



Überblick

Die Philippinen belegen mit einer Gesamtfläche von 300.000 km² Platz 73 aller Länder der Welt. Das Land in Südostasien besteht aus 7.641 Inseln, von denen nur etwa 2.000 bewohnt sind. Die 11 größten Inseln machen 94 % der gesamten Fläche aus. Die größte von ihnen, Luzon, hat eine Fläche von rund 105.000 km². Gleich danach kommt Mindanao mit etwa 95.000 km², dann Samar mit 13.429 km² und auf Platz 4 Negros mit 13.310 km².

Gemessen an der Einwohnerzahl sind die Philippinen mit knapp über 109 Millionen Einwohnern und rund 1,4 % der Weltbevölkerung das dreizehntgrößte Land der Welt. Bis 2050 prognostizieren die Vereinten Nationen ein Bevölkerungswachstum um mehr als 35 Millionen. Diese Zahl entspricht der derzeitigen Gesamtbevölkerung Saudi-Arabiens.

Die letzten allgemeinen Wahlen von Exekutive und Legislative auf allen Regierungsebenen – auf nationaler, Provinz- und lokaler Ebene – fanden auf den Philippinen am 9. Mai 2016 statt. Rodrigo Duterte von der Partei PDP-Laban wurde zum Präsidenten und Leni Robredo von der Liberal Party zur Vizepräsidentin gewählt. Bei den Parlamentswahlen vom Mai 2019 waren zwölf Sitze im Senat und alle Mandate im Repräsentantenhaus neu zu vergeben. Die PDP-LDP konnte ihren Anteil der abgegebenen Stimmen bei den Senatswahlen um 21,2 % und bei den Wahlen zum Repräsentantenhaus um 29,3 % steigern. Die

nächsten Präsidentschaftswahlen werden am 9. Mai 2022 stattfinden, wobei der amtierende Präsident gemäß den Bedingungen der philippinischen Verfassung nicht mehr zur Wiederwahl steht.

Die Volkswirtschaft der Philippinen belegt mit einem geschätzten jährlichen Bruttoinlandsprodukt von 367,3 Milliarden USD im Jahr 2019 weltweit Platz 31. In den vergangenen zehn Jahren lag das durchschnittliche jährliche BIP-Wachstum der Philippinen bei 6,3 % – einer der Spitzenwerte in ganz Asien. Seit dem Jahr 2000 ist das Land auf der Liste der größten Volkswirtschaften, gemessen am BIP, um zehn Plätze nach oben geklettert.

Das zuletzt im April 2019 aktualisierte Rating von Standard & Poor's für die Philippinen liegt bei BBB+ mit stabilem Ausblick. Moody's beurteilt die philippinische Bonität mit Baa2 bei stabilem Ausblick, Fitch mit BBB und stabilem Ausblick.

Der Zentralbank der Philippinen – Bangko Sentral Ng Pilipinas (BSP) – kommt die Aufgabe zu, "auf eine niedrige und stabile Inflation hinzuarbeiten, die für ein ausgewogenes und nachhaltiges Wirtschaftswachstum förderlich ist" (Republic Act 7653). Hierzu gilt seit Januar 2002 ein anzustrebender geldpolitischer Inflationszielrahmen samt Bekanntgabe eines vordefinierten Inflationsziels, zu dem sich die BSP in einem bestimmten Zeitraum verpflichtet. Das gegenwärtige, per Beschluss



Seit 2005 hat Standard & Poor's das Land nicht weniger als fünf Mal hochgestuft. Nachdem die Philippinen 2013 zum ersten Mal ein Investment-Grade-Rating erhielten, liegen sie heute bei BBB+ und damit auf einer Stufe mit Italien und Portugal und nur eine Stufe hinter Spanien.



im Dezember 2015 in Kraft getretene Inflationsziel beträgt 3,0 % ± 1,0 Prozentpunkt.

Der "Ease of Doing Business"-Bericht 2020 der Weltbank nennt verschiedene Indikatoren, die unter anderem darüber Aufschluss geben, wie schwierig oder einfach Firmenneugründungen, Grundbucheintragungen, Baugenehmigungen, Kreditaufnahmen, die Entrichtung von Steuern, die Durchsetzung von Verträgen und die Abwicklung von Insolvenzen zu bewerkstelligen sind. Die Philippinen rutschten im Jahr 2018 von Platz 113 auf Platz 134 ab, stiegen jedoch bis 2019 bis auf Rang 95 – die bisher beste Platzierung des Landes auf dieser Liste.

Im jüngsten Global Competitiveness Report des Weltwirtschaftsforums belegen die Philippinen im Bereich Infrastruktur Platz 96 von 141 Ländern. Eine detaillierte Aufschlüsselung zeigt die Philippinen auf Platz 59 bei der Schifffahrt, auf Platz 88 bei Häfen und bei Straßen sowie auf Platz 96 im Luftverkehr. Bei der Qualität der installierten Stromversorgungskapazität, gemessen am Prozentsatz der tatsächlich an den Endverbraucher gelieferten Leistung, rangieren die Philippinen weltweit auf Rang 53.

Nach Angaben des philippinischen Energieministeriums betrug die installierte Gesamtleistung auf den Philippinen zum Ende des Jahres 2019 fast 26 GW, ein Wert, der seit dem Jahr 2005 um rund 40 % gestiegen ist. Innerhalb dieses Gesamtwerts belief sich die

erneuerbare Energiekapazität auf knapp über 7 GW. Hiervon entfielen 921 MW auf Solarenergie, 427 MW auf Windkraft und 363 MW auf Biomasse. Insgesamt machen erneuerbare Energien ohne Geothermie und Wasserkraftwerke nun knapp 7 % der installierten Gesamtleistung aus.

Im Dezember 2018 verabschiedete die Regierung der Philippinen eine Gesetzesvorlage für ein Steuerreformgesetz, zu dessen wichtigsten Bestimmungen eine Erhöhung der Verbrauchsteuer auf Kohle gehört. Außerdem wurden mit dem Gesetz auch die Verbrauchsteuern auf Kraftfahrzeuge, Mineralölprodukte wie Diesel, Benzin und Kochgas sowie die Bergbauabgaben signifikant erhöht.

Der Tax Reform Act zielte auf ein einfacheres, gerechteres und effizienteres Steuersystem ab, das sich durch niedrigere Steuersätze und eine breitere Steuerbasis auszeichnet, um Investitionen und die Schaffung von Arbeitsplätzen zu fördern und die Armut zu bekämpfen. Es sollte zur Finanzierung dessen beitragen, was Präsident Duterte als "ein goldenes Zeitalter der Infrastruktur" zum Umbau der Wirtschaft bezeichnete. Geplant sind Gesamtausgaben von rund 180 Milliarden USD für Straßen, Eisenbahnen und Flughäfen. Die landläufige Bezeichnung für dieses Programm lautet "Build, build, build".

BTI 2020

Der Bertelsmann Stiftung
Transformation Index (BTI)
mit seiner Skala von 1 bis 10
analysiert und bewertet den
Zustand der Demokratie, der
Marktwirtschaft und der politischen Verwaltung von 137 Entwicklungs- und Schwellenländern. Gemessen werden dabei
Fort- und Rückschritte auf
dem Weg zur konstitutionellen
Demokratie und zu einer sozial
unterlegten Marktwirtschaft.

Status Index

6,09 #54 || 137 Philippinen

5,48

Zustand der Demokratie

5,75 #68 || 137 Philippinen

5,52 Asien/Ozeanien

Zustand der Marktwirtschaft

6,43 #37 || 137 Philippinen

5,46 Asien/Ozeanien*

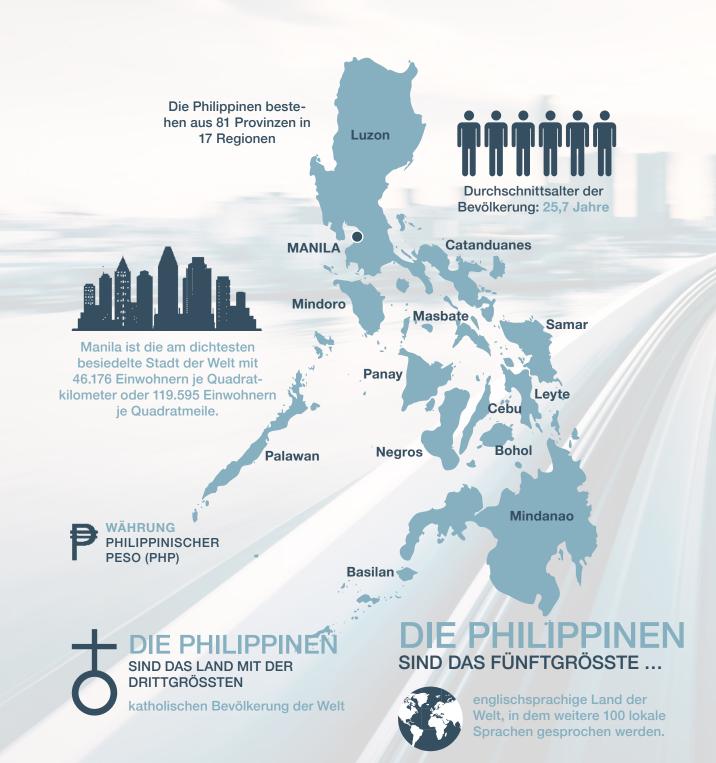
Governance-Index

4,89 #69 || 137 Philippinen

4,77 Asien/Ozeanien

*Regionaler Durchschnitt

PHILIPPINEN EIN ÜBERBLICK









BBB+
MIT STABILEM
AUSBLICK

BEVÖLKERUNGS-WACHSTUM von 2000 – 2030 WACHSTUM von 2010 – 2019 STROM-VERBRAUCH von 2010 – 2018 BONITÄTS-BEWERTUNG Standard & Poor's



PLATZ 13

Platz 13 unter den Ländern der Welt gemessen an der Bevölkerungszahl, die bis 2050 um mehr als 35 Millionen steigen wird





PLATZ 96

von 137 Ländern der Welt nach Infrastrukturqualität



2,3 MILLION

2,3 Millionen Haushalte haben immer noch keinen Zugang zu Strom



ZWEITGRÖSSTER Produzent geothermaler

Energie der Welt

89
MILLIARDEN

US-DOLLAR

Die Nationale Wirtschafts- und Entwicklungsbehörde listet 104 Vorzeige-Infrastrukturprojekte auf, die bis Ende 2028 fertiggestellt werden sollen.



Geography

The Philippines is the 73rd largest country in the world, with a total land area around 300,000km². Located in South East Asia, it consists of 7,641 islands of which only around 2,000 are inhabited. Facing the South China Sea to the west, the Philippine Sea on the east and the Celebes Sea to the South, its 36,289km of coastline makes it the country with the 5th longest coastline in the world.

The 11 largest islands contain 94% of the total land area. The biggest of these islands is Luzon at about 105,000 km². The next largest island is Mindanao at about 95,000 km² then Samar at 13,429 km² and Negros 13,310 km². The archipelago is around 800 km from the Asian mainland and is located between Taiwan and Borneo. It shares maritime borders with Taiwan to the north, Vietnam to the west, Palau to the east and Malaysia and Indonesia to the south.

Most of the mountainous islands are covered in tropical rainforest and are volcanic in origin. The highest mountain is Mount Apo. It rises to 2,954 meters above sea level and is located on the island of Mindanao. The Galathea Depth in the Philippine Trench is the deepest point in the country and the third deepest in the world. The longest river is the Cagayan River in northern Luzon.

The climate of the Philippines is tropical and strongly monsoonal with three main seasons: the hot dry season or summer from March to May; the rainy season from June to November; and the cool dry season from December to February. The western shores facing the South China Sea have the most marked dry and wet seasons. Temperatures throughout the year usually range from 21°C to 32°C, with January being the coolest month and May the warmest. The average yearly temperature is around 26.6°C.

Annual rainfall measures as much as 5,000 mm in the mountainous east coast section but less than 1,000 mm in some of the sheltered valleys. The wettest known tropical cyclone to impact the archipelago was the July 1911 cyclone, which dropped over 1,168 mm of rainfall within a 24-hour period in Baguio City.

From June to November tropical cyclones (typhoons) often strike the Philippines. Most of these storms come from the southeast, their frequency generally increasing from south to north. In some years the number of cyclones reaches 25 or more.

The Philippines experiences frequent seismic and volcanic activity. The Benham Plateau to the east is an undersea region active in tectonic subduction and around 20 earthquakes are registered daily, though most are too weak to be felt. The last major earthquake was the 1990 Luzon earthquake which measured 7.7 on the Richter scale and caused damage over an area around 20,000 km². There are altogether about 50 volcanoes, of which more than 10 are known to be active such as the Mayon Volcano, Mount Pinatubo, and Taal Volcano. The eruption of Mount Pinatubo in



Total land area: 300,000 km², Ranked 73rd largest, (99.38% Land, 0.62% Water)

Capital: Manila

Time zone: UTC +8

Currency: Philippine peso (abbreviated as PHP)

Continent: Asia

Coordinates: 13°00'N, 122°00'E

Highest point: Mount Apo, 2,954m

Lowest point: Philippine Sea, 0 m

Longest river: Cagayan River, 505 km

Largest lake: Laguna de Bay, surface area about 911 km² June 1991 produced the second largest terrestrial eruption of the 20th century bringing vast quantities of minerals and toxic metals to the surface environment.

Due to the monsoon climate and heavy rainfall, around one-quarter of the Philippines comprises tropical rainforest, though this figure has been declining gradually over a long period of time as a result of logging, mining, and farming activities. Between the mid-20th century and the early 21st century, the country's forestland was reduced by more than half. A ban on the export of hardwoods has been in effect since the mid-1980s, but it appears that hardwood timber continues to leave the country illegally.

Much of the land of the hilly and mountainous regions consists of moist, fertile soils, often with a significant concentration of volcanic ash, whilst the alluvial plains and terraces are a mixture of clay and younger soils and much of the Visayas and north—west of Luzon is dark and mineral-rich. These areas support a wide range of cultivated crops although the eastern mountains of Luzon are largely covered with shrubs, bushes, and other secondary growth that typically emerges in areas that have been cleared of their original forest cover.

The rich and fertile soils mean the agricultural sector comprises a major part of the Philippines economy and employs nearly one-third of the total workforce. Almost a quarter of the total farmland is used for rice growing with other staple crops including sugarcane and maize. The Philippines is one of the world's largest producers of coconuts and coconut products with bananas, pineapples, papayas and other tropical fruits also cultivated along with coffee, tobacco and hemp.

The indigenous vegetation of the Philippines resembles much of the Malay archipelago although the islands are home to an estimates 13,500 species of flowering plants and ferns, including hundreds of species of orchids, some of which are extremely rare. The rafflesia plant found on Mindanao has a flower almost one metre in diameter.

The Philippines' rainforests and extensive coastlines make it home to a wide range of birds, animals, and sea creatures and it is one of the world's ten most biologically diverse countries. Around 1,100 land vertebrate species can be found in the Philippines including over 100 mammal species and 170 bird species not thought to exist elsewhere.

The Philippines are inhabited by more than 200 species of mammals, including water buffalo (carabao), goats, horses, hogs, cats, dogs, monkeys, squirrels, lemurs, mice, pangolins (scaly anteaters), mongooses, civet cats, and red and brown deer, among others. The country lacks large predators, with the exception of snakes, such as pythons and cobras, saltwater crocodiles and birds of prey, such as the national bird, known as the Philippine Eagle, one of the three largest and most powerful in the world.

The seas surrounding the Philippine islands and its inland lakes, rivers, estuaries, and ponds are inhabited by more than 2,000 varieties of fish. The Tubbataha Reefs in the Sulu Sea were designated a UNESCO World Heritage site in 1993 in recognition of their abundance and diversity of marine life and in 2009 the boundaries of the World Heritage site were extended to triple its original size.

Due to the volcanic nature of the islands, mineral deposits are abundant. The country is estimated to have the second-largest gold deposits after South Africa and one of the largest copper deposits in the world. Most of the country's metallic minerals, including gold, copper, iron ore, lead, zinc, chromite, and copper, are drawn from major deposits on the islands of Luzon and Mindanao. Smaller deposits of silver, nickel, mercury, molybdenum, cadmium, and manganese occur in several other locations. The Visayas are the principal source of non-metallic minerals, including limestone for cement, marble, asphalt, salt, sulphur, asbestos, guano, gypsum, phosphate, and silica whilst petroleum and natural gas are extracted from fields off the northwest coast of Palawan.



The Galathea Depth is a 10,540-metre-deep (34,580 ft) depth in the Philippine Trench in the western Pacific Ocean. Biological samples collected during an expedition demonstrated a wide variety of fish, amphipods, and bacteria surviving at depths seldom seen before.

Demographics

The Philippines is the world's 13th largest country by population with just over 109 million people; around 1.4% of the world's total population. The United Nations estimates the population will increase by almost 35 million by 2050, equivalent to adding the current total population of Saudi Arabia.

The population is very young, with a median age of 25.7 years. There are around 63.3 million adults in the Philippines. Average life expectancy is around 71.7 years and it is ranked 128th in the world according to the World Health Organisation. The birth rate for every 1,000 of the population is 20.4 and the death rate for every 1,000 of the population is 5.9. The country's birth rate remains significantly higher than the world average, as well as the average for the Southeast Asian region.

The population density of the Philippines is high, but the distribution of the population is uneven. It has six cities with a population exceeding one million residents; Quezon City,

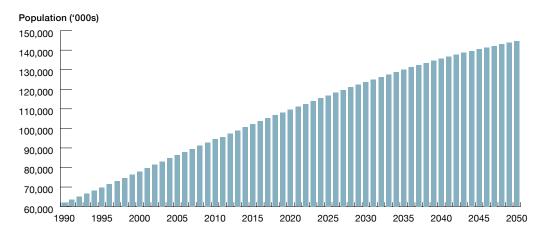
Manila, Caloocan City, Budta, Davao and Malingao whilst parts of Metro Manila have a population density that is more than 100 times that of some outlying areas such as the mountainous area of northern Luzon. At the beginning of the 20th century, more than 80% of the population was rural, but by the early 21st century that proportion had dropped to roughly 40%.

Around 47.5% of the population is classified as urban. Quezon City, which at the time of the 2015 census contained 2.9 million people, forms a part of the wider Metropolitan Manila area, which is comprised of 17 cities and municipalities and has an overall estimated population today of 13.9 million people. The entire Greater Manila urban area spills out beyond the boundaries of Metro Manila and is reported to contain around 22.7 million people, which is more than one-fifth of the Philippines' entire population. Of the 81 provinces outside Metro Manila, five have a population more than 3 million, eight between 2 and 3 million and eighteen between 1 and 2 million.



The Philippines is the only Asian nation that is predominantly Christian. While many of its Southeast Asian neighbors practice Buddhism, 86% of the Filipino population is Roman Catholic.

Philippines population forecast to increase by more than 35m over next 30 years



Source: United Nations Population Division



Economy

The Philippine economy is the 31st largest in the world, with an estimated annual gross domestic product in 2019 of USD367.3 billion. Over the past ten years, the average annual growth of GDP in the Philippines was 6.3%; one of the best performances in the whole of Asia and since 2000, the country has risen 10 places in the list of the world's largest economies ranked by GDP.

The World Bank notes that, "the Philippines is one of the most dynamic economies in the East Asia Pacific region. With increasing urbanization, a growing middle class, and a large and young population, the Philippines' economic dynamism is rooted in strong consumer demand supported by a vibrant labor

market and robust remittances. Business activities are buoyant with notable performance in the services sector including the business process outsourcing, real estate, and finance and insurance industries."

Annual GDP growth of 6.3% in the decade to 2019 was almost 2 percentage points higher than the average of the previous decade and a globally competitive workforce, most notably in the Business Process Outsourcing (BPO) sector has enjoyed an uplift in wages, productivity and per capita GDP. From an average of just USD793 per head in 1990, per capita GDP rose more than fourfold to USD3,300 by the end of 2019. This increase came at a time of strong demographic change when the



The Business Process Outsourcing (BPO) industry is one of the Philippines' great success stories, contributing \$26 billion to the economy in 2019. BPO employs 1.3 million people in over 1000 firms. BPO roles offer relatively high pay, working benefits and safe, air-conditioned working environments.

	10	11	12	13	14	15	16	17	18	19
Asia 30-country total	9,6	7,8	7,0	6,9	6,8	6,8	6,7	6,3	6,4	5,5
China	10,6	9,5	7,9	7,8	7,3	6,9	6,8	6,9	6,8	6,1
India	10,3	6,6	5,5	6,4	7,4	8,0	8,3	7,0	6,1	4,2
Indonesia	6,4	6,2	6,0	5,6	5,0	4,9	5,0	5,1	5,2	5,0
Thailand	7,5	0,8	7,2	2,7	1,0	3,1	3,4	4,1	4,2	2,4
Philippines	7,6						6,9	6,7	6,2	5,9
Malaysia	7,5	5,3	5,5	4,7	6,0	5,0	4,5	5,7	4,7	4,3
Pakistan	2,6	3,6	3,8	3,7	4,1	4,1	4,6	5,2	5,5	3,3
Bangladesh	6,0	6,5	6,3	6,0	6,3	6,8	7,2	7,6	8,0	7,9
Vietnam	6,4	6,4	5,5	5,6	6,4	7,0	6,7	6,9	7,1	7,0
Sri Lanka	8,0	8,4	9,1	3,4	5,0	5,0	4,5	3,3	3,2	2,7

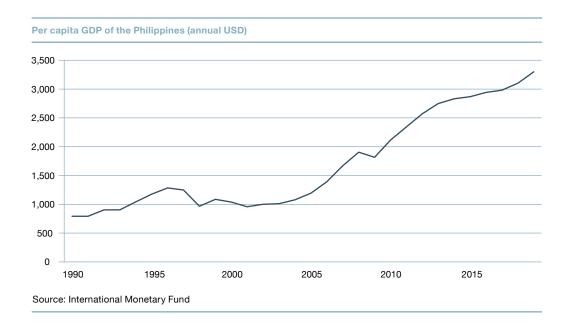
population itself almost doubled from 61 million in 1990 to 108 million at end-2019.

The Philippines' Central Bank – Bangko Sentral Ng Pilipinas (BSP) – is tasked, "to promote a low and stable inflation conducive to a balanced and sustainable economic growth." (Republic Act 7653) The adoption of an inflation targeting framework for monetary policy in January 2002 is aimed at achieving this objective and entails the announcement of an explicit inflation target (defined as year-overyear change in the Consumer Price Index) that the BSP promises to achieve over a given time period. Effective from a resolution in December 2015, the current inflation target is set at 3.0 percent ± 1.0 percentage point.

To achieve the inflation target, the BSP uses a suite of monetary policy instruments in implementing the desired monetary policy stance. The reverse repurchase (RRP) or borrowing rate is the primary monetary policy instrument of the BSP. As with most of the G7 countries, the seven-person advisory committee holds eight monetary policy meetings per year with the decision announced immediately but the detailed 'highlights' of the meeting released one month later. Four times each year, an Inflation Report is published as part of the BSP's transparency mechanism under inflation targeting and to convey to the public the overall thinking and analysis behind the BSP's decision on monetary policy.



The Philippines is the largest exporter of nurses world-wide. For many decades, the country has consistently supplied nurses to the United States and Saudi Arabia, whilst Europe and other Middle East states now feature prominently. Of an estimated 2.2 million Overseas Filipino Workers (OFWs), around a quarter are nurses.





Economic and business environment

Trade and Industry Secretary, Ramon Lopez, had a stated aim to reach the "top 20%" of 190 countries tracked by World Bank before President Rodrigo Duterte ends his term in 2022. "Improving ease of doing business in the Philippines is an endeavour that involves the Executive, Legislative, and Judicial branches of government. It is a whole-of-government effort."

The World Bank's 'Ease of Doing Business 2020' report presents various indicators that measure, among others, the ease of starting a business, registering a property, obtaining construction permits, getting credit, paying taxes, enforcing contracts and resolving insolvency. The Philippines' rank slipped from 99 to 124 between 2016-18 but by 2020, it had improved to 93; its' best ever placing in the global league table. Among the ASEAN member states, there were no changes in the rankings from the 2019 to 2020 report. Singapore still leads followed by Malaysia and Thailand. The Philippines remained at 7th place followed by Cambodia, Lao PDR and Myanmar.

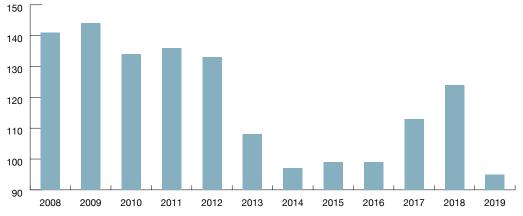
The World Bank noted that, "The Philippines made starting a business easier by abolishing the minimum capital requirement for domestic companies. It made dealing with construction permits easier by improving coordination and streamlining the process for obtaining an occupancy certificate and strengthened minority investor protections by requiring greater disclosure of transactions with interested parties and enhancing director liability for transactions with interested parties."

The impressive performance of the Philippine economy has been recognised in a series of upgrades to its long-term credit rating. Since 2005, Standard & Poor's have upgraded the country's rating no less than five times and having achieved an 'investment grade' rating for the first time in 2013, the Philippines today stands at BBB+; on a par with Italy and Portugal and just one notch below Spain. Amongst its Asian peers, it is now above both Indonesia and India and on a par with Thailand.



The 17 sustainable development goals (SDGs) are political objectives set by the United Nations (UN) with the aim of ensuring sustainable development economically, socially and ecologically. The goals were defined akin to the development process for the millennium development goals (MDGs) and took effect on 1 January 2016 for a period of 15 years (running until 2030). Unlike the MDGs, which were only for developing countries, the SDGs apply to all countries.

World Bank's Ease of Doing Business ranking



Source: World Bank 'Ease of Doing Business 2020'

Politics

The constitution of the Philippines was drafted then ratified in a popular referendum held in February 1987. Its key provision was a return to a bicameral legislature, called the Congress of the Philippines, consisting of a lower House of Representatives (currently composed of 297 members) and a much smaller upper house, the Senate, of 24 members.

Executive power is vested in the President of the Philippines who serves as both the head of state and head of government and who appoints his or her cabinet over whom he or she presides. The President also serves as the Commander-in-Chief of the Armed Forces and has the power to declare martial law. The President and Vice-President are elected by direct vote every six years, usually on the second Monday of May and may serve for only one single, fixed term. The Vice-President is first in line to succession if the President resigns, is impeached or dies and four vice presidents in history have assumed the presidency without having been elected to the office.

Congressional representatives are elected for a term of three years. They can be re-elected twice but they may not run for a fourth consecutive term. The senators are elected to a term of six years. They can be re-elected but may not run for a third term. The constitution provides Congress with impeachment pow-

ers, with the House of Representatives having the power to impeach, and the Senate having the power to try the impeached official.

The last General Election in the Philippines took place on May 9th 2016 for the executive and legislative branches of all levels of government: national, provincial and local. Rodrigo Duterte of PDP-Laban and Leni Robredo of the Liberal Party won the presidential and vice presidential elections. At the legislative elections held in May 2019, 12 seats in the Senate and all seats in the House of Representatives were contested. PDP-LDP enjoyed a 21.2% positive swing of the popular vote in its favour at the Senate elections and a 29.3% positive swing in the House.

At the end of 2019, President Duterte's net satisfaction score amongst Filipinos polled by Social Weather Stations stood at a new high of +72; the highest of any President in the past 34 years. The next Presidential Election will be held on May 9th 2022 but, under the terms of Philippines' constitution, the incumbent President will be ineligible for re-election. Although some well-known personalities have hinted at the possibility of running for President, no-one has yet formally declared his or her intentions.



The Philippines has twice elected a female President

Corazon Aquino

Gloria Macapagal-Arroyo 2001-2010

The Philippines has twice elected a female President



Source: Social Weather Stations

Infrastructure

The planning, design, construction and maintenance of infrastructure facilities, especially national highways, flood control and water resources development systems, and other public works in accordance with national development objectives is the responsibility the Department of Public Works and Highways, (DPWH or Obras Publica), whose history stretches way back to 1868.

As at October 2019, the Philippines' road system comprises about 33,000 kilometres, of which more than 97% are paved with either concrete or asphalt. According to the DPWH's own classification, only 29% of the concrete and 14% of the asphalt roads are in 'good' condition, with the respective totals for 'fair' condition being 24% and 8%. The national roads connecting major cities are numbered N1–N82. They are mostly single and dual carriageways linking two or more cities.

The railway system consists of light rail transit (LRT) lines in Metro Manila and heavy rail lines in Luzon. The three LRT lines commenced operations in 1984, 1999, and 2003. Two lines known as the Yellow and Purple Lines are owned and operated by a government-owned corporation, the Light Rail Transit Authority (LRTA), while the third, Blue Line, was financed and constructed by a private corporation, the Metro Rapid Transit Corporation (MRTC), and is operated by the government under a buildlease-transfer agreement. The lines operated by the LRTA carry about 700,000 passengers along 31km and between 31 stations each day, while the MRT line has 13 stations along 16.9km and carries more than 600,000 passengers daily. A limited number of heavy rail commuter services are operated by Philippine National Railways (PNR), serving areas to the south of Metro Manila. Other than these commuter services and some other services linking towns in the Bicol region, however, the heavy rail lines in the Philippines have been essentially non-operational for several years. The total length of the railway system is just 77km.

Inter-island water transport is a very important subsector of the national transport system. There are about 1,250 ports, of which about 1,000 are government-owned and the rest are privately owned and managed. Of the government-owned ports, about 140 fall under the jurisdiction of the Philippine Ports Authority (PPA) and the Cebu Ports Authority;

the remainder are the responsibility of other government agencies or local government units. The busiest port is the Port of Manila, which comprises four main sections: North harbour, South harbour, Manilla international container terminal and Harbour centre terminal. It has 22 available berths and 12 piers with an annual cargo tonnage of around 75 million and container volume of 4.5 million twenty-foot equivalents (TEU's) annually.

In recent years, there has been significant development of roll-on roll-off (ro-ro) ferry services, which are aimed at providing an alternative to traditional long-distance interisland shipping services. In 2003, the Government of the Philippines issued a policy to promote ro-ro: the Strong Republic Nautical Highway Program. This is composed of three major trunk lines: the western, eastern, and central nautical highways consisting of 12 main routes along 919 kilometres served by different shipping operators. This program has not only linked the country's major island groups of Luzon, Visayas, and Mindanao, but it has also had positive effects on the economies of the smaller islands along the major routes.

There are 215 airports in the Philippines, of which 85 are government-owned and controlled and the rest are privately owned and operated. Of the government-controlled airports, 12 are designated as international airports, 13 are Principal Class 1 airports, 19 are Principal Class 2 airports, and 41 are community airports. The Ninoy Aquino International Airport is currently the main gateway of the Philippines, serving the Metro Manila area and its surrounding regions. In 2019, it was the world's 39th busiest airport by passenger numbers with 47.89 million. A new terminal building at Clark International Airport is scheduled to open in January 2021 and will bring its total capacity to 12.2 million passengers. Two more terminals are expected to be completed by 2025, boosting Clark's passenger capacity to more than 110 million annually.

Philippine Airlines (PAL) is the national flag carrier of the Philippines and was the first commercial airline in Asia. It is the country's biggest airline company and has the largest number of international flights to the Philippines as well as domestic flights. Cebu Pacific is the leading domestic airline with a 61% market share. It flies to 36 different domestic destinations in Philippines and to 26 international destinations.

The telecommunications industry in the Philippines was de-regulated in 1995, leading to the creation of many telecommunication service providers for mobile, fixed-line, internet and other services. Subsequent mergers and takeover activity have seen the emergence of two dominant players; PLDT's Smart Communications and Globe. A new entrant to the market, Dito Telecommunity, has pledged to provide coverage for 37% of the population by end-2020 and has until March 2021 to begin operations.

Source: World Economic Forum. The Global Competitiveness Report 2019

As of end-2019, more than 73 million people used the internet in the country, accounting for 67% of the total population; more than 10 percentage points higher than the Asian regional average of 55%. A report from We are Social showing online behaviour around the world revealed that Filipinos spend on average 10.02 hours a day on the internet on any device, the most of any country globally. Filipinos also spent the most time on social media at four hours and 12 minutes on average per day. The country has the highest female ratio on Twitter at 63 percent, and Instagram at 64 percent.

Overall, however, the Philippines ranks only number 96 of 141 countries for Infrastructure in the World Economic Forum's 2019 Global Competitiveness Report. A detailed breakdown shows it ranks 88 for railroads, 88 for ports, 88 for roads and 96 for air transport. Indeed, its overall rank of 96 was down 4 places on the previous year; a period in which

its population increased by over 1.5 million people.

Back in December 2017, the Philippines government passed a tax reform bill – the Tax Reform for Acceleration and Inclusion (TRAIN). This was designed to help finance what President Duterte had called in his second State of the Nation address, "a golden age of infrastructure" with total planned spending around USD180 billion for roads, railways and airports to transform the Philippines' economy. This has become known as the "Build, build, build" programme and it planned to increase infrastructure spending to 7.3% of GDP by the end of the Presidential term of office in 2022.

The Government initially lined up 75 big-ticket infrastructure projects under the "Build, build, build" programme but as of October 2019, only two projects had been completed whilst a further nine were under construction. Senator Juan Edgardo Angara told a Senate hearing in late 2019 that that at least 12 projects would be completed by 2020, 17 projects by 2021, 26 projects by 2022, and the rest beyond the Duterte administration. A revised schedule of Infrastructure Flagship Projects on the National Economic and Development Authority website now lists 104 projects but has a lower cost of PHP4.3tn (USD89bn). It suggests the government is aiming to complete just a little over half (56) of the projects by the end of the presidential term of office with the balance targeted to finish by 2028.



In the 2020 PHP3.6tn total spending budget, 38% was allotted for education, health-care, housing and social welfare; 29% for infrastructure, tourism, trade, job generation and agriculture; and 11% for debt payments.

Energy market

Figures from the Department of Energy show that total installed power capacity in the Philippines currently amounts to just over 25,000 MW; a figure which has increased by more than 60 per cent since 2005. Within this total, renewable energy capacity excluding geothermal and hydropower rose to 1,711 MW with solar, biomass and wind accounting for around 7% of the total installed capacity.

coal: Coal still accounts for more than 40% of all electricity capacity installed in the Philippines. The country has vast potential coal deposits (estimated by the DoE at 2.39 billion tonnes) and in 2019 it produced 15.27 million metric tonnes, of which 10.24 million tonnes were exported. At the same time, the country imported 26.98 million tonnes; largely from Indonesia, South Africa and Australia. The power sector is by far the biggest user of coal, consuming 28.65 million tonnes of the total 33.12 million tonnes burned in 2019.

There are 21 coal-fired power stations nationally, the most recent of which was a 500 MW plant in Luzon grid-connected on October 2019 which was included in the 'Build, build, build' programme. Indeed, the Philippines was the only country in South-east Asia that saw a 1 GW increase in coal capacity last year.

NATURAL GAS: Natural gas comprises almost 13% of the country's total installed power capacity. In 1991, Shell Philippine Exploration B.V. and Oxy drilled the Malampaya gas field which became the largest gas

discovery in the country with proven reserves of 2.7 to 3.2 trillion cubic metres of gas. Located just off Palawan Island's west coast, it accounts for nearly all of the Philippines' domestic natural gas output, with the much smaller and older Libertad gas field contributing less than 1% of the national total. The vast majority of natural gas from Malampaya provides fuel for three power plants in Batangas.

OIL-BASED: The Philippines consists of more than 7,000 islands, many of which are small and have traditionally relied on generators fuelled by imported diesel. This is heavily subsidised by consumers through what is known as the Universal Charge for Missionary Electrification (UCME) with a planned cost of PHP14.66 billion (USD 293.2 million) in 2019. Diesel, oil thermal and combined cycle power generation amounts to 17% of current installed capacity.

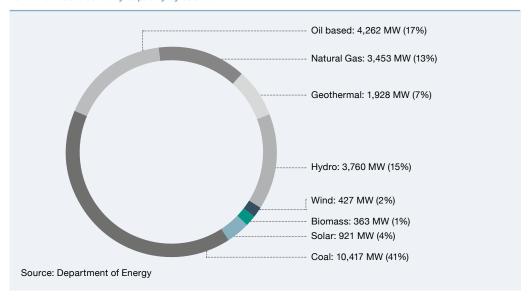
HYDROELECTRICITY: The Philippines is not short of water and there are many hydroelectric power plants located in Luzon, Visayas and Mindanao. Around 15% of the country's installed power capacity comes from hydroelectricity and there are at least 30 operational plants with several more already under construction. According to the Department of Energy, the total untapped hydropower resource potential of the country is estimated at 13,097 MW, of which 85 percent are considered large and small hydros (11,223 MW), 14 percent (1,847 MW) are classified as mini-hydros while less than 1 percent (27 MW) are considered micro-hydros. Almost all the large hydro plants are connected to the

Total installed power capacity

Installed	Thermal (MW)				Renewable (MW)						
Capacity in Year	Coal	Oil Based	Natural Gas	Sub-Total Thermal	Geothermal	Hydro	Wind	Biomass	Solar	Sub-Total Renewable	Total (MW)
2005	3.967	3.669	2.763	10.399	1.978	3.222	25	0	1	5.226	15.625
2007	4.213	3.616	2.834	10.663	1.958	3.293	25	0	1	5.277	15.940
2009	4.277	3.193	2.831	10.301	1.953	3.291	33	30	1	5.308	15.609
2011	4.917	2.994	2.861	10.772	1.783	3.491	33	83	1	5.391	16.163
2013	5.568	3.353	2.862	11.783	1.868	3.521	33	119	1	5.542	17.325
2015	5.963	3.610	2.862	12.435	1.917	3.600	427	221	165	6.330	18.765
2017	8.844	4.292	3.453	16.589	1.944	3.701	427	258	896	7.226	23.815
2019	10.417	4.262	3.453	18.132	1.928	3.760	427	363	921	7.399	25.531

Source: Department of Energy

Total installed electricity capacity by source



main transmission grid, while most of mini and micro plants are embedded to the local distribution system

GEOTHERMAL: According to the International Geothermal Association (IGA), the Philippines ranks second globally to the United States in producing geothermal energy. As of 2015, the US had a capacity of 3,450 megawatts of geothermal power, while that of the Philippines was 1,870 MW. This had increased to 1,928 MW by the end of 2019. Combined energy from the nation's six geothermal fields, located in the islands of Luzon, Leyte, Negros and Mindanao, accounts for approximately 7.6% of the country's installed generating capacity.

WIND: Wind power accounts for less than 2% of total installed energy capacity, with 427MW. All wind power sites in the Philippines are on-shore facilities, although in early 2020, the DoE awarded rights to study and develop two offshore wind energy projects with a combined potential output of more than 1.2GW. The first plant, named "Aparri Bay" and located in Northern Philippines will have 500-600 MW capacity and the second, which is in the central part of the country, will have a capacity of 600 MW. According to a study by the US National Energy Laboratory, the Philippines has around

10,000 square kilometres of land area with good-to-excellent wind resources due to their elevation and proximity to coastline and the US Department of Energy estimates that wind resources in the Philippines could generate up to 70,000 MW of electricity.

BIOENERGY: Bioenergy accounts for just 1.4% of installed power generation capacity, with 363 MW. The Philippines has plentiful supplies of biomass energy resources in the form of agricultural crop residues, forest residues, animal wastes and agro-industrial wastes. The Department of Environment and Natural Resources (DENR) says the Philippines could generate substantial volumes of residues which can be utilized as energy fuel and the Department of Energy's 2019 Power Situation Report lists a total of 215 MW (209 MW of which is for the Visayas Grid) new capacity awaiting commission.

SOLAR: As at end-2019, the installed capacity of solar electricity was 921 MW, almost 4% of the total but more than five times greater than just four years' previously. As of March 2020, the Department of Energy's website lists a total of a further 13,066 MW potential capacity either at the pre-development or development phase, although there is no certainty or time horizon upon which these will proceed.

Renewable energy policy

The Philippines's electricity transmission is divided into three grids; one each for Luzon, Visayas and Mindanao. As at end-2019, the total installed electricity capacity across the three grids was 17,286 MW, 3,809 MW and 4,436 MW respectively. The Luzon and Visayas grids are interconnected through the 350 kV DC HVDC Leyte-Luzon transmission line, while the Mindanao Grid remains isolated until the completion of a HVDC link from Negros to Lanao del Norte which was scheduled for end-December 2020.

The Department of Energy's 2019 Power Situation report lists fourteen transmission projects which are proposed for a 25-year development plan between 2020 and 2045. These are designed to increase energy supply, improve reliability and resilience, and enhance interconnectedness across a widespread and challenging geography. The long-term planning assumptions for the three grids in 2040 envisage a further 24,385 MW capacity addition in Luzon, 9,180 MW in Visayas and 10,200 MW in Mindanao. This represents a more than 70% increase on current capacity of just 25,531 MW.

The accelerated exploration and development of renewable energy sector began with the enactment of RA 9513 otherwise known as Renewable Energy Law of 2008. To achieve the objectives of the RE Law, the DoE together with its stakeholders headed by the National Renewable Energy Board (NREB) formulated the National Renewable Energy Plan (NREP)

which summarised the 20-year aspirational targets from biomass, solar, wind, hydropower, geothermal and ocean energy. It also called for a series of programmes – including fiscal incentives for eligible renewable energy developers, a Green Energy Option Programme and a Renewable Portfolio Standard – which we look at later in this section.

The NREP, which was launched in 2011, served as the country's roadmap in the development and utilization of renewable energy. The targets under NREP were to triple the 2010 installed capacity of 5,439 MW by 2030. The NREP was always intended to be a 'living document' whose forecasts and targets would be updated in line with programme reviews, project deployment and technological development. It would not have been realistic in any market economy to hit a multi-year target at the end of every plan period.

By 2015, the energy market had of course evolved, not necessarily in line with the plans outlined in the original NREP. Only biomass had met or exceeded its target with a 335 MW increase against a planned 227 MW uplift. Hydro capacity rose 190 MW versus a planned 341 MW, solar rose 115 MW versus a 269 MW plan whilst wind capacity showed a huge shortfall; increasing by only 394 MW compared to a planned increase of 1048 MW. Total geothermal capacity, meanwhile, actually fell by 60 MW during the period under review.

Taking the developments of the previous four years into account, it was proposed in 2016 to

NREP proposed revised targets 2016

	Actual	Target	t Capacity Add	Total new	Total			
in MW	capacity (as of 2010)	2015	2015 2020		2030	capacity (2011 – 2030)	capacity by 2030	
Geothermal	1,966	220	1,100	95	80	1,495	3,461	
Hydro	3,400	341	3,161	1,892	0	5,394	8,794	
Biomass	39	277	0	0	0	277	316	
Wind	33	1,048	855	442	0	2,345	2,378	
Solar	1	269	5	5	5	284	285	
Ocean	0	0	36	35	0	71	71	
Total	5,439	2,155	5,157	2,469	85	9,866	15,305	

Source: Central Electricity Authority



revise and amend the NREP. The new document was submitted by the National Renewable Energy Board (NREB) to the DoE in 2017 but it was never signed into law; hence the original 2011 still stands as the official reference work.

The striking feature of the proposed revised plan compared to the original version was the huge increase in the installed capacity of solar energy. This was expected now to increase by 9,522 MW by 2030 versus an originally estimated increase of just 284 MW. Indeed, the planned increase for solar energy was greater than all the other sources combined: geothermal, hydro, biomass, wind and ocean totalled 8,022 MW versus 9,522 MW for solar.

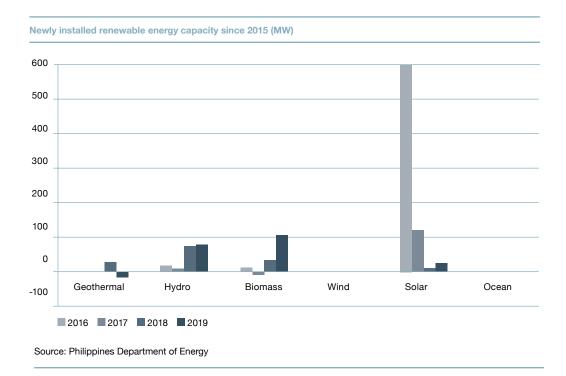
Not only has solar now taken centre stage in the Philippines' push for renewable energy, it is the clear leader in terms of installation, operation and grid connectivity. In the period since the latest proposed (but unsigned) iteration of the NREP, growth in solar has significantly outpaced that of other renewable technologies. Of a total 1,069 MW of new installed RE capacity between 2015 and 2019, fully 756 MW came from solar energy; almost three-quarters of the entire amount.

To help the future development of renewable energy, rules for the Renewable Portfolio Standard (RPS) and Green Energy Option Program (GEOP) provided for in the 2008 RE Act were finally released in 2017, with mandatory RPS compliance scheduled from 2020. The RPS stipulates that all distribution utilities, electricity suppliers and generating companies increase their renewable energy by 1% per annum the next ten years. This should help meet the goal of 35% renewable energy generation across the country by 2030.

In a notable relaxation of previous rules on foreign ownership, the DoE in October 2019 issued Department Circular #DC2019-10-0013: 'Omnibus Guidelines Governing the Award and Administration of Renewable Energy Contracts and the Registration of Renewable Energy Developers'. Section 4.2.1 notes, "The RE Applicant must be a Filipino or, if a corporation, must be duly registered with the Securities and Exchange Commission (SEC), with at least 60% of its capitalisation duly owned and controlled by Filipinos, unless the application is for biomass development and/or uses waste-to-energy technology, in which case the 60% Filipino capitalisation requirement shall not apply. This provision shall retroact to all RE Applications

₽ PHP≥ 2.99

Electricity costs in the Philippines are the highest among the Association of Southeast Asian Nations' (ASEAN) 10 member countries at around 10 PhP/kWh (USD0.20/kWh). New utility-scale solar installations have been contracted for prices as low as PhP2.99 (USD0.058) per kWh.



for biomass resources development and utilisation that are being evaluating prior to the effectivity of this Circular".

The DoE permits the development of "biomass, waste to energy technology, wind, solar, run-of-river, impounding hydropower sources that meet internationally accepted standards, ocean, hybrid systems, geothermal and other RE technologies that may be later identified by the DoE". To demonstrate compliance with the RPS, a system of Renewable Energy Certificates (REC) trading will be put in place and administered by a newly-created Philippine Renewable Energy Market System (PREMS).

In parallel to the RPS system, the Green Energy Option Program aims to develop and improve the functioning of a market in which large-scale corporate power consumers can enter into agreements with registered thirdparty renewable energy developers to purchase renewable electricity which is transmitted to them by the existing power Distribution Utilities. In addition to fee income, the DU's also retains the REC's from the third-party RE suppliers. These corporate Power Purchase Agreements (PPA's) are becoming a familiar feature of electricity markets around the world. A Philippine GEOP system designed to complement the RPS framework could thus help lower energy costs whilst meeting the new legal obligations.

The Department of Energy's stated mission is, "to improve the quality of life of the Filipino by formulating and implementing policies and programs to ensure sustainable, stable, secure, sufficient, accessible and reasonably-priced energy." Its' vision is of, "a globally-competitive DoE powering up Filipino communities through clean, efficient, robust and sustainable energy systems that will create wealth, propel industries and transform the lives of men and women and the generations to come."

The Philippines has committed to climate change goals and a 70% reduction in greenhouse gases by 2030. To help meet this commitment, a more rapid build-up in both electricity capacity and production will have to come from solar, wind and biomass energy. It is to be hoped that the opportunities afforded by the reaffirmed RE Act and provisions can be the catalyst for a new wave of investment to drive the energy transition.

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