom of page.

ReliefWeb

ReliefWeb is a service of UN OCHA that consolidates information and analysis from organizations, countries, and disasters for the humanitarian community. Website: <https://reliefweb.int/>

PreventionWeb

PreventionWeb is provided by UNDRR to consolidate DRR information into an online, easy to understand platform. Website: <https://www.preventionweb.net/english/>

International Federation of Red Cross and Red Crescent Societies (IFRC)

IFRC is the world’s largest humanitarian organization, comprised of its 192 member National Societies, a secretariat in Geneva, Switzerland, and over 60 delegations around the world. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of the National Societies. IFRC’s work focuses on four core areas: promoting humanitarian values, disaster response, disaster preparedness, and health and community care. IFRC GO is a Red Cross Red Crescent platform to connect information on emergency needs with the right response. IFRC GO aims to make all disaster information universally accessible and useful to IFRC responders for better decision making. Website: <https://media.ifrc.org/ifrc> and <https://go.ifrc.org/>

IFRC Asia Pacific Regional Office (APRO)

IFRC’s APRO, located in Kuala Lumpur, Malaysia, works in support of 38 National Societies, including the Brunei Darussalam Red Crescent Society. Through Country Cluster Delegations and Country Delegation Offices, it

provides coordination, financial and technical support for disaster operations, and longer-term development programs. Via the IFRC “Go Platform,” the organization publishes a dashboard regarding regional operations. “Go Platform”: <https://go.ifrc.org/regions/2#operations>
Twitter: @IFRCAsiaPacific

International Committee of the Red Cross (ICRC)

ICRC is an impartial, neutral, and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. It also works to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. ICRC, together with IFRC and the 192 Red Cross Red Crescent Societies, make up the Red Cross Red Crescent Movement. Website: <https://www.icrc.org/en>

Humanitarian Response

Humanitarian Response is a platform providing the humanitarian community a means to aid in coordination of operational information and related activities. Website: <https://www.humanitarianresponse.info>

Global Disaster Alert and Coordination System (GDACS)

GDACS is a cooperation framework between the UN, the European Commission, and disaster managers worldwide to improve alerts, information exchange, and coordination in the first phase after major sudden-onset disasters. Website: <https://www.gdacs.org/alerts/>

Virtual OSOCC

The Virtual OSOCC is a real-time online coordination tool for disaster response professionals from urban search and rescue teams, national authorities, and regional and international organizations at a global level.

Website: <https://vosocc.unocha.org/>
The latest alerts can be found here: <http://www.gdacs.org/Alerts/default.aspx>
To subscribe: <http://www.gdacs.org/About/contactus.aspx>

ThinkHazard!

ThinkHazard! is a website that provides detailed information on a country. Information is provided on Brunei regarding hazards, country assessments, projects, early warning systems, and other resources.
Website: <http://thinkhazard.org>

Humanitarian Country Teams (HCT)

HCT is a strategic and operational decision-making and oversight forum established and led by the Humanitarian Coordinator in each country. It is generally comprised of representatives from UN agencies including the IOM, international NGOs, and the IFRC as well as the respective National Society in the country. During a disaster response, HCTs often produce a Situation Report (SitRep), usually in conjunction with OCHA.

Most HCT SitReps can be found through ReliefWeb: <https://reliefweb.int/>

Humanitarian Data Exchange (HDX)

HDX is an open platform for sharing data across crises and organizations. It launched in 2014 with the goal of centralizing humanitarian data for easy access and analysis. HDX is managed by OCHA's Center for Humanitarian Data in The Hague.
Website: <https://data.humdata.org/> or <https://data.humdata.org/group/brn>

Regional Information Sources

ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)

The AHA Centre was established by the ten ASEAN member-states on 17 November 2011. The aim of the AHA Centre is to facilitate disaster management cooperation and

coordination among ASEAN member-states, including Brunei. The AHA Centre partners with international organizations such as the UN, IFRC, and international NGOs. The AHA Centre is a good information resource for regional disaster updates.

Situation updates, flash updates, and weekly disaster updates on disasters in the ASEAN member-states are available on the AHA Centre website and by subscription.

To subscribe, email info@ahacentre.org or go to: <https://ahacentre.org/subscribe-to-flash-update/>
Website: <https://ahacentre.org>

Twitter: @AHACentre

Facebook: AHA CENTRE

Changi Regional HADR Coordination Centre (RHCC)

The Changi Regional HADR Coordinating Center (RHCC) was launched on 12 September 2014 by the Singapore Ministry of Defence. The Changi RHCC seeks to facilitate military-to-military coordination in international disaster responses by supporting the military of an affected state by helping to coordinate assistance from other foreign militaries. It aims to provide open, inclusive, and flexible platforms that allow both regional and extra-regional militaries to work together effectively in a multinational disaster response. It accomplishes this in part with liaison officers (including one sent from Brunei), deploying coordination units to affected areas, disseminating weekly disaster reports, and with its OPERA Computer Information System (CIS). The CIS sharing system is used as a tool to help facilitate decision making. Changi RHCC manages the OPERA CIS web portal to broadcast the updated situation status of multinational military responses to disasters to minimize duplication and gaps in the provision of foreign military assistance. It has been used in various responses, including the response to the Gorkha earthquake in Nepal in April 2015.

Website: <https://www.changirhcc.org/>

To subscribe to RHCC Weekly and Spot Reports, email: Changi_RHCC@defence.gov.sg

U.S. Government Sources

U.S. Agency for International Development (USAID)

USAID is committed to responding to crises around the world to help people and places most in need. They aim to:

- Promote Global Health
- Support Global Stability
- Provide Humanitarian Assistance
- Catalyze Innovation and Partnership
- Empower Women and Girls

USAID produces a monthly newsletter called USAID Newsletter which is available digitally at <https://www.usaid.gov/news-information/newsletter>

More information and updates from USAID are available via their blog, IMPACT, at <https://blog.usaid.gov/> and on Facebook, Instagram, Twitter, and YouTube.

Website: <https://www.usaid.gov/>

USAID Bureau for Humanitarian Assistance (BHA)

USAID / BHA is responsible for leading and coordinating the U.S. Government response to disasters overseas. BHA responds to an average of 75 disasters in 70 countries every year. BHA fulfills its mandate of saving lives, alleviating human suffering, and reducing the social and economic impact of disasters worldwide in partnership with USAID functional and regional bureaus and other U.S. Government agencies. BHA works with the international population to assist countries to prepare for, respond to, and recover from humanitarian crises.²¹⁴

USAID / BHA products include situation reports and maps, which are available via email mailing lists as well as ReliefWeb. Information products (HA Updates/Fact Sheets, etc.) are also available on USAID.gov (<https://www.usaid.gov/humanitarian-assistance>)

For BHA updates on a disaster response, ask the BHA representative for the respective DoD Geographic Combatant Command to add you to the email list, if you have a U.S. government

email address:

- BHA.INDOPACOM@usaid.gov
- BHA.SOUTHCOM@usaid.gov
- BHA.NORTHCOM@usaid.gov
- BHA.AFRICOM@usaid.gov
- BHA.SOCOM@usaid.gov
- BHA.CENTCOM@usaid.gov
- BHA.EUCOM@usaid.gov

Pacific Disaster Center

Pacific Disaster Center (PDC) has trademarked an early warning and decision support system called DisasterAWARE. DisasterAWARE is primarily for disaster management practitioners and senior decision makers. It supports DRR and best practices throughout all phases of disaster management from early warning to multi-hazard monitoring. It has a collection of scientifically verified, geospatial, data and modeling tools to assess hazard risks and impacts. A restricted version of DisasterAWARE is the EMOPS (Emergency Operations) system, which is specifically for the disaster management community, including government agencies and humanitarian assistance organizations serving at local, state, federal, and regional levels.²¹⁵

PDC also provides a public version, Disaster Alert, which offers open access to a world map documenting 18 hazard types.²¹⁶ Disaster Alert also has a free, early-warning app to receive customizable map-based visual alerts of active hazards. The app offers a global notification system covering natural and man-made hazards. It is available on both iPhone and Android.²¹⁷

Website: <https://www.pdc.org/> and <https://www.pdc.org/apps/disasteraware/>

Emergency Operations (EMOPS) system (request account): <https://emops.pdc.org/emops/>

All Partners Access Network (APAN)

APAN is the Unclassified Information Sharing Service for the U.S. DoD. APAN provides the DoD and mission partners community space and collaboration tools to leverage information to effectively plan, train, and respond to meet their business requirements and mission objectives.

APAN's technology team has been supporting HADR operations for over 15 years.²¹⁸ APAN has played an integral role in the success of disaster responses, such as the 2015 California Wildfire Response and the 2013 Typhoon Haiyan Response in which they provided organizations and militaries a centralized location to share information, increase situational awareness and decrease response time and duplicated efforts for best practices in HADR services.²¹⁹

Website: <https://www.apan.org/>

Joint Typhoon Warning Center (JTWC)

JTWC provides advanced warning for U.S. Government agencies and organizations in relevant areas.

Website: <https://www.metoc.navy.mil/jtwc/jtwc.html>

Daniel K. Inouye Asia-Pacific Center for Security Studies (DKI-APCSS)

DKI-APCSS is a U.S. DoD institute that addresses regional and global security issues, inviting military and civilian representatives of the U.S. and Asia-Pacific nations to its program of executive education and workshops.

Website: <https://apcss.org/>

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

The CFE-DM is a U.S. DoD organization that was established by the U.S. Congress in 1994 and is a direct reporting unit to U.S. Indo-

Pacific Command. CFE-DM provides training and education to help U.S. and foreign military personnel navigate complex issues in disaster management and humanitarian assistance. They produce country focused disaster management reference handbooks, after action reports, best practices, and lessons learned for advancement in response coordination. CFE-DM also works to improve cross-coordination and reduce duplication of efforts and promote U.S. involvement in civilian-military consultations and dialogues with relevant HADR parties such as the AHA Centre, UN OCHA, and the Changi RHCC. CFE-DM provides resources and updates at its website, as well as via Facebook and Twitter accounts (@cfedmha).

- Website: <https://www.cfe-dmha.org/>
- Disaster Management Reference Handbooks are available for download at: <https://www.cfe-dmha.org/Publications/Disaster-Management-Reference-Handbooks>
- CFE-DM Disaster Information Reports are available for download at: <https://www.cfe-dmha.org/Publications/Reports-Studies>
- Civil-Military Coordination in Foreign Disaster Relief Missions: Best Practices for Information Sharing is available here: <https://www.cfe-dmha.org/Publications/Best-Practices-Pamphlets>

INFRASTRUCTURE

Brunei Darussalam has well-developed infrastructure, with a road network serving the entire country, international ports, and one of the best telecommunication systems in Southeast Asia.²²⁰ Responsibility for most of the nation's infrastructure falls under the Ministry of Transport and Infocommunications (MTIC). The ministry was originally established as the Ministry of Communication in 1984 after independence. Its current name dates to 2018 when meteorological, land transport, civil aviation, and service departments were included in the expanded MTIC.²²¹ Figure 11 shows the organizational structure of the MTIC.²²²

Transport

Brunei is well-connected by air and sea to key trading ports and cities throughout Southeast Asia. Internal transport is dominated by roads although there is some river-borne transport capacity for people and goods.

Airports

Brunei's main airport, Brunei International Airport, is located in Bandar Seri Begawan and is managed by the government. Brunei International Airport is used as the base for Royal Brunei Airlines, the country's flag carrier, which was established in 1974 as an independent corporation wholly owned by the government.²²³ The passenger terminal of Brunei International Airport has a maximum capacity of 2 million passengers per year. Located opposite the Brunei International Airport across the runways is Rimba Air Force Base, which is the main airfield and headquarters of the RBAirF.²²⁴

Brunei has a second, privately managed airport, Anduki Airfield. Located in the town of Seria in Belait District, Anduki Airfield is a commercial airport managed by Brunei Shell Petroleum, which uses Sikorsky S-92 helicopters in support of offshore oil platforms.²²⁵

Table 6 shows international codes and runway lengths for main airports in Brunei.²²⁶

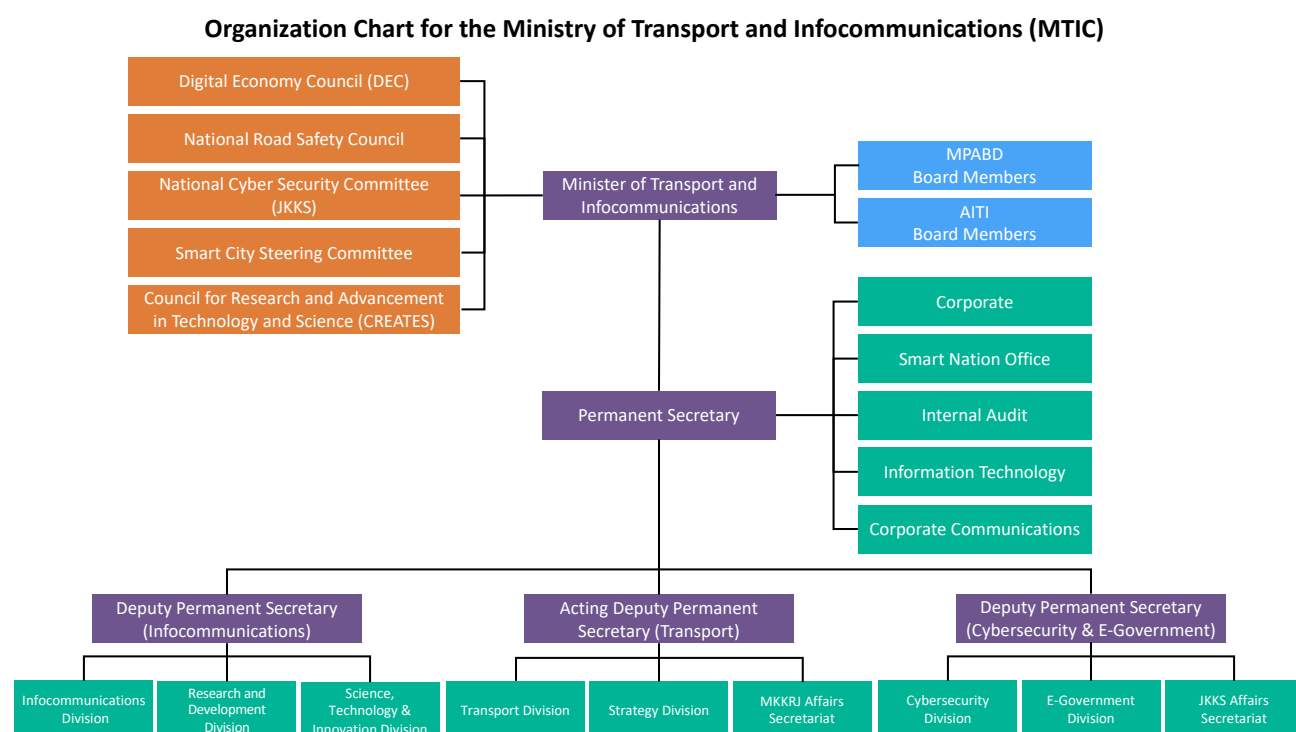


Figure 11: Brunei Ministry of Transport and Infocommunications Organization Chart

Airport	IATA / ICAO Code	Runway Length
Brunei International Airport	BWN / WBSB	3,658 x 46 m (12,000 x 150 feet)
Anduki Airfield	(none) / WBAK	820 m (2,690 feet)

Table 6: Codes and Runway Lengths for Brunei’s Main Airports

Brunei also has several heliports:

- Bangar Heliport (AG11327), Bangar, Temburong District
- Istana Nurul Iman Heliport (AG11328), Bandar Seri Begawan, Brunei-Muara District
- Kuala Belait Heliport (AG11329), Kuala Belait, Belait District
- Muara Heliport (AG11330), Muara, Brunei-Muara District
- Pulau Muara Besar Heliport (AG11331), Pulau Muara Besar, Brunei-Muara District
- RIPAS Hospital Heliport (AG11332), Bandar Seri Begawan, Brunei-Muara District
- Sengkurong Heliport (AG11333), Sengkurong, Brunei-Muara District
- Seria Hospital Heliport (AG11335), Seria, Belait District
- Seria Heliport (AG11334), Seria, Belait District
- Shell Panaga Heliport (AG11336), Panaga, Belait District
- Tumasek Heliport (AG11337), Bandar Seri Begawan, Brunei-Muara District
- Tutong (AG11338), Tutong, Tutong District
- Ulu Ulu Resort Heliport (AG11339), Ulu Ulu, Temburong District²²⁷

Seaports

In 2017, the Marine Department and the Ports Department were merged into the Maritime and Ports Authority Brunei Darussalam (MPABD), which is headquartered in Jalan Pelabuhan, Muara, and has responsibility for managing seaports. MPABD was established as the regulatory authority and is responsible for the management, administration, and security of port and shipping affairs in the country. Its establishment enabled the development of the port and shipping sector in a more planned,

directed, and orderly manner.²²⁸ According to MPABD Order 2017, which established MPABD, the department’s functions include licensing and regulatory functions regarding maritime and port services and facilities, merchant shipping, and safety at sea. MPABD also regulates staffing of vessels, prevention of pollution at sea within port areas and territorial waters, promotion of port development and efficiency, and navigation within port limits and approaches. Brunei Darussalam joined the International Maritime Organization in 1984.²²⁹

Brunei’s main seaport is Muara Port, the major entrance for international trade. This deepwater port is located about 28 km (17 miles) from the capital city. More than 90% of import and export items other than oil and gas go through Muara Port. It has two main terminals - a conventional terminal and a container terminal - with a combined area of 24 hectares. Royal Dutch Shell has some oil-related facilities there and Brunei Shell Oil (Brunei Shell Petroleum) has established an institution to support operations offshore of Muara Port.²³⁰

Port of Muara

Located in Jalan Pelumpong, Muara, the Port of Muara is Brunei’s largest port and the country’s principal commercial gateway. Containers, cement, building materials, vehicles, and livestock dominate cargo throughput, and it can accommodate container ships, oil and chemical tankers, and offshore supply ships. Muara port handles over 1.32 million tons of general cargo per year. Key routes link it to Singapore, Malaysia, Vietnam, and Thailand.²³¹

- Cargo capacity: 106,174 twenty-foot equivalent units (TEU)²³²
- Maximum size: Draught 8.5 m (28 feet); Length overall (LOA) 180 m (591 feet)²³³
- Port code: BNMUA
- Coordinates: 5° 1’ 22” North (N), 115° 3’ 56” East (E)²³⁴

Port of Bandar Seri Begawan

The port of Bandar Seri Begawan is a commercial feeder port with ferry terminals that

provide service to nearby ports. It lies on the southwest bank of Brunei Bay near the Brunei river entrance. It is primarily a river port and agricultural commerce center with main routes serving Malaysia, Singapore, Vietnam, and Thailand. With its wharf extending 427 m (1,400 feet) from southwest to northeast, the port has a cargo terminal, a passenger terminal, and five berths.²³⁵

- Maximum size: Draught less than 6.5 m (21 feet)
- Port code: BNBWN
- Coordinates: 4.869856406 °N, 114.957589 °E

Port of Kuala Belait

Kuala Belait is a river port on the east side of Sungai Belait in the heart of an offshore oil field. The part of the port near the mouth of the river is operated by Brunei Shell and public entry is restricted. The commercial port is located to the south of the municipality. Brunei Shell Petroleum Co Ltd is the main user of the Kuala Belait port, which has been developed as the base for the Seria Oil fields.²³⁶

- Cargo Capacity: 200,000 TEU
- Maximum size: Draught 3.1 m (10 feet) with 872 deadweight tonnage (DWT); LOA 60 m (197 feet)²³⁷
- Port code: BNKBT
- Coordinates: 4° 35' 19" N, 114° 13' 37" E

Port of Tanjong Salirong

Tanjong Salirong is a river port, primarily used for loading logs and handling cargo from neighboring Sarawak, Malaysia. Approximately 30 vessels visit the port annually.

- Maximum size: Draught: 6.1 m (20 feet)
- Port code: BNTAS²³⁸
- Coordinates: 4.9166° N, 115.0833° E²³⁹

Port of Lumut

The port of Lumut is located just to the northeast of Seria and has open sea berths for LNG and methanol loading.²⁴⁰

- Port code: BNLUM
- Coordinates: 4° 40' 12" N, 114° 27' 49" E²⁴¹

Port of Seria

Seria Port is a feeder port located at the southern end of Brunei's coast, approximately 5.4 nautical miles offshore. It is an open sea berth terminal used specifically for crude oil and condensate loading and is operated by Brunei Shell Petroleum. There are two operational single buoy moorings or single point moorings (permanently moored buoys that are critical for transportation of liquid cargo), located 6 nautical miles from the shore. Approximately 180 vessels visit the port annually. Draughts may be increased at the discretion of Brunei Shell Petroleum if tide and weather conditions are suitable.²⁴²

- Maximum size: LOA 290 m (951 feet); Draught 9.6 m (31,5 feet)
- Port code: BNSER
- Coordinates: 4° 36' 45" N, 114° 18' 54" E²⁴³

Roads

The major national road network is the Brunei National Roads System, which was constructed and is maintained by the PWD. All national highways are two-lane roads. Road signs use white characters on a green background, and some signs may use the Malay/Jawi script. The speed limit is 100 km/hour (62 miles/hour). The total length of roads is 2,836 km (1,762 miles) of which 423 km (263 miles) are highways. The six main highways are:

1. Muara-Tutong Highway
2. Sultan Hassanah Bolkiah Highway
3. Tungku Highway
4. Kuala Belait Highway
5. Telisai-Lumit Highway
6. Brunei-Temburong Highway, including Temburong Bridge²⁴⁴

Traffic moves on the left side of the road, as in the UK and Japan.²⁴⁵

Railways

There is currently no public railway in Brunei. There is an industrial railway privately owned by Brunei LNG and serving its LNG plant, where

battery-electric railcars transport personnel and equipment 5 km (3.1 miles) offshore to a ship-loading platform.²⁴⁶ Brunei LNG commissioned new rail car vehicles in 2012.²⁴⁷

Two historic railways operated in Brunei. In the 1880s, a 2.5-km (1.6-mile) line connected Brooketon Colliery's coal mines with Muara port and were operated by the Sarawak government; the railway was closed in 1924 along with the Brooketon Colliery.²⁴⁸ Another railway was constructed in the 1930s by Royal Dutch Shell to connect its Seria refinery with a water pumping station at Badas, approximately 19 km (11.8 miles) away, but it has not been used for decades.²⁴⁹

Waterways

Rivers in Brunei include the Belait, Tutong, and Brunei rivers in the western part of the country, and the Pandaruan and Temburong rivers in the eastern part. All rivers generally flow northward to the South China Sea.²⁵⁰ The Belait is the largest river and is located near Brunei's far southwestern border with the Malaysian state of Sarawak. It flows southeast-northwest through swampy terrain for about 32 km (20 miles) before discharging into the South China Sea. At the mouth of the Belait is the town of Kuala Belait and the center of an offshore oilfield.²⁵¹

Bandar Seri Begawan, Brunei's capital and largest city is situated on the northern banks of the Brunei River.²⁵² On the outskirts of the capital is Kampong Ayer, a prominent traditional settlement of houses built on stilts over the river and that has been in continuous occupation for at least 600 years. It has more than 10,000 residents and is the largest and best-preserved water village in Southeast Asia.²⁵³

Schools

Brunei provides free education to children in primary and secondary schools, and there are high enrollment rates. This provision is partially aided by Brunei's oil production revenue,²⁵⁴ which facilitates the government to maintain expenditure on education of 4.4% of GDP, higher than the world average of 3.7%.²⁵⁵

Pre-primary school age is considered to be 3-5 years of age, primary school age spans 6-11 years, secondary school ages 12-18 years, and tertiary 19-23 years of age. Compulsory education lasts nine years, from age 6 to 14.²⁵⁶ In 2020, Brunei had 98% gross primary school enrollment, including 98% among males and 99% among females. Per 2019 data, there is a 97% persistence rate to the last grade of primary school, with 96% among males and 98% among females. Approximately 85% of teachers are trained in primary education.²⁵⁷

At the end of primary school, students take a compulsory primary school assessment, the Penilaian Sekolah Rendah, to determine placement in a suitable secondary school course in accordance with their assessed learning abilities. The four secondary programs available are the General Secondary Education Program, Applied Secondary Education Program, Specialized Education Program, and Special Educational Needs Program. Table 7 shows the ministry-approved National Education System for the 21st Century (SPN21, or Sistem Pendidikan Negara Abad ke-21).²⁵⁸

SPN21 was introduced in 2009 to reform the education structure, curriculum and assessment, and technical education, and to provide students with greater access to tertiary education via multiple pathways. The SPN21 educational system also aims to meet the goals of Education for All and the Millennium Development Goals (MDG), and to support education for a sustainable future by incorporating values of sustainability.²⁵⁹

The Ministry of Education (MOE) supervises all government and private learning institutions in compliance with the 1984 Education Act. All primary and secondary learning institutions follow a common syllabus, decided upon by the Ministry. Both Malay and English languages are used for instruction. The school week runs Monday through Thursday and Saturday with a split Friday-Sunday weekend. Brunei's Islamic heritage is reflected in the formal educational philosophy, which focuses on Koranic components including piety and faith, as well

Age at Each Level of Schooling	SPN21 Assessment/Public Examination	
Preschool and Primary Education		
5 Years Old	Preschool	
6-11 Years Old	Penilaian Sekolah Rendah (PSR)	
Secondary Education		
12-16 Years Old	4 - Year General Secondary Education Programme	5 - Year General/ Applied Secondary Education Programme
	Year 7	
	Year 8 Student Progress Assessment (SPA)	
	Year 9	Year 9
	Year 10 BC GCE 'O' Level	Year 10
		Year 11 BC GCE 'O' Level/IGCSE/BETC

Table 7: Brunei Schooling System

as devotion towards the sultan. Simultaneously, Brunei's history as a British protectorate also left some influence on the educational system in terms of curricula and structures.²⁶⁰

The MOE's strategic plan for 2018-2022 lays out three strategic objectives, each linked to a core strategy that will be operationalized through strategic initiatives:

1. Strategic Objective 1: Transform our organization's human resources towards a performance-driven culture.
 - Core Strategy: Improve ministry-wide human resource planning and execution for continued growth and success
 - Strategic Initiative 1: Develop and implement a clear succession plan strategy
 - Strategic Initiative 2: Develop and implement a comprehensive human resource development strategy
2. Strategic Objective 2: Provide equal and equitable access to quality education
 - Core Strategy: Improve system-wide inclusion for universal access to quality learning and educational attainment opportunities
 - Strategic Initiative 1: Promote quality early childhood education (pre-primary education)
 - Strategic Initiative 2: Strengthen the delivery of basic education (primary and secondary education)
 - Strategic Initiative 3: Improve quality and access to post-secondary education
 - Strategic Initiative 4: Improve inclusion of disadvantaged and at-risk learners at every education level
 - Strategic Initiative 5: Improve opportunities for lifelong learning
3. Strategic Objective 3: Enhance shared accountability with stakeholders in the development of teaching and learning
 - Core Strategy: Strengthen stakeholders' engagement and support for robust implementation of education initiatives
 - Strategic Initiative 1: Strengthen and sustain internal collaborations and integration
 - Strategic Initiative 2: Strengthen and sustain linkages with relevant external stakeholders²⁶¹

Disaster Risk Reduction in the Education Sector

Much of Brunei's DRR in the education sector is conducted by the BDRCS. Of the Brunei Red Crescent's approximately 1,500 volunteers across four district branches, about 80-85% are youth volunteering as school cadets. The BDRCS Action Plan to strengthen its strategy for the period 2017-2020 included as core components youth and volunteer empowerment as well as school safety.²⁶² School cadets are a uniformed group of students recognized by the government and who play a key role in implementing BDRCS activities at the school level. As of 2017, the BDRCS School Cadets program had 15 schools registered with it.

The MOE, through the Department of Co-Curriculum Education (DOCE), provides continuous financial and logistical support to all cadet activities, which include leadership training, first aid, survival skills, and jungle orienteering. Under DOCE, the Uniformed Group Unit works closely with uniformed security services and first responders such as the RBPF, RBAF, BFRD, the Scout Federation, the Girl Guides Association, BDRCS, and the Educational Institution Volunteers Group to organize and coordinate activities at national, regional, and international levels. DOCE's Uniformed Group Unit also collaborates with NGOs, government agencies, and other stakeholders to coordinate activities related to student leadership.²⁶³

The Brunei Red Crescent also reaches schools through ongoing campaigns jointly conducted with relevant ministries, including the MOH for campaigns relating to first aid, blood donor recruitment, and non-communicable disease awareness, as well as the MTIC on road safety campaigns.

BDRCS school outreach activities include:

- School Disaster Management
 - First Aid — Training for school children and BDRCS school cadets
 - Evacuation training — School students participate in flood and fire evacuation training

- School safety plan — Students map hazards in school, evaluate accessibility, emergency assembly areas, fire exits, and fire extinguishers, and conduct fire drills
- Risk Reduction and Resilience Education
 - Awareness sessions after school — Students learn about school safety as part of their school's co-curricular activities
 - Annual Youth Leaders Camp — BDRCS organizes a nationwide Youth Leader Camp as part of the Youth as Agents of Behavioral Change program
 - Tree planting — BDRCS Youth take part in climate change awareness campaigns by planting trees as part of youth engagement in green projects²⁶⁴

Communications

Brunei's telecommunications infrastructure is well developed, and services are of high standard due to significant investment in networks and services. The country has a relatively mature telecom system, and mobile subscription rates have increased to a level of high penetration. A launch of 5G pilot services in April 2021 was intended to increase awareness of the benefits of 5G and boost the mobile broadband sector.²⁶⁵

Brunei Darussalam joined the Asia-Pacific Telecommunity (APT) on 18 March 1986.²⁶⁶ Mobile phones were introduced in 1989 and were improved in 1995 by the implementation of Global System for Mobile Communication, a standard developed by the European Telecommunications Standards Institute to set protocols for second-generation digital cellular networks used by mobile devices. In 2005, 3G services were introduced and were followed by 4G in 2014. In 2019, the network infrastructure of Brunei's four telecommunications providers – Telekom Brunei Berhad, Datastream Technology Sdn Bhd, Progresif Cellular Sdn Bhd, and Brunei International Gateway Sdn Bhd – were consolidated under a single entity, the Unified National Networks Sdn Bhd.²⁶⁷ 5G technology has been in Brunei since 2020, but it is not yet in public use. Reports in June 2022 suggested

Brunei was “set to launch its 5G service soon,” and 90% of base stations in the country were in place.²⁶⁸

Telephones

Telephone service throughout Brunei is good, including good international service to Southeast Asia, the Middle East, Western Europe, and the U.S. Fixed-line telephone connections are declining, but mobile-cellular telephones are widespread and mobile broadband has taken over in the advancement in the telecoms access market.

Fixed-telephone subscriptions are held by 24 per 100 inhabitants while there are 123 mobile-cellular subscriptions per 100 inhabitants. Approximately 94% of individuals own a mobile phone, with 99% of the female population and 91% of the male population owning a mobile phone. Approximately 99% of the population is covered by a mobile-cellular network, 96% is covered by at least a 3G mobile network, and 95% is covered by at least a 4G mobile network.²⁶⁹

Internet Access

In Brunei, approximately 95% of all individuals use the internet, with internet use at 100% among the female population and 92% among the male population. An estimated 64% of households have a computer at home, and 54% of households have internet access at home. There are 16 fixed broadband subscriptions per 100 inhabitants, and 125 active mobile-broadband subscriptions per 100 inhabitants. The international bandwidth per Internet user is 154 kilobits per second (kbps).

Regarding ICT skills, 57% of individuals have basic skills, 40% have standard skills, and 28% have advanced skills. Basic ICT skills would be copying or moving a file or folder; using copy and paste tools to duplicate or move information within a document; sending e-mails with attached files; or transferring files between a computer and other devices. Standard ICT skills are considered as using basic arithmetic formula in a spreadsheet; connecting and installing new devices; creating electronic presentations with

presentation software; or finding, downloading, installing, and configuring software. Advanced ICT skills would be writing a computer program using a specialized programming language.²⁷⁰

Mass Media

Mass media is strictly controlled by the government. Per Reporters Without Borders (RSF, or Reporters sans frontières), press freedom is virtually non-existent in the sultanate. Self-censorship is the rule for journalists working for Radio Television Brunei (RTB), which is owned by the state, and for the leading daily newspapers, which are directly owned by the Sultan's family. Publishing content that undermines the “prominence of the national philosophy” is punishable by three years in prison under the sedition law, and journalists face five years in prison for any article deemed malicious. The SPC, adopted in 2019, provides for nothing less than the death penalty for any statement or publication deemed to be blasphemous or to have advocated apostasy.²⁷¹

For broadcast media, state-controlled RTB operates five channels. Three Malaysian TV stations are available and foreign TV broadcasts are accessible via satellite systems. RTB operates five radio networks and broadcasts on multiple frequencies; the UK's official armed forces radio and TV broadcaster, British Forces Broadcast Service (BFBS), provides radio broadcasts on two FM stations. Some radio broadcast stations from Malaysia are available via repeaters.²⁷²

Post

Postal services fall under the responsibility of the Brunei Postal Services Department. The first post office was established in 1895 by the Borneo Company. Since 1984, when Brunei became independent, the Postal Services Department has been under the responsibility of the Ministry of Communications, now MTIC.²⁷³ Brunei has been a member of the Universal Postal Union since 15 January 1985.²⁷⁴ In addition to the mail processing center in Berakas, the Brunei Postal Services Department has branches in Bandar Seri Begawan, Gadong, Seri Complex, Lapangan

Terbang, Anggerak Desa, Rimba, Salambigar, Muara, Bunut, Sengkurong, Limau Manis, Lumapas, Tutong, Telisai, Lamunin, Kuala Belait, Seria, Lumut, Labi, and Bangar.²⁷⁵ Postal services include air and sea mail, deferred mail, insured mail, registered mail, private box and locked bag services, sales of stamps and philatelic products, remittance money, and postal orders.

Utilities

Various aspects of utilities are the responsibility of the Department of Energy, under the Prime Minister's Office, or the Public Works Department (PWD). The PWD includes eight departments:

1. Department of Roads
2. Department of Administration and Finance
3. Department of Drainage and Sewerage
4. Department of Water Services
5. Department of Building Services
6. Department of Technical Services
7. Department of Mechanical & Electrical Services
8. Department of Development²⁷⁶

Power

The energy sector contributed 57.8% of Brunei's GDP in 2021.²⁷⁷ As of 2020, Brunei produced about 110,000 barrels of oil and 9,600 barrels of natural gas liquids per day, and much of the crude oil and natural gas are exported.²⁷⁸ Brunei's total energy production in 2019 was 0.728 quadrillion British thermal units (Btu). The country ranked 57 out of 176 countries for energy production, a relatively high ranking considering its population is less than 500,000 people.²⁷⁹

Brunei has four dams and 10 thermal power plants. Natural gas fuels the majority of the country's electricity generation, and the country is self-sufficient in energy production. Brunei's annual consumption of energy was 53 terawatt-hours (TWh) per 2019 data. Per capita, Brunei's average energy consumption was 121,637 kilowatt hours (kWh) in 2019, and Brunei consumed 4.64 TWh of electricity in 2019 and 2020. This is the sum of all energy uses, including

electricity, transport, and heating. 100% of the country's population has access to electricity.²⁸⁰

Brunei plans to import electricity through a potential transmission line from Malaysia. Brunei is also planning to develop the Temburong Smart City, which would mostly be powered by solar power and is projected to become the 'Green Jewel of Brunei.' Initiatives like these are expected to significantly drive Brunei's power market. The Brunei power market is consolidated, with major companies including the Government of Brunei's Department of Electrical Services, Berakas Power Management Company, Brunei LNG Sdn Bhd, General Electric Company, Toshiba Corp., and others.²⁸¹

Brunei is also seeking to diversify its generation mix by building more renewable electric generation capacity. In 2014, Brunei adopted a strategic plan to achieve a 10% share of renewables in the national energy mix by 2035, with most renewable electric generation efforts through solar PV plants and waste-to-energy projects.²⁸² Yet a March 2021 Ministry of Energy report concluded, "Despite the increased focus on EEC [energy efficiency and conservation], growing domestic energy demand ensures that fossil fuel will remain the primary energy source."²⁸³ However, in October 2021, the Minister of Energy expressed an increased renewable energy goal, announcing that Brunei aims to meet 30% of its overall power generation mix with renewable energy by 2035.²⁸⁴

On 21 May 2022, the Sultan gave an order for the abolition of the Ministry of Energy and the formation of a new Department of Energy under the Prime Minister's Office. The announcement did not give any reason for the change.²⁸⁵

According to the new Department of Energy website, "With the main goal to support the national agenda for a dynamic and sustainable economy, the Department contributes to the development of the country's energy sectors including Oil and Gas, Power Sector and Renewable Energy. The energy sector accounted for 55% of the country's total GDP in 2020."²⁸⁶ Brunei's Department of Electrical Services is administered under the Energy Department, Prime Minister's Office.²⁸⁷

The Department of Energy lists eight strategic objectives:

1. **STRATEGIC OBJECTIVE 1: DIVERSIFICATION OF ENERGY SECTOR TO INCREASE RESILIENCE FROM GLOBAL OIL MARKET UNCERTAINTY** – To reduce the impact of global oil market fluctuations on national revenue with the creation of value-added products, especially through further downstreaming
 - Pulau Muara Besar Oil Refinery and Petrochemical Plant
 - Fertilizer Industries
 - Liquefied Natural Gas
 - Methanol, Further Downstreaming, and Improvements
2. **STRATEGIC OBJECTIVE 2: EFFECTIVE AND SUSTAINABLE HYDROCARBON RESOURCE MANAGEMENT** – To ensure that the oil and gas sectors remain stable and sustainable to drive socio-economic growth
 - Unlock New Areas
 - Promote Upstream Opportunities to International Companies
 - Facilitate Near Field Exploration, Low-cost Development, and Increase Reserves in Existing Fields
 - Optimum Exploitation of Hydrocarbon Resources and Integrate Value Chain to Maximize Value
 - Manage Oil and Gas Assets Safely
3. **STRATEGIC OBJECTIVE 3: GREEN ENERGY** – For the long-term energy security of Brunei Darussalam and its environment
 - 100 megawatts (MW) Solar PV Installation
 - Rollout Renewable Energy Policy and Intervention
 - Explore Other Renewable Energy Technologies
 - Roll Out Energy Efficiency and Conservation
 - Other Green Energy Measures and Activities
4. **STRATEGIC OBJECTIVE 4: AFFORDABLE, SAFE, RELIABLE, AND EFFICIENT MODERN ENERGY** – To ensure the continued domestic supply of power and products from the energy sector for the welfare of the nation
 - Improve Generation System Performance and Capacity
 - Strengthen Electricity Supply Network
 - Modernization of Services
 - Regulate Electricity Supply Industry
 - Ensure Uninterrupted Domestic Supply of Petroleum Products
5. **STRATEGIC OBJECTIVE 5: HIGHLY SKILLED BRUNEIAN WORKFORCE IN THE ENERGY SECTOR** – To ensure Bruneians are able to leverage employment opportunities in the energy sector at all levels
 - Facilitate and Regulate Local Employment
 - Enforce and Regulate Succession Planning
 - Develop Local Talent and Capabilities
6. **STRATEGIC OBJECTIVE 6: SUPPORTING SOCIO-ECONOMIC DEVELOPMENT THROUGH ENERGY SECTOR SPIN-OFFS** – To ensure that energy sector generates spin-offs that benefit the socio-economic growth of Brunei Darussalam by ensuring local businesses and workers are able to access opportunities generated from the energy sector
 - Enforcement of Local Business Development Directives
 - Capacity Building of Enterprises
 - Spin-Offs Development
7. **STRATEGIC OBJECTIVE 7: ROBUST AND CONDUCTIVE REGULATORY FRAMEWORK AND SAFETY STANDARDS** – For the Creation of a conducive environment that enables foreign direct investment, business establishment, and private sector growth

8. STRATEGIC OBJECTIVE 8:
ORGANIZATIONAL EXCELLENCE
 - Dynamic, Successful, and Vibrant Organization that deliver Excellent Service
 - Manpower and Talent
 - Thriving Ecosystem
 - Digitalization²⁸⁸

Water and Sanitation

Responsibility for water and sanitation largely falls to the PWD, specifically its subsidiary Department of Water Services.²⁸⁹ The PWD supplies 99.9% of potable water, which includes 0.2% rural water supply. The Department of Water Services is responsible for overseeing the planning, design, and management of the country's water resources. The aim is to ensure sustainability and adequate resources to meet future demands, which include protection and conservation of existing and potential resources. The department's Water Services Laboratory provides testing and sampling to ensure water is clean and safe for public use. The laboratory was accredited under the Singapore Accreditation Council – Singapore Laboratory Accreditation Scheme and achieved the International Organization for Standardization's ISO 17025, General Requirements for the competence of testing and calibration laboratories.²⁹⁰ Approximately 86% of sewage is treated before disposal and 44% of the population is served by the public sewer system.²⁹¹ Approximately 96% of the population uses at least basic sanitation services and 100% of the population uses at least

basic drinking water services.²⁹² Wastewater treatment service is provided at no cost to the public.

Brunei has the highest rate of water usage among ASEAN member-states at 380 liters or 100 gallons (gal) per day per person, compared to 212 liters (56 gal)/day/person in Malaysia and 151 liters (40 gal)/day/person in Singapore. Yet these high usage rates, as of 2019 reporting, had fallen from 2015 when data showed Bruneians consumed 450 liters (119 gal)/day/person.²⁹³ The cost of water production in Brunei is US\$0.90 per cubic meter but is sold to the public at US\$0.11 per cubic meter, a subsidy of 88%. Brunei's Ministry of Development (MoD) introduced a prepaid water meter system in 2019 with the aim of curbing high usage and further reducing water wastage.²⁹⁴ The MoD and PWD are replacing aging water pipe infrastructure with the aim of reducing water wastage via leaks by more than 45%, in line with WHO standards. Projects scheduled for completion in 2022 include the replacement of pipe support for raw water from the Badas water pump station to Seria Water Treatment Plant, old main pipes at the Seria Water Treatment Plant, the water tank at Sungai Bera Industrial Park, and Badas Raw Water Pumping Station, as well as the upgrade of sewerage systems in Kuala Belait and Seria municipal areas.²⁹⁵ Future water challenges include wastewater management, water pollution, river water quality, water security, and water resource management.²⁹⁶

HEALTH

Brunei Darussalam has one of the best healthcare systems in Asia and in the world. Maternal and child mortality and many communicable diseases have decreased significantly.²⁹⁷ Life expectancy at birth in 2017 was 77.5 years for women and 73.3 years for men, and it was forecast to increase to 82.5 years for women and 79 years for men in 2100. In 2018, government health spending was US\$525.07 per person, with out-of-pocket spending and prepaid private spending combined coming in at less than US\$29 per person. Total health expenditures are expected to decrease 11% by 2050.²⁹⁸

Brunei experiences many health outcomes also seen in other developed countries, including longer life expectancies but also a rise in lifestyle-associated noncommunicable diseases (NCD). NCDs account for eight of the top 10 causes of death. Figure 12 shows Brunei's top 10 causes of total number of deaths in 2019 and percent change 2009–2019 for all ages combined.²⁹⁹

Figure 13 shows the top 10 causes of death and disability (disability-adjusted life years or DALY) in 2019 and percent change 2009–2019 for all ages combined.³⁰⁰ One DALY represents the loss of the equivalent of one year of full health.

Health Care System Structure

Brunei's health care system provides a relatively high coverage of essential services. Citizens receive free healthcare, including medicines for inpatients and outpatients, funded by Brunei's General Treasury.³⁰¹ Total health expenditure per capita is US\$1,777.80, comprising about 1.8% of GDP. Brunei has an estimated 17.7 physicians per 10,000 population; 0.17 pharmacists per 1,000 population; 2.7 hospital beds per 1,000 population; and 3.9 doctor consultations per capita. As the federal government provides healthcare and medical services, the MOH oversees the country's

government hospitals, health centers, and clinics. Brunei has four government hospitals, 16 health centers, and 64 primary care facilities. Travelling health clinics and flying medical services are available for remote areas.³⁰² The leadership structure of the MOH is depicted in Figure 14.³⁰³

WHO support to Brunei Darussalam focuses on:

- Direction for service delivery architecture and service model
- Health workforce plan in light of service delivery transformation
- Provider payment system to incentivize system re-orientation and contain costs
- Health technology assessment mechanisms and processes to link with existing resource allocation processes; and
- Integration of health information systems to underpin ongoing monitoring to achieve optimum efficiency and effectiveness.³⁰⁴

Health Information

The MOH created a 'one patient, one record' system implemented in 2019 to facilitate its goal of delivering universal health benefits to its citizens. Touted as a healthcare milestone, the comprehensive health-information management system contains health records of every citizen across the country. The aim was to create a system capable of spanning the country's health facilities, ensuring every health record was easily accessible to physicians and other healthcare professionals "anywhere, anytime." The MOH partnered with DXC Technology for technical support and expertise through the creation of a system named Brunei Health Information and Management System (Bru-HIMS). Bru-HIMS integrates with nearly a dozen pre-existing MOH systems. The system's provision of a "single, consistent record" of a patient's healthcare information through real-time data integration and replication, as well as mobile app access, led to at least 90% of the population registering.³⁰⁵

What causes the most deaths?

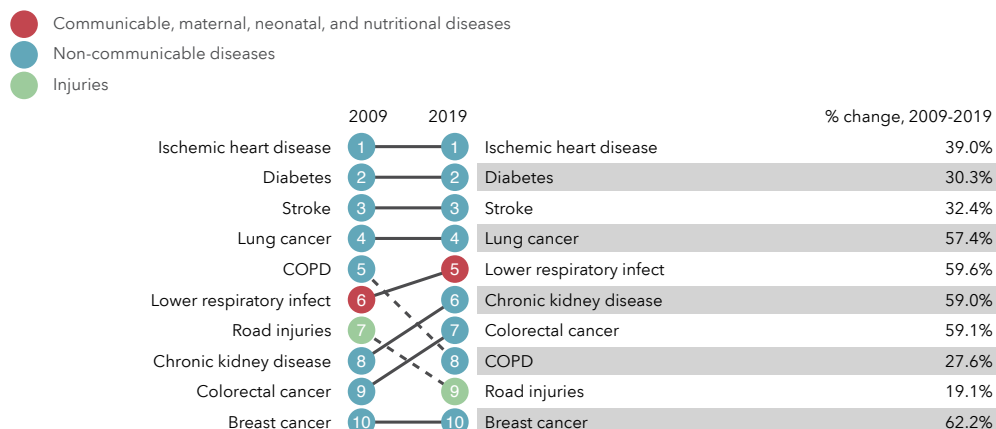


Figure 12: Top 10 Causes of Death in Brunei (2019)

What causes the most death and disability combined?

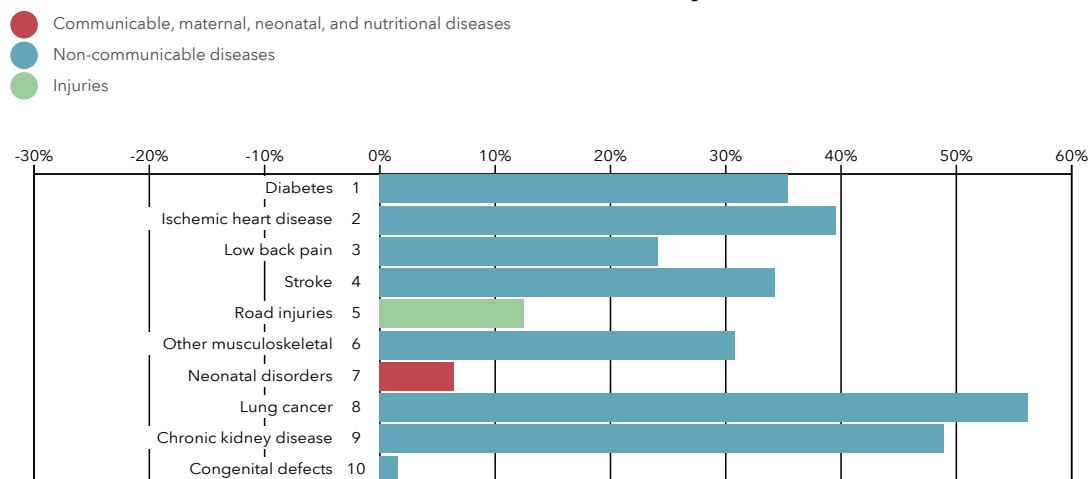


Figure 13: Top 10 Causes of Death and Disability (2019)

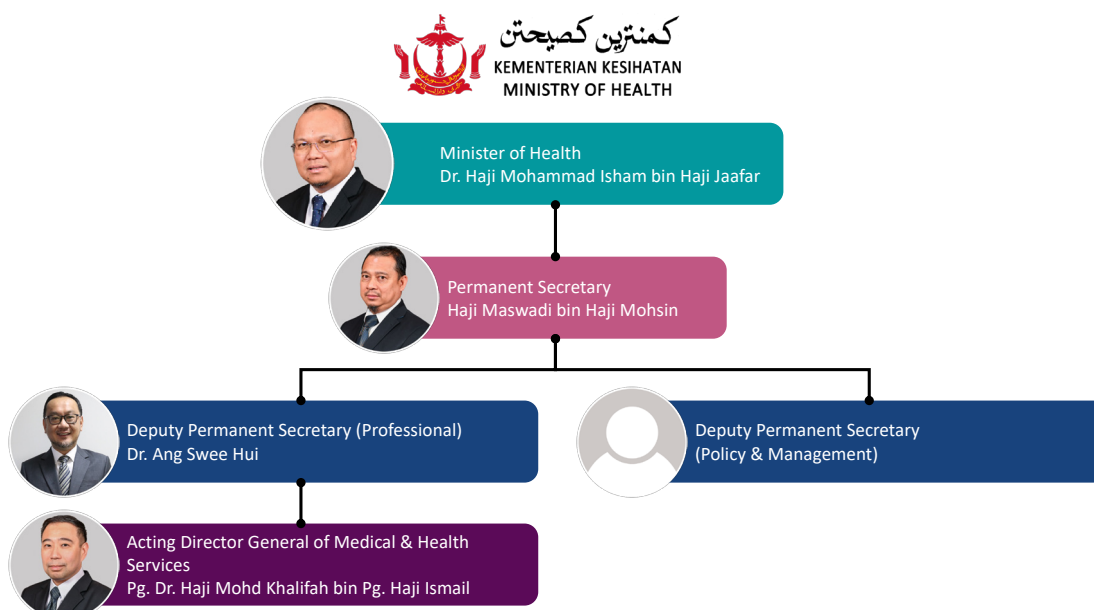


Figure 14: Leadership Structure of Brunei's Ministry of Health

Health Strategies and Surveillance

The MOH Disease Control Division (DCD) uses a communicable disease surveillance system based on three types of surveillance — indicators, syndromic, and events. Indicator surveillance is based on the reporting of notifiable diseases. The DCD receives daily notifications of diseases from government and private health centers and hospitals in the Brunei-Muara district. Disease notifications in the other districts are received by the District Health Offices, which in turn transmit them to the DCD. Syndromic surveillance involves the collection of relevant information from the government health centers on clusters of syndromes, such as influenza-like illness (ILI). The ILI surveillance system was developed in 2003, enabling the formulation of public health measures in the prevention and control of influenza infections by detecting outbreaks early and predicting outbreak trends. This surveillance system utilizes data on daily trends in attendance of patients with upper respiratory tract infections from sentinel sites at the Bandar Seri Begawan and Seria health centers. Acute Flaccid Paralysis surveillance is conducted by DCD for poliomyelitis surveillance and to support the polio-free status of Brunei Darussalam. Events surveillance involves the monitoring of unusual events, including initial reports that have yet to be substantiated. It provides early warning of emerging infectious diseases and potential disease outbreaks. Information is obtained through formal and informal channels, to be followed by appropriate investigative actions.³⁰⁶

WHO certified Brunei's elimination and eradication of malaria in 1987. However, given the prevalence of malaria in the region and the risk of reintroduction into the country, the Malaria Vigilance Unit, Entomology Unit, and Vector Control Unit continue to carry out activities to prevent the reintroduction of malaria and indigenous transmission and are responsible for the prevention and control of other vector-borne disease, such as dengue, chikungunya,

and Japanese encephalitis. The units conduct epidemiological surveillance, spraying operations, and chemoprophylaxis for travelers and military personnel undergoing jungle training in the country due to the presence of zoonotic simian malaria in the country's jungles. All foreign workers are required to undergo a malaria check before departure and upon arrival. All cases of reported malaria since 1987 have been imported.³⁰⁷

WHO certified Brunei had poliomyelitis-free status in 2000 and that it had eliminated measles in 2015.³⁰⁸

Communicable Diseases

Many communicable diseases have decreased significantly in Brunei, and WHO has certified the country as having eliminated malaria, poliomyelitis, and measles.³⁰⁹ No cases of monkeypox had been detected in Brunei as of 15 June 2022.³¹⁰

Among Brunei's top 10 causes of death in the past decade, only one is considered communicable, categorized as lower respiratory infection.³¹¹ Insect-borne diseases occur, including dengue and Japanese encephalitis. HIV/AIDS remains a risk. Foodborne, waterborne, and other infectious diseases include hepatitis, tuberculosis, and hand, foot, and mouth disease (HFMD). Red algae sometimes reach dangerous levels in coastal waters and local authorities may issue red tide warnings against swimming in certain areas or eating types of seafood as red algal bloom can cause paralytic shellfish poisoning.³¹²

As shown in Figure 15, the top 10 notifiable communicable diseases reported in Brunei in 2018-2019 were gastroenteritis, chickenpox, HFMD, food poisoning, tuberculosis, syphilis, dengue, influenza, salmonella, and dysentery.³¹³

Figure 16 depicts top notifiable communicable diseases over a longer range of time, from 2014 to 2019, with gastroenteritis leading each year, usually followed by chickenpox and HFMD.

Brunei has eradicated or managed well many of the more severe communicable diseases

Number of cases of top ten notifiable communicable diseases, 2018–2019

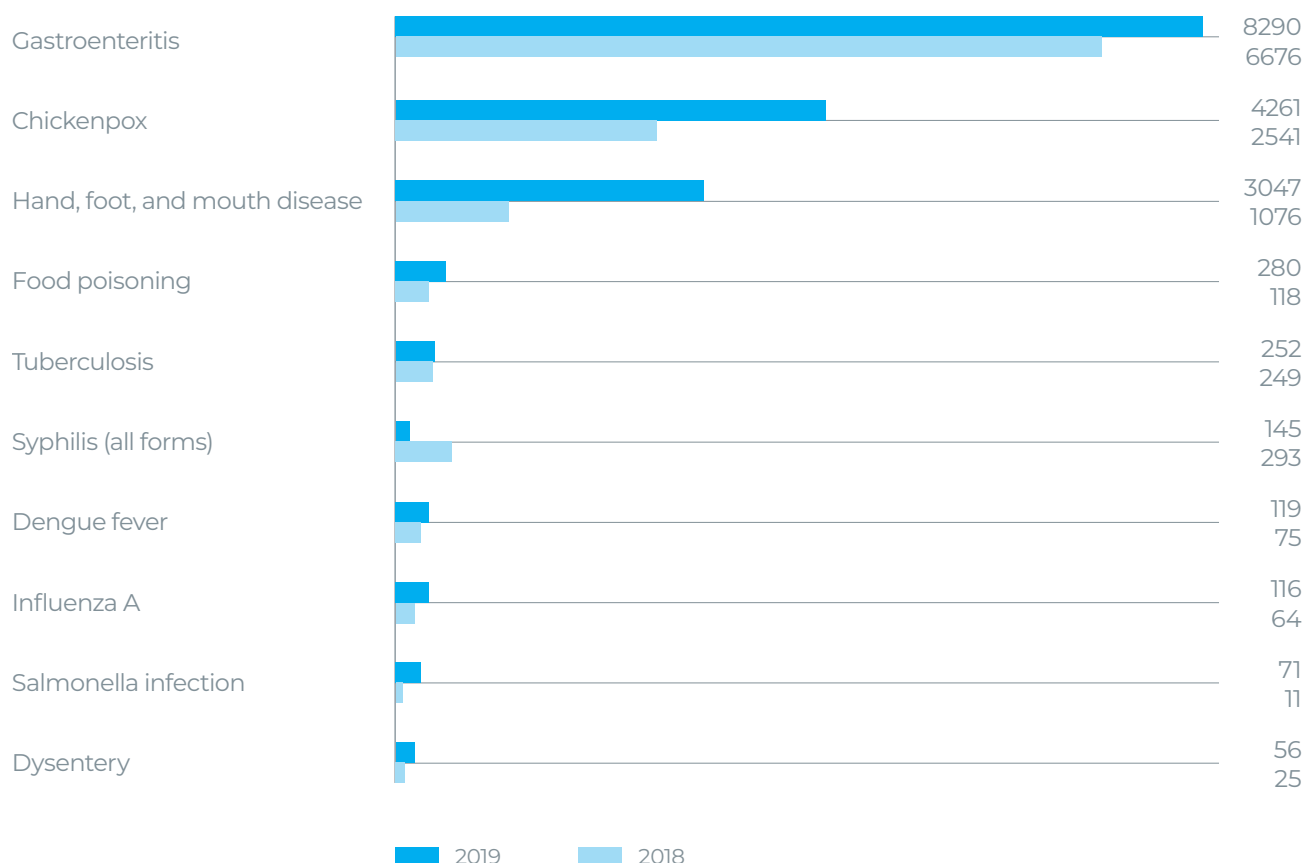


Figure 15: Top 10 Notifiable Communicable Diseases (2018-2019)

Number of cases of notifiable communicable diseases

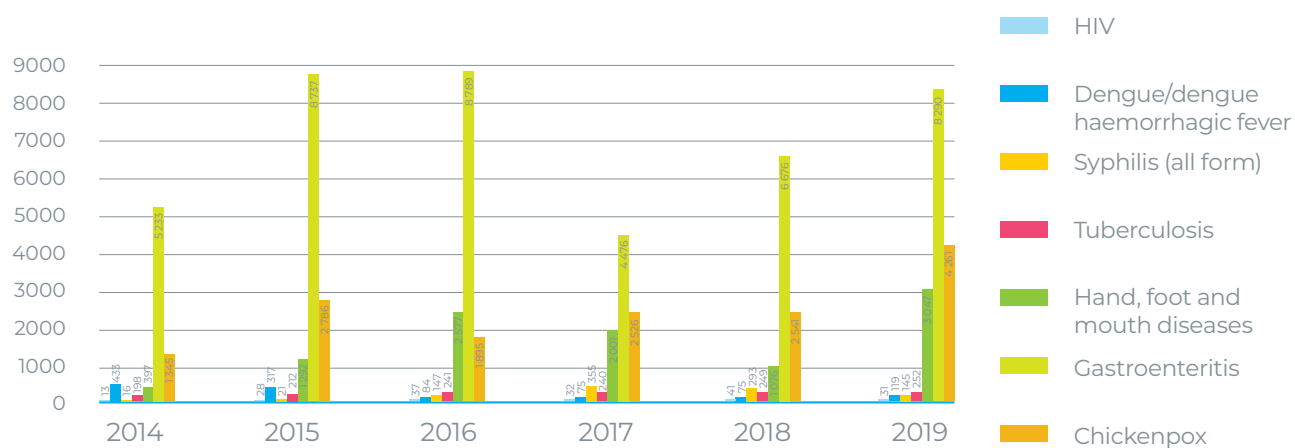


Figure 16: Top Notifiable Communicable Diseases (2014-2019)

through advanced child and life-long vaccine programs, improvement in living standards, clean drinking water, improved food sanitation, and universal advanced healthcare. The more prevalent communicable diseases have relatively low fatality rates.

Gastroenteritis

Gastroenteritis is highly infectious, and Brunei authorities have had increasing awareness of viral gastroenteritis outbreaks since 2014. The MOH reported in 2014 there were 5,233 cases, in 2015 there were 8,737 cases, in 2016 there were 8,789 cases, in 2017 there were 4,476 cases, in 2018 there were 6,676 cases, and in 2019 there were 8,290 cases.³¹⁴ On 5 August 2021, Minister of Health Dato Dr. Isham highlighted the increase of gastroenteritis at a launch for amendments of the Wholesome Meat Order and the Public Health (Food) Act, emphasizing safe food storage and handling. As of 6 August 2021, a total of 727 cases of gastroenteritis had been reported for 2021 with most cases occurring in children aged five and below, a marked increase from 605 reported cases in 2020.³¹⁵ Gastroenteritis is an inflammation of the intestinal lining caused by a virus, bacteria, or parasites. It spreads through contaminated food or water or by contact with an infected person. Symptoms include diarrhea, abdominal pain, vomiting, headache, fever, and chills. The best prevention is frequent hand washing, and most people recover with no treatment.³¹⁶

Chickenpox

Brunei reported 1,345 cases of chickenpox in 2014, 2,786 cases in 2015, 1,895 cases in 2016, 2,526 cases in 2017, 2,541 cases in 2018, and 4,261 cases in 2019.³¹⁷ Chickenpox is an infection caused by the varicella-zoster virus. Most cases are in children under age 15, but older children and adults can get it. Symptoms include an itchy rash and blisters. The infection spreads very easily from one person to another.³¹⁸

Hand, Foot, and Mouth Disease

Brunei reported 397 cases of HFMD in

2014, 1,292 cases in 2015, 2,577 cases in 2016, 2,001 cases in 2017, 1,076 cases in 2018, and 3,047 cases in 2019.³¹⁹ The numbers dropped significantly in 2022, with only 14 cases reported for the period 1 January to 12 May 2022, including five cases among children aged 5 and below. According to the MOH, the results of continuous monitoring detected an increase in the number of cases in a neighboring country from the beginning of 2022.³²⁰ HFMD is a common viral infection that occurs most often in children but can also occur in adolescents and occasionally in adults. Most cases are mild, with common symptoms including fever, painful sores in the mouth, and a rash with blisters on hands, feet, and buttocks. However, more severe symptoms such as meningitis, encephalitis, and polio-like paralysis may also occur.³²¹ The virus can spread person-to-person through tiny air droplets released when the sick person sneezes, coughs, or blows their nose.

Dengue

Brunei is susceptible to outbreaks of mosquito-borne dengue. The level of risk is frequent or continuous, meaning that frequent outbreaks occur.³²² Brunei reported a total of 290 dengue cases in 2012,³²³ 416 cases in 2013,³²⁴ 433 cases in 2014, 317 cases in 2015, 84 cases in 2016, 75 cases in 2017, 75 cases in 2018, and 119 cases in 2019.³²⁵ For 2020, Brunei reported at least 43 cases by the latter half of the year.³²⁶ Many of the spikes in cases align with dengue epidemics affecting the larger Southeast Asia region. Dengue is an infection caused by the dengue virus, which has four serotypes. The primary vectors that transmit the disease are *Aedes aegypti* mosquitoes and, to a lesser extent, *Aedes albopictus*. Dengue is found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas. While many infections produce only mild illness, it can occasionally develop into a potentially lethal complication, called severe dengue. Early detection of disease progression associated with severe dengue and access to proper medical care lowers fatality rates of severe dengue to below 1%. The incidence of

dengue has grown dramatically around the world in recent decades.³²⁷ The rise is partially linked to climate change, which has led to shifts in rainfall, humidity, and temperature that drive longer breeding spells for mosquito species that carry the virus.³²⁸

Japanese encephalitis

Brunei has some risk of Japanese encephalitis (JE).³²⁹ A 2021 analysis estimated that 17.6% of Brunei's population is at low risk of JE and 64.9% of the population is at high risk, based on environmental conditions.³³⁰ However, the disease incidence rate in Brunei is overall relatively low and infrequent compared to other countries in the Southeast Asia and Western Pacific regions.³³¹ Brunei is estimated to have fewer than 100 annual cases.³³² Japanese encephalitis virus is a flavivirus related to dengue, yellow fever, and West Nile viruses, and is spread by mosquitoes. It is the main cause of viral encephalitis in many countries in Asia. Although symptomatic JE is rare, the case-fatality rate among those with encephalitis can be as high as 30%. There is no cure for the disease. Safe and effective vaccines are available to prevent JE.³³³

Syphilis

Brunei reported 16 cases of syphilis in 2014, 21 cases in 2015, 147 in 2016, 355 in 2017, 293 in 2018, and 145 in 2019.³³⁴ Syphilis is a sexually transmitted infection caused by the *Treponema pallidum* bacterium. It results in substantial morbidity and mortality but is curable, especially when treated early.³³⁵ Untreated, it can lead to blindness, deafness, or brain damage.

HIV

Brunei has an overall low reported incidence of human immunodeficiency virus (HIV) infection, which causes acquired immunodeficiency syndrome (AIDS) in late stages of infection. Brunei reported 13 cases of local HIV in 2014, 28 cases in 2015, 37 cases in 2016 (0.09 per 1,000 population), and 32 cases in 2017 (0.08 per 1,000 population). The data indicates cases of HIV/AIDS among locals

only. According to the MOH, 100% of the population with advanced HIV infection has access to anti-retroviral drugs.³³⁶ People known to be HIV positive are prohibited from entering the country. However, there is no mandatory testing for short-term tourist stays.³³⁷ In 2019, UNAIDS and the United Nations Population Fund (UNFPA) expressed concern about new criminal laws Brunei passed imposing the death penalty for same-sex sexual activity, adultery, and having a child outside marriage, with one of their concerns being that this will drive HIV-infected people away from lifesaving treatment.³³⁸ HIV is spread through sex, unsterilized needles and syringes, blood transfusions, and mother-to-child transmission during pregnancy and breastfeeding.

Tuberculosis

Tuberculosis (TB) infection rates in Brunei have declined steadily for decades, though they have risen slightly in recent years. Brunei made significant progress in reducing TB rates from more than 500 cases per 100,000 population in the 1960s, to 91.96 per 100,000 population in the year 2000. TB further declined to a low point of 44.04 per 100,000 population in 2005 and remained at 60.81 per 100,000 populations until 2012. As of 2020, the estimated TB rate is 83 per 100,000 population.³³⁹ Declines after the year 2000 are credited to the National Tuberculosis Control Programme (NTP), which was launched in March 2000, following a WHO consultant visit the previous year. Along with the NTP's launch, the first edition of National TB Guidelines was released, and the National Tuberculosis Coordinating Centre (NTCC) in Kiarong became functional at the end of 2000. The NTCC is responsible for program implementation, monitoring, coordination, and evaluation of TB prevention and control activities at all levels.³⁴⁰ Brunei's health care system reached and notified an estimated 87% of people with TB in 2020 and successfully treated 75% of those diagnosed with TB.³⁴¹ Brunei tested 100% of bacteriologically confirmed TB cases for rifampicin resistance, recording no drug-resistant cases of TB in

2020.³⁴² The NTCC's goal is to eliminate TB in Brunei by 2050.

Lower Respiratory Tract Infections

The burden of lower respiratory tract infections (LRTI) has declined substantially globally in recent decades, although it remains relatively high in Southeast Asia. Brunei has among the lowest rates of LRTI in East and Southeast Asia, but from 2000 to 2017 the rate of LRTI in Brunei increased from 12.02 to 21.13 per 100,000 population.³⁴³ LRTI are infections in the lungs or area below the larynx or voice box, and include pneumonia, bronchitis, and tuberculosis. LRTI are primarily the result of viral, bacterial, or even fungal infection, though they can also be caused by environmental irritants such as smoke, dust, chemicals, or allergens.³⁴⁴

Coronavirus Disease 2019 (COVID-19)

Brunei was one of few countries to have early success in holding off significant numbers of COVID-19 cases in the country for a long period of time. The country recorded its first imported case on 9 March 2020. However, its 7-day rolling average of daily new confirmed cases stayed in the single digits until August 2021. From August to October 2021, Brunei's average daily new confirmed cases ranged 100-200 but dropped to below 10 by the end of December 2021. Numbers of daily new cases started rising by the end of January 2022, skyrocketed throughout February, and on 7 March 2022 hit a peak 7-day rolling average of 4,213.14 daily new confirmed COVID-19 cases.³⁴⁵ This spike was quickly managed, and numbers rapidly dropped, decreasing to less than 100 new daily cases by May 2022. However, numbers had slowly been climbing again, and as of 22 June 2022, Brunei had reported 158,527 total cumulative cases of COVID-19,³⁴⁶ including 225 deaths.³⁴⁷ Figure 17 shows the progression of daily new confirmed COVID-19 cases in Brunei from 14 March 2020 to 22 June 2022.³⁴⁸

As of 18 June 2022, the total number of recovered cases had reached 152,018, while there

were still 3,550 active cases. As of 12 June 2022, Brunei had reported an increase in COVID-19 cases of 45.9% compared to the previous 14 days, and an overall COVID-19 case fatality rate of 0.1%, per the WHO.³⁴⁹ As of 22 June 2022, the total cumulative number of confirmed COVID-19 deaths was 225, per Johns Hopkins University COVID-19 data. Relative to its small population, this gives Brunei a cumulative confirmed death rate of 509.59 per million people. This is higher than the per-million cumulative COVID-19 death rates in Cambodia (180.33), Taiwan (236.89), Singapore (257.63), Thailand (436.63), and Vietnam (438.88) as of 22 June 2022, but lower than the Philippines (544.67), Indonesia (567.02), Malaysia (1090.46), Canada (1097.96), and the U.S. (3,048.33).³⁵⁰ While the number of new COVID-19 cases in Brunei was on the increase again by June 2022, intensive care unit (ICU) usage remained at 0% and the number of reported COVID-19 deaths in Brunei Darussalam remained low.³⁵¹

The National Vaccination Program for COVID-19 commenced on 3 April 2021 and was implemented in phases as outlined in the National Vaccination Program.³⁵² The first phase started with front-line healthcare and uniformed personnel, senior citizens, and students studying abroad. The second phase covered childcare workers, adults with co-morbidities, and teachers. The third phase included the general public aged 18 years and older. The COVID-19 vaccine was provided free to citizens and residents.³⁵³ Vaccines available in Brunei include Sinopharm, Oxford-AstraZeneca, Moderna, and Pfizer-BioNTech.³⁵⁴ Brunei procured the various vaccines through bilateral and multilateral arrangements. Brunei received its first batch of 52,000 Sinopharm doses from China in February 2021, and the second batch of 100,000 Sinopharm doses and 102,400 accompanying syringes from China in September 2021. Brunei had provided China COVID-19 financial assistance in March 2020.³⁵⁵ Brunei received its initial AstraZeneca COVID-19 vaccines via the COVAX Facility, or COVID-19 Vaccine Allocation Plan, a partnership between

Daily new confirmed COVID-19 cases

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.



Figure 17: Daily New Confirmed COVID-19 Cases in Brunei, 14 March 2020 – 22 June 2022

the WHO, UNICEF, Gavi and the Coalition for Epidemic Preparedness Innovations. The first batch of 24,000 AstraZeneca doses arrived in Brunei on 2 April 2021, among a total of 100,800 AstraZeneca doses arranged by June 2021 via the COVAX Facility.³⁵⁶ Brunei received its first batch of 50,400 Moderna doses from Spain on 20 June 2021, out of 200,000 doses of Moderna vaccine procured.³⁵⁷ The country received its first batch of 58,500 Pfizer-BioNTech vaccine doses on 5 November 2021 from Belgium, followed by another batch containing 242,190 doses the following day.³⁵⁸ As of 18 June 2022, 72.1% of the population overall had received three vaccination doses, while the vaccination coverage for children aged 5-11 was 84.4% for the first dose and 70.3% for the second dose.³⁵⁹

The NDC has official oversight of the COVID-19 response, but the MOHEOC managed day-to-day issues with ad hoc support from other agencies.³⁶⁰ In the first several months of the pandemic, Brunei pursued an aggressive strategy of restrictive measures that amounted

to some of the toughest in Southeast Asia. Starting in January 2020, officials restricted travel from China. In February, authorities started screenings at all ports of entry, and Royal Brunei Airlines stopped flights to/from Changsha, Haikou, Hangzhou, Nanning, and Shanghai and reduced flights to/from Beijing and Hong Kong. Following the first COVID-19 case in the country on 9 March 2020, the MOH announced on 17 March that anyone arriving in Brunei, including returning Bruneian citizens, was required to self-isolate for two weeks or face a penalty of “imprisonment up to a period of 6 months, or a fine up to \$10,000, or both.” On 15 March, Brunei citizens and foreigners were banned from leaving the country, and on 23 March, all foreign arrivals were blocked, and restaurants were closed. Mosques were closed for a week and sanitized, and mass gatherings such as weddings were limited. The MOH’s informational campaign included a website dedicated to informing the population about the pandemic, with a section aimed at dispelling

misconceptions about COVID-19 that were proliferating on social media.³⁶¹ Most schools partially reopened in June 2020.³⁶² Lockdown measures were applied over different periods and in varying degrees to schools and workplaces, and there were some stay-at-home orders.³⁶³ COVID-19 did not start significantly spreading in the country until the end of 2021.

On 25 October 2021, the COVID-19 Steering Committee announced the National COVID-19 Recovery Framework, which has the goal of transitioning to an endemic phase of living with COVID-19 with minimal disruptions on day-to-day activities.³⁶⁴ Figure 18 shows Brunei's National COVID-19 Recovery Framework.³⁶⁵

On 1 April 2022, the stay-at-home directive enacting a curfew from midnight to 0400 ended. Starting 1 August 2022, land and sea borders are planned to be fully opened, subject to the COVID-19 situation and the operational readiness of the control posts.³⁶⁶

Non-Communicable Diseases

The rising prevalence of NCDs and their increased associated average treatment costs are contributing to financial challenges for Brunei's predominantly government-funded health care system.³⁶⁷ NCDs have been the main cause of death in Brunei Darussalam for more than three decades. They are estimated to account for 85% of all deaths. Cardiovascular diseases account for 29% of deaths, cancers for 25%, diabetes for 9%, chronic respiratory diseases for 6%, and other NCDs for 17%, per 2018 data.³⁶⁸ In 2019, the top five causes of cancer deaths among males were trachea, bronchus, and lung cancers, rectum and anus cancers, liver and intrahepatic bile ducts cancers, prostate cancers, and non-Hodgkin's lymphoma. Among females, the top five causes of cancer deaths were trachea, bronchus, and lung cancers, breast cancers, rectum and anus cancers, liver and intrahepatic bile ducts cancers, and cervix uteri cancer.³⁶⁹

The MOH views a shift away from traditional lifestyles and dietary patterns as an underlying

cause of high NCD rates and the government launched the Brunei Darussalam National Multisectoral Action Plan for the Prevention and Control of NCDs (BruMAP-NCD) to boost the prevention and treatment of NCDs as part of the MOH's Vision 2035, known as "Together Towards a Healthy Nation."³⁷⁰ As an extension of the previous BruMAP-NCD 2013-2018, the current BruMAP-NCD 2021-2025 was launched in March 2022 and coincided with an introduction to an online health education platform for the Workplace and Health Programme and a smoking cessation campaign, Quit2Win Ramadhan for smokers.³⁷¹ BruMAP-NCD 2021-2025 was prepared for publication in 2021, its launch was postponed due to COVID-19.³⁷² According to Dr. Hajah Norhayati, Head of Health Promotion Center, the drafting of BruMAP-NCD 2021-2025 involved a series of consultations and discussions of technical working groups in the health sector as well as three multi-sectoral consultation workshops in the country facilitated by two WHO-appointed consultants.³⁷³ According to the WHO, Brunei has made the most progress among ASEAN countries in fighting NCDs, particularly in drug and alcohol counseling, tobacco usage warnings, and public awareness programs.³⁷⁴ The overarching goal is to reduce the probability of death from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases by 10% among people ages 30 to 69 years by 2025. To achieve this, BruMAP-NCD 2021-2025 lays out four strategic objectives:

1. To strengthen national governance for NCD prevention and control
2. To reduce NCD risk factors and protect health
3. To strengthen early detection and clinical management of NCDs and NCD risk factors
4. To strengthen NCD surveillance and research³⁷⁵

Some progress has been made against NCDs. The probability of dying between ages 30 and 70 years from one of the four main NCDs (cancer, diabetes, cardiovascular diseases, or

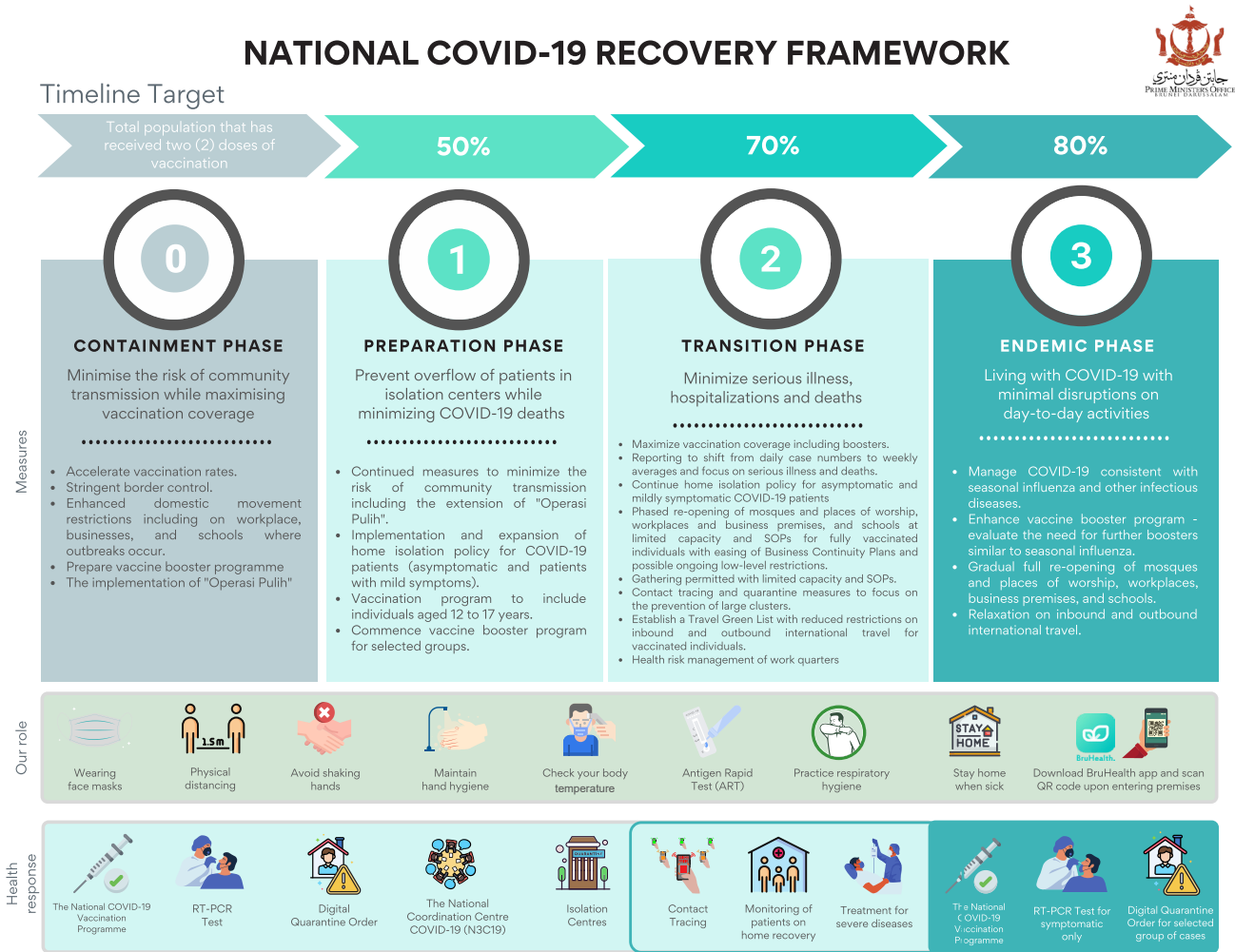


Figure 18: Brunei’s National COVID-19 Recovery Framework

chronic respiratory diseases) was 20.5% in 2000, a number that decreased to 17.4% in 2010 and continued to decrease to 16.6% in 2016.³⁷⁶

Training for Health Professionals

The Brunei Medical Board aims to regulate medical practitioners and dentists who practice in Brunei Darussalam through registration, in accordance with the Medical Practitioners and Dentists Act.³⁷⁷ As of February 2022, Brunei had more than 800 registered medical practitioners and over 100 registered dental practitioners who held a valid annual practicing certificate.³⁷⁸

Raja Isteri Pengiran Anak Saleha (RIPAS)

Hospital, the largest hospital in Brunei, also serves as a teaching hospital for medical and nursing students in collaboration with higher national and international education institutions.³⁷⁹ One of the primary collaborations is with the Institute of Medicine of the University of Brunei Darussalam (UBD), which was established in 1999 with many MOH doctors serving as lecturers. In 2005, RIPAS and UBD started their Partnership Medical School Programme. RIPAS collaborates internationally with the Medical School of Australia’s University of Queensland, which designated RIPAS as a teaching hospital for the university in 1999, as well as other medical schools in the UK, Canada, Australia, New Zealand, and Malaysia.³⁸⁰

WOMEN, PEACE, AND SECURITY

The UN Security Council Resolution (UNSCR) 1325 recognizes that women's involvement in peace and security issues leads to the achievement of long-lasting stability. This acknowledgment in 2000 stemmed from efforts by international organizations, national governments, and civil society groups globally to establish what we now know as the Women, Peace, and Security (WPS) Agenda.³⁸¹ Furthermore, the United Nations General Assembly created UN Women, the United Nations Entity for Gender Equality and the Empowerment of Women, in 2010. In addition, the UN has made significant progress in advancing gender equality, including through landmark agreements such as the Beijing Declaration and Platform for Action and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). Countries that have ratified the Convention are legally bound to put its provisions into practice. Although Brunei acceded to CEDAW in 2006,³⁸² it has not submitted a report.³⁸³

Some progress on women's rights has been achieved in Brunei; however, work still needs to be done. As of February 2021, only 9.1% of seats in parliament were held by women. Closing data gaps on gender is essential for achieving gender-related SDG commitments in the country. As of December 2020, only 33.6% of indicators needed to monitor the SDGs from a gender perspective were available with gaps in key categories such as violence against women and unpaid care and domestic work. In addition, such categories as gender and poverty, physical and sexual harassment, women's access to assets (including land), and gender and the environment lack comparable methodologies for regular monitoring.³⁸⁴

Brunei's revised SPC went into effect in April 2019. The new legal code has received international criticism for violating the human

rights of vulnerable groups, including children, women, and religious and sexual minorities. The revised penal code may also encourage violence and discrimination against women on the basis of sexual orientation. The code stipulates the death penalty (including death by stoning) for offences such as rape, adultery, sodomy, extramarital sexual relations for Muslims, robbery, and insult or defamation of the Prophet Mohammad, among other infractions.³⁸⁵

With Brunei being a member of ASEAN, there are roles the country fills regionally that contribute to international peacekeeping activities, and it has a stake in maintaining globally recognized peacekeeping training centers that could evolve as the ASEAN WPS agenda expands. For example, Brunei has contributed peacekeepers to the United Nations Interim Force in Lebanon, where Bruneian forces work alongside a Malaysian contingent. In addition, the ASEAN Ministerial Dialogue on Strengthening Women's Role for Sustainable Peace and Security, held in September 2020, reiterated ASEAN's determination to ensure the integration of WPS into regional policies and frameworks across the three ASEAN community pillars – i.e., Political-Security Community, Economic Community, and Socio-Cultural Community.

The RBAF supports the WPS agenda and acknowledges the need to incorporate initiatives for achieving gender equality and to empower all women and girls including by strengthening and expanding women's role in the military. This also includes expanding and engaging women in regional and international commitments and more operational roles being open to women besides the traditional roles of women in the military. To achieve this progress, RBAF will need to align with the WPS agenda and identify policies that eliminate barriers to gender mainstreaming such as harassment policies.³⁸⁶

CONCLUSION

Brunei has largely been spared from severe natural hazards such as earthquakes, volcanic eruptions, and typhoons. The country experiences some low-level threats from thunderstorms, monsoon rains, flash floods, landslides, and haze. Brunei has not experienced significant tsunamis in recent history, but it does have a moderate exposure risk to tsunami hazards. While Brunei's overall disaster risk is low, threats should not be underestimated. Small recurrent hazard episodes, including annual floods and landslides, are generally not reported to international disaster databases and may have a cumulative impact on communities that are regularly affected.

The country is also susceptible to epidemics and has felt harmful effects of the COVID-19 pandemic. However, it managed to delay significant spread of COVID-19 until after the national vaccination program began, thus reducing potential fatalities and severe illnesses. Brunei's pandemic experience was influenced by its historic investments into an advanced healthcare system and into providing free health services, making healthcare relatively accessible to the majority of citizens. Brunei's wealth is derived from its fossil fuel-based economy, which contributes to a GDP of US\$14 billion and one of the highest per capita incomes in the world given the country's small population of less than 500,000 people. The investment of this wealth into social services, including health and education, contributes to social resilience.

Brunei's disaster resilience is also enhanced by the government's attention to disaster prevention, mitigation, and preparedness. The Disaster Management Order of 2006 set up the NDC as well as the NDMC, the lead government agency in disaster response. NDMC coordinates the DDMCs in all four districts. The NDMC has also developed the SNAP for DRR, NaSOP for response, and CBDRM Program. Other disaster management and risk reduction initiatives include financing national development plans to

improve drainage systems and infrastructure in flood-prone areas as part of a broader adaptation and mitigation effort. Finally, NDMC is the focal point for Brunei's disaster-related integration within ASEAN. As an ASEAN member-state, Brunei signed the AADMER in 2009, and supports ASEAN Vision 2025 on Disaster Management and ASEAN Declaration on "One ASEAN One Response, Responding to Disasters as One in the Region and Outside the Region."

Brunei is vulnerable to threats exacerbated by climate change, including projected increases in temperatures, rainfall, and sea levels, and the government has recognized the impact this would have on the country's economic hubs located along the coastline, including Bandar Seri Begawan. Brunei is already experiencing more floods, forest fires, major landslides, and strong winds, as well as mean temperatures that are believed to be increasing at a rate of 0.25°C (0.45°F) per decade. Projections estimate Brunei may experience a temperature increase of up to 4°C (7.2°F) and sea level rise of up to 1.1 m (3.6 feet) by the end of the century, as well as mean monthly rainfall increasing to 500 mm (19.7 in) by 2050.

Brunei is increasingly aware of the threats climate change poses to it and of the country's conundrum with an economy heavily based upon fossil fuels, which contributes to climate change. Even as it works to diversify its economy away from greenhouse gas-emitting industries, Brunei is also acting to mitigate threats from climate change. The country is planning to launch the ASEAN Centre for Climate Change in September 2022, pending ASEAN member-states' approval. As part of Brunei's 2021 ASEAN chairmanship, the center was considered an initiative that would allow Brunei to become a regional knowledge and research hub on climate change to build capacity and contribute to climate change adaptation and disaster risk reduction efforts in the region.

APPENDICES

DoD DMHA Engagements in the Past Five Years (FY 2017-2022)

The list below describes several of the military-to-military DMHA Engagements that the U.S. has had with Brunei in the last five years.

Exercise Pahlawan Warrior – June 2022

Exercise Pahlawan Warrior is a bilateral army-to-army exercise between the RBLF and United States Army Pacific (USARPAC) as part of Operation Pacific Pathways. The exercise focuses on enhancing partner land force capacity and capabilities and increases interoperability operations that reaffirm shared security commitments to the Indo-Pacific region and aim to tackle internal security challenges. U.S. soldiers assigned to the 3rd Cavalry, 4th Squadron, 3rd Infantry Brigade Combat Team, 25th Infantry Division trained alongside the RBLF on jungle skills, military operations in urban terrain, and live fire exercises, as well as participated in Subject Matter Expert Exchanges (SMEE) in June 2022.³⁸⁷

Exercise CARAT – November 2021

Cooperation Afloat Readiness and Training (CARAT) is an annual series of bilateral military exercises between the U.S. and Southeast Asian nations and that is designed to boost cooperation and interoperability. CARAT builds upon other engagements in South Asia, Southeast Asia, and the Pacific Islands, including Pacific Partnership. In November 2021, the U.S. military and RBAF participated virtually and in person in the 27th annual CARAT maritime exercise in the South China Sea. The 5-day engagement included virtual SMEEs and training to include vessel interdiction and boarding training, riverine security training, replenishment at sea best practices, a WPS symposium, maritime domain awareness, unmanned aerial vehicles, and anti-terrorism force protection. The at-sea phase

involved ships and aircraft from both militaries with events designed to enhance interoperability between the two militaries including search and rescue exercises.³⁸⁸

Exercise CARAT – October 2020

In October 2020, the U.S. military and the RBAF partnered for the 26th annual CARAT maritime exercise off the coast of Brunei. CARAT is the U.S. Navy's oldest and longest continually running regional exercise in South and Southeast Asia. The exercise enhances maritime security cooperation and interoperability throughout the Indo-Pacific region and strengthens partnerships among regional navies. Due to the COVID-19 environment and restrictions, virtual content generation and collaboration was utilized and resulted in successful planning of multiple exercise SMEEs. The virtual SMEEs featured vessel interdiction and boarding; U.S. Marine Corps and RBLF cooperation and training; explosive ordnance disposal; riverine security; replenishment at sea best practices; and a WPS symposium. Other virtual exchanges included maritime domain awareness, unmanned aerial vehicles, and anti-terrorism force protection.³⁸⁹

Exercise CARAT – October 2019

On 22 October 2019, at Rimba Air Base in Brunei, the U.S. Navy's Rear Admiral Joey Tynch, Commander Task Force 73, along with members from the RBAirF, flew a Sikorsky S-70i Black Hawk helicopter during exercise CARAT 2019. The flight consisted of simulated tactical maneuvers and combat landing practice in a remote jungle environment.³⁹⁰ In addition to RBAF units, the exercise involved U.S. participants working side-by-side with several other Bruneian government agencies, including the Judge Advocate General's Office, RBPF, MPABD, Fisheries Department, Narcotics Control Bureau, Attorney General's Chambers, and Universitas Brunei Darussalam. During the at-sea phase of the exercise, both countries demonstrated their ability to work together

through numerous events including deck landing qualifications, medical evacuation simulations, and bilateral underway replenishment scenarios.³⁹¹

Exercise Pahlawan Warrior – August 2018

From 6 to 16 August 2018, 33 U.S. active and National Guard Soldiers from USARPAC partnered with RBLF soldiers for Exercise Pahlawan Warrior in three locations in Brunei. Training included jungle warfare operations and military operations in urban terrain tactics. Both armies shared best practices during a medical SMEE on Tactical Combat Casualty Care. This was the first time that the RBLF and U.S. Army conducted a bilateral training exercise in Brunei.³⁹²

U.S.-Brunei Senior Officials Dialogue – June 2018

The U.S. and Brunei held the third Senior Officials’ Dialogue on 12 June 2018. The U.S. and Brunei delegations reviewed their bilateral security partnership, including expanding cooperation in counterterrorism through joint military exercises. Meetings convened on human rights, combatting trafficking-in-persons, and opportunities for expanding bilateral trade and investments. Also discussed were broader regional developments and security concerns, including the Democratic People’s Republic of Korea (North Korea) and the South China Sea as well as the central role that ASEAN plays in the Indo-Pacific region.³⁹³

International/Foreign Relations

The bilateral U.S.-Brunei relationship incorporates trade, environmental cooperation, and defense engagement. In addition to high-level bilateral coordination and communication, the U.S. engages Brunei within ASEAN, which Brunei chaired in 2013 and again in 2021. While the CARAT exercise is at the core of the bilateral defense relationship, Brunei’s armed forces also engage in joint exercises, training programs, and other military cooperation with the U.S.³⁹⁴

U.S. military students have attended the Brunei Command and Staff Course and Bruneian military personnel have attended U.S. military academies. Meanwhile, the U.S. Embassy in Brunei maintains a network of 300 Bruneian alumni of U.S. government exchange programs and has worked with Bruneian civil society. Trade between the two countries totaled US\$262 million in 2020.³⁹⁵

Brunei also maintains a wide-ranging relationship with China that, in 2013, was formalized as a “Strategic Cooperative Relationship” that spans trade, energy, defense, education, tourism, and other topics.³⁹⁶ China’s security forces conduct bilateral exercises with Brunei including “Bandar Seri Begawan,” an emergency response exercise. In January 2021, Hengyi Industries Sdn Bhd, a joint venture between China and Brunei, conducted an emergency response exercise with the collaboration of Brunei’s NDMC at Pulau Muara Besar Industrial Park to test the readiness and response plan of Hengyi and related agencies.³⁹⁷

Despite this robust relationship, Brunei is one of several nations to lay claim to parts of the South China Sea, putting Brunei at potential odds with China. The features claimed by Brunei fall within its Exclusive Economic Zone (EEZ), and Brunei claims no islands. Maritime features including Bombay Castle, Louisa Reef, Owen Shoal, and Rifleman Bank, all fall within Brunei’s EEZ, but the country claims only Louisa Reef, which lies upon its continental shelf. Because Louisa Reef is part of the Spratly Islands, that feature is also claimed by China and Vietnam. However, Brunei is the only claimant state that does not occupy any maritime features or maintain a military presence in the region. The EEZ is home to lucrative fisheries and oil and natural gas deposits, and it is a transportation highway and trade route. Disputes over maritime sovereignty and plans to expand defense alliances with countries that have overlapping claims are expected to continue. Figure 19 shows the area surrounding the South China Sea and Brunei; the blue dashed line illustrates Brunei’s claimed EEZ while the yellow dashed line represents Malaysia’s claimed EEZ in the South China Sea.³⁹⁸



Figure 19: Area Surrounding Brunei

Participation in International Organizations

Brunei is a member of, participates in, or cooperates with the following international organizations and agreement frameworks either as a government or via a national NGO or other entity:

Asian Development Bank (ADB), Asia-Pacific Economic Cooperation (APEC), ASEAN Regional Forum, Association of Southeast Asian Nations (ASEAN), Commonwealth, Colombo Plan, East Asia Summit (EAS), Food and Agriculture Organization of the United Nations, Group of 77, International Atomic Energy Agency, International Bank for Reconstruction and Development, International Civil Aviation Organization, International Chamber of Commerce, Institute of Catastrophe Risk Management, International Development Association, International Federation of Red Cross and Red Crescent Societies (IFRC), International Labour Organization, International Monetary Fund (IMF), International Maritime Organization (IMO), International Mobile Satellite Organization, International

Criminal Police Organisation (INTERPOL), International Olympic Committee, International Organization for Standardization (ISO-correspondent), International Telecommunications Satellite Organization, International Telecommunications Union, Non-Aligned Movement, Organization of Islamic Cooperation, Organisation for the Prohibition of Chemical Weapons, United Nations (UN), United Nations Conference on Trade and Development, UN Educational, Scientific, and Cultural Organization, World Tourism Organization, Universal Postal Union,

World Customs Organization, World Health Organization (WHO), World Intellectual Property Organization, World Meteorological Organization (WMO), World Trade Organization.

Brunei is a contributor of peacekeepers to UN missions. As of March 2022, it is contributing 30 troops to the United Nations Interim Force in Lebanon (UNIFIL).³⁹⁹

Brunei participates in the Independent Decommissioning Body (IDB), created by the Government of the Philippines and the Moro Islamic Liberation Front (MILF) in 2014 to ensure the decommissioning and reintegration into society of MILF fighters in Philippines' Mindanao. Brunei, alongside Turkey and Norway, provides an expert to the process; these three experts work on the IDB Board with four local experts (two from the government and two from MILF) to oversee the process of implementing the Comprehensive Agreement on the Bangsamoro. In November 2021, the IDB announced the move into the third phase of decommissioning wherein 35% of MILF fighters and weapons would complete demobilization and reintegration.⁴⁰⁰

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. DoD personnel must review the Foreign Clearance Guide (FCG) for travel to Brunei (www.fcg.pentagon.mil). All official travel and personal travel for active-duty personnel must be submitted through an APACS request. Contact information for the Defense Attaché Office can be found in the FCG if you have additional questions.

Passport/Visa

U.S. passport holders must have at least six months' validity remaining on their passports before entering Brunei for business or pleasure and are required to obtain visas prior to arrival in Brunei for visits of 90 days or longer. Travelers are also required to have at least six blank passport pages. For further information about entry or exit requirements, travelers may consult: Consular Section of the Embassy of Brunei
3520 International Court NW,
Washington, DC 20008
Tel. +1-202-237-1838
Website: <https://bn.usembassy.gov/>

Immigration offenses, including overstay of visa, are punishable by jail sentences, fines, and caning. Individuals associated with violators, such as contractors or employers, are subject to the same penalties if the violator is found guilty.

Communicable Diseases: Brunei has imposed HIV/AIDS travel restrictions as part of a ban on communicable diseases. The Ministry of Health requires all travelers entering Brunei to fill out a Health Declaration Card and submit it to the Ministry's Officer-In-Charge upon disembarkation. Travelers may be subjected to a medical examination upon arrival in Brunei Darussalam and may be quarantined if infected or suspected to be infected with an infectious disease or if travelers have had contact with such a person.

Safety and Security

U.S. citizens in Brunei should be vigilant regarding their personal security, maintain a low profile, vary times and routes during their daily routines, and report any suspicious activity to the local police and to the U.S. Embassy.

Noting several past anti-Western terrorist bombings in Indonesia, the U.S. Department of State continues to be concerned that terrorist groups, such as those claiming affiliation with the Islamic State of Iraq and Syria (ISIS), have the capability to carry out terrorist attacks throughout the region.

Crime: Most crimes that occur in Brunei are non-violent crimes of opportunity, including residential burglaries and vehicle break-ins. While in Brunei, visitors can generally avoid becoming victims of crimes of opportunity by practicing good security awareness. For example, secure valuables (remove them from plain view), avoid secluded locations, properly secure residences and vehicles, and do not travel alone late at night. Crime in Brunei peaks in July and December, due to the holidays and schools being out of session.

U.S. citizen victims of sexual assault should first contact the U.S. Embassy.

Report crimes to the local police at 993 and contact the U.S. Embassy at +673-238-4616 ext. 2100 Monday – Friday from 7:45 a.m. to 4:30 p.m., or +673-873-0691 (24 hours).

Remember that local authorities are responsible for investigating and prosecuting the crime. To help U.S. victims of crime overseas, the Embassy/Consulate can:

- help find appropriate medical care
- assist in reporting a crime to the police
- contact relatives or friends with written consent
- explain the local criminal justice process in general terms
- provide a list of local attorneys
- provide information on victim's compensation programs in the U.S.
- provide an emergency loan for repatriation to the United States and/or limited medical support in cases of destitution

- help find accommodation and arrange flights home
- replace a stolen or lost passport

Domestic Violence: U.S. citizen victims of domestic violence may contact the Embassy for assistance.

Tourism: The tourism industry is generally regulated, and rules with regard to best practices and safety inspections are regularly enforced. Hazardous areas/activities are identified with appropriate signage and professional staff is typically on hand in support of organized activities. In the event of an injury, appropriate medical treatment is widely available throughout the country. In remote areas, it may take more time for first responders and medical professionals to respond, stabilize a patient, and provide life-saving assistance. U.S. citizens are encouraged to purchase medical evacuation insurance.⁴⁰¹

Emergency Contact Information

U.S. Embassy Bandar Seri Begawan

Simpang 336-52-16-9

Jalan Duta

Bandar Seri Begawan BC4115, Brunei

Darussalam

Tel: +673-238-4616

Emergency: +673-873-0691

Fax: +673-238-4606

Email: ConsularBrunei@state.gov

Website: <https://bn.usembassy.gov/embassy/bandar-seri-begawan/>

Currency Information

Bruneian Dollar – BND / B\$

US\$1.00 = BND 1.37 or BND 1.00 = US\$0.728
(as of 24 May 2022)⁴⁰²

Travel Health Information

The CDC provides guidance that all travelers to Brunei should be up to date on routine vaccinations. The following are additional recommendations for travel to Brunei. The information in Tables 8 and 9 is taken directly from the CDC website under the Travelers

Health Section (<https://wwwnc.cdc.gov/travel/destinations/list/>).⁴⁰³

Health Alerts for Brunei: At the time of writing this handbook (24 May 2022), the CDC has listed Brunei as a “Level 3: High” alert country due to COVID-19. Because of this level of Alert, the CDC recommends:

- Be up to date with COVID-19 vaccines before traveling to Brunei.
- Travelers who are not up to date with COVID-19 vaccines should avoid travel to Brunei.
- Even travelers who are up to date with COVID-19 vaccines may still be at risk for getting and spreading COVID-19.
- Anyone 2 years or older should properly wear a well-fitting mask in indoor public spaces.
- Persons who have a weakened immune system or are at increased risk for severe disease, even if they are up to date with COVID-19 vaccines, should talk with their clinician about risk and consider delaying travel to Brunei.

The following actions you can take to stay healthy and safe on your trip include:

Eat and Drink Safely

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

Eat

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

Don’t Eat

- Food served at room temperature
- Food from street vendors
- Raw or soft-cooked (runny) eggs
- Raw or undercooked (rare) meat or fish
- Unwashed or unpeeled raw fruits and vegetables
- Unpasteurized dairy products

- “Bushmeat” (monkeys, bats, or other wild game)

Drink

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

Don’t Drink

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

Take Medicine

Talk with your doctor about taking prescription or over-the-counter drugs with you on your trip in case you get sick. If you are going to a high-risk area, fill your malaria prescription before you leave, and take enough with you for the entire length of your trip. Follow your doctor’s instructions for taking the pills; some need to be started before you leave.

Prevent Bug Bites

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

To prevent bug bites:

- Cover exposed skin by wearing long-sleeved shirts, long pants, and hats.
- Use an appropriate insect repellent (see below).
- Use permethrin-treated clothing and gear (such as boots, pants, socks, and tents) if spending a lot of time outdoors.

For protection against ticks and mosquitoes:

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

For protection against mosquitoes only:

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

- DEET
- Picaridin (also known as KBR 3023, Bayrepel, and Icaridin)
- Oil of lemon eucalyptus (OLE) or para-Menthane-3,8-diol (PMD)
- IR3535
- 2-undecanone

Always use insect repellent as directed.

If you are bitten by bugs:

- Avoid scratching bug bites and apply hydrocortisone cream or calamine lotion to reduce the itching.
- Check your entire body for ticks after outdoor activity. Be sure to remove ticks properly.

Routine Vaccines	<p>All travelers should be up to date on all routine vaccines before every trip. Some of these vaccines include:</p> <ul style="list-style-type: none"> • Chickenpox (Varicella) • Diphtheria-Tetanus-Pertussis • Flu (influenza) • Measles-Mumps-Rubella (MMR) • Polio; and • Shingles.
COVID-19	All eligible travelers should be up to date with their COVID-19 vaccines.
Hepatitis A	Vaccination may be considered for most travelers; it is recommended for travelers at higher risk (e.g., visiting smaller cities, villages, or rural areas where exposure might occur through food or water; or prone to “adventurous eating”).
Hepatitis B	Vaccination recommended for unvaccinated travelers of all ages to Brunei.
Japanese Encephalitis	<p>Vaccination is recommended for travelers who:</p> <ul style="list-style-type: none"> • Are moving to reside in an area with Japanese encephalitis • Spend long periods of time, such as a month or more, in areas with Japanese encephalitis; or • Frequently travel to areas with Japanese encephalitis. <p>Vaccination may be considered for travelers:</p> <ul style="list-style-type: none"> • Spending less than a month in areas with Japanese encephalitis but who will be doing activities that increase risk of infection, such as visiting rural areas, hiking or camping, or staying in places without air conditioning, screens, or bed nets; or • Going to areas with Japanese encephalitis who are uncertain of their activities or how long they will be there. <p>Vaccination is not recommended for travelers planning short-term travel to urban areas or travel to areas with no clear Japanese encephalitis season.</p>
Measles	Infants 6 to 11 months old traveling internationally should get 1 dose of measles-mumps-rubella (MMR) vaccine before travel. This dose does not count as part of the routine childhood vaccination series.
Rabies	<p>Rabid dogs are commonly found in Brunei. However, rabies treatment is often available for those who are bitten or scratched by a dog or other mammal while in Brunei. Travelers who should consider rabies vaccination before their trips include travelers whose activities may involve exposure to dogs or wildlife. Travelers more likely to encounter rabid animals include:</p> <ul style="list-style-type: none"> • Campers, adventure travelers, or cave explorers (spelunkers) • Veterinarians, animal handlers, field biologists, or laboratory workers handling animal specimens; or • Visitors to rural areas. <p>Since children are more likely to be bitten or scratched by a dog or other animals, consider rabies vaccination for children traveling to Brunei.</p>
Typhoid	Vaccination recommended for most travelers, especially those staying with friends or relatives or visiting smaller cities or rural areas.
Yellow Fever	Vaccination required for travelers arriving in Brunei from a country with risk of Yellow Fever virus transmission and who are ≥9 months of age; this applies to travelers who are in transit for >12 hours in an airport located in a country with risk of Yellow Fever virus transmission.

Table 8: Recommendations for Travelers for Vaccine-Preventable Diseases

Dengue	Dengue is spread by insect bites. It is transmitted by infected mosquitos. Avoid insect bites.
Chikungunya	Chikungunya is spread by insect bites. It is transmitted by the bite of an infected mosquito. Avoid insect bites.
Hantavirus	Hantavirus spreads via air and droplets. It may be contracted by breathing in air or accidentally eating food contaminated with the urine, droppings, or saliva of infected rodents, by the bite from an infected rodent, or, less commonly, by being around someone sick with hantavirus (only occurs with Andes virus). To avoid exposure, avoid rodents and the areas where they live, and avoid sick people.
Leptospirosis	Leptospirosis spreads via contaminated water or soil. It may be contracted by touching urine or other body fluids from an animal infected with leptospirosis, swimming or wading in urine-contaminated fresh water, contact with urine-contaminated mud, or drinking water or eating food contaminated with animal urine.
Tuberculosis (TB)	TB is spread by air or droplet; it may be contracted by breathing in TB bacteria that is in the air from an infected and contagious person coughing, speaking, or singing. Prevention relies on avoiding sick people.

Table 9: Recommendations for Travelers for Non-Vaccine-Preventable Diseases

Sendai Framework

The Sendai Framework is the global blueprint and fifteen-year plan to build the world’s resilience to natural disasters.⁴⁰⁴ The information in this section is sourced directly from the Sendai Framework for Disaster Risk Reduction 2015-2030, which outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks.

The Seven Global Targets include:

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality rates in the decade 2020-2030 compared to the period 2005-2015.

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

- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.⁴⁰⁵

The Four Priorities of Action include:

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

The Sendai Framework aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries by 2030. It was adopted at the Third United Nations World Conference on Disaster Risk Reduction in Sendai, Japan, in 2015.⁴⁰⁶ The Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.⁴⁰⁷ Figure 20 shows the Sendai DRR Framework.⁴⁰⁸

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

Scope and purpose

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

Expected outcome

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

Goal

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

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015	Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030
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Figure 20: UN Sendai Framework for Disaster Risk Reduction (2015-2030)

HFA Country Progress Report

The Hyogo Framework for Action (HFA) was adopted as a guideline to reduce vulnerabilities to natural hazards. The HFA assists participating countries to become more resilient and to better manage the hazards that threaten their development. The most recent levels of progress results published from Brunei are from 2009-2011 and are represented in Figure 21 and Table 10. Table 11 provides an overview of the overall challenges and the future outlook statement from the HFA report. The 2009 Report is the most recent HFA report available for Brunei. The information in this section is sourced directly from the HFA Country Progress Report.⁴⁰⁹

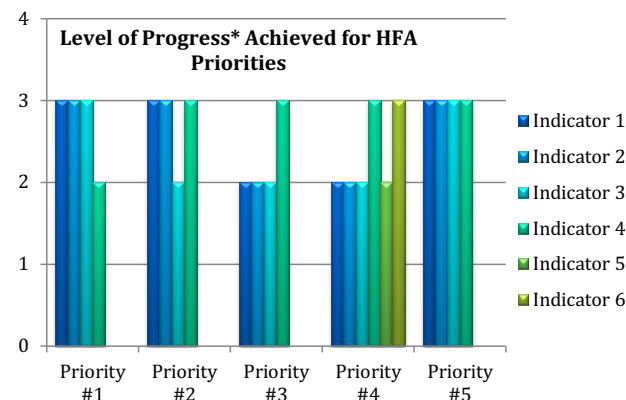


Figure 21: HFA Level of Progress Achieved

Priority for Action #1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.		
Core Indicator*	Indicator Description	Level of progress Achieved*
1	National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels.	3
2	Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels.	3
3	Community participation and decentralization is ensured through the delegation of authority and resources to local levels.	3
4	A national multi sectoral platform for disaster risk reduction is functioning.	2
Priority for Action #2: Identify, assess and monitor disaster risks and enhance early warning.		
1	National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.	3
2	Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.	3
3	Early warning systems are in place for all major hazards, with outreach to communities.	2
4	National and local risk assessments take account of regional / trans-boundary risks, with a view to regional cooperation on risk reduction.	3
Priority for Action #3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels		
1	Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems, etc.).	2
2	School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.	2
3	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.	2
4	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.	3

Table 10: National Progress Report on the Implementation of the HFA

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

Table Notes:

*Level of Progress:

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

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

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

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

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

Table 10: National Progress Report on the Implementation of the HFA (cont.)

Future Outlook Area 1: The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.	
Challenges:	The Strategic National Action Plan (SNAP), as the mechanism to address this concern, must be implemented by all agencies. Integration of DRR into development policies, planning, and programming at all levels with a special emphasis on disaster prevention, mitigation, preparedness, and vulnerability reduction remains a priority.
Future Outlook Statement:	The SNAP would bring together multiple agencies in a concerted action in integration of disaster risk reduction concerns in social, environmental, physical, and land use planning.
Future Outlook Area 2: The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.	
Challenges:	The Community Based Disaster Risk Management (CBDRM) program will continue to play a very important role in engaging the community in the country's effort in increasing the communities' disaster resilience.
Future Outlook Statement:	To involve the grass roots leaders in developing their respective communities in developing their mechanisms such as hazard assessment, reducing risk associated with hazards, and developing contingency planning to reduce the damage and loss from disasters.
Future Outlook Area 3: The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programs in the reconstruction of affected communities.	
Challenges:	Getting the community to fully participate in a program to increase their awareness on disaster management in Brunei Darussalam remains a challenge. The community's full participation is crucial towards the country's efforts toward achieving a disaster resilient community.
Future Outlook Statement:	The CBDRM program will continue to play a very important role in engaging the community in the country's efforts to increase the public awareness on DRR and, in return, build towards disaster resilience.

Table 11: HFA Country Progress Report Future Outlook Areas, Brunei

Country Profile

The information in the Country Profile section is sourced directly from the CIA World Factbook for Brunei. Additional numbers on country comparison to the world can be found by going directly to the CIA website (<https://www.cia.gov/the-world-factbook/>), which discusses topics including geography, people and society, government, economy, energy, communications, military and security, transportation, terrorism, and transnational issues.⁴¹⁰

Background

The Sultanate of Brunei's influence peaked between the 15th and 17th centuries when its control extended over coastal areas of northwest Borneo and the southern Philippines. Brunei subsequently entered a period of decline brought on by internal strife over royal succession, colonial expansion of European powers, and piracy. In 1888, Brunei became a British protectorate; independence was achieved in 1984. The same family has ruled Brunei for over six centuries. Brunei benefits from extensive petroleum and natural gas fields, the source of one of the highest per capita GDPs in the world. In 2017, Brunei celebrated the 50th anniversary of the Sultan Hassanal BOLKIAH's accession to the throne.

Geography

Location

Southeastern Asia, along the northern coast of the island of Borneo, bordering the South China Sea and Malaysia

Geographic coordinates

4 30 N, 114 40 E

Area

total: 5,765 sq km

land: 5,265 sq km

water: 500 sq km

country comparison to the world: 172

Area – comparative

slightly smaller than Delaware

Land boundaries

total: 266 km

border countries (1): Malaysia 266 km

Coastline

161 km

Maritime claims

territorial sea: 12 nm

exclusive economic zone: 200 nm or to median line

Climate

tropical; hot, humid, rainy

Terrain

flat coastal plain rises to mountains in east; hilly lowland in west

Elevation

highest point: Bukit Pagon 1,850 m

lowest point: South China Sea 0 m

mean elevation: 478 m

Natural resources

petroleum, natural gas, timber

Land use

agricultural land: 2.5% (2018 est.)

arable land: 0.8% (2018 est.)

permanent crops: 1.1% (2018 est.)

permanent pasture: 0.6% (2018 est.)

forest: 71.8% (2018 est.)

other: 25.7% (2018 est.)

Irrigated land

10 sq km (2012)

Natural hazards

typhoons, earthquakes, and severe flooding are rare

Geography – note: close to vital sea lanes through South China Sea linking Indian and Pacific Oceans; two parts physically separated by Malaysia; the eastern part, the Temburong district, is an exclave and is almost an enclave within Malaysia

People and Society

Population

478,054 (2022 est.)

note: immigrants make up approximately 26% of the total population, according to UN data (2019)

country comparison to the world: 173

Nationality

noun: Bruneian(s)

adjective: Bruneian

Ethnic groups

Malay 65.8%, Chinese 10.2%, other 24% (2020 est.)

Languages

Malay (Bahasa Melayu) (official), English, Chinese dialects

major-language sample(s): Buku Fakta Dunia, sumber yang diperlukan untuk maklumat asas. (Malay)

Religions

Muslim (official) 80.9%, Christian 7.1%, Buddhist 7.1%, other (includes indigenous beliefs) 5% (2016 est.)

Demographic profile

Brunei is a small, oil-rich sultanate of less than half a million people, making it the smallest country in Southeast Asia by population. Its total fertility rate – the average number of births per woman – has been steadily declining over the last few decades, from over 3.5 in the 1980s to below replacement level today at nearly 1.8.

The trend is due to women’s increased years of education and participation in the workforce, which have resulted in later marriages and fewer children. Yet, the population continues to grow because of the large number of women of reproductive age and a reliance on foreign labor – mainly from Malaysia, Thailand, the Philippines, Indonesia, and South Asian countries – to fill low-skilled jobs.

Brunei is officially Muslim, and Malay is the official language. The country follows an official Malay national ideology, Malay Islamic Monarchy, which promotes Malay language and culture, Islamic values, and the monarchy. Only seven of Brunei’s native groups are recognized in the constitution and are defined as “Malay” – Brunei Malays, Belait, Kedayan, Dusun, Bisayak, Lun Bawang, and Sama-Baiiau. Together they make up about 66% percent of the population and are referred to as the Bumiputera. The Bumiputera are entitled to official privileges, including land ownership, access to certain types of employment (Royal Brunei Armed Forces and Brunei Shell Petroleum), easier access to higher education, and better job opportunities in the civil service.

Brunei’s Chinese population descends from migrants who arrived when Brunei was a British protectorate (1888 and 1984). They are prominent in the non-state commercial sector and account for approximately 10% of the population. Most Bruneian Chinese are permanent residents rather than citizens despite roots going back several generations. Many are stateless and are denied rights granted to citizens, such as land ownership, subsidized health care, and free secondary and university education. Because of the discriminatory policies, the number of Chinese in Brunei has shrunk considerably in the last 50 years. Native ethnic groups that are not included in the Bumiputera are not recognized in the constitution and are not officially identified as “Malay” or automatically granted citizenship. Foreign workers constitute some quarter of the labor force.

Age structure

0-14 years: 22.41% (male 53,653/female 50,446)
 15-24 years: 16.14% (male 37,394/female 37,559)
 25-54 years: 47.21% (male 103,991/female 115,291)
 55-64 years: 8.34% (male 19,159/female 19,585)
 65 years and over: 5.9% (2020 est.) (male 13,333/female 14,067)

Figure 22 is the population pyramid for Brunei.⁴¹¹

Dependency ratios

total dependency ratio: 38.7
 youth dependency ratio: 31
 elderly dependency ratio: 7.7
 potential support ratio: 12.9 (2020 est.)

Median age

total: 31.1 years
 male: 30.5 years
 female: 31.8 years (2020 est.)
 country comparison to the world: 116

Population growth rate

1.45% (2022 est.)
 country comparison to the world: 66

Birth rate

16.14 births/1,000 population (2022 est.)
 country comparison to the world: 101

Death rate

3.79 deaths/1,000 population (2022 est.)
 country comparison to the world: 218

Net migration rate

2.18 migrant(s)/1,000 population (2022 est.)
 country comparison to the world: 48

Urbanization

urban population: 78.9% of total population (2022)
 rate of urbanization: 1.44% annual rate of change (2020-25 est.)
 total population growth rate v. urban population growth rate, 2000-2030

Major urban areas – population

241,000 BANDAR SERI BEGAWAN (capital) (2011)
 note: the boundaries of the capital city were expanded in 2007, greatly increasing the city area; the population of the capital increased tenfold

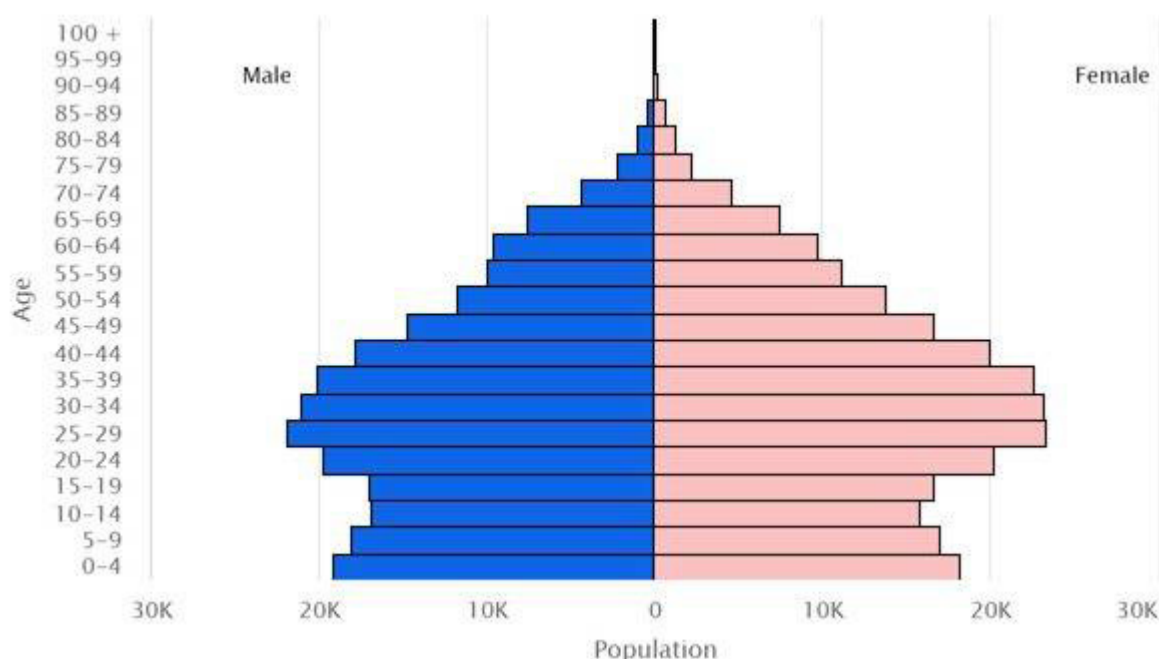


Figure 22: Population Pyramid, Brunei (2022)

Sex ratio

at birth: 1.05 male(s)/female
0-14 years: 1.06 male(s)/female
15-24 years: 1 male(s)/female
25-54 years: 0.89 male(s)/female
55-64 years: 0.94 male(s)/female
65 years and over: 0.74 male(s)/female
total population: 0.95 male(s)/female (2022 est.)

Maternal mortality ratio

31 deaths/100,000 live births (2017 est.)
country comparison to the world: 109

Infant mortality rate

total: 10.52 deaths/1,000 live births
male: 12.88 deaths/1,000 live births
female: 8.05 deaths/1,000 live births (2022 est.)
country comparison to the world: 134

Life expectancy at birth

total population: 78.38 years
male: 76.01 years
female: 80.86 years (2022 est.)
country comparison to the world: 72

Total fertility rate

1.74 children born/woman (2022 est.)
country comparison to the world: 157

Contraceptive prevalence rate

NA

Drinking water source

improved: urban: 99.7% of population
rural: NA
total: 99.9% of population
unimproved: urban: 0.4% of population
rural: 0% of population
total: 0.1% of population (2020)

Current Health Expenditure

2.2% (2019)

Physicians density

1.61 physicians/1,000 population (2017)

Hospital bed density

2.9 beds/1,000 population (2017)

Sanitation facility access

improved: urban: NA
rural: NA
total: NA
unimproved: urban: NA
rural: NA
total: NA

HIV/AIDS – adult prevalence rate

NA

HIV/AIDS – people living with HIV/AIDS

NA

HIV/AIDS – deaths

NA

Obesity – adult prevalence rate

14.1% (2016)
country comparison to the world: 129

Children under the age of 5 years underweight

NA

Education expenditures

4.4% of GDP (2016)
country comparison to the world: 86

Literacy

definition: age 15 and over can read and write
total population: 97.2%
male: 98.1%
female: 93.4% (2018)

School life expectancy (primary to tertiary education)

total: 14 years
male: 14 years
female: 14 years (2020)

Unemployment, youth ages 15-24

total: 21.4%
male: 19%
female: 25.8% (2019 est.)

Environment

Environment – current issues

no major environmental problems, but air pollution control is becoming a concern; seasonal trans-boundary haze from forest fires in Indonesia

Environment – international agreements

party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Climate Change-Paris Agreement, Comprehensive Nuclear Test Ban, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution; signed, but not ratified: none of the selected agreements

Air pollutants

particulate matter emissions: 5.78 micrograms per cubic meter (2016 est.)
carbon dioxide emissions: 7.66 megatons (2016 est.)
methane emissions: 8.4 megatons (2020 est.)

Climate

tropical; hot, humid, rainy

Land use

agricultural land: 2.5% (2018 est.)
arable land: 0.8% (2018 est.)
permanent crops: 1.1% (2018 est.)
permanent pasture: 0.6% (2018 est.)
forest: 71.8% (2018 est.)
other: 25.7% (2018 est.)

Urbanization

urban population: 78.9% of total population (2022)
rate of urbanization: 1.44% annual rate of change (2020-25 est.)
total population growth rate v. urban population growth rate, 2000-2030

Revenue from forest resources

forest revenues: 0.05% of GDP (2018 est.)
country comparison to the world: 127

Revenue from coal

coal revenues: 0% of GDP (2018 est.)
country comparison to the world: 70

Waste and recycling

municipal solid waste generated annually: 216,253 tons (2016 est.)

Total water withdrawal

municipal: 151.5 million cubic meters (2017 est.)
agricultural: 5.3 million cubic meters (2017 est.)

Total renewable water resources

8.5 billion cubic meters (2017 est.)

Government

Country name

conventional long form: Brunei Darussalam
conventional short form: Brunei
local long form: Negara Brunei Darussalam
local short form: Brunei
etymology: derivation of the name is unclear; according to legend, MUHAMMAD SHAH, who would become the first sultan of Brunei, upon discovering what would become Brunei exclaimed “Baru nah,” which roughly translates as “there” or “that’s it”

Government type

absolute monarchy or sultanate

Capital

name: Bandar Seri Begawan
geographic coordinates: 4 53 N, 114 56 E
time difference: UTC+8 (13 hours ahead of Washington, DC, during Standard Time)
etymology: named in 1970 after Sultan Omar Ali SAIFUDDIEN III (1914-1986; “The Father of Independence”) who adopted the title of “Seri Begawan” (approximate meaning “honored lord”) upon his abdication in 1967; “bandar” in Malay means “town” or “city”; the capital had previously been called Bandar Brunei (Brunei Town)

Administrative divisions

4 districts (daerah-daerah, singular – daerah);
Belait, Brunei dan Muara, Temburong, Tutong

Independence

1 January 1984 (from the UK)

National holiday

National Day, 23 February (1984); note – 1
January 1984 was the date of independence
from the UK, 23 February 1984 was the date
of independence from British protection; the
Sultan’s birthday, 15 June

Constitution

history: drafted 1954 to 1959, signed 29
September 1959; note – some constitutional
provisions suspended since 1962 under a
State of Emergency, others suspended since
independence in 1984
amendments: proposed by the monarch; passage
requires submission to the Privy Council for
Legislative Council review and finalization
takes place by proclamation; the monarch can
accept or reject changes to the original proposal
provided by the Legislative Council; amended
several times, last in 2010

Legal system

mixed legal system based on English common
law and Islamic law; note – in April 2019, the full
sharia penal codes came into force and apply to
Muslims and partly to non-Muslims in parallel
with present common law codes

International law organization participation

has not submitted an ICJ jurisdiction
declaration; non-party state to the ICC

Citizenship

citizenship by birth: no
citizenship by descent only: the father must be a
citizen of Brunei
dual citizenship recognized: no
residency requirement for naturalization: 12
years

Suffrage

18 years of age for village elections; universal

Executive branch

chief of state: Sultan and Prime Minister Sir
HASSANAL Bolkiah (since 5 October 1967);
note – the monarch is both chief of state and
head of government

head of government: Sultan and Prime Minister
Sir HASSANAL Bolkiah (since 5 October 1967)
cabinet: Council of Ministers appointed and
presided over by the monarch; note(s)- 4
additional advisory councils appointed by
the monarch are the Religious Council, Privy
Council for constitutional issues, Council of
Succession, and Legislative Council; Sultan
and Prime Minister Sir HASSANAL Bolkiah is
also Minister of Finance, Defense, and Foreign
Affairs and Trade
elections/appointments: none; the monarchy is
hereditary

Legislative branch

description: unicameral Legislative Council or
Majlis Mesyuarat Negara Brunei (33 seats; 20
members appointed by the sultan from ex-officio
cabinet ministers, titled people, and prominent
citizens in public service and various professional
fields and 13 members from 4 multi-seat
constituencies, and 3 ex-officio members – the
speaker and first and second secretaries
elections: January 2017 – appointed by the sultan
election results: NA; composition (as of February
2022) – men 30, women 3, percent of women
9.1%

Judicial branch

highest courts: Supreme Court (consists of the
Court of Appeal and the High Court, each with a
chief justice and 2 judges); Sharia Court (consists
of the Court of Appeals and the High Court);
note – Brunei has a dual judicial system of
secular and sharia (religious) courts; the Judicial
Committee of Privy Council (in London) serves
as the final appellate court for civil cases only
judge selection and term of office: Supreme

Court judges appointed by the monarch to serve until age 65, and older if approved by the monarch; Sharia Court judges appointed by the monarch for life

subordinate courts: Intermediate Court; Magistrates' Courts; Juvenile Court; small claims courts; lower sharia courts

Political parties and leaders

National Development Party or NDP [YASSIN Affendi]

note: Brunei National Solidarity Party or PPKB [Abdul LATIF bin Chuchu] and People's Awareness Party or PAKAR [Awang Haji MAIDIN bin Haji Ahmad] were deregistered in 2007; parties are small and have limited activity

International organization participation

ADB, APEC, ARF, ASEAN, C, CP, EAS, FAO, G-77, IAEA, IBRD, ICAO, ICC (NGOs), ICRM, IDA, IFRCS, ILO, IMF, IMO, IMSO, Interpol, IOC, ISO (correspondent), ITSO, ITU, NAM, OIC, OPCW, UN, UNCTAD, UNESCO, UNIFIL, UNWTO, UPU, WCO, WHO, WIPO, WMO, WTO

Diplomatic representation in the US

chief of mission: Ambassador Dato Paduka Haji Serbini bin Haji ALI (since 28 January 2016)
chancery: 3520 International Court NW, Washington, DC 20008

telephone: +1-202-237-1838

FAX: +1-202-885-0560

email address and website: info@bruneiembassy.org

<http://www.bruneiembassy.org/index.html>

consulate(s): New York

Diplomatic representation from the US

chief of mission: Ambassador Caryn R. McCLELLAND (since December 2021)
embassy: Simpang 336-52-16-9, Jalan Duta, Bandar Seri Begawan, BC4115

mailing address: 4020 Bandar Seri Begawan Place, Washington DC 20521-4020

telephone: +673-238-7400

FAX: +673-238-7533

email address and website: ConsularBrunei@state.gov

<https://bn.usembassy.gov/>

Flag description

yellow with two diagonal bands of white (top, almost double width) and black starting from the upper hoist side; the national emblem in red is superimposed at the center; yellow is the color of royalty and symbolizes the sultanate; the white and black bands denote Brunei's chief ministers; the emblem includes five main components: a swallow-tailed flag, the royal umbrella representing the monarchy, the wings of four feathers symbolizing justice, tranquility, prosperity, and peace, the two upraised hands signifying the government's pledge to preserve and promote the welfare of the people, and the crescent moon denoting Islam, the state religion; the state motto "Always render service with God's guidance" appears in yellow Arabic script on the crescent; a ribbon below the crescent reads "Brunei, the Abode of Peace"

National symbol(s)

royal parasol; national colors: yellow, white, black

National anthem

name: "Allah Peliharakan Sultan" (God Bless His Majesty)

lyrics/music: Pengiran Haji Mohamed YUSUF bin Pengiran Abdul Rahim/Awang Haji BESAR bin Sagap

note: adopted 1951

Economy

Economic overview

Brunei is an energy-rich sultanate on the northern coast of Borneo in Southeast Asia. Brunei boasts a well-educated, largely English-speaking population; excellent infrastructure; and a stable government intent on attracting foreign investment. Crude oil and natural gas production account for approximately 65% of GDP and 95% of exports, with Japan as the primary export market.

Per capita GDP is among the highest in the world, and substantial income from overseas investment supplements income from domestic hydrocarbon production. Bruneian citizens pay no personal income taxes, and the government provides free medical services and free education through the university level.

The Bruneian Government wants to diversify its economy away from hydrocarbon exports to other industries such as information and communications technology and halal manufacturing, permissible under Islamic law. Brunei's trade increased in 2016 and 2017, following its regional economic integration in the ASEAN Economic Community, and the expected ratification of the Trans-Pacific Partnership trade agreement.

Real GDP (purchasing power parity)
\$27.23 billion (2020 est.)
\$26.91 billion (2019 est.)
\$25.9 billion (2018 est.)
note: data are in 2017 dollars
country comparison to the world: 140

Real GDP growth rate
1.3% (2017 est.)
-2.5% (2016 est.)
-0.4% (2015 est.)
country comparison to the world: 161

Real GDP per capita
\$62,200 (2020 est.)
\$62,100 (2019 est.)
\$60,400 (2018 est.)
note: data are in 2017 dollars
country comparison to the world: 14

GDP (official exchange rate)
\$12.13 billion (2017 est.)

Inflation rate (consumer prices)
-0.2% (2017 est.)
-0.7% (2016 est.)
country comparison to the world: 16

GDP – composition, by sector of origin
agriculture: 1.2% (2017 est.)
industry: 56.6% (2017 est.)
services: 42.3% (2017 est.)

GDP – composition, by end use
household consumption: 25% (2017 est.)
government consumption: 24.8% (2017 est.)
investment in fixed capital: 32.6% (2017 est.)
investment in inventories: 8.5% (2017 est.)
exports of goods and services: 45.9% (2017 est.)
imports of goods and services: -36.8% (2017 est.)

Agricultural products
poultry, eggs, fruit, cassava, bananas, legumes, cucumbers, rice, pineapples, beef

Industries
petroleum, petroleum refining, liquefied natural gas, construction, agriculture, aquaculture, transportation

Industrial production growth rate
1.5% (2017 est.)
country comparison to the world: 142

Labor force
203,600 (2014 est.)
country comparison to the world: 168

Labor force – by occupation
agriculture: 4.2%
industry: 62.8%
services: 33% (2008 est.)

Unemployment rate
6.9% (2017 est.)
6.9% (2016 est.)
country comparison to the world: 109

Unemployment, youth ages 15-24
total: 21.4%
male: 19%
female: 25.8% (2019 est.)
country comparison to the world: 66

Population below poverty line
NA

Household income or consumption by percentage share

lowest 10%: NA

highest 10%: NA

Budget

revenues: 2.245 billion (2017 est.)

expenditures: 4.345 billion (2017 est.)

Budget surplus (+) or deficit (-)

-17.3% (of GDP) (2017 est.)

country comparison to the world: 218

Public debt

2.8% of GDP (2017 est.)

3% of GDP (2016 est.)

country comparison to the world: 207

Taxes and other revenues

18.5% (of GDP) (2017 est.)

country comparison to the world: 158

Fiscal year

1 April – 31 March

Current account balance

\$2.021 billion (2017 est.)

\$1.47 billion (2016 est.)

country comparison to the world: 40

Exports

\$7.83 billion (2019 est.) note: data are in current year dollars

\$7.04 billion (2018 est.) note: data are in current year dollars

country comparison to the world: 106

Exports – partners

Japan 34%, Australia 12%, Singapore 10%, India 8%, Malaysia 8%, Thailand 7%, China 6%, South Korea 5% (2019)

Exports – commodities

natural gas, crude petroleum, refined petroleum, industrial alcohols, industrial hydrocarbons (2019)

Imports

\$6.81 billion (2019 est.) note: data are in current year dollars

\$5.68 billion (2018 est.) note: data are in current year dollars

country comparison to the world: 127

Imports – partners

Singapore 18%, China 14%, Malaysia 12%, Nigeria 5%, United Arab Emirates 5%, United States 5% (2019)

Imports – commodities

crude petroleum, refined petroleum, cars, tugboats, valves (2019)

Reserves of foreign exchange and gold

\$3.488 billion (31 December 2017 est.)

\$3.366 billion (31 December 2015 est.)

country comparison to the world: 105

Debt – external

\$0 (2014)

\$0 (2013)

note: public external debt only; private external debt unavailable

country comparison to the world: 204

Exchange rates

Bruneian dollars (BND) per US dollar – 1.33685 (2020 est.)

1.35945 (2019 est.)

1.3699 (2018 est.)

1.3749 (2014 est.)

1.267 (2013 est.)

EnergyElectricity access

electrification – total population: 100% (2020)

Electricity – production

4.014 billion kWh (2016 est.)

country comparison to the world: 127

Electricity – consumption
3.771 billion kWh (2016 est.)
country comparison to the world: 129

Electricity – exports
0 kWh (2016 est.)
country comparison to the world: 111

Electricity – imports
0 kWh (2016 est.)
country comparison to the world: 129

Electricity – installed generating capacity
821,000 kW (2016 est.)
country comparison to the world: 134

Electricity – from fossil fuels
100% of total installed capacity (2016 est.)
country comparison to the world: 5

Electricity – from nuclear fuels
0% of total installed capacity (2017 est.)
country comparison to the world: 56

Electricity – from hydroelectric plants
0% of total installed capacity (2017 est.)
country comparison to the world: 161

Electricity – from other renewable sources
0% of total installed capacity (2017 est.)
country comparison to the world: 178

Crude oil – production
100,000 bbl/day (2018 est.)
country comparison to the world: 42

Crude oil – exports
127,400 bbl/day (2015 est.)
country comparison to the world: 33

Crude oil – imports
160 bbl/day (2015 est.)
country comparison to the world: 82

Crude oil – proved reserves
1.1 billion bbl (1 January 2018 est.)
country comparison to the world: 39

Refined petroleum products – production
10,310 bbl/day (2015 est.)
country comparison to the world: 100

Refined petroleum products – consumption
18,000 bbl/day (2016 est.)
country comparison to the world: 144

Refined petroleum products – exports
0 bbl/day (2015 est.)
country comparison to the world: 135

Refined petroleum products – imports
6,948 bbl/day (2015 est.)
country comparison to the world: 159

Natural gas – production
12.74 billion cu m (2017 est.)
country comparison to the world: 38

Natural gas – consumption
3.936 billion cu m (2017 est.)
country comparison to the world: 66

Natural gas – exports
8.268 billion cu m (2017 est.)
country comparison to the world: 23

Natural gas – imports
0 cu m (2017 est.)
country comparison to the world: 97

Natural gas – proved reserves
260.5 billion cu m (1 January 2018 est.)
country comparison to the world: 39

Communications

Telephones – fixed lines
total subscriptions: 103,885 (2020 est.)
subscriptions per 100 inhabitants: 24 (2020 est.)
country comparison to the world: 136

Telephones – mobile cellular
total subscriptions: 526,732 (2020)
subscriptions per 100 inhabitants: 120.4 (2020 est.)
country comparison to the world: 173

Telecommunication systems

general assessment: Brunei is improving its national telecom network; telecommunications infrastructure and services are of high standard, due to healthy investment in networks and services; relatively mature telecom system compared to other Asian countries; mobile subscription increasing steadily to high penetration; launch of 5G pilot services in April 2021 aimed to increase awareness of the benefits of 5G and boost the mobile broadband sector; access to telecom services via the Kacific-1 satellite (2021)

domestic: every service available; nearly 24 per 100 fixed-line, 120 per 100 mobile-cellular (2020)
international: country code – 673; landing points for the SEA-ME-WE-3, SJC, AAG, Lubuan-Brunei Submarine Cable via optical telecommunications submarine cables that provides links to Asia, the Middle East, Southeast Asia, Africa, Australia, and the US; satellite earth stations – 2 Intelsat (1 Indian Ocean and 1 Pacific Ocean) (2019)

Broadcast media

state-controlled Radio Television Brunei (RTB) operates 5 channels; 3 Malaysian TV stations are available; foreign TV broadcasts are available via satellite systems; RTB operates 5 radio networks and broadcasts on multiple frequencies; British Forces Broadcast Service (BFBS) provides radio broadcasts on 2 FM stations; some radio broadcast stations from Malaysia are available via repeaters

Internet country code

.bn

Internet users

total: 415,609 (2020 est.)
percent of population: 95% (2020 est.)
country comparison to the world: 163

Broadband – fixed subscriptions

total: 71,078 (2020 est.)
subscriptions per 100 inhabitants: 16 (2020 est.)
country comparison to the world: 134

TransportationNational air transport system

number of registered air carriers: 1 (2020)
inventory of registered aircraft operated by air carriers: 10
annual passenger traffic on registered air carriers: 1,234,455 (2018)
annual freight traffic on registered air carriers: 129.35 million (2018) mt-km

Civil aircraft registration country code prefix
V8Airports

total: 1 (2021)
country comparison to the world: 215

Airports – with paved runways

total: 1
over 3,047 m: 1 (2021)

Heliports

3 (2021)

Pipelines

33 km condensate, 86 km condensate/gas, 628 km gas, 492 km oil (2013)

Roadways

total: 2,976 km (2014)
paved: 2,559 km (2014)
unpaved: 417 km (2014)
country comparison to the world: 162

Waterways

209 km (2012) (navigable by craft drawing less than 1.2 m; the Belait, Brunei, and Tutong Rivers are major transport links)
country comparison to the world: 96

Merchant marine

total: 96
by type: general cargo 18, oil tanker 3, other 75 (2021)
country comparison to the world: 90

Ports and terminals

major seaport(s): Muara
oil terminal(s): Lumut, Seria
LNG terminal(s) (export): Lumut

Military and Security

Military and security forces

Royal Brunei Armed Forces: Royal Brunei Land Force, Royal Brunei Navy, Royal Brunei Air Force (2021)

Military expenditures

3.1% of GDP (2021 est.)
3.7% of GDP (2020 est.)
3.1% of GDP (2019) (approximately \$870 million)
2.7% of GDP (2018) (approximately \$720 million)
2.8% of GDP (2017) (approximately \$750 million)
country comparison to the world: 30

Military and security service personnel strengths

~ 6,500 total active troops (4,500 Army; 1,000 Navy; 1,000 Air Force) (2021)

Military equipment inventories and acquisitions

Royal Brunei Armed Forces imports nearly all of its military equipment and weapons systems and has a variety of suppliers, including the US and several European countries (2021)

Military service age and obligation

17 years of age for voluntary military service; non-Malays are ineligible to serve; recruits from the army, navy, and air force all undergo 43-week initial training (2021)
Military – note: Brunei has a long-standing defense relationship with the United Kingdom and hosts a British Army garrison, which includes a Gurkha battalion and a jungle warfare school; Brunei also hosts a Singaporean military training base (2021)

Transnational Issues

Disputes – international

per Letters of Exchange signed in 2009, Malaysia in 2010 ceded two hydrocarbon concession blocks to Brunei in exchange for Brunei’s sultan dropping claims to the Limbang corridor, which divides Brunei; nonetheless, Brunei claims a maritime boundary extending as far as a median with Vietnam, thus asserting an implicit claim to Louisa Reef

Refugees and internally displaced persons

stateless persons: 20,863 (mid-year 2021); note – thousands of stateless persons, often ethnic Chinese, are permanent residents and their families have lived in Brunei for generations; obtaining citizenship is difficult and requires individuals to pass rigorous tests on Malay culture, customs, and language; stateless residents receive an International Certificate of Identity, which enables them to travel overseas; the government is considering changing the law prohibiting non-Bruneians, including stateless permanent residents, from owning land

Trafficking in persons

current situation: human traffickers exploit foreign victims in Brunei; some men and women who migrate to Brunei to work as domestics or in retail or construction are subject to involuntary servitude, debt-based coercion, contract switching, non-payment of wages, passport confiscation, physical abuse, or confinement; some female migrants entering Brunei on tourist visas are forced into prostitution; some traffickers use Brunei as a transit point for victims used for sex and labor trafficking in Malaysia and Indonesia
tier rating: Tier 2 Watch List — Brunei does not fully meet the minimum standards for the elimination of trafficking but is making significant efforts to do so; the government enacted the 2019 Trafficking in Persons Order, which criminalized sex and labor trafficking and separated trafficking crimes from migrant smuggling crimes; the government formalized

its interagency anti-trafficking in persons committee; instituted a committee to review foreign worker recruitment practices, ratified the ASEAN Convention against Trafficking in Persons, and acceded to the UN TIP Protocol; however, authorities did not formally identify any trafficking cases, did not initiate any new trafficking prosecutions, and did not convict any traffickers; trafficking victims continued to be detained, deported, and charged with crimes without law enforcement determining if they were forced to commit the illegal acts by traffickers; the government again did not allocate money to a fund established in 2004 for victim compensation and repatriation; a draft national action plan to combat trafficking was not completed for the sixth consecutive year (2020)

Illicit drugs

drug trafficking and illegally importing controlled substances are serious offenses in Brunei and carry a mandatory death penalty

Acronyms and Abbreviations

°C / °F	Degrees Celsius / Fahrenheit
°N / S / E / W	Degrees of latitude or longitude – North, South, East, West
\$	United States Dollar
7FI	7 Flight, Army Air Corps (UK)
AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACDM	ASEAN Committee on Disaster Management
ADB	Asian Development Bank
ADMM	ASEAN Defence Ministers Meeting
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on disaster management
APAN	All Partners Access Network
APEC	Asia-Pacific Economic Cooperation
APRO	Asia Pacific Regional Office (of IFRC)
APT	Asia-Pacific Telecommunity
ASEAN	Association of Southeast Asian Nations
BDMD	Brunei Darussalam Meteorological Department
BDRCS	Brunei Darussalam Red Crescent Society
BFB	British Forces Brunei
BFBS	British Forces Broadcast Service
BFRD	Brunei Fire and Rescue Department
BHA	Bureau for Humanitarian Assistance (of USAID)
BMKG	Agency for Meteorology, Climatology and Geophysics (Indonesia)
BNCCP	Brunei Darussalam National Climate Change Policy
Bru-HIMS	Brunei Health Information and Management System
BruMAP-NCD	Brunei Darussalam National Multisectoral Action Plan for the Prevention and Control of NCDs
BTU	British thermal units
CARAT	Cooperation Afloat Readiness and Training
CBDRM	community-based disaster risk management
CBRN/E	chemical, biological, radiological, and nuclear/explosive
CCA	climate change adaptation
CE	Common Era (formerly AD/Anno Domini)
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CES	Combat Engineers Squadron
CFE-DM	Center for Excellence in Disaster Management and Humanitarian Assistance
CIS	Computer Information System
CO ₂ e	carbon dioxide equivalent
COP	Conference of Parties
COVAX	COVID-19 Vaccines Global Access
COVID-19	coronavirus disease 2019

DALY	disability-adjusted life years
DCC	Disaster Command Center
DCD	Disease Control Division
DDMC	District Disaster Management Centre
DEOC	District Emergency Operation Centre
DGMHS	Director General of Medical and Health Services
DKI-APCSS	Daniel K. Inouye Asia-Pacific Center for Security Studies
DMHA	Disaster Management and Humanitarian Assistance
DMO	Disaster Management Order
DMSPF	Disaster Management Strategic Policy Framework
DOCE	Department of Co-Curriculum Education
DoD	Department of Defense (U.S.)
DRR	disaster risk reduction
DWP	Defence White Paper
DWT	deadweight tonnage
EAC	East Asia Summit
EEC	energy efficiency and conservation
EEZ	exclusive economic zone
EMOPS	Emergency Operations
ENSO	El Niño Southern Oscillation
EU	European Union
EV	Electric Vehicle
gal	gallon(s)
GDACS	Global Disaster Alert and Coordination System
GDP	Gross Domestic Product
Gg	Gigagrams
GHG	greenhouse gas
HADR	Humanitarian Assistance and Disaster Relief
HAZMAT	hazardous material
HCT	Humanitarian Country Teams
HDX	Humanitarian Data Exchange
HFMD	hand, foot, and mouth disease
HIV/AIDS	human immunodeficiency virus / acquired immunodeficiency syndrome
ICP	Incident Command Post
ICRC	International Committee of the Red Cross
ICS	Incident Command System
ICT	information and communications technology
ICU	Intensive care unit
IDB	Independent Decommissioning Body
IFRC	International Federation of Red Cross and Red Crescent Societies

IHL	International Humanitarian Law
ILI	influenza-like illness
IMF	International Monetary Fund
IMO	International Maritime Organization
INFORM	Index for Risk Management
IOM	International Organization for Migration (UN-Migration)
ISO	International Organization for Standardization
ITCZ	Inter Tropical Convergence Zone
JAPEM	Community Development Department or Jabatan Pembangunan Masyarakat
JE	Japanese encephalitis
JTWC	Joint Typhoon Warning Center
kbps	kilobits per second
Kg	Kampong or village
km / km ²	kilometer(s) / square kilometer(s)
kWh	kilowatt hours
LGBTI	Lesbian, Gay, Bisexual, Transgender, and Intersex
LNG	liquefied natural gas
LOA	Length overall
LRTI	lower respiratory tract infections
m	meter(s)
MCO	Multi-Country Office
MCYS	Ministry of Culture, Youth, and Sports
mm	millimeter(s)
MIB	Melayu Islam Beraja or Malay Islamic Monarchy
MILF	Moro Islamic Liberation Front
MKM	Council on Social Welfare or Majlis Kesejahteraan Masyarakat
MoD	Ministry of Development
MOE	Ministry of Education
MOH	Ministry of Health
MOHEOC	Ministry of Health emergency operations center
MORA	Ministry of Religious Affairs
MPABD	Maritime and Ports Authority Brunei Darussalam
MPTC	Multi-Purpose Training Centre
MTIC	Ministry of Transport and Infocommunications
MW	Megawatt
NaSOP	National Standard Operating Procedures
NDC	Nationally Determined Contribution or National Disaster Council
NDMC	National Disaster Management Centre
NGO	non-government organization
NTCC	National Tuberculosis Coordinating Centre

NTP	National Tuberculosis Control Programme
NTWC	National Tsunami Warning Center
OCHA	Office for the Coordination of Humanitarian Affairs (UN)
OECD	Organisation for Economic Co-operation and Development
PDC	Pacific Disaster Center
PTWC	Pacific Tsunami Warning Center
PV	photovoltaic
PWD	Public Works Department
RBAirF	Royal Brunei Air Force
RBAF	Royal Brunei Armed Forces
RBLF	Royal Brunei Land Force
RBN	Royal Brunei Navy
RBPF	Royal Brunei Police Force
RHCC	Changi Regional HADR Coordination Centre
ROAP	Regional Office for Asia and the Pacific (UN OCHA)
RSF	Reports without Borders / Reporters sans Frontières
RTB	Radio Television Brunei
SAOFFG	Southeastern Asia-Oceania Flash Flood Guidance System
SASOP	Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations
SCSTAC	South China Sea Tsunami Advisory Center
SDG	Sustainable Development Goal
SMEE	Subject Matter Expert Exchange
SMS	short messaging service (text)
SNAP	Strategic National Action Plan for Disaster Risk Reduction
SOP	standard operating procedure
SPC	Sharia Penal Code
SPN21	National Education System for the 21st Century
TB	Tuberculosis
TEU	twenty-food equivalent unit(s)
TWFP	Tsunami Warning Focal Point
TWh	terawatt-hours
UBD	University of Brunei Darussalam
UK	United Kingdom
UNCRC	United Nations Convention on the Rights of Children
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund

UNHCR	United Nations Office of the High Commissioner for Refugees
UNICEF	United Nations Children’s Fund
UNIFIL	United Nations Interim Force in Lebanon
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNSCR	United Nations Security Council Resolution
U.S.	United States
USAID	United States Agency for International Development
USARPAC	United States Army - Pacific
WFP	World Food Programme
WHO	World Health Organization
WMO	World Meteorological Organization
WPS	Women, Peace, and Security

Endnotes

- 1 New World Encyclopedia. Brunei. 11 February 2022. <https://www.newworldencyclopedia.org/p/index.php?title=Brunei&oldid=1064776>.
- 2 Bee, O.J., Thambipillai, P., & Damit, M.Y. Brunei-History. Encyclopedia Britannica. Accessed 26 April 2022. <https://www.britannica.com/place/Brunei/History>
- 3 Chen, C. Peter. Brunei. World War II Database. 2013. <https://ww2db.com/country/brunei>
- 4 Bee, O.J., Thambipillai, P., & Damit, M.Y. Brunei-History. Encyclopedia Britannica. Accessed 26 April 2022. <https://www.britannica.com/place/Brunei/History>
- 5 Bee, O.J., Thambipillai, P., & Damit, M.Y. Brunei-History. Encyclopedia Britannica. Accessed 26 April 2022. <https://www.britannica.com/place/Brunei/History>
- 6 BBC. (09 07 2019). Brunei Country Profiles. 9 July 2019. <https://www.bbc.com/news/world-asia-pacific-12990058?msclkid=03f29801c68211ec99c246a18de-a02e2>
- 7 Department of Economic Planning and Statistics. Population. Ministry of Finance and Economy, Government of Brunei. 2021. <https://deps.mofe.gov.bn/SitePages/Population.aspx>
- 8 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 9 Pariona, A. Society. World Atlas. 5 December 2018. <https://www.worldatlas.com/articles/important-aspects-of-the-culture-of-brunei.html>
- 10 Pariona, A. Society. World Atlas. 5 December 2018. <https://www.worldatlas.com/articles/important-aspects-of-the-culture-of-brunei.html>
- 11 Thambipillai, Pushpa, Bee, Ooi Jin and Damit, Mohamad Yusop. Brunei. Encyclopedia Britannica. Accessed 25 April 2022. <https://www.britannica.com/place/Brunei>
- 12 Embassy of Brunei Darussalam to the United States. Introducing Brunei. Accessed 25 April 2022. <http://www.bruneiembassy.org/about-brunei.html>
- 13 Department of Economic Planning and Development, Brunei. Brunei. City Population. Accessed 2 June 2022. <https://www.citypopulation.de/en/brunei/cities/>
- 14 Permanent Committee on Geographical Names (PCGN). Toponymic Fact File Brunei. November 2018. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931489/Brunei_Toponymic_Factfile_2018.pdf
- 15 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 16 U.S. Department of State. 2020 Report on International Religious Freedom: Brunei. 12 May 2021. <https://www.state.gov/reports/2020-report-on-international-religious-freedom/brunei/>
- 17 Ministry of Education. National Education System for the 21st Century; SPN21. 2013. [https://www.moe.gov.bn/spn21dl/SPN21%20ENG%20\(2013\)%20COMPLETE.pdf](https://www.moe.gov.bn/spn21dl/SPN21%20ENG%20(2013)%20COMPLETE.pdf)
- 18 Young, Amy; Muhammad, Norhazlin; Bakar, Osman; O'Leary, Patrick; and Abdalla, Mohamad. Children in Brunei Darussalam: Their Educational, Legal and Social Protections. International Journal of Islamic Thought. 11. 6-16. May 2017. DOI: 10.24035/ijit.11.2017.002.
- 19 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 20 Humanium. Children of Brunei. Accessed 2 June 2022. <https://www.humanium.org/en/brunei/>
- 21 Ministry of Education. National Education System for the 21st Century; SPN21. 2013. [https://www.moe.gov.bn/spn21dl/SPN21%20ENG%20\(2013\)%20COMPLETE.pdf](https://www.moe.gov.bn/spn21dl/SPN21%20ENG%20(2013)%20COMPLETE.pdf)
- 22 Young, Amy; Muhammad, Norhazlin; Bakar, Osman; O'Leary, Patrick; and Abdalla, Mohamad. Children in Brunei Darussalam: Their Educational, Legal and Social Protections. International Journal of Islamic Thought. 11. 6-16. May 2017. DOI: 10.24035/ijit.11.2017.002.
- 23 Asia-Pacific Centre for the Responsibility to Protect. Brunei Darussalam: Baseline Assessment of R2P Implementation. 2019. https://r2pasiapacific.org/files/3886/Brunei_annex_combined.pdf
- 24 Girls not Brides. Brunei. Accessed 2 June 2022. <https://www.girlsnotbrides.org/learning-resources/child-marriage-atlas/regions-and-countries/brunei/#:~:text=Under%20Brunei's%20Marriage%20Act%2C%20which,with%20parental%20and%20participant%20consent.>
- 25 Open Access Government. Brunei death penalty will not be repealed or implemented. 7 May 2019. <https://www.openaccessgovernment.org/brunei-death-penalty/64515/>
- 26 Child Rights International Network. MINIMUM AGES OF CRIMINAL RESPONSIBILITY IN ASIA. Accessed 2 June 2022. <https://archive.crin.org/en/home/ages/asia.html>
- 27 UN Women. Brunei Darussalam. Accessed 2 June 2022. <https://data.unwomen.org/country/brunei-darussalam>
- 28 UNESCO. Global education monitoring report 2019: gender report: Building bridges for gender equality. 2019. <https://unesdoc.unesco.org/ark:/48223/pf0000368753>
- 29 Asia-Pacific Centre for the Responsibility to Protect. Brunei Darussalam: Baseline Assessment of R2P Implementation. 2019. https://r2pasiapacific.org/files/3886/Brunei_annex_combined.pdf
- 30 ASEAN Intergovernmental Commission on Human Rights. Women in Natural Disasters: Indicative Findings in Unraveling Gender in Institutional Responses. January 2019. https://aichr.org/wp-content/uploads/2019/01/Adopted_AICHR_Thematic_Study_Women_in_Natural_Disasters_26012018.pdf
- 31 U.S. Department of State. 2020 Report on International Religious Freedom: Brunei. 12 May 2021. <https://www.state.gov/reports/2020-report-on-international-religious-freedom/brunei/>

32 Human Rights Watch. Brunei's Pernicious Penal Code. 22 May 2019. [https://www.hrw.org/news/2019/05/22/bruneis- Pernicious-new-penal-code#:~:text=Brunei's%20Syariah%20Penal%20Code%20\(2013,and%20religious%20and%20sexual%20minorities.](https://www.hrw.org/news/2019/05/22/bruneis- Pernicious-new-penal-code#:~:text=Brunei's%20Syariah%20Penal%20Code%20(2013,and%20religious%20and%20sexual%20minorities.)

33 BBC. Brunei says it won't enforce death penalty for gay sex. 6 May 2019. <https://www.bbc.com/news/world-asia-48171165>

34 ASEAN Today. Editorial: Brunei's equal opportunities problem. 30 April 2018. <https://www.aseantoday.com/2018/04/bruneis-equal-opportunities-problem/>

35 Amu, Analisa. Sultan establishes Persons with Disabilities Order 2021 Old Age Pensions and Disability Allowances Act. The Bruneian. 19 July 2021. <https://thebruneian.news/2021/07/19/sultan-establishes-persons-with-disabilities-order-2021-old-age-pensions-and-disability-allowances-act/>

36 United Nations Committee on the Rights of the Child. Concluding observations on the combined second and third periodic reports of Brunei Darussalam. 24 February 2016. <https://www.icj.org/wp-content/uploads/2016/07/Concluding-Observations-CRC-Brunei-2016-eng.pdf>

37 Ihsan, YB Dato Hj Aminuddin. Creating a more inclusive society for people with disabilities. The Scoop. 3 December 2019. <https://thescoop.co/2019/12/03/creating-a-more-inclusive-society-for-people-with-disabilities/>

38 Amu, Analisa. Sultan establishes Persons with Disabilities Order 2021 Old Age Pensions and Disability Allowances Act. The Bruneian. 19 July 2021. <https://thebruneian.news/2021/07/19/sultan-establishes-persons-with-disabilities-order-2021-old-age-pensions-and-disability-allowances-act/>

39 Abdul-Mumin, Khadizah H. National Study on Elderly Persons (NSEP) in Brunei Darussalam. 2018. [https://www.duke-nus.edu.sg/docs/librariesprovider3/education-docs/1-national-study-on-elderly-persons-\(nsep\)-in-brunei-darussalam-by-dr-khadizah-haji-abdul-mumin.pdf?sfvrsn=5738c19a_4](https://www.duke-nus.edu.sg/docs/librariesprovider3/education-docs/1-national-study-on-elderly-persons-(nsep)-in-brunei-darussalam-by-dr-khadizah-haji-abdul-mumin.pdf?sfvrsn=5738c19a_4)

40 ASEAN Post. Age is an asset in Brunei. 31 December 2018. <https://theaseanpost.com/article/age-asset-brunei-0>

41 Tolman, Alana. Brunei's stateless left in a state of confusion. New Mandala. 8 April 2016. <https://www.newmandala.org/bruneis-stateless-left-in-a-state-of-confusion/>

42 U.S. Department of State. BRUNEI 2021 HUMAN RIGHTS REPORT. March 2022. https://www.state.gov/wp-content/uploads/2022/03/313615_BRUNEI-2021-HUMAN-RIGHTS-REPORT.pdf

43 Boeding, Madeline. THE STATELESS PEOPLE IN BRUNEI. Borgen Project. 8 August 2017. <https://borgenproject.org/the-stateless-people-of-brunei/>

44 Office of the High Commissioner for Human Rights. Statelessness Network Asia Pacific, The Brunei Project, Global Campaign for Equal Nationality Rights and Institute on Statelessness and Inclusion. Joint Submission to the Human Rights Council at the 33rd Session of the Universal Periodic Review. May 2019. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiGqobku5n4AhUFoY4IH-dO6Dn8QFnoECC4QAQ&url=https%3A%2F%2Fuprdoc.ohchr.org%2Fuprweb%2Fdownloadfile.aspx%3Ffile-name%3D6509%26file%3D%2FEnglishTranslation&usg=AOvVaw3odLkuqd0_D97srEhOCKPy

45 U.S. Department of State. BRUNEI 2021 HUMAN RIGHTS REPORT. March 2022. https://www.state.gov/wp-content/uploads/2022/03/313615_BRUNEI-2021-HUMAN-RIGHTS-REPORT.pdf

46 Minority Rights Group International. World Directory of Minorities and Indigenous Peoples - Brunei Darussalam: Chinese. 2008. Accessed 4 May 2022. <https://www.refworld.org/docid/49749d4832.html>

47 Minority Rights Group International. World Directory of Minorities and Indigenous Peoples - Brunei Darussalam: Chinese. 2008. Accessed 4 May 2022. <https://www.refworld.org/docid/49749d4832.html>

48 World Bank. Brunei GDP. <https://tradingeconomics.com/brunei/gdp#>

49 Asian Development Bank. Brunei Darussalam: Overview. Accessed 6 June 2022. <https://aric.adb.org/brunei>

50 World Bank. Brunei GDP. <https://tradingeconomics.com/brunei/gdp#>

51 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>

52 OECD. Government at a Glance, Southeast Asia 2019, Country Fact Sheet: Brunei Darussalam. <https://www.oecd.org/gov/gov-at-a-glance-sea-country-factsheet-brunei-darussalam.pdf>

53 U.S. Department of State. 2021 Investment Climate Statements: Brunei. Accessed 16 June 2022. <https://www.state.gov/reports/2021-investment-climate-statements/brunei/>

54 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>

55 Green, Emma. Poverty in Brunei Darussalam. Borgen Project. 7 November 2020. <https://www.borgenmagazine.com/poverty-in-brunei-darussalam/>

56 Khan, Asif Ullah. Brunei's Youth Facing Unemployment. 4 April 2020. <https://theaseanpost.com/article/bruneis-youth-facing-unemployment>

57 Green, Emma. Poverty in Brunei Darussalam. Borgen Project. 7 November 2020. <https://www.borgenmagazine.com/poverty-in-brunei-darussalam/>

58 Encyclopedia Britannica. Brunei-Economy. <https://www.britannica.com/place/Brunei/Economy>

59 Encyclopedia Britannica. Brunei-Economy. <https://www.britannica.com/place/Brunei/Economy>

60 Oxford Business Group. Tourism. The Report: Brunei Darussalam 2013. <https://oxfordbusinessgroup.com/brunei-darussalam-2013/tourism>

61 Visit Southeast Asia. Best Ecotourism Spots in Brunei. ASEAN. <https://www.visitsetheastasia.travel/guides/best-ecotourism-spots-in-brunei/>

- 62 Brunei Tourism – Abode of Peace. Tourism Department, Ministry of Primary Resources and Tourism. <https://www.brunetourism.com/>
- 63 Encyclopedia Britannica. Brunei-Economy. <https://www.britannica.com/place/Brunei/Economy>
- 64 Encyclopedia Britannica. Brunei-Economy. <https://www.britannica.com/place/Brunei/Economy>
- 65 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 66 Commonwealth Local Government Forum. The Local Government System in Brunei Darussalam: Country Profile 2017-18. http://www.clgf.org.uk/default/assets/File/Country_profiles/Brunei_Darussalam.pdf
- 67 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 68 Attorney-General's Chambers. SUCCESSION AND REGENCY PROCLAMATION, 1959. https://www.agc.gov.bn/AGC%20Images/LOB/cons_doc/constitution_ii.pdf
- 69 Commonwealth Local Government Forum. The Local Government System in Brunei Darussalam: Country Profile 2017-18. http://www.clgf.org.uk/default/assets/File/Country_profiles/Brunei_Darussalam.pdf
- 70 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 71 Constitution of Brunei Darussalam. Via Constitute. Accessed 6 June 2022. https://www.constituteproject.org/constitution/Brunei_2006?lang=en
- 72 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 73 Constitution of Brunei Darussalam. Via Constitute. Accessed 6 June 2022. https://www.constituteproject.org/constitution/Brunei_2006?lang=en
- 74 Commonwealth Local Government Forum. The Local Government System in Brunei Darussalam: Country Profile 2017-18. http://www.clgf.org.uk/default/assets/File/Country_profiles/Brunei_Darussalam.pdf
- 75 Commonwealth Network. Brunei Darussalam: Government. Accessed 6 June 2022. https://www.commonwealthofnations.org/sectors-brunei_darussalam/government/
- 76 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 77 Commonwealth Network. Brunei Darussalam: Government. Accessed 6 June 2022. https://www.commonwealthofnations.org/sectors-brunei_darussalam/government/
- 78 CIA World Factbook. Brunei. Accessed 25 April 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 79 Steiner, Kerstin. Melayu Islam Beraja ('Malay Muslim Monarchy'). East Asia Forum. 23 October 2019. <https://www.eastasiaforum.org/2019/10/23/the-state-of-islam-in-brunei/>
- 80 Freedom House. Freedom in the World 2020. <https://freedomhouse.org/country/brunei/freedom-world/2020>
- 81 World Maps Info.com Accessed 30 June 2022. <https://www.worldmaps.info/Brunei/>
- 82 CIA World Factbook. Brunei. Accessed 7 June 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 83 World Bank Climate Change Knowledge Portal. Brunei Darussalam. Accessed 7 June 2022. <https://climateknowledgeportal.worldbank.org/country/brunei-darussalam>
- 84 CIA World Factbook. Brunei. Accessed 7 June 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 85 Thambipillai, Pushpa, et al. Brunei. Encyclopedia Britannica. Accessed 7 June 2022. <https://www.britannica.com/place/Brunei#ref52433>
- 86 Ecology Asia. Brunei Bay. Accessed 7 June 2022. <https://www.ecologyasia.com/html-loc/brunei-bay.htm>
- 87 ASEAN. NATIONAL EFFORTS RELATED TO ASEAN CONNECTIVITY. SULTAN HAJI OMAR 'ALI SAIFUDDIEN BRIDGE – BRUNEI DARUSSALAM. Accessed 18 July 2022. <https://connectivity.asean.org/resource/sultan-haji-omar-ali-saifuddien-bridge-brunei-darussalam/>
- 88 Thambipillai, Pushpa, et al. Brunei. Encyclopedia Britannica. Accessed 7 June 2022. <https://www.britannica.com/place/Brunei#ref52433>
- 89 CIA World Factbook. Brunei. Accessed 7 June 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 90 National Bureau of Asian Research. Country Profile: Brunei; Summary of Claims. Accessed 7 June 2022. <https://www.nbr.org/publication/brunei/>
- 91 Bader, Jeffrey A. The U.S. and China's Nine-Dash Line: Ending the Ambiguity. Brookings. 6 February 2014. <https://www.brookings.edu/opinions/the-u-s-and-chinas-nine-dash-line-ending-the-ambiguity/>
- 92 National Bureau of Asian Research. Country Profile: Brunei; Summary of Claims. Accessed 7 June 2022. <https://www.nbr.org/publication/brunei/>
- 93 Thambipillai, Pushpa, et al. Brunei. Encyclopedia Britannica. Accessed 7 June 2022. <https://www.britannica.com/place/Brunei#ref52433>
- 94 Brunei Darussalam Meteorological Department. Climate. Accessed 7 June 2022. <http://bruneiweather.com.bn/climate#:~:text=The%20climate%20of%20Brunei%20is,the%20region%20as%20a%20whole>
- 95 Brunei Darussalam National Determined Contribution (NDC) 2020. <https://unfccc.int/sites/default/files/NDC/2022-06/Brunei%20Darussalam%27s%20NDC%202020.pdf>
- 96 Energy and Industry Department. Brunei Darussalam's Second National Communication. 2017. <https://unfccc.int/documents/39798>
- 97 Brunei Darussalam National Determined Contribution (NDC) 2020. <https://unfccc.int/sites/default/files/NDC/2022-06/Brunei%20Darussalam%27s%20NDC%202020.pdf>

98 Brunei Darussalam National Determined Contribution (NDC) 2020. <https://unfccc.int/sites/default/files/NDC/2022-06/Brunei%20Darussalam%27s%20NDC%202020.pdf>

99 Abu Bakar, Rasidah Hj. Brunei to set up ASEAN Centre for Climate Change. *The Scoop*. 23 June 2022. <https://thescoop.co/2022/06/23/brunei-to-set-up-asean-centre-for-climate-change/>

100 Energy and Industry Department. Brunei Darussalam's Second National Communication. 2017. <https://unfccc.int/documents/39798>

101 Ndah, A.B., Odihi, J.O. A Systematic Study of Disaster Risk in Brunei Darussalam and Options for Vulnerability-Based Disaster Risk Reduction. *Int J Disaster Risk Sci* 8, 208–223 (2017). <https://doi.org/10.1007/s13753-017-0125-x>

102 UNESCAP Risk and Resilience Portal. Country Portal: Brunei Darussalam. 2021. <https://rrp.unescap.org/country-profile/brn#paragraph-id--19566>

103 The Scoop. Ulu Tutong Golden Jubilee Dam to supply water for 250K people. 20 July 2018. <https://thescoop.co/2018/07/20/ulu-tutong-golden-jubilee-dam/>

104 OYO International Corporation, Mitsubishi Research Institute, Inc., and CTI Engineering International Co., Ltd. Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region: Country Report Brunei. AHA Centre and Japan International Cooperation Agency (JICA). March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>

105 US Geological Survey. The Modified Mercalli Intensity Scale. Accessed 8 June 2022. <https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale>

106 OYO International Corporation, Mitsubishi Research Institute, Inc., and CTI Engineering International Co., Ltd. Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region: Country Report Brunei. AHA Centre and Japan International Cooperation Agency (JICA). March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>

107 US Geological Survey. The Modified Mercalli Intensity Scale. Accessed 8 June 2022. <https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale>

108 World Health Organization. Our Work in Brunei Darussalam. Accessed 8 June 2022. <https://www.who.int/brunei/our-work>

109 Prevent Epidemics. Brunei Darussalam. Accessed 8 June 2022. <https://preventepidemics.org/countries/brn/>

110 Ndah, A.B., Odihi, J.O. A Systematic Study of Disaster Risk in Brunei Darussalam and Options for Vulnerability-Based Disaster Risk Reduction. *Int J Disaster Risk Sci* 8, 208–223 (2017). <https://doi.org/10.1007/s13753-017-0125-x>

111 OYO International Corporation, Mitsubishi Research Institute, Inc., and CTI Engineering International Co., Ltd. Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region: Country Report Brunei. AHA Centre and Japan International Cooperation Agency (JICA). March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>

112 Nippon Koei Co., Ltd. et al. DATA COLLECTION SURVEY ON ASEAN REGIONAL COLLABORATION IN DISASTER MANAGEMENT FINAL REPORT; COUNTRY REPORT – BRUNEI. Japan International Cooperation Agency. December 2012. <https://openjicareport.jica.go.jp/pdf/12085536.pdf>

113 Shams Shahriar, Zahran El-Said M. M., Said Safwanah N. M., Hui Kho J., Lee Naderah N. D. H. M. F., and Hasim N. H. H. Risk assessment for forest fire in Brunei Darussalam. *MATEC Web of Conferences* 258, 05033 (2019). <https://doi.org/10.1051/mateconf/201925805033>

114 Noor, Adib. FRD records 216 calls on forest fires last year. *Borneo Bulletin*. 2 February 2022. <https://borneobulletin.com.bn/frd-records-216-calls-on-forest-fires-last-year-2/>

115 Shams Shahriar, Zahran El-Said M. M., Said Safwanah N. M., Hui Kho J., Lee Naderah N. D. H. M. F., and Hasim N. H. H. Risk assessment for forest fire in Brunei Darussalam. *MATEC Web of Conferences* 258, 05033 (2019). <https://doi.org/10.1051/mateconf/201925805033>

116 OYO International Corporation, Mitsubishi Research Institute, Inc., and CTI Engineering International Co., Ltd. Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region: Country Report Brunei. AHA Centre and Japan International Cooperation Agency (JICA). March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>

117 Ndah, A.B., Odihi, J.O. A Systematic Study of Disaster Risk in Brunei Darussalam and Options for Vulnerability-Based Disaster Risk Reduction. *Int J Disaster Risk Sci* 8, 208–223 (2017). <https://doi.org/10.1007/s13753-017-0125-x>

118 OYO International Corporation, Mitsubishi Research Institute, Inc., and CTI Engineering International Co., Ltd. Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region: Country Report Brunei. AHA Centre and Japan International Cooperation Agency (JICA). March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>

119 OYO International Corporation, Mitsubishi Research Institute, Inc., and CTI Engineering International Co., Ltd. Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region: Country Report Brunei. AHA Centre and Japan International Cooperation Agency (JICA). March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>

120 Borneo Bulletin. Forest fire in Brunei reaches 90ha of government land. 5 May 2022. <https://www.thestar.com.my/aseanplus/aseanplus-news/2022/05/05/forest-fire-in-brunei-reaches-90ha-of-government-land>

- 121 Borneo Bulletin. Team effort douses two-day forest fire in Brunei. 7 May 2022. <https://www.thestar.com.my/aseanplus/aseanplus-news/2022/05/07/team-effort-douses-two-day-forest-fire-in-brunei>
- 122 Borneo Bulletin. Forest fire in Brunei reaches 90ha of government land. 5 May 2022. <https://www.thestar.com.my/aseanplus/aseanplus-news/2022/05/05/forest-fire-in-brunei-reaches-90ha-of-government-land>
- 123 Borneo Bulletin. Flash floods wreak havoc in Brunei. 27 January 2022. <https://www.thestar.com.my/aseanplus/aseanplus-news/2022/01/27/flash-floods-wreak-havoc-in-brunei>
- 124 Royal Brunei Land Force. ROYAL BRUNEI LAND FORCE PLAY A SIGNIFICANT SUPPORT ROLE IN HUMANITARIAN ASSISTANCE AND DISASTER RELIEF OPERATIONS IN BELAIT DISTRICT. 11 November 2021. <https://land.mindef.gov.bn/Lists/News%20Headlines/DispAnnouncement.aspx?id=1107>
- 125 Royal Brunei Land Force. HUMANITARIAN ASSISTANCE AND DISASTER RELIEF RESPONSE BY SECOND BATTALION ROYAL BRUNEI LAND FORCE. 4 September 2021. <https://land.mindef.gov.bn/Lists/News%20Headlines/DispAnnouncement.aspx?ID=1067&ContentTypeId=0x010400103FD76F1DC41943A293CF9D1F899C87>
- 126 Royal Brunei Land Force. ROYAL BRUNEI LAND FORCE PLAY A SIGNIFICANT SUPPORT ROLE IN HUMANITARIAN ASSISTANCE AND DISASTER OPERATIONS IN TUTONG AND BELAIT DISTRICT. 7 May 2021. <https://land.mindef.gov.bn/Lists/News%20Headlines/DispAnnouncement.aspx?ID=969&ContentTypeId=0x010400103FD76F1DC41943A293CF9D1F899C87>
- 127 Royal Brunei Land Force. HUMANITARIAN ASSISTANCE AND DISASTER RELIEF RESPONSE BY SECOND BATTALION ROYAL BRUNEI LAND FORCE. 13 January 2021. <https://land.mindef.gov.bn/Lists/News%20Headlines/DispAnnouncement.aspx?ID=823&ContentTypeId=0x010400103FD76F1DC41943A293CF9D1F899C87>
- 128 Royal Brunei Land Force. THIRD BATTALION ROYAL BRUNEI LAND FORCE INVOLVED IN DOMESTIC NATURAL DISASTER RELIEF EFFORT. 29 November 2020. <https://land.mindef.gov.bn/Lists/News%20Headlines/DispAnnouncement.aspx?ID=764&ContentTypeId=0x010400103FD76F1DC41943A293CF9D1F899C87>
- 129 Abu Baker, Rasidah Hj. Tutong remains on alert for more flooding. The Scoop. 20 December 2019. <https://thescoop.co/2019/12/20/flood-alerts-remain-in-tutong/>
- 130 Abu Baker, Rasidah Hj. Bomba: 161 hectares of forest destroyed by fire in past week. The Scoop. 22 March 2019. <https://thescoop.co/2019/03/22/bomba-161-hectares-of-forest-destroyed-by-fire-in-past-week/>
- 131 ADINet. Brunei Darussalam, Floods in Tutong District. 2 June 2018. <https://adinet.ahacentre.org/report/brunei-darussalam-floods-in-tutong-district-20180602>
- 132 ADINet. Brunei Darussalam, Flash flood. 3 January 2018. <https://adinet.ahacentre.org/report/brunei-darussalam-flash-flood-20180103>
- 133 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM Global Risk Index. Methodology. <https://drmkc.jrc.ec.europa.eu/inform-index/InDepth/Methodology>
- 134 INFORM Report 2020. Shared Evidence for Managing Crisis and Disasters. https://publications.jrc.ec.europa.eu/repository/bitstream/JRC120275/01_inform_2020_online_%284%29.pdf
- 135 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM Country Risk Profile: Brunei. Accessed 7 June 2022. <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile>
- 136 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM Country Risk Profile: Brunei. Accessed 7 June 2022. <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile>
- 137 ASEAN Intergovernmental Commission on Human Rights. Women in Natural Disasters: Indicative Findings in Unraveling Gender in Institutional Responses. January 2019. https://aichr.org/wp-content/uploads/2019/01/Adopted_AICHR_Thematic_Study_Women_in_Natural_Disasters_26012018.pdf
- 138 Nippon Koei Co., Ltd. et al. DATA COLLECTION SURVEY ON ASEAN REGIONAL COLLABORATION IN DISASTER MANAGEMENT FINAL REPORT; COUNTRY REPORT – BRUNEI. Japan International Cooperation Agency. December 2012. <https://openjicareport.jica.go.jp/pdf/12085536.pdf>
- 139 British High Commission in Bandar Seri Begawan. British Garrison joins the Belait District's Disaster Management Centre's efforts to extinguish fires. 26 March 2015. <https://www.gov.uk/government/news/british-garrison-joins-the-belait-districts-disaster-management-centres-efforts-to-extinguish-fires>
- 140 ASEAN Intergovernmental Commission on Human Rights. Women in Natural Disasters: Indicative Findings in Unraveling Gender in Institutional Responses. January 2019. https://aichr.org/wp-content/uploads/2019/01/Adopted_AICHR_Thematic_Study_Women_in_Natural_Disasters_26012018.pdf
- 141 Nippon Koei Co., Ltd. et al. DATA COLLECTION SURVEY ON ASEAN REGIONAL COLLABORATION IN DISASTER MANAGEMENT FINAL REPORT; COUNTRY REPORT – BRUNEI. Japan International Cooperation Agency. December 2012. <https://openjicareport.jica.go.jp/pdf/12085536.pdf>
- 142 National Institute of Disaster Management (India). Country Profile: Brunei Darussalam. 2014. https://nidm.gov.in/easindia2014/err/pdf/country_profile/brunei_darussalam.pdf
- 143 National Disaster Management Centre. Organizational Chart. Accessed 9 June 2022. <http://www.ndmc.gov.bn/SitePages/Carta%20Organisasi.aspx>
- 144 National Institute of Disaster Management (India). Country Profile: Brunei Darussalam. 2014. https://nidm.gov.in/easindia2014/err/pdf/country_profile/brunei_darussalam.pdf
- 145 Ndah, A.B., Odihi, J.O. A Systematic Study of Disaster Risk in Brunei Darussalam and Options for Vulnerability-Based Disaster Risk Reduction. *Int J Disaster Risk Sci* 8, 208–223 (2017). <https://doi.org/10.1007/s13753-017-0125-x>
- 146 AHA Centre. Governing Board. Accessed 16 June 2022. <https://ahacentre.org/governing-board-of-the-aha-centre/>

147 Institute of Policy Studies. Toward a Disaster-Resilient ASEAN: Building the Capacity of Brunei Darussalam on Disaster Management. Master in Public Policy and Management Student Research Project. 2015. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2017/12/2015_soe_et_al_building_the_capacity_of_brunei_darussalam_on_disaster_management.pdf

148 World Health Organization. JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES OF BRUNEI DARUSSALAM. Mission Report: 28 October – 1 November 2019. <https://www.who.int/publications/i/item/9789240006973>

149 National Disaster Management Centre. Bahagian Operasi. Accessed 9 June 2022. <http://www.ndmc.gov.bn/SitePages/Bahagian%20Operasi.aspx>

150 Nippon Koei Co., Ltd. et al. DATA COLLECTION SURVEY ON ASEAN REGIONAL COLLABORATION IN DISASTER MANAGEMENT FINAL REPORT; COUNTRY REPORT – BRUNEI. Japan International Cooperation Agency. December 2012. <https://openjicareport.jica.go.jp/pdf/12085536.pdf>

151 National Institute of Disaster Management (India). Country Profile: Brunei Darussalam. 2014. https://nidm.gov.in/easindia2014/err/pdf/country_profile/brunei_darussalam.pdf

152 National Disaster Management Centre. Bahagian Operasi. Accessed 9 June 2022. <http://www.ndmc.gov.bn/SitePages/Bahagian%20Operasi.aspx>

153 Ndah, A.B., Odihi, J.O. A Systematic Study of Disaster Risk in Brunei Darussalam and Options for Vulnerability-Based Disaster Risk Reduction. *Int J Disaster Risk Sci* 8, 208–223 (2017). <https://doi.org/10.1007/s13753-017-0125-x>

154 Institute of Policy Studies. Toward a Disaster-Resilient ASEAN: Building the Capacity of Brunei Darussalam on Disaster Management. Master in Public Policy and Management Student Research Project. 2015. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2017/12/2015_soe_et_al_building_the_capacity_of_brunei_darussalam_on_disaster_management.pdf

155 ASEAN Intergovernmental Commission on Human Rights. Women in Natural Disasters: Indicative Findings in Unraveling Gender in Institutional Responses. January 2019. https://aichr.org/wp-content/uploads/2019/01/Adopted_AICHR_Thematic_Study_Women_in_Natural_Disasters_26012018.pdf

156 World Health Organization. JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES OF BRUNEI DARUSSALAM. Mission Report: 28 October – 1 November 2019. <https://www.who.int/publications/i/item/9789240006973>

157 Ministry of Defence. Royal Brunei Armed Forces, History and Role. Accessed 9 June 2022. <https://mindef.gov.bn/SitePages/RBAF%20Introduction.aspx>

158 Royal Brunei Land Force. Vision and Mission. Accessed 9 June 2022. <https://land.mindef.gov.bn/Site%20Pages/Vision%20and%20Mission.aspx>

159 Royal Brunei Air Force. Vision and Mission. Accessed 9 June 2022. https://www.mindef.gov.bn/airforce/_layouts/15/start.aspx#/SitePages/Vision%20and%20Mission.aspx

160 Ministry of Defence. Defending the Nation's Sovereignty: A Secure and Resilient Future. Defence White Paper 2021. <https://mindef.gov.bn/Defence%20White%20Paper/DWP%202021.pdf>

161 Ministry of Defence. ROYAL BRUNEI LAND FORCE CONDUCTS HUMANITARIAN ASSISTANCE AND DISASTER RELIEF OPERATION IN BELAIT DISTRICT. 8 November 2021. <https://www.mindef.gov.bn/Lists/News/print.aspx?ID=5484>

162 Royal Brunei Air Force. HUMANITARIAN AID DELIVERY FOR TYPHOON HAIYAN VICTIMS IN PHILIPPINES. Accessed 13 June 2022. <https://www.mindef.gov.bn/air-force/SitePages/Operation%20Typhoon%20Halyan.aspx>

163 Abu Baker, Jalelah. Nepal earthquake: SAF and Royal Brunei Armed Forces join hands to provide aid. *Straits Times*. 30 April 2015. <https://www.straitstimes.com/asia/south-asia/nepal-earthquake-saf-and-royal-brunei-armed-forces-join-hands-to-provide-aid>

164 U.S. Indo-Pacific Command. 27th CARAT Brunei Concludes, Enhances Maritime Security Collaboration. 19 November 2021. <https://www.pacom.mil/Media/News/News-Article-View/Article/2849227/27th-carat-brunei-concludes-enhances-maritime-security-collaboration/>

165 Espena, Joshua and Anne Uy. Brunei, ASEAN and the South China Sea. *Lowy Institute; The Interpreter*. 3 August 2020. <https://www.loyyinstitute.org/the-interpreter/brunei-asean-and-south-china-sea>

166 ERIS. The UK in Southeast Asia – Brunei and the Five Power Defence Arrangements. Grupo de Estudos de Defesa e Segurança Internacional (GEDES). 18 April 2017. <https://gedes-unesp.org/the-uk-in-southeast-asia-brunei-and-the-five-power-defence-arrangements/>

167 British Forces Brunei. About BFB. Accessed 13 June 2022. <https://www.britishforcesbrunei.co.uk/about-brunei-garrison>

168 Royal Army. Deployments – Brunei: The British Army in Brunei. Accessed 13 June 2022. <https://www.army.mod.uk/deployments/brunei/>

169 Gurkha Brigade Association. Exercise Hikmat Bersatu Enam with the Royal Brunei Armed Forces. 2 August 2021. <https://www.gurkhabde.com/exercise-hikmat-bersatu-enam-with-the-royal-brunei-armed-forces/>

170 British High Commission in Bandar Seri Begawan. British Garrison joins the Belait District's Disaster Management Centre's efforts to extinguish fires. 26 March 2015. <https://www.gov.uk/government/news/british-garrison-joins-the-belait-districts-disaster-management-centres-efforts-to-extinguish-fires>

171 Gurkha Brigade Association. Gurkhas deployed to support efforts in controlling COVID-19 outbreak in Brunei. 8 September 2021. <https://www.gurkhabde.com/gurkhas-deployed-to-support-the-control-of-covid-19-in-brunei/>

172 National Institute of Disaster Management (India). Country Profile: Brunei Darussalam. 2014. https://nidm.gov.in/easindia2014/err/pdf/country_profile/brunei_darussalam.pdf

- 173 World Health Organization. JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES of BRUNEI DARUSSALAM. Mission Report: 28 October – 1 November 2019. <https://www.who.int/publications/i/item/9789240006973>
- 174 Institute of Policy Studies. Toward a Disaster-Resilient ASEAN: Building the Capacity of Brunei Darussalam on Disaster Management. Master in Public Policy and Management Student Research Project. 2015. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2017/12/2015_soe_et_al_building_the_capacity_of_brunei_darussalam_on_disaster_management.pdf
- 175 East Asia Summit. About the East Asia Summit. Accessed 4 April 2022. <https://eastasiasummit.asean.org/about-east-asia-summit>
- 176 East Asia Summit. Natural Disaster Management. Accessed 4 April 2022. <https://eastasiasummit.asean.org/natural-disaster-management>
- 177 Australian Department of Home Affairs. 2018 East Asia Summit International Disaster Assistance Workshop Outcomes Report. <https://www.homeaffairs.gov.au/emergency/files/2018-eas-international-disaster-assist.pdf>
- 178 East Asia Summit Disaster Management Initiative. AN OVERVIEW OF THE EAST ASIA SUMMIT RAPID DISASTER RESPONSE TOOLKIT. January 2018. <https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2018/01/2015-EAS-Preliminaries-for-the-Rapid-Disaster-Response-Toolkit.pdf>
- 179 East Asia Summit. Country Disaster Response Arrangements – Tool 3. https://asean.org/wp-content/uploads/images/2015/June/EAS_toolkit/EAS-Toolkit-3.pdf
- 180 Institute of Policy Studies. Toward a Disaster-Resilient ASEAN: Building the Capacity of Brunei Darussalam on Disaster Management. Master in Public Policy and Management Student Research Project. 2015. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2017/12/2015_soe_et_al_building_the_capacity_of_brunei_darussalam_on_disaster_management.pdf
- 181 United Nations Multi-Country Office in Malaysia. The UN in Brunei Darussalam. Accessed 16 June 2022. <https://malaysia.un.org/en/about/brunei-darussalam>
- 182 UN Country Team in Malaysia. UN Country Results Report: Malaysia 2021. <https://malaysia.un.org/en/185017-un-malaysia-singapore-and-brunei-darussalam-country-results-report-2021>
- 183 Prime Minister's Office. BRUNEI DARUSSALAM SUSTAINABLE DEVELOPMENT GOALS ANNUAL REPORT 2021. <https://www.pmo.gov.bn/SiteCollectionDocuments/Report/BDSDGAR2021.pdf>
- 184 JAPEM. 09.02.22 Nearly 8,000 registered volunteers involved in nation's COVID-19 fight. 9 February 2022. <http://www.councils.gov.bn/Lists/News/DispForm.aspx?ID=1211>
- 185 MKM Brunei. About Us. Accessed 16 June 2022. <https://mkmborneo.org/about-us/>
- 186 International Committee of the Red Cross (ICRC). The Movement. Accessed 23 March 2020. <https://www.icrc.org/en/movement#:~:text=The%20International%20Red%20Cross%20and,armed%20conflicts%20and%20other%20emergencies>
- 187 ICRC. Brunei: Senior military officers enhance practical knowledge of IHL. 21 June 2018. <https://www.icrc.org/en/document/brunei-senior-military-officers-enhance-practical-knowledge-ihl>
- 188 Provided by Ganesh Navaratnam, IFRC APRO. Email dated 17 July 2022.
- 189 IFRC. Operational Plan 2021: Malaysia, Singapore and Brunei – Asia Pacific Region. 14 July 2021. <https://reliefweb.int/report/malaysia/malaysia-singapore-and-brunei-asia-pacific-region-operational-plan-2021-appeal>
- 190 Brunei Darussalam Red Crescent Society. Background, Structure, Future Plans and Challenges. (PowerPoint) Regional Disaster Management Committee Meeting, Singapore, 6-8 June 2012. <https://www.rcrc-resilience-southeastasia.org/tag/brunei-darussalam/>
- 191 U.S. Embassy in Brunei Darussalam. History of U.S.-Brunei Relations. Accessed 16 June 2022. <https://bn.usembassy.gov/embassy/bandar-seri-begawan/history-u-s-brunei-relations/>
- 192 U.S. Embassy in Brunei Darussalam. Current Priorities. Accessed 16 June 2022. <https://bn.usembassy.gov/our-relationship/policy-history/current-issues/>
- 193 U.S. Embassy Bandar Seri Begawan. Welcoming Brunei's first cohort for Academy for Women Entrepreneurs. 23 October 2021. <https://bn.usembassy.gov/welcoming-bruneis-first-cohort-for-academy-for-women-entrepreneurs/>
- 194 USAID Regional Development Mission for Asia. ENGAGING REGIONAL INSTITUTIONS. 2 May 2019. <https://www.usaid.gov/asia-regional/documents/engaging-regional-institutions-may-2018>
- 195 USAID Regional Development Mission for Asia. GENDER EQUALITY AND FEMALE EMPOWERMENT. 14 May 2018. <https://www.usaid.gov/asia-regional/fact-sheets/gender-equality-and-female-empowerment>
- 196 Prime Minister's Office. Wawasan Brunei 2035. Accessed 14 June 2022. <http://wawasanbrunei.gov.bn/SitePages/Our%20Vision%20For%202035.aspx#>
- 197 Institute of Policy Studies. Toward a Disaster-Resilient ASEAN: Building the Capacity of Brunei Darussalam on Disaster Management. Master in Public Policy and Management Student Research Project. 2015. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2017/12/2015_soe_et_al_building_the_capacity_of_brunei_darussalam_on_disaster_management.pdf
- 198 Nippon Koei Co., Ltd. et al. DATA COLLECTION SURVEY ON ASEAN REGIONAL COLLABORATION IN DISASTER MANAGEMENT FINAL REPORT; COUNTRY REPORT – BRUNEI. Japan International Cooperation Agency. December 2012. <https://openjicareport.jica.go.jp/pdf/12085536.pdf>
- 199 Ministry of Home Affairs. MESYUARAT MAJLIS BENCANA KEBANGSAAN. 12 December 2021. <http://www.moha.gov.bn/Lists/Announcement/DispForm.aspx?ID=342>
- 200 World Health Organization. JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES of BRUNEI DARUSSALAM. Mission Report: 28 October – 1 November 2019. <https://www.who.int/publications/i/item/9789240006973>

201 Energy and Industry Department. Brunei Darussalam's Second National Communication. 2017. <https://unfccc.int/documents/39798>

202 Institute of Policy Studies. Toward a Disaster-Resilient ASEAN: Building the Capacity of Brunei Darussalam on Disaster Management. Master in Public Policy and Management Student Research Project. 2015. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2017/12/2015_soe_et_al_building_the_capacity_of_brunei_darussalam_on_disaster_management.pdf

203 Institute of Policy Studies. Toward a Disaster-Resilient ASEAN: Building the Capacity of Brunei Darussalam on Disaster Management. Master in Public Policy and Management Student Research Project. 2015. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2017/12/2015_soe_et_al_building_the_capacity_of_brunei_darussalam_on_disaster_management.pdf

204 World Health Organization. JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES OF BRUNEI DARUSSALAM. Mission Report: 28 October – 1 November 2019. <https://www.who.int/publications/i/item/9789240006973>

205 World Health Organization. JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES OF BRUNEI DARUSSALAM. Mission Report: 28 October – 1 November 2019. <https://www.who.int/publications/i/item/9789240006973>

206 Nippon Koei Co., Ltd. et al. DATA COLLECTION SURVEY ON ASEAN REGIONAL COLLABORATION IN DISASTER MANAGEMENT FINAL REPORT; COUNTRY REPORT – BRUNEI. Japan International Cooperation Agency. December 2012. <https://openjicareport.jica.go.jp/pdf/12085536.pdf>

207 Brunei Darussalam Meteorological Department. "Be Alert Be Prepared Take Action: Your Guide to Colour-Coded Severe Weather Warnings & Weather Advisories." 2018. <http://www.met.gov.bn/admin/upload/downloads1581472370.pdf>

208 WaterWorld. Brunei deploying rugged smart water management. 11 January 2022. <https://www.waterworld.com/wastewater/press-release/14223363/brunei-deploying-rugged-smart-water-management>

209 World Meteorological Organization. Flash Flood Guidance System with Global Coverage (FFGS). Accessed 16 June 2022. <https://public.wmo.int/en/projects/ffgs#:~:text=FFGS%20is%20a%20robust%20system,rainfall%20estimates%20and%20hydrological%20models>

210 World Meteorological Organization. Responsibilities of the Regional Centre (RC) and NMHSs [PowerPoint]. First Steering Committee Meeting (SCM 1) SAOFFG System, Jakarta, Indonesia, 10-12 July 2017. <https://community.wmo.int/southeastern-asia-oceania-flash-flood-guidance-saoffg-system>

211 Brunei Darussalam Meteorological Department. Overviews of existing flash flood forecasting and warning tools and hydrometeorological data of Brunei Darussalam [PowerPoint]. First Steering Committee Meeting (SCM 1) SAOFFG System, Jakarta, Indonesia, 10-12 July 2017. <https://community.wmo.int/southeastern-asia-oceania-flash-flood-guidance-saoffg-system>

212 UNESCO. Tsunami Center for South China Sea becomes fully operational on World Tsunami Awareness Day. 6 November 2019. <https://www.unesco.org/en/articles/tsunami-center-south-china-sea-becomes-fully-operational-world-tsunami-awareness-day>

213 Joint Publication 3-29. Foreign Humanitarian Assistance. 14 May 2019. Page IV-35. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_29.pdf?ver=2019-05-21-150525-607

214 U.S. Agency for International Development (USAID). Humanitarian Assistance. Accessed 23 March 2021. <https://www.usaid.gov/humanitarian-assistance>

215 PDC. About DisasterAWARE. Accessed 23 March 2021. <https://www.pdc.org/apps/disasteraware/about-disasteraware/>

216 PDC. Disaster Alert. Accessed 23 March 2021. <https://disasteralert.pdc.org/disasteralert/>

PDC. DisasterAWARE Quick Start User Guide, 2019, Version 6.5. <https://disasteraware.pdc.org/help/Quick-Start-Guide-DisasterAWARE-screen.pdf>

217 PDC. DisasterAlert™. Accessed 23 March 2021. <https://www.pdc.org/apps/disaster-alert/>

218 All Partners Access Network (APAN). About Us. Accessed 23 March 2021. <https://www.apan.org/pages/about>

219 All Partners Access Network (APAN). Solutions. Accessed 23 March 2021. <https://www.apan.org/pages/solutions-hadr>

220 Brunei Darussalam - Infrastructure, power, and communications. <https://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Brunei-Darussalam-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>

221 Ministry of Transport and Infocommunications. About Us: Brief History. <http://www.mtic.gov.bn/pages/brief%20history.aspx>

222 Ministry of Transport and Infocommunications. Organization Chart. <http://www.mtic.gov.bn/Images1/organisational%20chart/MTIC-Structure-English.jpg>

223 Royal Brunei Airlines. RB Today and Our History. <https://www.flyroyalbrunei.com/brunei/en/about-rb/rb-today-our-history/#2019>

224 Royal Brunei Air Force. <https://www.mindef.gov.bn/airforce/Theme/Home.aspx>; Rimba Air Force Base. http://next.owlapps.net/owlapps_apps/article?id=70880185&lang=en

225 Airports-Worldwide. Anduki Airfield. https://www.airports-worldwide.com/brunei/anduki_brunei.php

226 <https://airportguide.com/airport/info/WBAK>; <https://metar-taf.com/airport/WBAK>; Airports Worldwide. Anduki Airfield. https://www.airports-worldwide.com/brunei/anduki_brunei.php

227 Airport Guide. Airports in Brunei. https://airport-guide.com/search/airport-search-results/?search_type=airport_country_search&airport_country=Brunei

228 Ministry of Transport and Infocommunications. About Us. <http://www.mtic.gov.bn/pages/brief%20history.aspx>

- 229 Maritime and Port Authority of Brunei Darussalam. ARUS Volume 1. <https://mpabd.gov.bn/wp-content/uploads/2021/01/Arus-Vol1.pdf>
- 230 AHA CENTRE, Japan International Cooperation Agency. Country Report Brunei: Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region. March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>
- 231 Seabay Logistics. Seaports – Brunei. <https://www.seabaycargo.com/seaport/brunei.html>
- 232 Bansar China. Largest Five Ports in Brunei. <https://www.bansarchina.com/largest-brunei-port/>
- 233 ShipNext. Muara (Brunei). <https://shipnext.com/port/muara-bnmua-brn>
- 234 SeaRates. World Sea Ports: Sea Ports of Brunei. Port of Muara https://www.searates.com/port/muara_bn
- 235 Seabay Logistics. https://www.seabaycargo.com/seaport/detail/Bandar-Seri-Begawan_Brunei_BNBWN.html
- 236 Seabay Logistics. https://www.seabaycargo.com/seaport/detail/Kuala-Belait_Brunei_BNKB.html
- 237 Bansar China. Largest Five Ports in Brunei. <https://www.bansarchina.com/largest-brunei-port/>
- 238 ASEAN Single Window: Trade Facilitation for the ASEAN Economic Community. Brunei Darussalam Ports and Points of Entry. <https://asw.asean.org/index.php/nsw/brunei-darussalam/list-of-ports-and-points-of-entry>
- 239 ShipNext. Tanjong Salirong (Brunei). <https://shipnext.com/port/tanjong-salirong-bntas-brn>
- 240 OneOcean Group Ltd. Lumut. <https://www.findaport.com/port-of-lumut>
- 241 SeaRates. https://www.searates.com/port/lumut_bn
- 242 Seabay Logistics. https://www.seabaycargo.com/seaport/detail/Seria_Brunei_BNSER.html#
- 243 SeaRates. <https://www.searates.com/maritime/brunei>
- 244 AHA CENTRE, Japan International Cooperation Agency. Country Report Brunei: Natural Disaster Risk Assessment and Area Business Continuity Plan Formulation for Industrial Agglomerated Areas in the ASEAN Region. March 2015. <https://openjicareport.jica.go.jp/pdf/1000023399.pdf>
- 245 Land Transport Department. Brunei Driving Regulations. <http://www.jpd.gov.bn/SitePages/Land%20Transport%20Department/Regulations/Brunei%20Driving%20Regulations.aspx>
- 246 Alan Keep Ltd. Industrial Railways: BLNG in Brunei. <https://www.alankeef.co.uk/services/industrial-railways>
- 247 Brunei LNG. Milestones. <https://www.bruneilng.com/milestones/>
- 248 Yunos, Rozan. Before the Oil, It was Coal: The History of Brooketon Coalmine in Muara. http://www.bruneire-sources.com/goldenlegacy/tgl_before_the_oil.html
- 249 Railways in Brunei. <https://sinfin.net/railways/world/brunei.html>
- 250 Encyclopedia Britannica. Brunei: Land – Relief, drainage, and soils. <https://www.britannica.com/place/Brunei>
- 251 Encyclopedia Britannica. Belait River. <https://www.britannica.com/place/Belait-River>
- 252 WorldAtlas. Maps Of Brunei Darussalam. <https://www.worldatlas.com/maps/brunei-darussalam>
- 253 Ministry of Primary Resources and Tourism. Brunei River Heritage Trail. https://www.bruneitourism.com/wp-content/uploads/2019/08/Brunei-River-Heritage-Trail_compressed.pdf
- 254 Gibson, Paula. Education in Brunei. Borgen Report. 26 October 2017. <https://borgenproject.org/education-in-brunei/>
- 255 World Bank, Government expenditure on education, total (% of GDP), <https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS>; Knoema. Brunei Darussalam - Current expenditure on education as a share of gross national income. <https://knoema.com/atlas/Brunei-Darussalam/topics/Education/Expenditures-on-Education/Expenditure-on-education-as-a-share-of-GNI>
- 256 UNESCO Institute for Statistics. Brunei Darussalam. <http://uis.unesco.org/en/country/bn>
- 257 World Bank. “School Enrollment” data, September 2021. <https://data.worldbank.org/indicator/se.prm.enr?locations=BN>
- 258 Ministry of Education. National Education System for the 21st Century (SPN21). <https://www.moe.gov.bn/Pages/spn21.aspx>
- 259 Ministry of Education & UNESCO. Education for All 2015 National Review Report: Brunei Darussalam. 2015. <https://unesdoc.unesco.org/ark:/48223/pf0000230503>
- 260 Education Destination Asia. School Education System in Brunei. <https://educationdestinationasia.com/essential-guide/brunei/brunei-education-system>
- 261 Ministry of Education. Strategic Plan 2018-2022, p. 21. <https://www.moe.gov.bn/DocumentDownloads/Strategic%20Plan%20Book%202018-2022/Strategic%20plan%202018-2022.pdf>
- 262 Brunei Red Crescent. Action Plan: Strengthening BDRC Strategy 2017-2020. <https://www.rccr-resilience-southeastasia.org/wp-content/uploads/2017/05/action-plan-2017-2020-bdrc.pdf>
- 263 Ministry of Education, Department of Co-Curriculum Education. Website accessed 27 May 2022. <https://www.moe.gov.bn/SitePages/Department%20Of%20Co-Curriculum%20Education.aspx>
- 264 Brunei Darussalam Red Crescent Society. Working towards School Safety, 2017. https://www.rccr-resilience-southeastasia.org/wp-content/uploads/2017/11/Brunei_Web-min.pdf
- 265 CIA. The World Factbook. Brunei: Communications. 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/#communications>
- 266 Asia-Pacific Telecommunity. APT Members. <https://www.apr.int/aprmembers>
- 267 The Bruneian. Telecommunication in Brunei Darussalam – Then and Now. 6 April 2022. <https://thebruneian.news/2022/04/06/telecommunication-in-brunei-darussalam-then-and-now/>

268 The Star. 5G services on the horizon in Brunei. 10 June 2022. <https://www.thestar.com.my/aseanplus/aseanplus-news/2022/06/10/5g-services-on-the-horizon-in-brunei>

269 International Telecommunication Union (ITU). Digital Development Dashboard: Brunei Darussalam. November 2021. p. 1. https://www.itu.int/en/ITU-D/Statistics/Documents/DDD/ddd_BRN.pdf

270 ITU. Digital Development Dashboard: Brunei Darussalam. p. 2. https://www.itu.int/en/ITU-D/Statistics/Documents/DDD/ddd_BRN.pdf

271 RSF. Brunei. <https://rsf.org/en/country/brunei>

272 CIA. The World Factbook. Brunei: Communications. <https://www.cia.gov/the-world-factbook/countries/brunei/#communications>

273 Postal Services Department. History. <http://www.post.gov.bn/SitePages/History.aspx>

274 Universal Postal Union. Member Countries. <https://www.upu.int/en/Universal-Postal-Union/About-UPU/Member-Countries?csid=-1&cid=54#mb--1>

275 Postal Services Department. Our Branches. <http://www.post.gov.bn/SitePages/Our%20Branches.aspx>

276 Public Works Department. Organizational structure. <http://www.mod.gov.bn/pwd/SitePages/ORGANIZATION-AL%20STRUCTURE.aspx>

277 Department of Energy. Website accessed 2 June 2022. <http://www.energy.gov.bn/SitePages/index.aspx>

278 BP. Statistical Review of World Energy, 70th edition, 2021. <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-full-report.pdf>

279 U.S. Energy Information Administration. Brunei: Total energy production 2019. <https://www.eia.gov/international/rankings/country/BRN?pa=12&u=0&f=A&v=none&y=01%2F01%2F2019>

280 Ritchie, Hannah and Max Roser. Brunei: Energy Country Profile. Our World in Data. <https://ourworldindata.org/energy/country/brunei>

281 MarketResearch.com. Brunei Power Market - Growth, Trends, and Forecasts (2020 - 2025). August 2020. <https://www.marketresearch.com/Mordor-Intelligence-LLP-v4018/Brunei-Power-Growth-Trends-Forecasts-13693424/>

282 International Energy Agency. Brunei Darussalam. <https://www.iea.org/countries/brunei-darussalam>; U.S. Energy Information Administration. Brunei. March 2017. <https://www.eia.gov/international/analysis/country/BRN>

283 Ministry of Energy. "Brunei Darussalam Country Report," in Han, P. and S. Kimura (eds.), *Energy Outlook and Energy Saving Potential in East Asia 2020*, Jakarta: ERIA, pp.45-54. https://www.eria.org/uploads/media/Books/2021-Energy-Outlook-and-Saving-Potential-East-Asia-2020/10_Ch.3-Brunei.pdf

284 Narayan, Mohi. Renewables to make up 30% of Brunei's power generation by 2035 -minister. Reuters. 24 October 2021. <https://www.reuters.com/world/asia-pacific/renewables-make-up-30-bruneis-power-generation-by-2035-minister-2021-10-25/>

285 Malaysia Sun. Brunei's Ministry of Energy abolished. 22 May 2022. <https://www.malaysiasun.com/news/272560141/bruneis-ministry-of-energy-abolished>

286 Department of Energy. Introduction. Accessed 17 June 2022. <https://www.energy.gov.bn/SitePages/Pages/Introduction.aspx>

287 Department of Electrical Services. About DES: Brief History. Accessed 17 June 2022. <http://des.gov.bn/SitePages/about.aspx#brief-history-section>

288 Department of Energy. Strategic Objectives. <https://www.energy.gov.bn/SitePages/Strategic%20Objectives.aspx>

289 Public Works Department. Organizational structure. <http://www.mod.gov.bn/pwd/SitePages/ORGANIZATION-AL%20STRUCTURE.aspx>

290 Public Works Department. Water Services. <http://www.mod.gov.bn/pwd/SitePages/Water%20Services.aspx>

291 Commonwealth Governance. Utilities of Brunei Darussalam. https://www.commonwealthgovernance.org/countries/asia/brunei_darussalam/utilities/

292 UNICEF Data. Country Profiles: Brunei Darussalam. <https://data.unicef.org/country/brn/>

293 Brunei Times: The BT Archive. Brunei has highest water usage rate in SE Asia. 22 March 2015. <https://btarchive.org/news/national/2015/03/22/brunei-has-highest-water-usage-ratein-se-asia>

294 Lague, Pamela. Brunei government to introduce prepaid meters to curb water wastage. Smart Energy International. 13 March 2018. <https://www.smart-energy.com/regional-news/asia/brunei-government-prepaid-meters/#:~:text=In%20Asia%2C%20the%20Brunei%20Ministry%20of%20Development%20%28MoD%29,per%20cubic%20metre%20%E2%80%94%20a%20subsidy%20of%2088%25.>

295 The Scoop. Replacement of Belait's ageing water pipes to be completed by 2022. 13 October 2020. <https://thescoop.co/2020/10/13/govt-upgrades-infrastructure-to-fix-water-woes/>

296 UN Department of Economic and Social Affairs Sustainable Development. Brunei Darussalam: Progress on achieving SDG 6: 2020 Voluntary National Review. <https://sdgs.un.org/basic-page/brunei-daurssalam-24740>

297 WHO. Our Work in Brunei Darussalam. <https://www.who.int/brunei/our-work>

298 IMHE, University of Washington. Brunei. <https://www.healthdata.org/brunei>

299 IMHE. What Causes the Most Deaths? <https://www.healthdata.org/brunei>

300 IMHE. What causes the most death and disability combined? <https://www.healthdata.org/brunei>

301 Daniel, Jasmine. 5 Facts About Healthcare in Brunei Darussalam. Borgen Magazine. 8 November 2020. <https://www.borgenmagazine.com/5-facts-about-healthcare-in-brunei-darussalam/>

302 WHO. Brunei. Publications -- Pharmaceutical system: Brunei Darussalam [fact sheet]. 29 September 2017. <https://www.who.int/brunei/our-work>

- 303 Ministry of Health. About Us: Our Leadership. <https://www.moh.gov.bn/SitePages/MOHOrgChartOfficial.aspx>; About Us: Our Organization (English position titles). <https://www.moh.gov.bn/SitePages/MOHOrgChart.aspx>
- 304 WHO. Our work in Brunei Darussalam. 2022. <https://www.who.int/brunei/our-work>
- 305 Henderson, James. Inside Brunei's cutting-edge e-health system, built by DXC. Channel Asia. 19 June 2019. <https://www.channelasia.tech/article/663103/inside-brunei-cutting-edge-e-health-system-built-by-dxc/>
- 306 Ministry of Health, Disease Control Division. Communicable Diseases Surveillance. Accessed 6 June 2022. <https://www.moh.gov.bn/SitePages/Communicable%20Disease%20Surveillance.aspx>
- 307 Ministry of Health. Malaria Vigilance, Entomology and Vector Control Units. Accessed 6 June 2022. <https://moh.gov.bn/SitePages/Malaria%20Vigilance,%20Entomology%20and%20Vector%20Units.aspx>
- 308 WHO. Our Work in Brunei Darussalam. <https://www.who.int/brunei/our-work>
- 309 WHO. Our Work in Brunei Darussalam. <https://www.who.int/brunei/our-work>
- 310 Mahmud, Rokiah. No cases of monkeypox in Brunei. Borneo Bulletin. 21 June 2022. <https://borneobulletin.com.bn/no-cases-of-monkeypox-in-brunei/>
- 311 Institute for Health Metrics and Evaluation, University of Washington. Brunei Darussalam. <https://www.healthdata.org/brunei>
- 312 Smarttraveller, Australian Department of Foreign Affairs and Trade. Brunei Darussalam. <https://www.smarttraveller.gov.au/destinations/asia/brunei-darussalam>
- 313 WHO & Brunei Ministry of Health. Country Fact Sheet – Public Health Data at a Glance: Brunei Darussalam 2020, page 9. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/fact-sheet-brunei-darussalam.pdf?sfvrsn=b91eddf4_5
- 314 WHO & Brunei Ministry of Health. Country Fact Sheet – Public Health Data at a Glance: Brunei Darussalam 2020, page 14. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/fact-sheet-brunei-darussalam.pdf?sfvrsn=b91eddf4_5
- 315 Kon, James. Gastroenteritis cases among children on the rise. Borneo Bulletin. 6 August 2021, <https://borneobulletin.com.bn/gastroenteritis-cases-among-children-on-the-rise-2/>
- 316 Medline Plus, National Library of Medicine, National Institutes of Health. Gastroenteritis. <https://medlineplus.gov/gastroenteritis.html>
- 317 WHO & Brunei Ministry of Health. Country Fact Sheet, 2020, page 14. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/fact-sheet-brunei-darussalam.pdf?sfvrsn=b91eddf4_5
- 318 Medline Plus, National Library of Medicine, National Institutes of Health. Chickenpox. <https://medlineplus.gov/chickenpox.html>
- 319 WHO & Brunei Ministry of Health. Country Fact Sheet, 2020, page 14. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/fact-sheet-brunei-darussalam.pdf?sfvrsn=b91eddf4_5
- 320 BruDirect.Com. Hand, Foot and Mouth Disease Situation (HFMD). 14 May 2022. <https://www.bruirect.com/news.php?id=144721>
- 321 WHO. Hand, Foot and Mouth Disease. <https://www.who.int/westernpacific/emergencies/surveillance/archives/hand-foot-and-mouth-disease>
- 322 CDC. Dengue Around the World. November 2021. <https://www.cdc.gov/dengue/areaswithrisk/around-the-world.html>
- 323 Ministry of Health. <https://www.moh.gov.bn/SitePages/Information%20on%20Dengue.aspx>
- 324 Ministry of Health, Health Information Booklet 2013, page 42. https://www.moh.gov.bn/SiteCollectionDocuments/Health%20Indicator%20Booklet/HIB_2013.pdf; <https://www.moh.gov.bn/SitePages/Health%20Information%20Booklet.aspx>
- 325 WHO & Brunei Ministry of Health. Country Fact Sheet, 2020, page 14. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/fact-sheet-brunei-darussalam.pdf?sfvrsn=b91eddf4_5
- 326 The Star. Brunei: 43 dengue fever cases; Covid-19 stays at zero for 80 days. 26 July 2020. <https://www.thestar.com.my/aseanplus/aseanplus-news/2020/07/26/brunei-43-dengue-fever-cases-covid-19-stays-at-zero-for-79-days>
- 327 WHO. Dengue and severe dengue. <https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue>
- 328 Rashid, Mashida. Climate change and Asia's deadly dengue fever outbreaks. UNDP. 20 September 2019. <https://www.undp.org/asia-pacific/blog/climate-change-and-asia%E2%80%99s-deadly-dengue-fever-outbreaks>; Brandon, John. Dengue's Rise in Asia: Battling a Deadly Side Effect of Climate Change. The Asia Foundation. 16 December 2009. <https://asiafoundation.org/2009/12/16/dengues-rise-in-asia-battling-a-deadly-side-effect-of-climate-change/>
- 329 WHO. Japanese encephalitis, countries or areas at risk. 2018. https://www.who.int/images/default-source/imported/map-japanese-encephalitis.png?sfvrsn=91d0f0c5_2
- 330 Moore, Sean M. "The current burden of Japanese encephalitis and the estimated impacts of vaccination: Combining estimates of the spatial distribution and transmission intensity of a zoonotic pathogen." PLoS neglected tropical diseases vol. 15,10 e0009385. 13 Oct. 2021, doi:10.1371/journal.pntd.0009385 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8544850/>
- 331 Campbell, Grant L, Hills, Susan L, Fischer, Marc, Jacobson, Julie A, Hoke, Charles H. et al. Estimated global incidence of Japanese encephalitis: a systematic review. Bulletin of the World Health Organization, 89 (10), 766 - 774E. 2011. <https://apps.who.int/iris/handle/10665/271003>

332 Tran Minh Quan, Tran Thi Nhu Thao, Nguyen Manh Duy, Tran Minh Nhat, Hannah Clapham. Estimates of the global burden of Japanese encephalitis and the impact of vaccination from 2000-2015. *eLife* 9:e51027. 2020. <https://doi.org/10.7554/eLife.51027>; <https://elifesciences.org/articles/51027>

333 WHO. Japanese encephalitis: Key Facts. 9 May 2019. <https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis>

334 WHO & Brunei Ministry of Health. Country Fact Sheet, 2020, page 14.

335 WHO. Syphilis. https://www.who.int/health-topics/syphilis#tab=tab_1

336 Ministry of Health, Health Information Booklets, 2014-2017. <https://www.moh.gov.bn/SitePages/Health%20Information%20Booklet.aspx>

337 The Global Database on HIV-specific Travel and Residence Restrictions. Brunei. <https://www.hivtravel.org/Default.aspx?PageId=143&CountryId=4#:~:text=People%20living%20with%20HIV%20are%20not%20allowed%20to,HIV%20testing%20is%20required%20for%20short-term%20%28tourist%29%20stays.>

338 UNFPA. UNFPA and UNAIDS urge the Government of Brunei Darussalam to repeal new discriminatory and harmful criminal law provisions. 4 April 2019. <https://www.unfpa.org/press/unfpa-and-unaid-urge-government-brunei-darussalam-repeal-new-discriminatory-and-harmful>

339 WHO. Tuberculosis profile: Brunei Darussalam. https://worldhealthorg.shinyapps.io/tb_profiles/?_inputs_&entity_type=%22country%22&lan=%22EN%22&iso2=%22BN%22

340 Ministry of Health. National Tuberculosis Coordinating Center (NTCC). [https://www.moh.gov.bn/SitePages/National%20Tuberculosis%20Coordinating%20Center%20\(NTCC\).aspx#:~:text=Brunei%20Darussalam%20has%20come%20a%20long%20way%20in,improved%20public%20health%2C%20better%20diagnostic%20facilities%20and%20treatment.](https://www.moh.gov.bn/SitePages/National%20Tuberculosis%20Coordinating%20Center%20(NTCC).aspx#:~:text=Brunei%20Darussalam%20has%20come%20a%20long%20way%20in,improved%20public%20health%2C%20better%20diagnostic%20facilities%20and%20treatment.)

341 Stop TB Partnership. Tuberculosis Situation in 2020: Brunei Darussalam. https://www.stoptb.org/static_pages/BRN_Dashboard.html

342 WHO. Tuberculosis profile: Brunei Darussalam. <https://www.aidsdatahub.org/sites/default/files/resource/brunei-tb-profile-2021.pdf>

343 Feddema, J. J., van der Geest, A. M., Claassen, E., & van de Burgwal, L. "Lower Respiratory Tract Infection Trends in East and South-East Asia: In the Light of Economic and Health Care Development." *Global Pediatric Health*, Vol. 8, 24 January 2021, doi:10.1177/2333794X21989530, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7841237/>

344 Medical News Today. Lower respiratory tract infections: What to know. <https://www.medicalnewstoday.com/articles/324413>

345 Our World in Data. Brunei: Coronavirus Pandemic Country Profile. <https://ourworldindata.org/coronavirus/country/brunei>

346 Our World in Data. Brunei: Coronavirus Pandemic Country Profile. <https://ourworldindata.org/coronavirus/country/brunei>

347 World Life Expectancy. World Health Rankings: Health Profile Brunei COVID-19. <https://www.worldlifeexpectancy.com/country-health-profile/brunei>

348 Our World in Data. https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&facet=none&pickerSort=desc&pickerMetric=total_cases&hideControls=true&Metric=Confirmed+cases&Interval=7-day+rolling+average&Relative+to+Population=false&Color+by+test+positivity=false&country=~BRN

349 WHO. Brunei Darussalam Coronavirus Disease 2019 (COVID-19) Situation Report: Bi-weekly report for the week ending 12 June 2022. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/brunei-darussalam-situation-report/covid19_sitrep_brn_20220612.pdf

350 Our World in Data, graphically displaying data sourced from the John Hopkins University Center for Systems and Science Engineering. Cumulative confirmed COVID-19 deaths per million people. 22 June 2022. https://ourworldindata.org/explorers/coronavirus-data-explorer?tab=map&zoomToSelection=true&time=latest&facet=none&pickerSort=desc&pickerMetric=total_cases&hideControls=true&Interval=Cumulative&Relative+to+Population=true&Color+by+test+positivity=false&country=~BRN&Metric=Confirmed+deaths

351 WHO. Brunei Situation Report. 12 June 2022. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/brunei-darussalam-situation-report/covid19_sitrep_brn_20220612.pdf?sfvrsn=7fe67ed8_3

352 Ministry of Health. Program Vaksinasi Kebangsaan bagi COVID-19. <https://www.moh.gov.bn/SitePages/COVID-19%20Vaccine.aspx>

353 Ministry of Health. Brunei Darussalam Vaccination Strategy. <https://www.moh.gov.bn/Shared%20Documents/COVID-19%20Vaccine/Brunei%20Darussalam%20Vaccination%20Strategy%20V2.pdf>

354 U.S. Embassy in Brunei Darussalam. COVID-19 Information. 28 June 2022. <https://bn.usembassy.gov/u-s-citizen-services-covid-19-information/>

355 The Star. Brunei receives 100,000 doses of Covid-19 vaccines from China. 13 September 2021. <https://www.thestar.com.my/aseanplus/aseanplus-news/2021/09/13/brunei-receives-100000-doses-of-covid-19-vaccines-from-china>

356 WHO. First batch of COVID-19 vaccines arrive in Brunei Darussalam via COVAX Facility. 2 April 2021. <https://www.who.int/malaysia/news/detail/02-04-2021-first-batch-of-covid-19-vaccines-arrive-in-brunei-darussalam-via-covax-facility>

357 The Star. Brunei receives first batch of Covid-19 Moderna vaccine. 21 June 2021. <https://www.thestar.com.my/aseanplus/aseanplus-news/2021/06/21/brunei-receives-first-batch-of-covid-19-moderna-vaccine>

- 358 The Star. First batch of Pfizer arrives in Brunei. 6 November 2021. <https://www.thestar.com.my/aseanplus/aseanplus-news/2021/11/06/first-batch-of-pfizer-arrives-in-brunei>
- 359 The Star. Brunei records 519 new Covid-19 cases on Friday night 18 June 2022. <https://www.thestar.com.my/aseanplus/aseanplus-news/2022/06/18/brunei-records-519-new-covid-19-cases-on-friday-night-june-17>
- 360 Wong, J., Koh, W. C., Alikhan, M. F., Abdul Aziz, A., & Naing, L. "Responding to COVID-19 in Brunei Darussalam: Lessons for small countries." *Journal of global health*, 10(1), 010363. 2020. <https://doi.org/10.7189/jogh.10.010363>; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7295448/>
- 361 Bodetti, Austin. How Brunei Beat COVID-19. The Diplomat. 22 June 2020. <https://thediplomat.com/2020/06/how-brunei-beat-covid-19/>
- 362 The Star. Brunei schools to reopen on June 2. 22 May 2020. <https://www.thestar.com.my/aseanplus/aseanplus-news/2020/05/22/brunei-schools-to-reopen-on-june-2>
- 363 Reuters. COVID-19 Tracker: Brunei. 26 June 2022. <https://graphics.reuters.com/world-coronavirus-tracker-and-maps/countries-and-territories/brunei/>
- 364 BruDirect.Com. National COVID-19 Recovery Framework. 5 November 2021. <https://www.brudirect.com/news.php?id=131649>
- 365 Prime Minister's Office. National COVID-19 Recovery Framework. <https://www.pmo.gov.bn/SiteCollectionDocuments/covid19/National-COVID-19-Recovery-Framework.pdf>
- 366 U.S. Embassy in Brunei Darussalam. COVID-19 Information. 23 June 2022. <https://bn.usembassy.gov/u-s-citizen-services-covid-19-information/#:~:text=U.S.%20Embassy%20Bandar%20Seri%20Begawan,are%20available%20by%20appointment%20only.>
- 367 WHO. Our Work in Brunei Darussalam. <https://www.who.int/brunei/our-work>
- 368 WHO. Noncommunicable diseases Brunei Darussalam 2018 country profile. 31 August 2018. <https://www.who.int/publications/m/item/noncommunicable-diseases-brn-country-profile-2018>
- 369 WHO & Brunei Ministry of Health. Country Fact Sheet – Public Health Data at a Glance: Brunei Darussalam 2020, page 15. https://www.who.int/docs/default-source/wpro---documents/countries/brunei-darussalam/fact-sheet-brunei-darussalam.pdf?sfvrsn=b91eddf4_5
- 370 Oxford Business Group. Brunei Darussalam tackles rise of non-communicable diseases. 27 November 2016. <https://oxfordbusinessgroup.com/news/brunei-darussalam-tackles-rise-non-communicable-diseases>
- 371 BruDirect.com. Launching Of BruMap-NCD 2021-2025. 31 March 2022. <https://www.brudirect.com/news.php?id=141592>
- 372 Kon, James. New health action plan builds on previous results. Borneo Bulletin. 31 March 2022. <https://borneobulletin.com.bn/new-health-action-plan-builds-on-previous-results/>
- 373 Oleh Sim Y. H. BruMAP-NCD 2021-2025 kini dilancarkan. Media Permata. 31 March 2022. <https://mediapermata.com.bn/brumap-ncd-2021-2025-kini-dilancarkan/>
- 374 The Borgen Project. Fighting Non-communicable Diseases in Brunei. 21 July 2017. <https://borgenproject.org/fighting-diseases-in-brunei/>
- 375 Ministry of Health. BruMAP-NCD 2021-2025. <https://www.moh.gov.bn/Shared%20Documents/BRUMAP%20NCD%202021.pdf>
- 376 WHO & Brunei Ministry of Health. Country Fact Sheet – Public Health Data at a Glance, 2020, page 15.
- 377 Ministry of Health. Brunei Medical Board. <https://www.moh.gov.bn/SitePages/Brunei%20Medical%20Board.aspx>
- 378 Ministry of Health. List of Registered Medical Practitioners and Dentists for Year 2022 (updated 14th February 2022). <https://www.moh.gov.bn/Shared%20Documents/Brunei%20MEDICAL%20BOARD/GAZETTE%20-%20English%20-%20MOH%20website%20-%20February%202022.pdf>
- 379 Ministry of Health. RIPAS Hospital. <https://moh.gov.bn/SitePages/RIPAS%20h%C3%B4pital.aspx>
- 380 Ministry of Health. Medical Education Centre. <https://www.moh.gov.bn/SitePages/Medical%20Education%20Centre.aspx>
- 381 United States Institute of Peace. What is UNSCR 1325? Website Accessed June 24, 2022. https://www.usip.org/gender_peacebuilding/about_UNSCR_1325
- 382 UN Human Rights Treaty Bodies. Ratification Status for Brunei Darussalam. 24 May 2006. https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=25&Lang=EN
- 383 UN Women. Convention on the Elimination of All Forms of Discrimination against Women Country Reports. Website accessed June 26, 2022. <https://www.un.org/womenwatch/daw/cedaw/reports.htm>
- 384 UN Women. Brunei Darussalam. Asia. Website accessed June 26, 2022. <https://data.unwomen.org/country/brunei-darussalam>
- 385 United Nations Human Rights Office of the High Commissioner. Bachelet urges Brunei to stop entry into force of "draconian" new penal code. April 1, 2019. <https://www.ohchr.org/en/press-releases/2019/04/bachelet-urges-brunei-stop-entry-force-draconian-new-penal-code>
- 386 ASEAN Regional Study on Women, Peace, and Security. 2021. <https://asean.org/wp-content/uploads/2021/03/ASEAN-WPS-Study-01082021.pdf>
- 387 Oller, Spc. Joshua. Pahlawan Warrior 2022 commences. U.S. Army. 16 June 2022. https://www.army.mil/article/257616/pahlawan_warrior_2022_commences
- 388 U.S. Navy. U.S., Brunei Commence Bilateral Exercise CARAT Brunei. 15 November 2021. <https://www.navy.mil/Press-Office/News-Stories/Article/2842757/us-brunei-i-commence-bilateral-exercise-carat-brunei/>
- 389 Chatmas, Lt. Lauren. Indo-Pacific Defense FORUM. U.S. Navy. 22 October 2020. <https://ipdefenseforum.com/2020/10/u-s-brunei-partnership-remains-strong-during-carat-2020/>

- 390 U.S. Navy. Commander, U.S. 7th Fleet. Better When We Fly Together: CARAT Brunei 2019. 23 October 2019. <https://www.c7f.navy.mil/Media/News/Display/Article/1997100/better-when-we-fly-together-carat-brunei-2019/>
- 391 Veloicaza, Specialist 2nd Class Christopher. Commander, U.S. 7th Fleet. From Kingfisher to CARAT: U.S.- Brunei Exercise Concludes. Commander, Logistics Group Western Pacific Public Affairs Office. 31 October 2019. <https://www.c7f.navy.mil/Media/News/Display/Article/2005287/from-kingfisher-to-carat-us-brunei-exercise-concludes/>
- 392 Ray, Sgt. 1st Class Corey. U.S. Army Pacific conducts first Army-to-Army exercise in Brunei. U.S. Army. 16 August 2018. https://www.army.mil/article/209957/us_army_
- 393 The U.S. Embassy in Brunei Darussalam. Third U.S.-Brunei Senior Officials' Dialogue. 13 June 2018. <https://bn.usembassy.gov/u-s-brunei-senior-officials-dialogue/>
- 394 U.S. Department of State. U.S. Relations with Brunei. Bilateral Fact Sheet. 28 May 2021. <https://www.state.gov/u-s-relations-with-brunei/>
- 395 U.S. Department of State. U.S. Relations with Brunei. Bilateral Relations Fact Sheet. 28 May 2021. <https://www.state.gov/u-s-relations-with-brunei/>
- 396 Ministry of Foreign Affairs. The People's Republic of China. Accessed 29 June 2022. http://www.mfa.gov.bn/Pages/br_China.aspx
- 397 The Star. Brunei-China joint venture holds emergency response exercise. 14 January 2021. <https://www.thestar.com.my/aseanplus/aseanplus-news/2021/01/14/brunei-china-joint-venture-holds-emergency-response-exercise>
- 398 South China Sea. Disputed Waters: Brunei. <https://projects.voanews.com/south-china-sea/recent/>
- 399 UN Peacekeeping. Contributions by Country, Mission, and Personnel Type. March 2022. https://peacekeeping.un.org/sites/default/files/03_country_and_mission_48_march_2022.pdf
- 400 Independent Decommissioning Body. STATEMENT BY THE INDEPENDENT DECOMMISSIONING BODY ON THE LAUNCHING OF THE DECOMMISSIONING PHASE 3. 8 November 2021. <https://www.idb.ph/idb-statement-decommissioningphase3>
- 401 U.S. Department of State. Brunei International Travel Information. Accessed 24 May 2022. <https://travel.state.gov/content/travel/en/international-travel/International-Travel-Country-Information-Pages/Brunei.html>
- 402 XE. Currency Converter. <https://www.xe.com/currencyconverter/convert/?Amount=1&From=USD&To=BND>
- 403 CDC. Travelers Health: Brunei. Accessed 24 May 2022. https://wwwnc.cdc.gov/travel/destinations/traveler/none/brunei?s_cid=ncezid-dgmq-travel-single-001
- 404 PreventionWeb.net. Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030. http://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf
- 405 UNISDR. Sendai Framework for Disaster Risk Reduction. <https://www.unisdr.org/we/coordinate/sendai-framework>
- 406 PreventionWeb.net. Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030. http://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf
- 407 UNISDR. Sendai Framework for Disaster Risk Reduction. <https://www.unisdr.org/we/coordinate/sendai-framework>
- 408 PreventionWeb.net. Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030. http://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf
- 409 Prevention Web. Brunei Darussalam. National progress report on the implementation of the Hyogo Framework for Action (2009-2011). <https://www.preventionweb.net/>
- 410 CIA World Factbook. Brunei. Accessed 24 May 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/>
- 411 CIA World Factbook. Brunei – People and Society. Accessed 24 May 2022. <https://www.cia.gov/the-world-factbook/countries/brunei/images/cG9zdDoxODYxNzQ=>



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