

COUNTRY PROFILE: GUATEMALA

Overview of Guatemala's health system

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LIST OF ABBREVIATIONS

AIDS	Acquired immune deficiency syndrome
DALY	Disability-adjusted life Year
GDP	Gross National Product
GNI	Gross National Income
HDI	Human Development Index
HIV	Human immunodeficiency virus
IGSS	Instituto Guatemalteco de Seguridad Social
MSPAS	Ministerio de Salud Publica y Asistencia Social
NCD	Non Communicable Disease
NGO	Non-Governmental Organization
PAHO	Pan American Health Organization
PPP	Purchasing Power Parity
TB	Tuberculosis
US\$	United States dollar
WHO	World Health Organization

1. COUNTRY AT A GLANCE

Table 1. Country at a glance: Summary statistics

Component	Details/indicator/year	Data
Population	Population growth (2016)	2 ^a
	Population, total (2016)	16,582,469 ^a
	Population living in urban areas (2010)	52 ^a
	Population median age (years) (2013)	19 (2013, World Bank) ^b 22 (2017, PAHO) ^f
Geography	Guatemala has borders with four countries: Mexico (at the north and west), Belize (at the northeast), Honduras (by the east) and El Salvador (by the southeast). It has access to two oceans the Atlantic (Gulf of Honduras) by the northeast and the Pacific Ocean by the south. The Southern part of Guatemala is a volcanic region with 27 volcanoes and has a rich soil for agriculture. The temperature of the regions oscillates between 9-27°C depending on the altitude.	
Ethnic composition	The two most abundant ethnic groups are the Ladinos (mestizo), with close 60% of the total population and Maya, with close to 40% of the total population	
Economic and infrastructure data	Gross Domestic Product (GDP; at Purchasing Power Parity, at current international \$, 2016)	132 billion ^a
	Gross Domestic Product (GDP; current US\$, 2016)	79 billion ^a
	Gross National income (GNI) per capita PPP (current international \$, 2016)	7,760 ^a
	Economic growth as percentage of GDP (2016)	3.1 ^a
	Gini-index (2014)	48.7 ^a
	HDI (2015)	0.640 (ranked 125) ^c
	Poverty headcount ratio at national poverty lines as percentage of population (2014)	59.3 ^a
	Percentage of adult literacy as percentage of people ages 15 and above (2014)	81,3 ^a
	Education Gender parity index for primary and secondary school enrolment (2015)	0.95 ^a
	Percentage of population with access to improved sanitation facilities (2015)	63,9 (rural: 49.3; urban: 77,5) ^a
Health system	Health expenditure as percentage of GDP	6,2 (2014, World Bank) ^a 6.2 (2014, PAHO) ^g
	Public expenditure on health as percentage of total health expenditure (2014)	38 ^a
	Out-of-pocket health expenditure of total health expenditure	52 ^a
	Health expenditure per capita, PPP (constant 2011 international \$) (2014)	473 ^a

	Number of physicians per 1000 population	0.9 (2009, World Bank) ^a 0.75 (2014, PAHO) ^g
	Number of nurses and midwives per 1 000 population	0.86 (2009, World Bank) ^a 0.6 (2014, PAHO) ^g
	Percentage of births with skilled attendants (2015)	66 ^a
	Percentage of births assisted in health facilities (2015)	66 ^g
	Average life expectancy in years (2015)	73 ^a
	Hospital bed per 1000 (2011)	0.6 ^a
Disease burden	HIV prevalence as percentage among adults 15-49 (2016)	0.5 ^a
	Incidence of TB per 100 000 population per year (2016)	24 ^a
	Deaths due to HIV/AIDS per 100 000 (2012)	23 ^b
	Cause of death by NCD as percentage of total (2015)	56.7 ^a
	Maternal mortality rate per 100 000 births (2015)	88 ^g
	Infant mortality rate per 1 000 births	23.9 (2016, World Bank) ^a 21.0 (2015, PAHO) ^g
	Under-five mortality rate per 1 000 births (2017)	27.0 ^g
	Death by violence (interpersonal violence) (2015)	5,900 ^d
Top five causes of death as percentage of deaths (2012)^e	1. Lower respiratory infections	12%
	2. Interpersonal violence	11.5%
	3. Ischaemic heart disease	7.3%
	4. Diabetes mellitus	4.6%
	5. HIV/AIDS	4.2%
Top five causes of DALYs¹ (2012)^e	1. Maternal, neonatal, nutritional	ND
	2. Other NCDs ²	ND
	3. Suicide, homicide and conflict	ND
	4. Neuro-psychiatric conditions	ND
	5. Acute respiratory infections	ND

a World Bank World Development Indicators [World Bank a]; b WHO Global Health Observatory [WHO a]; c UNDP; d WHO Global Health Estimates 2015: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2015 [WHO d]; e WHO Guatemala: WHO Statistical profile [WHO b]; f PAHO/WHO Health Information Platform, for the Americas [PAHO b]; g PAHO Core Indicators Health Situation in the Americas [PAHO c].

¹ Disability-adjusted life years (DALYs) are the sum of years of life lost due to premature mortality (YLL) and years of healthy life lost due to disability (YLD).

² Other noncommunicable diseases (NCDs) including non-malignant neoplasms; endocrine, blood and immune disorders; sense organ, digestive, genitourinary, and skin diseases; oral conditions; and congenital anomalies.

2. COUNTRY CONTEXT

2.1 COUNTRY HISTORY AND POLITICAL SYSTEM

Located in Central America, Guatemala is rich of its heritage from the Maya civilisation that once flourished in the isthmus. The Indian culture remains an important culture feature of the country, especially within its interior uplands. This situation is quite unique compared to its neighbours. Interestingly enough, it is still unclear what caused the decline of Mayas around 900 CE, who was among the most developed civilisation of the continent. The conjuncture of soil exhaustion, climate change and armed conflicts with neighbours are commonly accepted (Diamond, 2005).

The colonization by the Spanish starts in the 16th century and they install their capital in Antigua Guatemala. From their prestigious predecessors, all they find are ruins of stunning cities in the midst of the dense tropical forest. Contrary to Mexico or Peru, the country has little precious metal, the major resources being the growing of cacao and indigo. The capital of the Captaincy is moved from Antigua to the actual Guatemala City in 1773 when the first is hit by a series of earthquakes. From this moment, Guatemala City becomes the centre of the entire region that stretches between Mexico and Panama (Stansifer, Horst, Anderson and Griffith, 2017).

Guatemala get independent from Spain in 1821 and from Mexico in 1823. It becomes the nodal point of the United Provinces of Central America but cannot avoid its collapse, due to backcountry uprising, the everlasting fight between Conservatives and Liberals and the tendency of member states to autonomy (Larousse, 2017). The uprising is notably lead by Rafael Carrera who gets and stays in power until his death in 1865. Under his authority, the country goes back to the old colonial ways. After his successor is overthrow in 1871, there is a period of almost unbroken liberalism that last until the dawn of World War II. During this period, roads, railways and telegraph lines are built, the power of the local aristocracy is reduced, and the Church is put under civil control (Stansifer, Horst, Anderson and Griffith, 2017).

During the first half of the 20th century, under the presidency of Manuel Estrada Cabrera (1898-1920) and Jorge Ubico (1926-1944), the country opens up to the United States and to companies such as the United Fruit Co. During this period is coined the term “Banana Republic” by the writer O. Miller, to criticise the power of such companies in the region. (Larousse, 2017). The 1931 military coup lead to a regime that foster economic development and paternalism toward indigenous. At the end of World War II, Guatemala faces strong economic problems. Following strikes and riots, Jorge Ubico resign and the following year, Juan José Arévalo is elected president with a reformist and humanist agenda (Larousse, 2017). His successor, Colonel Jacobo Arbenz Guzman, follows the same agenda but growing discontent from the Conservatives, major landowners, US companies (eg. United Fruit Co) and the CIA lead to a military putsch the opposition camp fomented from Honduras and Nicaragua in 1954. Follow years of civil war, series of coups and little regard toward Human rights. Indians suffer the most from the military regimes. Violence is at its paroxysm under General Efraín Ríos Montt. (Larousse, 2017)

The civil wars that lasted 36 years left 200,000 dead (most of them being Mayas) and hundreds of thousand displaced. The democratic transition starts in 1985 and is being conducted with a peace process. Indeed, violence and insecurity are still very high, with the issues of guerrillas not

being resolved. An agreement is found in December 1996 with their integration in the politic life. (Larousse, 2017).

The social and economic situation remains critical though. For the first time since 1996, a left president, Alvaro Colom Caballeros, is elected in November 2007, from the National Union for Hope. His agenda focuses on social development, improvement of education and access to health care services in rural areas (Larousse). Nevertheless, Guatemala is crippled by drug-related violence and in 2011, by reaction, a retired General, Otto Perez Molina from the Patriotic Party, is elected, with the moto of the “iron fist” to eradicate such violence. The people accused of genocide during the civil war are prosecuted. Former President Rios Montt is convicted of genocide but is considered as “no longer mentally capable of understanding the charges” and the trial is left in the limbo (Stansifer, Horst, Anderson and Griffith, 2017).

On November 7, 2012, a 7.4 magnitude earthquake hits the country and provokes widespread damages. On April 2015 explodes “The Line” scandal, a corruption affair that led to the resignation of the Vice President and the President Perez Molina (Stansifer, Horst, Anderson and Griffith, 2017). The current President is Jimmy Morales from the National Convergence Front (Frente de Convergencia Nacional), beating the former first lady Sandra Torres, wife of Alvaro Colom Caballeros.

2.2 POPULATION

Guatemala is the most populated country of Central America. 60% of its population is Mestizo (ladino, a mix between Hispanic and Maya origins). Indians from Maya origins accounts for approximately two-fifth of the total population, with diverse ethnises (Quiché, Kekchi, Cakchiquel or Mam). Although the official language is the Spanish, Maya languages are widely use. For instance, the Peace agreements of December 1996 are translated into more than 20 different Maya languages. The vast majority of the population is Catholics (57%) and 40% is protestant. Despite only officially accounting for 1,0% as for traditional Mayan religion, the society is heavily infused with pre-Colombian beliefs. 51.1% of the population lives in urban areas while 48,1% lives in in rural areas (Stansifer, Horst, Anderson and Griffith, 2017).

Due to the long civil war, internal displacement impacted durably the population, not only within the country (toward the Petén region) but also externally (emigration toward the US and Belize).

2.3 ECONOMY

Table 2. Economic measures of Guatemala

Indicator (year)	Data
Gross National income (GNI) per capita PPP (current international \$, 2016)	7,760 ^a
Economic growth as percentage of GDP (2016)	3.1 ^a
Present value of external debt as percentage of the GNI (2016)	13 ^a
Gini-index (2014)	48.7 ^a
HDI (2015)	0.640 (ranked 125) ^b

Poverty headcount ratio at national poverty lines as percentage of population (2015)	59.3 ^a
Percentage of unemployment as percentage of the total labor force (2016)	2.6 ^a

^a World Bank World Development Indicators [World Bank a]; ^b UNDP

Guatemala is one the strongest performers in Latin America but faces among the highest inequality rates, ranging from poverty, malnutrition, maternal and child mortality. Although the poverty rate was reduced between 2000 and 2006 (World Bank d), the poverty rose again in 2014. Indigenous people account for the majority of people living under the poverty line (52%) (World Bank a, 2017).

Agriculture is the main driver of the economy, with coffee, sugarcane and bananas plantations. It employs two-fifth of the workforce but accounts for only one-quarter of the GNP. The Pacific piedmont, given its very fertile soil, have a developed agriculture. There is considerable potential for forest and fishing resources. The extraction of petrol participated in the rise of the Petén region in the 1980s. Guatemala is also rich of mineral resources such as gold and silver, but huge open-pit mines had drag criticisms regarding human rights violation and indigenous land ownership (Stansifer, Horst, Anderson and Griffith, 2017).

The tourism has risen after the end of the civil war. Nevertheless, a negative trade balance and foreign indebtedness hinders the economy. Transfer of monies from Guatemalans living abroad account for more than the exports and tourism combined. In 2004, the country has ratified the Central America Free Trade Agreement (Stansifer, Horst, Anderson and Griffith, 2017).

2.4 ENVIRONMENT

Famous for its volcanoes, Guatemala offers a wide range of climatic and environmental diversity. From Guatemala City can be seen from time to time lava from Pacaya. The country can be divided into 4 different regions (Stansifer, Horst, Anderson and Griffith, 2017):

- There is a volcanic region, as the country is crossed over by a string of 27 volcanoes that stretch from Mexico to El Savador
- Between the volcanic region and the Pacific Ocean lies a fertile piedmont, 40-50km wide.
- The Petén Region is a square region in the northern part of the country, as part of the Yucatan peninsula. It is 300 meters high on average and face extensive flooding. It is mostly covered by a dense rainforest.
- Between the Petén region and the volcanoes, high mountains and valleys can be found.

The climate is also quite diverse. Near-desert conditions can be found in the Motagua River Valley while the Pacific Coast can have as high as 3,800 mm of precipitation. The dry season is usually from November to April. Yet, in the Caribbean region, it rains all year long. Below 900 m, the temperatures oscillate between 21-27° C. From 900 to 1,500 meters, temperatures are from 16 to 21° C and from 1,500 to 2,700 meters, the temperatures are from 10 to 16° C degree. Finally, above 2,700 meters, although the temperature doesn't allow crop, grazing animal can be achieved. The country faces severe tropical storms. As an example, hurricane Mitch in October 1998 left 100,000 people displaced (Stansifer, Horst, Anderson and Griffith, 2017).

2.5 INDIGENOUS POPULATION

Guatemala has a rather unique situation in Central and Latin America. The majority of the population is from Indigenous descent. As a result, along with the rise of the Mayan movement, Mayan religions have seen an increase in their practice. The 3 main indigenous communities are the K'iche' (11% of the total population), the Q'eqchi (8.3%) and the Kaqchikel (7.8%). Although Mayans can be found in every different social classes, they tend to be poorer as the vast majority lives in poverty or even extreme poverty. Indeed, they are more likely to suffer from exclusion, whether social, cultural, political or economic. There are 22 indigenous communities and 3 African-descent communities (the Afro-mestizos, the Garifuna and the Afro-Caribbean Creole English speaking) (Minority Rights Group International, 2017).

Indigenous communities and especially women suffered the most from abuses and rape during the civil war. According to the national Commission for Historical Clarification, a truth and reconciliation type commission, 88% of women and girls affected by violence during the Civil war was because they were women (gender-based violence). Today, violence against all Indigenous people are very often related to the development of energy production or extractive activities. The palm oil production often find itself in conflict with these communities (Minority Rights Group International, 2017).

Marked by strong inequality with the rest of the population, the health outcomes of the Indigenous population are rather bad. For example, children are more likely not to be vaccinated. It is estimated that 79% of the health care facilities located in predominantly indigenous communities are run only by nurses or medical students. Interestingly enough, traditional healers play an important role. A health policy from 2005 seeks to support more culturally appropriate health care especially with traditional midwives (Minority Rights Group International, 2017).

Even though 3 local languages (Garifuna, Mayan and Xinca) are protected by the 2003 Language Law, the lack of resources hindered its full implementation. Even, some other indigenous languages are at risk of disappearance (Minority Rights Group International, 2017).

3. HEALTH SYSTEM

3.1 ORGANIZATION

The health system is composed of a public and private sector. The public sector is composed of an array of institutions. The Ministry of Public Health and Social Welfare (Ministerio de Salud Publica y Asistencia Social, MSPAS) is responsible for the regulation and the management of the overall system and plays a stirring and leadership role. The public sector is also composed of the Guatemalan Social Security Institute (Instituto Guatemalteco de Seguridad Social, IGSS), of the San Carlos University and the Health services of the Ministry of Defense. The private sector is composed of both for-profit and non-profit actors. The training of healthcare workers takes place at the university. 5 universities, public and private, are responsible of the training of the physicians and surgeons. (PAHO a, 2009). The traditional health system, with healers, plays an important role.

3.2 CAPACITY

The MSPAS is the principal health care provider for the population. According to the Pan American Health Organization, in 2005, the MSPAS had 1304 health facilities and is the institution with the greatest number of facilities while the IGSS had 139. The non-profit sector is running more than 1000 facilities. (PAHO a, 2009). There is a strong concentration of health care workers in the metropolitan area and the rest of the country faces a shortage of professionals, especially specialist doctors.

3.3 POLICY ENVIRONMENT

According to Guatemala's Constitution, the enjoyment of health is a "basic non-discriminatory human right". (PAHO a, 2009). However, there is a strong distrust from the public toward the State, following the violence and abuses from the civil war. While it is not solely true for the health system, the public health system suffers from this image. One task from the government is to regenerate the social fabric and rebuilt the trust with its citizens (Flores, Ruano and Funchal, 2009).

The place of the traditional system has been evolving through the last decades. In the 70s and the 80s, the health policies aimed at educating traditional midwives (Replogle, 2007), notably to recognize complications or to treat basic issues. However, in the 90s, in the light of lack of evidence, the funders including the World Health Organization, stopped to finance these programs. The government started to focus on training more professional midwives.

3.4 HEALTH FINANCING

Table 3. Health financing data for Guatemala

Indicator	Data
Health expenditure as percentage of GDP (2014)	6.2 (World Bank) ^a 6.2 (PAHO) ^b
Public expenditure on health as percentage of total health expenditure (2014)	38 ^a
Public expenditure on health as percentage of general government expenditure (2014)	18 ^a
Out-of-pocket expenditure on health as percentage of total health expenditure (2014)	84 ^a
Health expenditure per capita PPP (constant 2011 international \$) (2014)	473 ^a

^a World Bank World Development Indicators [World Bank a]; ^b PAHO Core Indicators Health Situation in the Americas [PAHO c].

Out-of-pocket payment composed most of the health financing. While some gains can be observed between 2000 and 2006, there is a continued high level of inequitable distribution of the financial burden associated to health (Bowser, 2011). The low level of insurance and the concentration of the unwell among the poorest partly explained this phenomenon.

3.5 COUNTRY DISEASE PROFILE

Table 4. Country disease profile

Indicator (year)	Data
Age-standardized DALYs per 100 000 for communicable, maternal, perinatal and nutritional conditions (2015)	9,284 ^a
Age-standardized DALYs per 100 000 for non-communicable diseases (2015)	15,886 ^a
Age-standardized DALY for 100 000 injuries (2015)	5,868 ^a
Infant mortality rate per 1 000 births (2016)	23.9 (2016, World Bank) ^b 21.0 (2015, PAHO) ^e
Maternal mortality rate per 100 000 births (2015)	88 ^g
Estimated cases of Malaria (2015)	4,931 (World Bank) ^c 5538 (PAHO) ^g
Number of reported death due to Malaria (2014)	1 ^d
Incidence of TB per 100 000 population per year (2015)	24 ^b
HIV prevalence as percentage among adults 15-49 (2016)	0,5 ^b
Death due to AIDS	800 ^d
Cause of death by NCD as percentage of total (2015)	56,7 ^a
Death by violence (interpersonal violence) (2015)	5,900 ^b
Top five causes of mortality as percentage of deaths (2012) ^c	1. Lower respiratory infections (12%) 2. Interpersonal violence (11,5%) 3. Ischaemic heart disease (7,3%) 4. Diabetes mellitus (4,6%) 5. HIV/AIDS (4,2%)
Top five causes of DALYs ³ (2012) ^c	1. Maternal, neonatal, nutritional 2. Other NCDs ⁴ 3. Suicide, homicide and conflict 4. Neuro-psychiatric conditions 5. Acute respiratory infections

^a WHO Global Health Estimates 2015: Disease burden by Cause, Age, Sex, by Country and by Region, 2000-2015 [WHO c] ; ^b World Bank World Development Indicators [World Bank a] ; ^c WHO Global Health Observatory [WHO a] ; ^d WHO Global Health Estimates 2015: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2015 [WHO d]; ^e PAHO Core Indicators Health Situation in the Americas [PAHO c].

³ Disability-adjusted life years (DALYs) are the sum of years of life lost due to premature mortality (YLL) and years of healthy life lost due to disability (YLD).

⁴ Other noncommunicable diseases (NCDs) including non-malignant neoplasms; endocrine, blood and immune disorders; sense organ, digestive, genitourinary, and skin diseases; oral conditions; and congenital anomalies.

Notably enough, the life expectancy has risen since 1991, from 58 for the men and 63 for the women to 70 and 76 respectively (World Bank a, 2017). The under-five mortality rate has been declining since the 90s from approximately 80% to 27% (PAHO c, 2017) but remains above the Americas average. The maternal mortality has been decreasing from 1990 to 2005 but has been stable since and is also above the region average. Lower respiratory infections as top five cause of mortality has been slightly decreasing since 2000 but interpersonal violence, ischaemic heart disease, diabetes and HIV/AIDS have remained stable (WHO a, 2017).

The role of the traditional Mayan health sector is rather important and plays a uniquely crucial role compare to the rest of the region. The definition of the state of well-being in those communities is rather broad and encompass good health both physical, mental and spiritual. An illness is considered as a disequilibrium of the body. There is a continuing dysfunction between traditional and Western beliefs and practices. Biomedicine tends to ignore traditional medicine in an effort to appear scientific. Hitherto, health among people relying on traditional medicine has deteriorated with the intrusion of Western practises. Self-treatment is very common with herbal-treatment and drugs bought at vendors that often lack of training. Antibiotics can be found rather easily without prescription also expensive and lead to misuse. Therefore, there is a need to make the professional health care facilities more culturally inclusive and also financially more accessible (Adams and Hawkins, 2007).

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