

Is North Korea Headed Toward Another Famine?

Introduction

In the 1990s, the Democratic People's Republic of Korea experienced a massive famine under the rule of Kim Jong-Il that devastated the country. Reliant on food and agricultural imports from the Soviet Union and the People's Republic of China, North Korea suffered following broken trade ties. In addition to their struggling economy, "the country suffered a series of natural disasters, including floods and drought" that destroyed their agricultural sector (Encyclopedia Britannica). Hundreds of thousands died from malnutrition and starvation. However, the economy and central planning of government-owned business sectors have experienced modest improvement since. Even under Kim Jong-Un, there has been little bureaucratic accountability. He has been more transparent relative to his father, and the outlook is dire. Based on economic, agricultural, and international factors, it begs the question: *is North Korea heading toward another famine?*

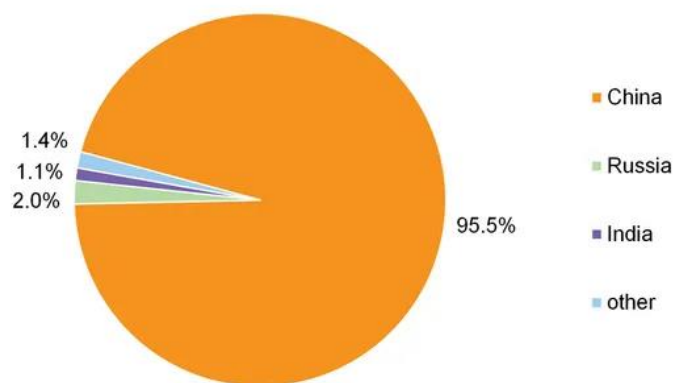
What is the status of North Korea's economy?

The overall status of North Korea's economy is generally unknown. The nation releases very little diagnostic information regarding its economic progress. The World Bank, SDG Country Profile, Economist Intelligence's Country Profile, and Index of Economic Freedom struggle to outline where North Korea stands in the global economy. However, many believe the North Korean economy is doing rather poorly. According to The Heritage Foundation's Index of Economic Freedom, North Korea has the lowest-functioning economy of any non-failed state. The only nations ranked lower include failing states such as Afghanistan, Somalia, and Syria (Index of Economic Freedom). The Heritage Foundation cannot accurately provide many statistics but

estimate a total decline of 13% in North Korea's economy since 2019. Estimations of gross domestic product with purchasing power parity are unavailable.

The Sustainable Development Goals' Country Profile notes that North Korea experienced a -4.60% decline in GDP. Comparably, South Korea's GDP increased by 2.51% (SDG Profile – South Korea). North Korea may experience “a moderate recovery in trade with China” in 2022 after their relationship has recently suffered due to the effects of COVID-19 (Economist Intelligence). The nation is still reliant on others for imports, as it was on the former Soviet Union. According to the Encyclopedia Britannica, one of North Korea's main imports has been food, beverages, and "other agricultural products." Since the DPRK's trade with China makes up a preponderance of its imports, any decrease severely impacts food availability.

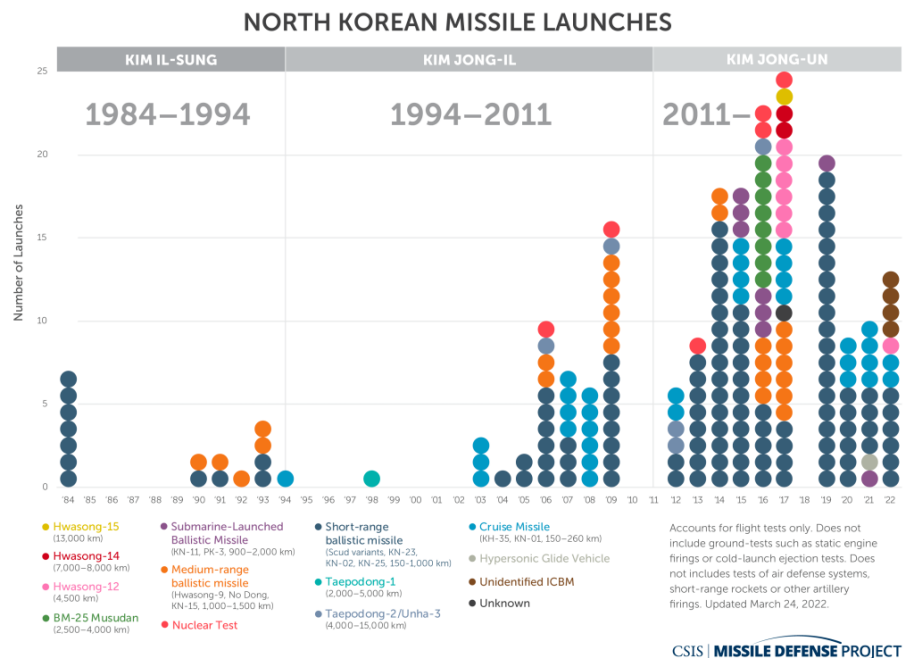
North Korea major import sources (2017)



Source: Encyclopedia Britannica

Following the COVID-19 pandemic, the North Korean people are likely suffering more. Such despair is caused in part by worsening sanctions and trade agreements. In just the 21st century, the United Nations Security Council has increased sanctions nearly every year since 2003 (Council on Foreign Relations). Most sanctions appeared to be in response to ballistic missile testing. Even DPRK leader Kim Jong-Un [promised to focus on the economy in 2022](#). Yet, according to the

Center for Strategic and International Studies, North Korea has launched close to 15 ballistic missiles. The regime even filmed [a state-supported propaganda video for missile production](#) this year. The 2022 statistic surpasses the past two years' worth of tests. It indicates that Kim Jong-Un has no intentions of mending the broken economy, contributing to the evidence that it is struggling.



Source: CSIS Missile Defense Project

What is the status of North Korea's agricultural sector?

Due to the communist nature of North Korea, the Kim Regime controls its entire centrally-planned agricultural sector. Free-market principles do not govern the economy, and it often experiences shortages. Since the famine, it has remained suffering. “North Korea has had a chronic shortage of chemical fertilizers, seed grains, and farming equipment” in the past three decades (Encyclopedia Britannica). The nation's staple crop, rice, was in dire short supply during the famine of the 1990s. With increasing climate concerns, such as worsening drought and dry periods, the survivability of rice is likely even lower. Furthermore, North Korea's forest land area dropped

from 53.6% to 50.1% in 2020 (SDG Country Profile – DPRK). This decrease may cause the country's already non-arable land to become more difficult to farm due to erosion.



A woman collecting spare corn in North Hwanghae Province, Kaesong, North Korea

Source: Getty Images

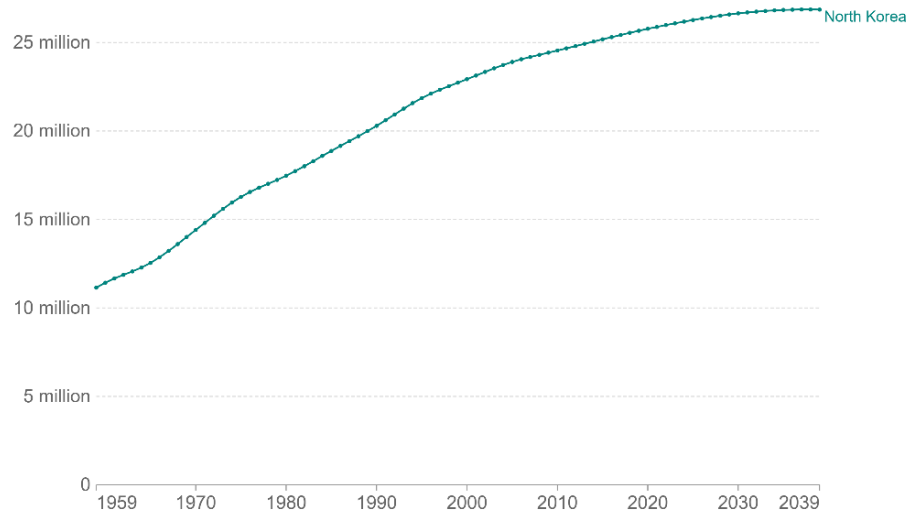
A recent agricultural assessment by the Center for Strategic and International Studies contributors indicates that “2020 crop yields...still left a food gap of approximately 860,000 tons – equivalent to roughly 2.3 months of food use”. According to their normalized-difference vegetation index, certain provinces struggle acutely with crop density, even in the summer months. The Kumgangsan province is doubtlessly the worst, followed by the Ryanggang province (CSIS Agricultural Assessment). These regions are some of the furthest from Pyongyang and contain the poorest and most ostracized citizens. Their mountainous nature makes it extremely difficult to maintain sustainable crop yields. Thus, most North Koreans likely go through the worst winter months without access to food. If conditions are anything like the famine of the 1990s, people will

push the extremes of morality to fill their stomachs. To listen to an anecdotal account of the horrific 1990s famine by Yeonmi Park, click [here](#).

Population, 1959 to 2039

Historical estimates of population, combined with the projected population to 2100 based on the UN's medium variant scenario.

Our World
in Data



Source: Gapminder (v6), HYDE (v3.2), UN (2019)

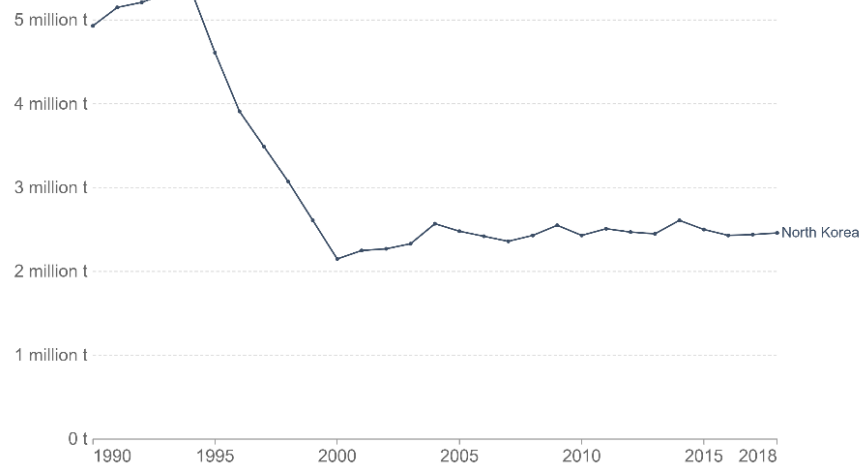
Note: Historical country data is shown based on today's geographical borders.

OurWorldInData.org/future-population-growth • CC BY

Nitrous oxide emissions

Nitrous oxide (N₂O) emissions are measured in tonnes of carbon dioxide equivalents (CO₂e) based on a 100-year global warming potential value.

Our World
in Data



Source: Nitrous oxide emissions by sector (CAIT)

Note: Emissions from land use change and forestry are included.

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

Source for both figures: Our World in Data

Additional agricultural evidence points to famine conditions. These two graphs depict data charts for North Korea. The top chart shows population growth (millions) in North Korea from 1959 to 2039 (predicted). The bottom chart shows nitrous oxide emission levels in North Korea from 1990 to 2018 (millions of tons). Agricultural fertilizer is a considerable producer of nitrous oxide emissions. North Korea produces and relies on fertilizer for viable crop output. In 1994, the height of North Korean nitrous oxide emissions hit 5.37 million tons. During this year, the population was 21.58 million. In 2018, the population rose to 25.55 million, but nitrous oxide emissions were only 2.46 million tons.

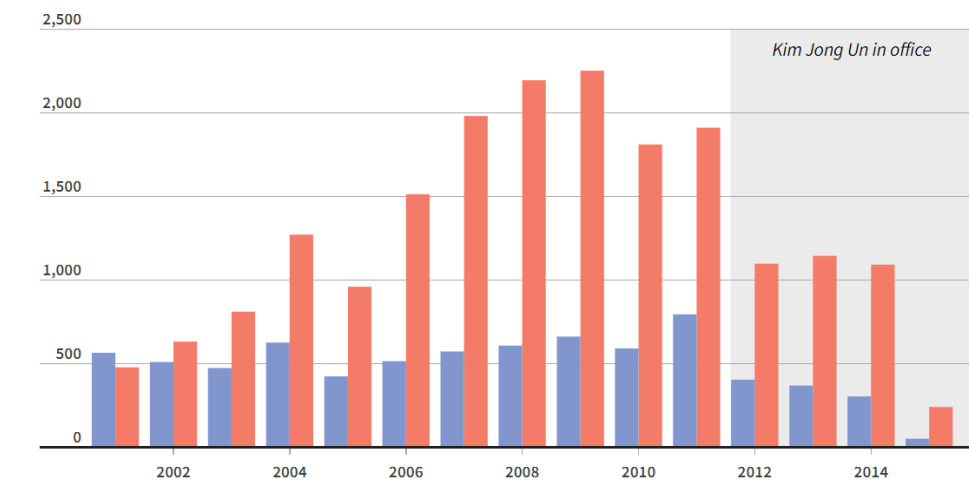
During the famine of the 1990s, nitrous oxide output plummeted, along with fertilizer production. This decrease caused a severe shortage of food and, thus, starvation. Since the famine, the population has grown to just over 4 million people. However, nitrous oxide output, and likely fertilizer production, is deficient. North Korea's land has not gotten more fertile, especially with climate change's impact. Lower levels of fertilizer production, with little arable land and more mouths to feed, lead to exceptional food stress. Therefore, the data provide evidence of potential famine conditions inside North Korea.

How would a famine impact different aspects of North Korean domestic politics?

Defectors

If famine were to occur in North Korea, defection numbers would likely go up. The nation's first agricultural disaster provides evidence for this trend. "Hundreds of thousands of North Koreans escaped to China throughout the 1990s to find food and work" (Human Rights Watch). This rate compares to a general trend of 1,000 to 3,000 known individuals a year. However, high defection rates are not a proven concomitant of famine conditions. Even though countless pieces

of evidence point to a current famine in North Korea, defection rates are sparse. [COVID-19 restrictions](#) have seemingly prevented many North Koreans from defecting to countries like China and Mongolia. According to Al Jazeera, “Pyongyang had issued shoot-to-kill orders in its border areas,” beginning in 2020. Thus, even though food insecurity is likely widespread, pandemic restrictions may be keeping many North Koreans from escaping.



Source: Reuters Graphics

Relaxation of Prohibited Activities

The most substantial change that occurred in the Democratic People’s Republic of Korea during the 1990s famine was the use of free trade black markets. Typically, North Korea harshly punishes any entrepreneurial activities. “At first, markets operated on the barter system, where desperately hungry people could exchange anything valuable for food...” (Human Rights Watch). However, some of these experimentally capitalist markets have been springing up again today under the slightly-loosened grip of Supreme Leader Kim Jong-Un. Jaw-dropping findings show that “76.7% [of North Koreans] claimed they had engaged in market activity and bartering to survive” in 2017 (CSIS Markets Assessment qt. in Forbes). Many individuals predict that such economic liberalization may one day collapse the regime entirely.

What can the world do?

With most evidence supporting a new famine in North Korea, it may seem impossible to help. International organizations have done so much to intervene, and it is doubtful their efforts reach the North Korean people. Sanctions have effectively crippled the economy. However, they also weigh down on starving, suffering civilians. Thoughts of a U.S. invasion of North Korea would only delegitimize their sovereignty and spark a potential nuclear war against South Korea and Japan, America's allies. International agreements, such as non-proliferation treaties, are continuously violated by Kim Jong-Un. The Supreme Leader seems to care more about his nuclear arsenal than anything else. It seems only one diplomatic effort has been successful. President Donald Trump's visit with Kim-Jong Un halted missile testing for an entire year in 2018 (CSIS Missile Launches). However, it was short-lived.

Since top-down efforts prove futile on North Korea's realist international stage, the world must turn to bottom-up approaches. Non-governmental organizations and non-profits that support defection from North Korea and integration elsewhere are changing lives. The outside funding and support of grassroots markets and free trade may eventually topple the regime. Additionally, and most threatening to North Korean sovereignty, is the influx of outside media. Simple exposures, such as movies, have pushed North Koreans to flee. Organizations should also continue to educate people globally about the nation's human rights violations. Though these endeavors are lengthy and uncertain, they may provide permanent changes. However, to combat the worsening famine in North Korea, international organizations should continue to contribute unrelenting agricultural and medical aid. To help the people of North Korea, click [here](#) and [here](#).

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