

REGIONAL REPORT: NORTH AMERICA

GLOBAL FOOD SECURITY INDEX 2019

Supported by



North America

Global Food Security Index 2019

Food security in North America

North America is home to the strongest agricultural and economic powerhouse countries in the world. Canada, Mexico and the United States have highly productive agricultural sectors, and are among the top exporters of goods such as maize, soybeans, pork and various fruits and vegetables.¹ The three countries enjoy high GDPs, comparative political stability and a plentiful food supply, strengthening overall food security. However, food security in the region does face challenges. All three countries rank in the top 20 for prevalence of obesity. Rising inequality, political threats, risks from climate change and natural resource degradation threaten food security, both now and in the future. These challenges cannot be ignored without potential consequences for food security.

Measuring food security: The Global Food Security Index

How food-secure are the countries in North America? To answer this question, The Economist Intelligence Unit, supported by Corteva Agriscience, conducts an annual benchmarking assessment called the Global Food Security Index (GFSI). The 2019 GFSI marks the eighth edition of this study and considers three core issues of food security: affordability, availability, and quality and safety. The index also explores the risk to food security from exposure to climate change and other natural resources challenges. This report presents the key findings for the three countries in North America included in the index.

Regional performance

Average regional scores	Score/100
1 North America	78.5
2 Europe	75.8
3 Middle East and North Africa	64.8
4 Asia Pacific	64.2
5 Central and South America	61.7
6 Sub-Saharan Africa	47.9

Regional statistics

GDP per capita (PPP)

Highest	United States	US\$32,516
Lowest	Mexico	US\$19,870

Total regional population

Highest	United States	331.9m
Lowest	Canada	37.4m

Prevalence of undernourishment

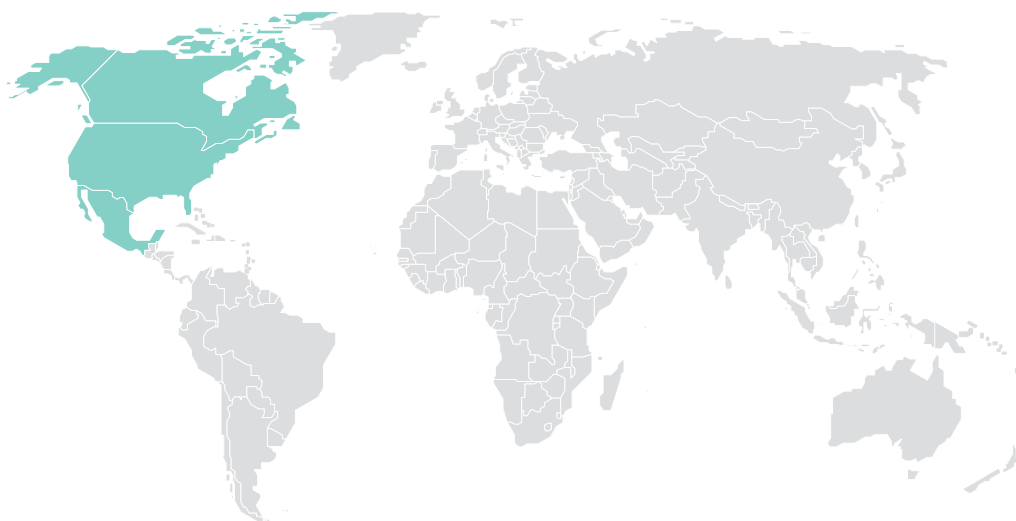
Highest	Mexico	3.6%
Lowest	Canada & United States	<2.5%

Prevalence of obesity

Highest	United States	37.3%
Lowest	Mexico	28.4%

Regional country ranking

	Rank/113
1 United States	3
2 Canada	8
3 Mexico	=43



Overview of findings

The three countries of North America are among the world's biggest economies and have some of the strongest environments for food security globally. In these higher-income countries, undernourishment rates are low, food and micronutrient availability is high and critical food safety infrastructure such as potable water and access to electricity is well established. However, political challenges such as shifting US trade policy and pockets of violence and corruption in Mexico threaten both food affordability and availability. Furthermore, all three countries face natural resource management and climate change risks through degradation of land, water and marine ecosystems.

In wealthier, more food-secure countries, nationwide food security metrics are strong, but may hide varying levels of access to sufficient, quality food among different populations. Income inequality is on the rise across the region, presenting a barrier to ensuring food security and access to healthy nutrition across each country, including vulnerable populations. Furthermore, countries with a more abundant food supply often face challenges related to overconsumption – obesity and its health implications. Across North America, countries can improve overall food security capacity by ensuring that healthy, nutritious food remains accessible and affordable in light of political shifts, growing inequality and climate-related and natural resource risks.

North America: Overall rankings

Rank		Score / 100
1	United States	83.7
2	Canada	82.4
3	Mexico	69.4

Key regional findings:

Key strengths

- Strong food safety nets are present across all countries, with national coverage and established funding mechanisms.
- All three countries have sufficient food supplies and availability of micronutrients to meet their population's needs.
- Access to financing for farmers is strong, with broad financial systems existing in all three countries.
- Estimates for food losses between harvest and transport to consumers are lower than for other regions, indicating robust post-harvest handling infrastructure.

Key gaps

- Despite low agricultural tariffs for most favoured trading partners, changing US trade policies and increased use of tariffs could impact food affordability.
- Transport infrastructure has room for improvement, particularly road infrastructure, which can ensure consistent access to food for rural and remote populations.
- Political insecurity, corruption and violence are risk factors for ensuring food accessibility in Mexico.
- High obesity rates require further attention through nutritional policies, guidelines and interventions.
- Water quality needs further attention in all three countries: agricultural water quality is at risk in Mexico and the United States, while certain coastal regions in all three countries face high risk for eutrophication (oxygen depletion).

Affordability

The first category of the GFSI measures food affordability by assessing factors including the ability of consumers to purchase food, their vulnerability to price shocks, and the presence of programmes and policies to support consumers when shocks occur. Strong economies, low levels of poverty and strong food safety nets and agricultural finance systems in all three countries make North America the highest-ranking region for food affordability. However, some challenges do face the region, including economic uncertainty and changes in regional and international trade dynamics. In the wake of these changes, well-funded food safety nets are all the more important for ensuring food security.

North America: Affordability rankings

These are the rankings for all countries in the region for the Affordability category.

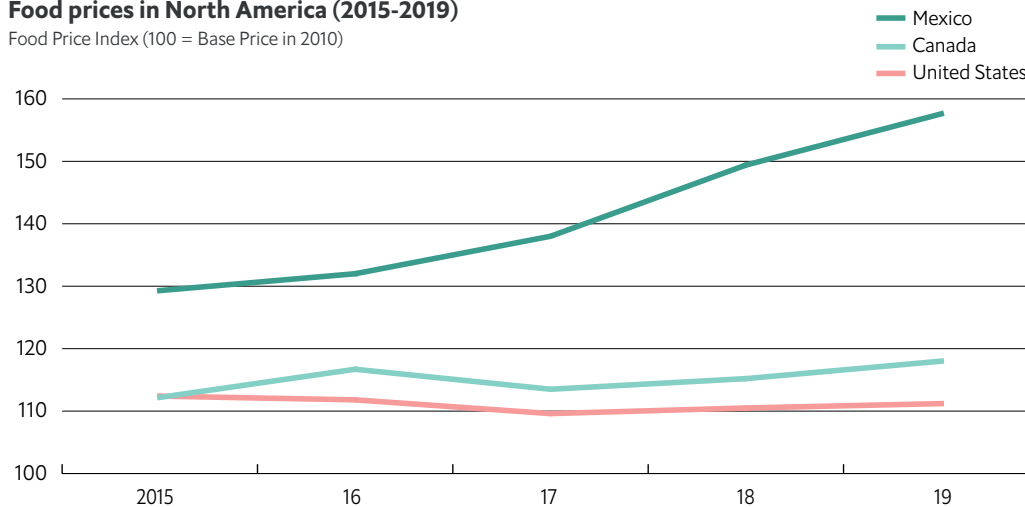
Rank		Score / 100
1	United States	87.4
2	Canada	83.3
3	Mexico	74.9

Key regional findings:

- Changing trade policies in the US pose a risk to local farmer incomes and food affordability.** Data from 2017-18 shows that the United States has the lowest agricultural import tariffs for most favoured nations in the region. Lower tariffs on food imports help to keep food prices low, indicating that the United States has an advantage in this respect. However, import tariffs for most favoured nations tell only part of the story. As the United States imposes tariffs on food imports from Europe, and China places tariffs on US agricultural exports, economists have projected that these costs will be passed on to the US consumer, making all purchases, including food, more expensive.^{2,3}
- All three countries have robust food safety net programmes and access to finance for farmers.** Although agricultural finance in Mexico is slightly weaker than in the United States and Canada, all three countries have at least broad financing available for farmers. While food safety nets have national coverage and dedicated funding, governments should ensure that these are sufficient for meeting needs of all vulnerable groups (such as indigenous populations).
- Food prices in Mexico are rising at a faster pace than in Canada and the United States.** In the past year, average food costs increased by nearly 5.5%, compared with 2.5% in Canada and less than 1% in the United States. Food prices in Mexico have risen steadily since 2016, largely due to a combination overall inflation and excise taxes on sugary beverages and processed foods.^{4,5}

Food prices in North America (2015-2019)

Food Price Index (100 = Base Price in 2010)



The Food Consumer Price Index (Food CPI) measures the change in price of the average basket of food goods in each country. Each country is scaled so that the price of the average basket of food goods equals 100.

Source: Food and Agriculture Organisation (FAO)

Availability

A second dimension of the GFSI measures food availability through assessing factors such as the sufficiency of the national food supply, risk of supply disruption, capacity to disseminate food, and research efforts to expand agricultural output. Across all three countries, there is an abundant food supply, meaning that food should be easily available. However, some challenges do remain, particularly in regards to equality of availability. Vulnerable populations, including rural communities, low-income households and indigenous communities, may not have the same access to food availability as the majority of each country. Furthermore, the abundance of food, as well as the nutritional quality of the available food, are likely a contributing factor to the rise in obesity rates across all three countries. In order to strengthen overall national food security, countries should focus on ensuring that quality food is available across all populations within the country.

North America: Availability rankings

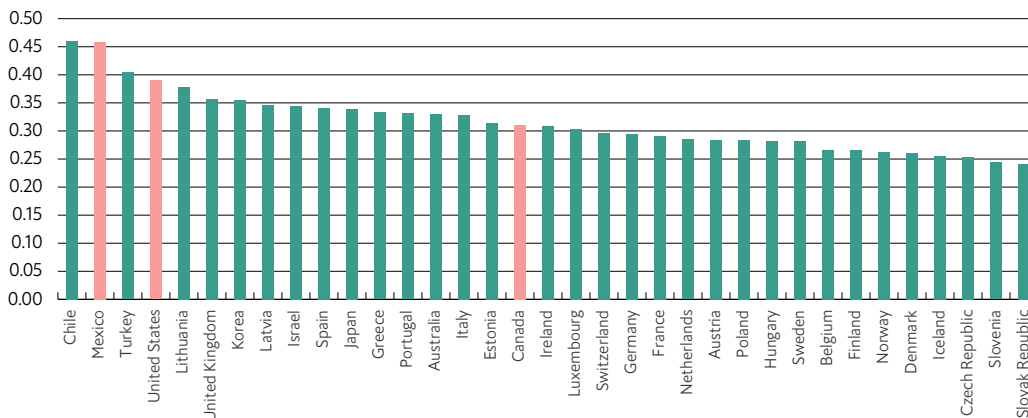
These are the rankings for all countries in the region for the Availability category.

Rank	Country	Score / 100
1	Canada	80.0
2	United States	78.3
3	Mexico	62.3

Key regional findings:

- North American countries have an abundant food supply – between 30-50% more than what is needed to meet the population’s food requirements.** All three countries have more than enough food to meet the needs of their respective populations. Coupled with low levels of food loss (between 1-5%), it is clear that there is a sufficient supply of food able to reach marketplaces. Food insecurity in these countries is more a factor of issues such as economic access to available food and unequal distribution of availability within the country, rather than an insufficient supply. Economic inequality not only hinders access to food overall, but also results in lower-income populations opting for cheaper, calorie-dense foods over more expensive, more nutrient-dense options. Mexico and the United States in particular, have high levels of inequality compared to other OECD countries.
- Transport infrastructure is strongest in Canada, while there is room for some improvement in the United States and Mexico.** The United States’ road, port and rail infrastructure ranks as “good” but not “very good,” indicating room for improvement across each metric. Mexico’s infrastructure is ranked as “moderate”, indicating even further room for improvement. Road infrastructure in particular is crucial for food access, especially for rural and remote locations within each country.
- Food availability in Mexico is at risk owing to potential threats in government service delivery.** As with many countries in Latin America, Mexican voters made their frustration with corruption and violence known in the most recent elections. However, these problems are difficult to resolve, and the continued existence of these challenges has led to higher levels of political instability in Mexico compared with its northern neighbours.⁶

GINI coefficients in OECD countries



The GINI coefficient measures income inequality in country. A coefficient of 0 indicates complete equality, while a coefficient of 1 represents complete inequality. Chile is ranked as the most unequal OECD country, followed by Mexico, Turkey and the United States.

Source: Organisation for Economic Co-operation and Development (OECD)

Quality and safety

This final category of the GFSI measures the variety and nutritional quality of the average diet, as well as food safety. In all three countries, there is a strong foundation for access to nutritious, safely stored and handled foods. Key micronutrients, such as Vitamin A and iron, are widely available, consumption of quality proteins is high and diets are not overly dependent on starchy sources. However, rising obesity rates indicate that both the quantity and quality of food in the diet require improvement, and countries should be focusing on addressing these through nutritional guidelines, policies and monitoring. Without serious attention, these countries will continue to face high burdens of non-communicable diseases including heart disease, diabetes and certain types of cancers.

North America: Quality and safety rankings

These are the rankings for all countries in the region for the Quality and safety category.

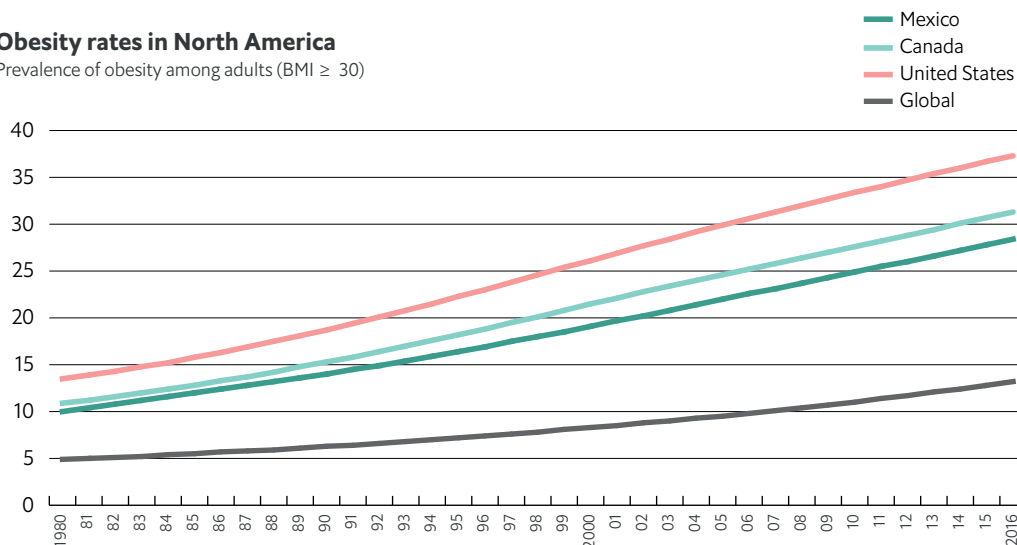
Rank		Score / 100
1	United States	89.1
2	Canada	86.7
3	Mexico	75.2

Key regional findings:

- **Although Canada and the United States have higher levels of dietary diversity than Mexico, data for all three countries indicates strong availability of key micronutrients and consumption of quality protein.** In the United States and Canada, over 70% of dietary calories come from non-starchy sources, compared with 56% in Mexico. Diversity of food sources ensures the consumption of essential vitamins and nutrients, including amino acids from protein sources. All three countries have high scores for availability of Vitamin A, iron and zinc.
- **Although micronutrient availability may not be a pervasive challenge in the region, government commitment to nutritional standards remains important to address deficiencies in vulnerable populations.** All three countries have evidence of nutritional guidelines, plans and ongoing nutrition monitoring. While micronutrients are widely available, this does not mean that they are equally accessible and consumed across the population. Nutritional monitoring helps to identify gaps in micronutrient access and consumption, and policies and guidelines help governments and health organisations to share information on how to address these dietary gaps.
- **Nutritional policies are also critical for combating rising obesity rates.** Nutrition policies and guidelines help countries navigate population-specific challenges such as overconsumption and the accompanying health challenges of poor diets. Approximately one-third of the population in all three countries are obese, elevating the risk of heart disease, diabetes and certain cancers.

Obesity rates in North America

Prevalence of obesity among adults (BMI ≥ 30)



Source: World Health Organisation (WHO)

Natural resources and resilience

In addition to the three core factors outlined above, the GFSI assesses how exposure to climate risks and the three natural assets crucial to food security (water, land and oceans) can affect a country's overall food security picture. This is used as an adjustment factor that serves as a lens through which food security can be viewed to demonstrate changes to the overall score when climate-related and natural resource risks are taken into account, but not as a mainstream criterion to determine index rankings.

While North America faces comparatively lower risks to food security from natural resources and resilience threats, all three countries still face a few serious challenges. Given the importance of the agricultural sectors in the region, these risks pose a threat not only to food security, but also the overall economy.

North America: Adjusted overall rankings

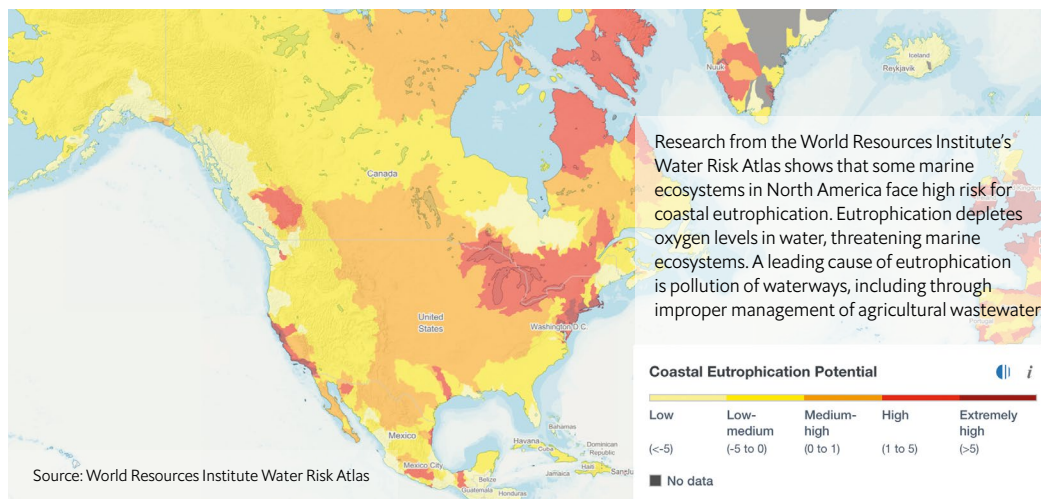
These are the overall index rankings taking into account the score adjustment for Natural Resources and Resilience risks.

Rank		Score / 100
1	United States	75.6
2	Canada	75.3
3	Mexico	60.9

Key regional findings:

- Poor land and water quality is a threat to agricultural production in Mexico.** According to UN data, an estimated 47% of Mexico's total land area is degraded, meaning that the biological and economic productivity of that land has been compromised. Estimates from other institutes indicate that this figure may be even higher – at nearly 60%.⁷ The World Resources Institute suggests that the risk to Mexico's agricultural water quality is elevated (as is water quality in the United States). The decline in soil and water quality has been attributed to factors such as overgrazing, poor resource management and improper use of pesticides.⁸ Compromised natural resources jeopardise the ability of Mexican farmers to produce enough food both for domestic consumption and for export.
- Canada is more vulnerable to drought and flooding risk than its neighbouring countries to the south.** Although all three countries face some drought risks, Canada is the most vulnerable to weather events involving either too much or too little precipitation for agriculture. The most recent drought in 2017 led to widespread wildfires, leading to loss of crops, livestock, buildings and equipment.⁹ Canada is also among the 15 countries most susceptible to flooding included in the GFSI. Although most media coverage of flood risk in Canada focuses on coastal communities and cities, flooding is a major threat to agriculture. A Canadian crop insurance company's internal assessment found that 49% of crop loss claims between 2006 and 2015 related to flooding, versus 18% caused by drought.¹⁰ However, Canada is far less susceptible to severe storms than Mexico and the United States, possibly due to the fact that it is not adversely affected by hurricanes.
- Coastal eutrophication is a risk for all three countries.** Deoxygenation of coastal waters is a risk in certain river, lake and ocean and other coastal areas across North America. In the United States and Canada, for example, the Great Lakes region faces high eutrophication risk, as does the Balsas River basin in Mexico. Caused by factors including agricultural and urban run-off and industrial waste, eutrophication can harm marine ecosystems (including aquaculture) and human health.

Coastal eutrophication potential in North America



Improving food security in North America

Key takeaways

1. In the face of rising inequality, investments which improve food security for vulnerable populations, including rural populations, are key for improving food security. One example is investing in transport infrastructure, particularly roads, which can ensure that food is available even in rural and isolated regions. For example, as noted by the International Fund for Agricultural Development (IFAD) in 2017, while only 21% of Mexicans live in rural communities, they accounted for two-thirds of the country's population living in extreme poverty.¹¹
2. In the wake of shifting trade policies and increased tariffs, the United States should ensure that food safety nets and other support systems are sufficient to meet the needs of populations at risk of food insecurity due to temporary or permanent loss of employment and income. However, social safety net systems in the country are at risk of reduced funding rather than expansion.
3. Combating obesity will require further attention and investment in nutrition. Countries should prioritise nutritional policies, interventions, guidelines and monitoring to reduce overall obesity rates, and thereby tackle associated severe non-communicable disease impacts. Mexico, for example, implemented an excise tax on foods viewed as contributing to obesity as a way to reduce their consumption.
4. Water quality is a crucial aspect of food security, particularly for countries with economies dependent on agriculture. The region should take steps to improve the quality of riverine, lake and coastal ecosystems at risk from deterioration due to pollution. The Food and Agriculture Organisation notes that agricultural practices play a major role in water quality, and improved livestock management and integrated pest management strategies are critical for mitigating negative effects on these ecosystems.¹²

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