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(In the Kim Jong Un Era) How Is the North Korean Food Situation?



I. Introduction

Since the adoption of the Universal Declaration of Human Rights (UDHR) in 1948, the international community has sought to protect the value of human rights. At the same time, it has strived to create a system that actually protects the human rights of all of the world's people. As a consequence, in 1966, the International Covenant on Economic, Social and Cultural Rights (hereinafter 'ICESCR'). This covenant recognizes labor rights, rights to social security, health, education, food, and shelter.¹

Article 25 of the UDHR stipulates: **"Everyone has the right to** a standard of living adequate for the health and well-being of himself and of his family, including **food**, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control."²⁾ Article 11, paragraph 2 of the ICESCR specifies the right to food in more concrete terms: **"The States Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger,** shall take, individually and through international co-operation, the measures, including specific programmes, which are needed".³⁾

The UN Committee on Economic, Social and Cultural Rights proclaims that "The principal obligation is to take steps to achieve progressively the full realization of the right to adequate food. This imposes an obligation to move as expeditiously as possible towards that goal. Every State is obliged to ensure for everyone under its jurisdiction access to the minimum essential food which is sufficient, nutritionally adequate and safe, to ensure their freedom from

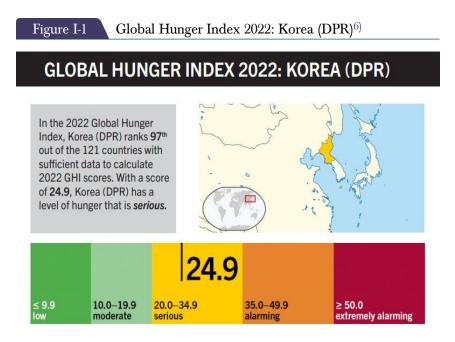
¹⁾ North Korea ratified this convention on September 14, 1981.

²⁾ MOFA, "International Human Rights Regulation," https://www.mofa.go.kr/www/wpge/m_3996/contents. do> (Accessed March 1, 2023).

³⁾ Ibid.

hunger."⁴⁾ In other words, the right to food is a fundamental right directly connected to the right to life. While it is the individual who exercises this right, the mandate to respect, protect, and realize this right falls on the state.

However, reports on the food situation in the DPRK published by international organizations indicate that North Koreans are not guaranteed a chance to access the minimum amount of food essential for survival. According to the Global Hunger Index 2022, hunger in North Korea is labeled 'serious' the country ranks 97th among 121 states with a score of 24.9. This number shows the severity of the food shortage in North Korea.⁵



⁴⁾ CESCR, "General Comment No. 12: The Right to Adequate Food (Art. 11 of the Covenant)," para. 14.

⁵⁾ The Global Hunger Index was developed to measure the global, regional, and national levels of hunger and track changes. The Irish NGO Concern Worldwide, the German Welthungerhife, and the US research organization IFPRI are involved in publishing and maintaining it. Concern Worldwide, *Global Hunger Index 2022*, https://www.globalhungerindex.org/pdf/en/2022/Korea-DPR.pdf (Accessed February 7, 2023).

⁶⁾ Ibid.

In addition, according to *the State of Food Security and Nutrition in the World 2022* jointly published by the Food and Agriculture Organization (hereinafter FAO), the International Fund for Agricultural Development (hereinafter IFAD), the United Nations Children's Fund (hereinafter UNICEF), the World Food Program (hereinafter WFP) and the World Health Organization (hereinafter WHO), 10.7 million or about 41.6% of the North Korean population were undernourished between 2019 and 2021, an increase of about 2.6 million from 8.1 million and an increase of 8%p from 33.8% in 2004-2006.⁷)

These numbers are highly significant. The year 2004 was when the country picked off from the famine (the so-called 'Arduous March') - when the majority of North Korean people were troubled with securing food.⁸) The fact that undernourishment has risen compared to then shows just how serious the food shortages are in North Korea right now.

As such, the international community emphasizes the importance of the right to food in its direct impact on quality of life, and the responsibility of the state to ensure food. Nonetheless, the share of the malnourished population is increasing amongst the North Korean people, and the international community is warning of the 'seriousness' of hunger and malnutrition. Hence, it reveals that North Koreans' right to adequate food is not being protected.

What are the causes of this persistent malnutrition originating from food shortages? First of all, one can point to the country's insufficient food production. The continued inability to produce food in sufficient amounts has meant that the people lack adequate nutrition. Internal issues in the North

⁷⁾ Food and Agriculture Organization of the United Nations(FAO), The State of Food Security and Nutrition in the World, https://www.fao.org/3/cc0639en/online/cc0639en.html> (Accessed February 7, 2023).

Amnesty International, "North Korean Food Shortages, Rights to Food," July 30, 2021. https://amnesty.or.kr/4219 7/> (Accessed March 13, 2023).

Korean system related to food production further add to these difficulties. Namely, the food distribution system is unequal and irrational in its functioning, and many people grapple with farming in small-scale fields to cope with an unstable food supply. In addition, the failure of policies designed to increase food production and the state's continued excessive procurement quotas even amidst continued insufficient production have combined to worsen North Korea's food crisis.

This report examines the causes of food shortages that have persisted into the Kim Jong Un era. In so doing, it seeks to shed light on why the right to food, which all North Koreans should undeniably enjoy, continues not to be guaranteed. (In the Kim Jong Un Era) How Is the North Korean Food Situation?

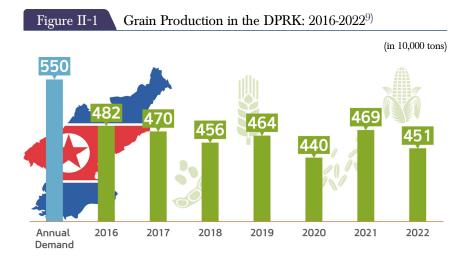


North Korea's Current Food Situation

II. North Korea's Current Food Situation

1. Chronic Food Shortages

North Korea's grain production in 2022 is estimated to have been 4.51 million tons, a decrease of 180,000 tons from 4.69 million tons in 2021, and overall grain production has been declining since 2016. In particular, North Korea has been unable to secure food in a stable manner as grain production has fluctuated every year since 2019. (See Figure II-1)

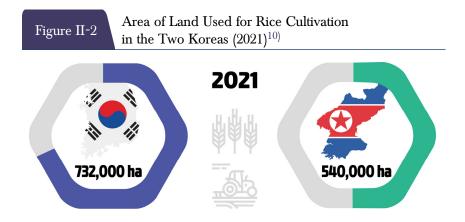


North Korea's annual grain demand is estimated to be about 5.5 million tons. Since 2016, the average production of all grains including rice, wheat, corn, and barley, is estimated to be about 4.6 million tons – an annual deficit of about 1 million tons. One million tons of food is equivalent to the amount of food consumed by all North Koreans for more than a couple of months, which

⁹⁾ Based on reconstruction from Korean Rural Development Administration data.

signals that an insufficient food supply hinders North Koreans from the right to food annually.

Insufficient production of cereals including rice and maize, and in addition, trends in the production of crops corroborate that the food shortages facing the North Korean people are even more critical. First of all, it is known that maize and rice are the staples of the North Korean diet.



Generally, the North Korean people are known to rely on rice and maize as staples. However, in reality, most North Koreans primarily subsist on corn and potatoes. Only around 17% of North Korean land is suitable for cultivation, with approximately 30% of this being appropriate for rice paddies. Hence, North Korea has unfavorable geographic conditions to cultivate rice only around 74.3% of South Korea's land is for rice farming.¹¹ (See Figure II-2) What is more, the climate is ill-suited for rice production. Hence, North Korean agriculture has settled on corn and potatoes - two crops known for high yields per unit of land. However, as seen in Figure II-3, corn and potato output are either declining

¹⁰⁾ Statistics Korea, Results of North Korean Rice Cultivation Land Survey 2021, February 25, 2022.

In 2021, South Korean rice cultivation extended over 732,000 hectares of land, whereas North Korean rice farming occupied 540,000 hectares (74.3% of South Korean levels).

year on year, or are not produced in sufficient quantities to feed the whole North Korean population. As a result, food shortages persist.



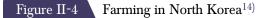
Figure II-3 North Korea's Crop Output: 2016-2021¹²)

2. The Kim Jong Un Regime's Response

According to the 'Voluntary National Review On the Implementation of the 2030 Agenda(VNR)' submitted by North Korea to the UN in June 2021, the North Korean authorities enumerated the following reasons for the country's declining food production: natural disasters and low resilience to mitigate their impacts, a scant number of agricultural equipment, and low levels of mechanization. In this report, North Korea also argued that while it has introduced scientific agricultural methods to raise food production, epeated typhoons and floods, have brought down the output. Further, limitations on agricultural land have led to large-scale land reclamation projects in the West Sea area. These efforts have been met with significant difficulties such as soil acidification and losses in fertile soil caused by flood.¹³

¹²⁾ Author's reconstruction based on data from Statistics Korea.

¹³⁾ DPRK, "Democratic People's Republic of Korea Voluntary National Review On the Implementation of the





The report also asserts that the authorities endeavor significantly to sustainably develop animal husbandry, fruit and vegetable cultivation and fisheries beyond cereal production, encourage cooperative (within collective farms) and individual subsidiary production of livestock, and broaden areas for fish farming to further raise output.

In the VNR report, the North Korean authorities also illustrated that during the 2021-2025 fiveyear strategy, a range of efforts to resolve the food issue, including the production of seeds, the introduction of scientific agricultural methods, increasing output from low output-lands, the reclamation of new lands, irrigation, and mechanization. It added that agricultural science and the development of technology, as well as active cooperation with international agencies were deemed as routes to sustainable development and food self-sufficiency.¹⁵

²⁰³⁰ Agenda," (June 2021), pp. 15–19, https://sustainabledevelopment.un.org/content/documents/282482021_V NR_Report_DPRK.pdb (Accessed February 7, 2023).

¹⁴⁾ Rodong Sinmun, March 18, 2023. (Photo=News1)

¹⁵⁾ DPRK, "Democratic People's Republic of Korea Voluntary National Review On the Implementation of the 2030 Agenda," pp. 15~19.

In the Kim Jong Un era, the North Korean government has continually stressed the importance of agriculture to fill in its food shortfall. In 2019, Rodong Sinmun, the mouthpiece of the Workers' Party of Korea (WPK) Central Committee, said in a political essay titled 'Let us Support the Party with Increased Rice' that Kim Jong Un had asserted: "We can live without gold, but we cannot live even a day without rice … Rice is more precious than gold. Agriculture most of all has literally the deep and fundamental foundation of constructing a strong socialist nation." He went on to say: "there must be much rice in order to hold the banner of our state first-ism further aloft, and further strengthen our home of socialism."¹⁶ Kim meant all cereals for the word 'rice'. Calling for greater production of all cereals in order to secure more foodstuff was arguably a tacit admission that this was the most imminent agenda facing the North Korean authorities. In reports, references were made to the 'arduous march' of the 1990s, when the country was in absolute poverty, further underlining just how desperate the North Korean authorities were.

Figure II-5

Rodong Simmun Political Essay Emphasizing the Importance of Rice¹⁷⁾

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지 유 영국 우이다. 지 유 영국 이 우리 아이다. 지 유 영국 인국 지 아이지 가 아이다. 지 유 인국 지 아이지 아이지 아이지 아이지 아이지 아이지 아이지 아이지 아이지 아	방안가지 이해가 주거해있는 것 두 것이다. 3 지원는 2 나이에 소전한 북한 가지는 2 나이에 소전한 북한 지원지 한 사이에 지원에 가지 지원지 한 사이에 지원에 가지 지원지 한 사이에 지원에 가지 지원지 한 사이에 지원 전 구권에 지원 전 가지 지원지 한 사이에 지원 전 구권에 지원 전 지원지 한 사이에 지원 전 구권에 지원 전 지원지 한 사이에 지원 전 구권에 지원 전 지원지 한 사이에 지원 한 가지 지원지 한 사이에 지원 한 가지 지원 전 지원지 한 사이에 지원 한 가지 지원 전 지원 한 지원 한	지하기도 하는 지하는 이 같은 그에요? 이 가 하는 것이 있는 것이 같이 것이 있는 것이 같이 것이 있는 것이 있는 것이 있는 것이 같이 않아? 것이 같이 것이 것이 것이 같이 것이 같이 같이 않아? 것이 같이 것이 있 것이 같이 같이 것이 같이 않이 않이 않이 않아? 것이 것이 같이 것이 같이 것이 같이 않이 않이 않이 않아? 것이 같이 것이 같이 않이 않아? 것이 같이 것이 같이 않이 않아? 것이 것이 같이 것이 같이 않이	특별한 소위 신전들이다. 의사에 위 는 1. 소설을 운영하는 체험에 위한 는 1. 소설을 운영하는 제품에 위한 는 1. 소설을 위한 는	지역 이 가지 가지 않는 것이 있는 것이 같이 있는 것이 것이	며 그트루 크나는 희업에 전체계신 우리 분수님. 이렇도 취해를 인진의 어버어를 높이 모시고 사는 이 방식 농업으로가 들어지켜 《알고려 당을 방울시!)는 신청의 구분을 더 높이 추매하였다. 비가 취도 눈이 되도 한모습으로 목착히 이 방울 가꾸어가는 농업된 사들의 해끗한 비율을 알려진 수 1월	아내요 가지의 일부록을 통해 통 같다. 24 시 19 분위 신뢰 문 가지 10 시 10
아도 우비의 농업근로자들처럼 정도자의 거유한 말접금에 마금의 로 목을 맞추며 그레들으로 온전을 끌 이는 그런 순결의 인간들은 찾아보 지 못할것이다. 중겠으로 몰하는 심상의 박중마당	신 전기가 가지가 가장을 재구로 될 취준다. 방도의 당승 왕들자! 이는 우리 등 업근도자들이 위대한 수행님들을 영원히 높이 우레버모지고 당중상의 정도대해 회자의 나이가는 한테는 곳	고 도가하는 그 그는 가 가 3 월 근로자들이 밖아받는 격정은 적정 부 것이었던가. 우리 수행님께서도 지역에서 날 는 사업을 하고계선다. 제상에 우리 수행님 같으셔하는 없다.	3 이제 그동안 6 2 2000 가가가 가 형치제 올려버지아 한다. 경제하는 한수님의 핵사직인 시정 인접을 높이 받을고 자책생활대전군 대 총열기체가진 강전도근도자들은 시대의 배송 순위는 길의대회에서 당	사망이 관련 모양 높이 올려가는 이것 이야말로 그 누구도 홍대물수 없고 지이물수도 없는 주제조선의 위대 한 온연업체의 창모습이 아니겠는가. 구도인체 정치에 창도하여 사내졌는가.	져있다. 위대학 당승 발들이 피와 담승 아	시키지 못하고 위해를 받는 다음 아 대해을 세우느라 급급해하는 은 일본해를 관련히 뿌려들고 도 사업을 때견성있게 필고나갈 배면 높이란 가슴을 받아온수 없다.

¹⁶⁾ Rodong Sinmun, April 29, 2019.

¹⁷⁾ Ibid. (Photo=News1)

Again in December 2021, the Fourth Plenary Meeting of the Eighth Central Committee of the WPK adopted a 'new programme for socialist ruralconstruction'. This included creating a prosperous countryside, a leap in agricultural productive capacity, and fundamental improvements to rural living conditions. It is noticeable that the stress was laid on wheat in relation to agricultural production. Previously in his policy speech to the Supreme People's Assembly in September 2021, Kim Jong Un emphasized the importance of wheat production. At the plenary meeting, he demanded "change [in] the grain production structure of the country and powerfully propel rice and wheat farming", aspiring "to shifting the dietary culture of our people to the one with rice and flour food as staple food."

This draws the following question: why would Kim Jong Un seek to promote the production of wheat flour instead of corn, as the primary staple in the North Korean diet? A plausible explanation is that international sanctions have thwarted the country's corn production. Corn is a high-yield crop relative to the land required, thus being the staple of the North Korean diet. But repeated cultivation of the crop degrades the fertility of land.¹⁸ Consequently, fertilizer is essential to revitalize the fertility of the land. However, with international sanctions as barriers to fertilizer imports, the production of corn has unavoidably dwindled.

¹⁸⁾ In other words, the capacity of the land to grow crops.



Figure II-6

Fertilizer Imports from China since Kim Jong Un Took Power¹⁹⁾

Accordingly, the North Korean authorities apparently have proposed wheat as an alternative due to its relatively lower fertilizer requirements, the fact that it can be grown from autumn to winter, and the possibility of double-cropping. However, farmers have acquired decades of rich experience with maize agriculture, but have relatively little with wheat. Hence, switching from an agricultural focused on one to the other may result in further unpredictability with yields. Additionally, recurring drought and flood damage may make double-cropping impossible, and thus disrupt the efforts to secure sufficient food. The biggest problem with a wheat-centered agricultural policy is the lack of flour-processing facilities. Currently, the country has one in Pyongyang – the Pyongyang Wheat Flour Processing Plant. But this factory alone cannot meet all the flour needs of the North Korean people. Hence, even if wheat production

¹⁹⁾ Korea International Trade Association (www.kita.net), "North Korean Trade Statistics."

rises, it is unclear how the authorities plan on turning this wheat into food. Thus, such a policy appears unlikely to improve the country's food situation.

In sum, the paper evidently described food production and the fact that North Korea's food production has been insufficient relative to the country's needs on a yearly basis. The authorities have actively poured in efforts to overcome these problems – actively setting out agricultural policies to secure foodstuff. Why have such efforts failed to resolve the situation? First of all, as noted above, the most important causes are the country's inhospitable climatic conditions, the lack of fuel and equipment due to sanctions, the lack of agricultural technology to increase food production, and the suspension of aid because of border closures since the outbreak of COVID-19. Nevertheless, as aforementioned, the fundamental cause of food shortages in North Korea is not just those related to challenges in securing food due to natural disasters and external factors, but also to internal factors, such as unreasonable and insufficient rationing, inefficient food production policies, and excessive food requisitions. In the Kim Jong Un Era How Is the North Korean Food Situation?



The Causes of North Korea's Perennial Food Shortages

III. The Causes of North Korea's Perennial Food Shortages

1. Nuclear Weapons Development and Sanctions on North Korea

A. Exorbitant Cost Earmarked for the Nuclear Program

North Korea is believed to have invested some \$1.1-1.6 billion in its nuclear weapons program to date. Were this to have been spent on the purchase of food instead, the country could have bought 1.5-2 years worth of its annual shortfalls of rice (1.41-2 million tons) or 3-4 years of its annual deficiency in corn (2.82-4.1 million tons) according to some experts' estimates.²⁰⁾ What is more, in 2022 alone, North Korea launched a total of 71 missiles including Intercontinental (ICBM), Intermediate-range (IRBM), and Short-range ballistic (SRBM) missiles. Each ballistic missile launch is believed to cost: \$30 million for ICBM; \$15 million for IRBM; and \$5 million for SRBM. Such estimated unit expenses imply a huge total cost of \$530 million for ballistic missile launches last year. Even if we account for lower missile production costs due to lower labor costs relative to the western world, North Korea is estimated to have spent \$200 million in total – enough to buy 500,000 tons of rice, enough to feed all North Koreans for 46 days, and enough to meet 50-60% of the country's estimated food shortfall based on some analysis.²¹

Hence, the North Korean regime has continued to use enormous amounts for ballistic missile launches, but has disregarded the food situation - violating the North Korean people's right to food. As a result, a humanitarian food crisis

^{20) &}quot;North Korea spent 2 trillion won on nuclear development, a sum equivalent to resolving four years of food crisis", Dong-a Ilbo, September 27, 2022.

^{21) &}quot;North Korea fired missiles with money able to feed the whole population for 46 days, surges in death by starvation as the food crisis deepens," *BBC News Korean*, December 20, 2022.

has emerged, and the regime cannot avoid the criticism that this is a crisis of its own making.

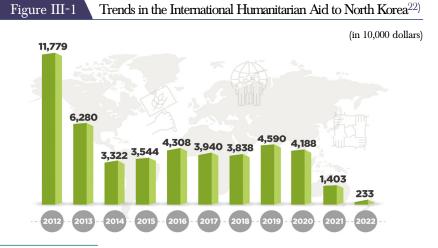
B. Impact of Sanctions on Rations

In addition, testimony from a North Korean defector reported that the food situation has decayed in the country and the rations either decreased or suspended as international sanctions nagainst North Korea's nuclear development began in earnest in 2016, resulting in less trade. At the Musan mine in North Hamgyeong, rations of 700-900g of rice were provided up to 2016, but from 2017, they were reduced to 400-500g, and in 2018, rations ceased altogether. A North Korean defector who defected in 2019 testified that rations halted as sanctions impeded the export of iron ore to China from 2017. Also, testimony indicated that when Jang Song Thaek was still alive, the mining companies were well off thanks to coal exports, but since 2017, exports have largely stopped and the food situation has been in dire straits. While workers are supposed to receive rice and corn in rations, they received coarse corn and corn on the cob. Thus, the quantity of edible food has decreased. In addition, the paths to export dry mushrooms, pine nuts, etc. have been blocked, hurting those involved in commercial activities. In addition, testimony indicates that these sanctions have made it difficult for North Koreans to smuggle items from China. This has further exacerbated shortages of rice and other supplies, undermining people's livelihoods.

2. COVID-19 and Border Blockade

North Korea's measure to seal its borders after COVID-19 has also had an adverse impact on the food situation in North Korea. Despite suffering from chronic food shortages, North Korea imposed a border blockade in 2020 which completely restricted human mobility and trade in goods with the outside world. As a result of this self-isolation, trade with China was suspended, leading to decreased food imports and growing difficulties when it comes to carrying out trade activities, hitting the country's financial capacity to purchase food from overseas.

Also, the North Korean authorities' border blockade measures to prevent the intrusion of COVID-19 have also had an adverse effect on the international community's aid activities, resulting in a reduction in external aid. Pyongyang has opted for international isolation ordering officials of international organizations to withdraw since the COVID-19 pandemic. The international community provided \$2.33 million in aid to North Korea in 2022, just 1.9% of the \$1.1779 billion they provided in 2012, the first year of Kim Jong Un's rule. Even as the sanctions were in place against the continued development of North Korea's nuclear weapons in 2016 and 2017, the international community continued to send around \$30-\$40 million worth of aid. But aid declined to just \$14 million in 2021, and drastically dropped to a mere amount of \$2.33 million in 2022. (See Figure III-1)



22) United Nations Office for the Coordination of Humanitarian Affairs (OCHR) Fund Tracking Service (FTS).

Alongside this drop in the size of aid, according to the WFP's Annual Food Distribution, the provision of food aid to North Korea plunged to 16,590 tons in 2020 and 6,079 tons in 2021, compared to 24,841 tons in 2019 prior to the pandemic.²³⁾ The international community is not expected to significantly boost its aid to the North in 2023. The UN Office for the Coordination for Humanitarian Affairs (OCHA)'s Global Humanitarian Overview 2023 express ed that in the years 2021-2023, it had no plan to provide assistance to North Korea. The OCHA expressed that because of the difficulties in access to North Korea, there is insufficient information to monitor the aid provision in a verifiable fashion. Thus, the office added it is inconceivable to organize activities within North Korea. Their report stresses that it is crucial for representatives from international organizations to be permitted to return to the North, to supply aid and help people in need of assistance as soon as possible.²⁴)

However, Pyongyang has thus far appeared to refuse international aid with Rodong Sinmun writing on January 18, 2023: "the imperialists are not generous to anyone. When they offer something, it entails an ulterior motive … The 'aid' and 'advanced technology' they offer are to make others dependent [on them], and the 'alliances' and 'cooperation they go on about are to dominate others".

As COVID-19 spread across North Korea in May 2022, stringent lockdown and blockage measures were imposed, leading to restrictions on movement and greatly hampering agricultural activities as a result of difficulties in labor mobilization. In addition, as the North Korean authorities ordered the sudden closure of the majority of marketplaces (*jangmadang*) to prevent the spread of COVID-19, residents lost their main source of income as well as places to purchase food and other daily necessities. With the closure of the marketplaces

^{23) &}quot;WFP, "75% drop in food aid to North Korea after COVID-19"," Radio Free Asia, September 2, 2022.

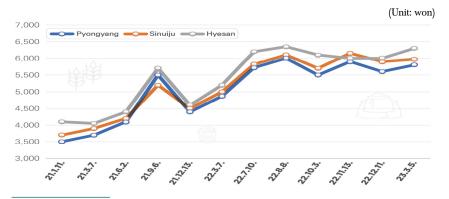
^{24) &}quot;UN excludes North Korea from aid plans for three straight years…'important to allow international representative s back rapidly," VOA, December 2, 2022.

(*jangmadang*), North Koreans formed so-called 'grasshopper markets' to trade food. Such ad hoc markets are generally located on the fringes of official marketplaces in back alleyways and roadsides to avoid crackdowns by the authorities. As these markets are frequently shutdown during crackdowns and then reopened abruptly, product prices tend to be high.

Changes in the price of rice since the start of the COVID-19 pandemic in Pyongyang, Sinuiju and Hyesan demonstrate continual hikes. (See Figure III-2) In early January 2021, rice cost 3,500 won per kilo, and prices peaked at 6,280 won in July 2022, while prices were around 6,000 won as of February 2023. Thus, rice prices have soared by some 71.4% in the capital since the start of the coronavirus pandemic. In July, August, and November 2022, rice traded above 6,000 won a kilo in Pyongyang, Sinuiju, and Hyesan – for the first time since 2017.

The North Korean authorities have prohibited the movement of their people and closed markets as quarantine measures. For that reason, North Koreans have encountered difficulties in getting hold of foodstuff. Markets for daily necessities, including food, have thus been driven underground.

Changes in the Price of Rice in Major North Korean Cities: Pyongyang, Sinuiju and Hyesan²⁵⁾



25) Daily NK, "North Korean Market Trends."

Figure III-2

On that account, the market ceased to function as the major supplier of food, North Koreans began to look for food covertly at high prices, while those lacking economic resources failed to acquire food. Consequently, dissent appears to have spread across society. The authorities have introduced a new grain policy and passed the new Anti-Deception Act in order to deal with corruption in grain distri bution. Worsening food shortages have inevitably resulted in increased corruption during the purchase and distribution of crops, including the falsification of the data on crop harvests and individuals' theft of crops. In response, the North Korean authorities reportedly discussed measures to combat corruption during the procurement and distribution of crops at a meeting of the Politburo of the WPK Central Committee held on September 25, 2022. North Korea's strict crop management shows the gravity of the food crisis. Additionally, in October 2022 the authorities stopped private sales of food, and moved to rationalize grain prices while starting the sale of grain at consigned prices (discounted relative to market rates) at grain sales stations. Since the country had issues in supply, the 'new grain policy' apparently has had little effect. Moreover, the new grain policy, despite under the pretext of providing food for a more affordable price to the people, has, in fact, made the state monopolize the sales of food. Accordingly, even the people with sufficient economic prowess to purchase food in places such as jangmadang have fewer options to secure food, hindering more people from accessing food regardless of their economic circumstances. Thus, the new grain policy and passage of new laws governing the distribution of grain have created a rigorous system of grain management. This alone demonstrates how serious the food situation must be. This policy has led to a vicious cycle of violating the right to food for all North Koreans.

Following a steep drop in food production and transactions due to the COVID-19 lockdown, it appears that the number of deaths from hunger has surged in North Korea. Prior to COVID-19, testimonies from North Korean defectors who witnessed incidents of starvation were waning. However, many people have reportedly starved to death in Kaesong and the Hamgyeong Provinces, underscoring the severity of food shortages in North Korea. The occurrence of deaths from starvation in South Hwanghae resulted from a nationwide ban on inter-regional movement due to COVID-19, and theC closure of marketplaces (*jangmadang*) amidst food shortages resulting from drought and deluge. In such circumstances, people unable to secure food starved.²⁶)

Further, recently in Kaesong, dozens of people have been discovered dead from starvation on a daily basis. As a consequence, Kim Jong Un has reportedly sent officials and his aides to Kaesong twice to ascertain the situation on the ground and to introduce measures to appease the public. Kaeso ng, one of three special cities in North Korea along with Rason and Nampo, is a large city of political and economic significance. Starvation in this very city



reflects the gravity of North Korea's recent situation regarding food availability, irrespective of the region – whether it is an urban or rural area.

Other circumstances also allude to the dismal conditions of food in North Korea. Recently, North Korean people suffering from starvation are selling blood for food, an increasing phenomenon after North Korea's border blockade in light of COVID-19. (See Table III-1)

^{26) &}quot;People dead from starvation discovered in rural South Hwanghae, 'tragedy' as people fail to find food amidst national lockdown," *Daily NK*, May 31, 2022.

Table III-1 A Testimony on Selling Blood for Food²⁷

It's nothing new to sell blood to pay for a meal.

There have long been cases of extracting and selling blood for money. However, in the past, some girls would sell their blood to earn quick cash without their parents' knowledge because they lacked money at home but yearned to dress nicely and eat delicious food.

Then the pandemic struck, which caused border closures. People have no longer been able to make a living by collecting scrap metal or digging up herbs, pushing many to resort to selling their blood.

When they were too busy and without food, people made ends meet by selling their blood once or twice, but it was not a sustainable practice. More importantly, how much blood can be drawn from people who have not eaten properly?

As a result, there have been more cases of people passing away, particularly in Hyesan, where some felt their days were numbered and prepared their final meal using the money they earned from selling blood.

A few days ago, a family in Hyesan drew their blood, sold it for one meal, left a note, and then committed suicide, prompting the city authorities to enforce regulations.

Simply put, this is not a world that humans can live in.

Consequently, growing accounts of death by starvation and of people selling blood imply that the North Korean authorities' quarantine measures - in response to COVID-19 - have further compounded the difficulty of obtaining food for the North Korean people.

3. Insufficient Rations

Under Cabinet Order 56 issued in March 1952, North Korea adopted regulations governing food rationing by the state. In May of the same year, the

²⁷⁾ A testimony of a North Korean defector, March 2023.

food rationing system was officially introduced and has remained in operation since.²⁸⁾ However, in the 1990s, the economic crisis meant that the system became dysfunctional. From 1995, only a select group received rations – while suspended for others. In 2002, following the adoption of the 'July 1st Economic Management Improvement Measures,'²⁹⁾ the system transitioned from providing rations for free to one that provided them at an 'appropriate price'. But the state declared in October 2005 its intention to normalize the system of food rationing, and thereafter forbade the trade in grain among individuals. The state sought to monopolize the sale of grain through the state-run food supply centers. Following the November 2009 currency reform, it attempted again to normalize the rationing system as part of policies aimed at restoring the planned economy. However, as of now, the rationing system has not been able to provide for all North Koreans, only for some workers and party members, that is, a privileged group.³⁰

A. State Rations

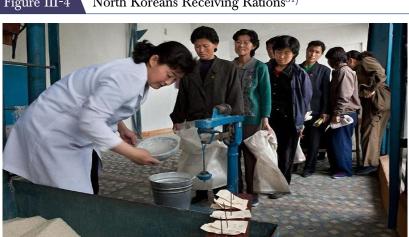
As mentioned before, North Korea initiated a rationing system in which the state systematically distributes consumer goods and food to the people, in order to address shortages in food and consumer goods during its formative years and maintained it ever since - utilized the system as a major means of managing the planned economy and maintaining social control. However, according to recent testimonies by North Korean defectors, even though North Korea officially maintains a system of rationing, it has not been functioning properly as food rations are provided in a differentiated and discriminatory manner.

²⁸⁾ National Institute for Unification Education, North Korea Knowledge Dictionary, (Seoul: National Institute for Unification Education, 2021), p. 311.

²⁹⁾ The July 1st Economic Improvement Measures were adopted in 2002 (on July 1st, as the name suggests). They included wage and price reforms, expansions to the autonomy of factory and firm managers, and a strengthening of material incentives offered to workers. These measures introduced some functions of the market economy to the existing planned economy.

³⁰⁾ National Institute for Unification Education, North Korea Knowledge Dictionary, pp. 312-313.

Defectors' testimony indicates that since Kim Jong Un took power, the country's rationing system has remained in a poor state. In the early days of his rule, rations were delivered, but insufficient in quantity relative to norms, or only delivered sporadically, and thus not expedient to resolve the country's problems of undernourishment. According to a defector who left the North in 2014, up to the spring of that year, he/she had received 5-6 months of rations, but stopped thereafter. According to multiple defectors who left in 2016, rations were not provided regularly - either sporadic or temporary provisions being common. According to another defector in his/her thirties, he/she had only heard about "receiving rations" - and not actually experienced it. And a defector who left the country in 2019, told that even when he/she received a month's worth of rations, he/she would not survive a month with it. When the rough corn was polished, the weight would significantly fall. Hence, food was always insufficient. Another defector said that in 2017, a potato factory opened, so they received 100kg of potatoes. But most of these were rotten, and thus not edible.



North Koreans Receiving Rations³¹) Figure III-4

^{31) &}quot;In North Korea, with the Party Congress, firms are told to take responsibility for food rations," Yonhap News Agency, May 5, 2016. (Photo=Cap Anamur)

Thus, food rations provided by the state are neither sufficient nor consistent, and since the benefits are centered mainly on specific groups such as party officials and Ministry of State Security (hereinafter MSS) agents, it has not contri buted to addressing food shortages suffered by ordinary North Koreans at all. A North Korean defector who left in 2017 said that an MSS agent received 200-300 kg, two years of food, at once. While another defector said that party officials received the most rations, followed by the MSS, prosecutors, and police management (Ministry of Public Security).

Especially, people working at the Central Party or specifically tasked with managing party funds at Office 39 or the Taehung General Bureau under Office 39 had, according to the testimony of multiple North Koreans, no issue in sustaining life with rations – in terms of quality and quantity. A defector who left in 2015 said that a member of the MSS would receive either 15kg of corn or 12kg of rice per month. Further, while an average worker would receive moldy corn of inedible quality, MSS agents received corn in comparatively moderate condition.

However, even within the elite, food rations are provided on a discriminatory basis. While professionals like doctors and teachers are part of the social elite, th eir rations are insufficient nutritionally relative to those provided to those working in powerful organs. Thus, clinicians and educators cannot live on rations alone and are often economically reliant on patients and students' parents. A defector who left the country in 2015 stated that while MSS agents and Ministry of Public Security (MPS) agents received rations in line with norms, teachers and doctors only received one-third of the designated amount. According to a defector with experience working as a nurse, in the early Kim Jong Un period, she received no rations while working as a nurse, nor did doctors. A defector who left the country in 2018, affirmed that teachers and doctors received rations mainly in autumn, with rations being so tiny that teachers could not live on them alone. Testimony from another defector maintained that doctors received ration cards from their hospital, and then received rations in the form of corn or wheat flour from a ration station. However, while they received rations every fortnight, these were only sufficient to last a week. Because the amount of ration received was minuscule, they needed help from family and friends to buy additional food at markets.

B. Enterprise-Level Rations

At the state level, the rationing system is defective. Hence, the North Korean people also receive rations from their workplaces, but the quantity of rations is contingent on the profitability of the firms they work for. Enterprises that provide relatively satisfactory rations include those operating munitions factories and mines and those that earn revenues in foreign currency.

In the case of the munitions industry, rations are stably provided compared to factories and enterprises in other sectors because the industry serves as the basis for maintaining North Korea's economic system and regime. A number of North Korean defectors have testified that those employed in munitions-related enterprises received rations relatively well. A defector who left in 2018 and had worked at a machine tools plant in North Pyeongan manufacturing munitions said that he/she received 150kg of corn and 30kg of rice annually. An average North Korean did not receive any rations, but those working in the production of munitions receive 6 months' worth of rations in the form of corn annually, told a defector who left North Korea in 2019. According to a defector who left in 2017, even in the same factory, rations were determined differentially depending on the department. For instance, he/she said that if you work in a munitions-related department, like the munitions mobilization department, rations are more reliable. The minerals produced in mines developed through Chinese investment are exported to China, generating substantial trade profits. Workers at such mines have received relatively stable food rations relative to workers working in other industries – even if their rations are still insufficient in quantity terms. A defector who left in 2015 said that their father worked in a mine in Yanggang Province, receiving both wages and food rations – only possible as he worked at a mine. Furthermore, a defector who left in 2017 said that people living in Musan, North Hamgyeong mainly work in the military or in mining and those in the military may not receive rations, but those working in mines do.



Further, enterprises that earn foreign currency have been found to have a more favorable ration situation. According to a defector who left in 2016, foreign trade companies in Yanggang Province granted 25kg of rice every month to their employees. A former worker at a log-trading company who left North Korea in 2019 said that they received 55kg of unpolished rice quarterly. The mother of a

³²⁾ Rodong Sinmun, November 26, 2022. (Photo=News1)

defector who left in 2019 and had worked as an official in an export factory received 50kg of rice monthly, enough to feed the family. Her husband, who had a job at a Chinese joint venture, received rations regularly every month, including 5kg of cooking oil, and three square meters of firewood in both spring and autumn. Some defectors also said that workers at enterprises that earn foreig n currency are offered rations from the workplace, and this has given rise to the perception that 'those who work with foreign countries don't need state rations.'

However, an increasing number of testimonies have been collected reporting that food rations were not provided at all or substantially decreased at an average state enterprise. A number of North Korean defectors also reported that food rations did not exist at all for state enterprises. This is because the state does not provide rations uniformly and firms rather provide them directly, differentially depending on their profitability. First, among those who said that rations were provided - even in small quantities - a construction worker received 200kg of a 500kg ration of potatoes annually, and a railroad construction worker received three months in quantity terms of an annual ration. In addition, according to a defector who left North Korea in 2017, firms "with power" provide the equivalent of 3-5 months' of rations on an annual basis, while those "without power" provide a month's amount of rations. Multiple North Korean defectors said that an average firm is unable to provide anywhere near the size of rations needed, and it is difficult to survive on food rations received.

In addition to this, a large number of defectors stated that there were no rations at all. According to a defector whose son worked at a taxi firm, his/her son never received any rations. Testimony also indicated that workers with various professions - railroad workers, nursery teachers, nurses, and schoolteachers - did not receive any rations. Other defectors said that not only did they not receive rations, but they also did not hear of workers at other firms receiving any.

C. Rations within the Military

Since the military is an important foundation for maintaining the regime in the DPRK, the military is prioritized in receiving rations, and the food situation of those in the military is better than that of the general population at large. A North Korean who left in 2018 said that when her husband worked in a general clinic they did not receive any rations, but after they moved to a military clinic to work as a military doctor, they received 15kg of rice and 17kg of corn every month. Another defector who left in 2017 similarly said that the rations in the military unit he/she worked at were moderate so they did not worry about food. Submarine units, airforce pilots, Kim Jong Un's bodyguards inter alia received p referential treatment. A defector whose husband was a military officer received 20kg of food for themselves and 34kg for their family, enough to live on.

However, military units where food rations are plentiful are uncommon, and many military officers suffer due to a lack of rations. Even though the military is granted priority, ordinary soldiers are not given sufficient food rations due to rampant corruption, like embezzlement by higher-ranking military officers. According to a defector who defected in 2016, new recruits at the army near the border ate no better than prisoners on a diet of steamed corn, and became gaunt after two months in service. Another defector said that average North Koreans believe that they cannot get a hold of rations because all food is allocated to the military. But in actuality, there are many feeble soldiers. According to testimony from a defector who left in 2019, cadres often steal food, so an average soldier's rations shrink, and the items available change. For instance, if soldiers are supposed to be provided 100kg of rice each, they actually receive 50kg of corn. Over a ten-year period as a conscript, because cadres steal all the food, soldiers only end up with 120-150g of food.

Testimonies indicate that soldiers stole food from civilians owing to

insufficient food rations in the military. A North Korean defector who defected in 2015 testified that he ordered soldiers to steal crops or enter civilian houses to steal other food items because otherwise, they could not survive in the military. While serving as a storage manager in the military, North Korean defectors indicate that rations were so tiny that they had to rob food and livestock from civilians. Whereas about 80% of North Korean soldiers are in a physically weakened state, they stay at their posts because they will be imprisoned at prison camps if they go AWOL. A North Korean defector who left in 2018 also testified that soldiers were told to loot. They were ordered to rifle through houses for crops or other food. This testimony indicates that soldiers are coerced to engage in stealing food from civilians by their superiors.



Indeed, multiple defectors stated that they suffered looting at the hands of soldiers while living near military units. A defector who lived near a unit before leaving in 2013 said that soldiers had stolen rice, kimchi, among others, but he/

³³⁾ Kang, Dong-wan, Pyongyang 882.6km, (Seoul: Neonadeuli, 2020).

she was unable to protest against them. Another said that soldiers had nothing to eat, so they came to civilian areas to steal food or livestock. As a result, his/her daughter had to stay home from school to protect his/her house. In borderland areas, when North Koreans smuggle goods from China, soldiers take food or a free meal in return for turning a blind eye.

4. Limits on Self-Sufficiency of Food at the Individual Level

A. Farming on Small Plots

With rationing systems of the state and enterprises largely out of order, North Koreans cultivate various forms of small plots such as vegetable gardens and small paddy fields to make up for the shortfall in rations. Generally in North Korea, a 'kitchen garden' is a patch of land attached to a dwelling that is legally recognized by the North Korean state for private cultivation. Article 24 of the North Korean constitution states: "Private property is property owned and consumed by individual citizens. The products of individual sideline activities including those from kitchen gardens, as well as income from other legal economic activities shall also be private property. The State shall protect private property and guarantee by law the right to inherit it."

Thus, personal farming for personal consumption is permitted – and not for commercial gains. Whereas kitchen gardens are legally permissible, mountainside plots, which began as an effort to overcome the deteriorated food crisis at the individual level, are unauthorized. However, while the latter is illegal in principle, because North Korea has serious food problems, the authorities either neglect such practices or even acquiesced to them.

The majority of North Korean defectors have either themselves or had a family with experience engaging in small-scale mountainside farming to resolve

food problems. Multiple North Korean defectors attest that this form of agriculture is a vital source of food to the North Korean people, and underline that without it, life would be very difficult. farmers generally plant corn, soybeans, potatoes, etc. with vegetables like red peppers, cucumbers, and cabbages also being farmed as ancillary crops. According to a defector who left in 2014, they harvested 800kg of corn in their kitchen garden, consuming all of it. Another who left in 2018 said that they had 2 *pyeong* (6.6m²) kitchen garden, so they farmed basic vegetables like cabbages, garlic, and spring onions to help resolve their food needs.

Mountainside plots are larger than kitchen gardens. A defector who left in 2014 farmed a plot of around 1,000 *pyeong* (330m²). The plot was around one to two hours away from the city, and produced enough food for their survival. Another who left in 2018 had a plot of around 800 *pyeong* (2,650m²) where they farmed corn and soybeans. Another said they had a plot that produced around a ton of potatoes, 150-200kg of corn, and 100kg of soybeans.



34) The Institute of Peace Affairs (IPA), "Neighborhood near Hyesan Chongnyon Station." (Photo=IPA)

In general, North Koreans use mountainside plots as a way of getting food for themselves or their families, but in some cases, they utilize them for economic purposes, such as selling crops to marketplaces (*jangmadang*) to make a living. A North Korean defector who left in 2016 said that he/she used a kitchen garden to produce about a ton of corn, consumed some, and then sold the remainder in a marketplace (*jangmadang*) to buy oil and clothes. Another who left in 2019 stated that he/she planted cabbage, lettuce, eggplants, tomatoes, red peppers, cucumbers, and garlic on 400-500 *pyeong*(1,300-1650m²) kitchen garden. Until 2015, the price of vegetables had been satisfactory, but from then, the price dropped. So, it became difficult for him/her to earn even small amounts. During the kimchi-making season in the autumn, he/she could make considerable sums. This testimony indicates that small plot farming has become part of the private economy beyond being just a means of supplementing food shortages in the DPRK.

B. Challenges with Mountainside Agriculture

Many North Koreans usually engage in kitchen gardens and mountainside farming, but because the latter is illegal, they have to bribe forestry protection inspectors, and/or pay land taxes (land usage fees). A defector who left in 2017 farmed a plot of around 700 *pyeong*(2,300m²), and paid forestry inspectors 3kg of corn, and 2kg of soybeans annually as a bribe. They also paid 5,000 North Korean won ostensibly to pay for forest fire protection. Another North Korean defector said that they paid 15,000 won in land taxes for around 300 *pyeong*(1,000m²), while one said they paid 10,000 won on around 1,000 *pyeong*(3,300m²) of land. Overall, there is no agreement among the testimony regarding a per *pyeong* (33m²) land usage charge, with numbers ranging from 10 won to 50 won even to 100 won per *pyeong*. This shows that a state-set amount does not exist. Because mountainside farming is illegal, some defectors have reported having their plots confiscated.

Moreover, since Kim Jong Un came to power, as reckless logging has created many bare mountains and floods have become more frequent, the regime has pursued forest restoration as a matter of land management. The concerted push for a 'forestry revolution', including designating 2015 as 'year zero of the forest restoration battle', has been accompanied by a ban on mountainside farming by North Koreans, and an emphasis on the tree planting projects. It appears that such policies have actually served to intensify the food problems facing the North Korean people. (See Figure III-8)

Figure III-8

Decrease in Mountainside Plots Due to the Forest Restoration Policy (2014/2020)³⁵⁾



A defector who left in 2016 said that from 2015, mountainside farming was banned by the authorities, so they continued farming secretly. Another who left in 2019 said that from 2015, tree planting campaign began with fields returned and resulting reforestation fueled the insufficiency in food supply further.

³⁵⁾ Kang, Ho-sang, "North-South Cooperation Planning through International Cooperation," KEI North Korean Environment Review, (2021), p. 31, cited in Pak, Ju-won, "Issues in Responding to Climate Change in the Forestry Sector and North-South Cooperation Plans," Joint Response to Climate Change through North-South Cooperation Planning Seminar, (2021).

Another defector said that while mountainside plots were banned and trees were planted, the trees were not well looked after and when they died, crops were grown in the land they left behind. The North Korean authorities' seizure of mountainside plots has engendered significant challenges for North Koreans in obtaining food. A North Korean defector said that the 'forestry revolution' under Kim Jong Un led to mountainside plots being confiscated and trees planted, but without extra food provision, these policies were essentially telling people to starve which led to considerable discontent among North Koreans.

5. Failure of Food Production Policy: Field Responsibility System (FRS)

The North Korean authorities have been operating the so-called Field Responsibility Management System or 'Field Responsibility System' (hereinafter FRS) since 2014. This system subdivides the existing production team system as part of a plan to reform the farmland system by modifying the management of cooperative farms. Under the new FRS, the lowest production unit in the collective farm, the 'sub-work team' (a sub-unit of the work team) was downsized from 10-15 people (of a work team) to 4-6 people, and these teams have been entrusted with specific fields. The heart of this new system is allocating land to farmers, and allowing them to keep and dispose of freely any surplus they generate beyond their production quota. It is believed that the split of the quota is 70:30, with 70% to the state and 30% to the farmer. This implies that larger harvests mean more output going to farmers, and thus the system should encourage farmers to raise productivity.

The FRS was experimented with in parts of North Hwanghae and North Hamgyeong in the early 2000s. But a lack of success led to its discontinuation. It was revived in 2012, after Kim Jong Un came to power. In 2014, in a letter Kim Jong Un sent to the 'National Conference of Subworkteam Leaders in the Agricultural Sector', he noted: "[e]qualitarianism in distribution has nothing to do with the socialist principle of distribution and has a harmful effect of diminishing farmers' enthusiasm for production." In so doing he stressed his determination to stabilize the FRS - laying emphasis on incentives rather than fair distribution. Thereafter, North Korea has further codified the section of the Farms Act detailing the FRS. (See Table III-2)

Table III-2	The Field Responsibility System as Specified in North Korea's Farms Act		
Article 22, Paragraph 2, Farms Act (2013 Revision)		Article 22, Paragraph 2, Farms Act (2020 Revision)	
Within the Sub-work Team Management System, farms shall immediately apply a m ² management system and contract system, the Field Responsibility System, and an Incentive and Punishment System to maximize the responsibility and role of farmers in agricultural production.		Within the Sub-work Team Management System, farms shall precisely implement the Field Responsibility System, and an Incentive and Punishment System, give clear tasks to farmers with respect to land management, the management of the farm, and the implementation of production planning, review such activities at the appropriate time, and distribute and deal with grain output.	

Testimonies from North Korean defectors indicate that the original purpose of the Field Responsibility System was well adhered to during its initial phase, contributing to improving the rights of individuals to food. However, farmland distribution became increasingly unfair over time and fertilizer was not supplied properly after the land was distributed, while harvest targets were too lofty for farmers. A defector who left in 2016 said that they had to give 70% of the planned harvest to the state. Where the harvest fell below 70% of the original plan, then additional grain had to be supplied the next year. In other words, the FRS had devolved into a system that piled up more misery for North Koreans. Also, multiple testimonies note that even though crops were supposed to be split 70:30 between state and farmer, failure to abide by this rule meant that farmers were given less. These testimonies also describe how corruption gave rise to systemic inefficiencies. A North Korean defector who crossed the border in 2019 said, "The crops were supposed to be divided by granting 30% to the state and 70% to farmers. But in reality, farmers received no more than 1%. Considering all sorts of costs such as fertilizer, oil, and labor, there was virtually no distribution at all, almost farmers were left empty-handed. However, the system continued to operate like this." A North Korean defector who defected in 2014 also claimed, "In order to receive a high quality land during the distribution of farmland by the authorities, one had to pay bribes." Another who defected in 2019 complained that arable land was claimed by the People's Unit (*inminban*) chiefs or team (*bunjo*) leaders, while unproductive land was given to ordinary farm workers.

Figure III-9 Farmers in a North Korean Co-op Farm³⁶



^{36) &}quot;Harvesting Crops in North Korea," Yonhap News Agency, October 17, 2019. (Photo=Yonhap News Agency)

Hence, the FRS was designed to raise agricultural output by utilizing individual incentives. However, the differences in the economic power of North Koreans have laid bare food inequality. The FRS has highlighted how important individual capacities are in raising the harvest, and the capacity to pay for one's own equipment and fertilizer has also become increasingly important. In principle, the state is supposed to provide agricultural supplies and equipment, but they are in short supply, and there are probably many instances of mid-level managers embezzling supplies. Hence, the individual is burdened with making up shortfalls they face, so those who have the means are able to do well as farmers, while those without, go into debt just of farm.

6. Excessive Food Requisitions

In addition to insufficient food supplies, the right to food in North Korea has been severely impacted by excessive food requisitions under various pretexts such as 'Rice for the Military (gullyangmi)' and 'Patriotic Rice (aegukmi)'. To begin with, North Koreans are generally obligated to submit rice to the state, and those who fail to do so in a timely manner are excluded from food rations. As such, they have no choice but to provide rice.

A North Korean defector who defected in 2019 testified, "it was difficult to meet the demands even if we offered all of our monthly rations to satisfy the various demands of not only the enterprise, but also the Youth League, the Workers' Unions, Party organizations and the People's Unit (*inminban*)." A defector who left in 2014 said that where the harvest was less than one ton, this would require 400kg of rice being given as food for the military, and where the harvest was above a ton, 40% of the harvest. Also, another defector who left the North in 2012 testified, "Although the requirements of the state are onerous, if you fail to offer rice as demanded, they will be excluded from the distribution

of crops in the fall. After this mandatory requisition, less than a third of the food initially allocated to farmers is all that remains."

Also, another defector who left in 2015 said that while military rice was supposed to be included in farmers' harvest quotas, where the authorities fail to provide food to the military, the latter descends on farms with trucks and takes food by force.

The North Korean authorities present this system of requisitioning as being premised on the consent of the North Korean people, even as this system further worsens the food situation facing the North Korean people. (See Table III-3)

Table III-3North Korean Agitprop Extolling the Voluntary
Participation in Requisitioning³⁷⁾

At Samjigang Collective Farm, the actions of a single young person became the sparks for a 'Patriotic Rice Movement'. While thinking about 'the duties of farmers' they made the decision. There were no 'requests' or 'appeals' from the Management Committee or supervising units. The farm provided 300t of patriotic rice. This increased to 350t this year.

However, testimonies by defectors claim that a failure to satisfy the official requisition quotas leads to intimidation and sanctions. According to North Korean defectors, if they did not provide Patriotic Rice (*aegukmi*), they would be threatened with house searches. If they failed to make military donations at the end of the year in accordance with the orders, they were told to buy food and donate it. And where they failed to do so, they faced threats and sanctions from the authorities, so to meet any shortfall in their quotas they would borrow food in-kind at high-interest rates. Obviously, requisitioning was not a voluntary act for North Koreans.

^{37) &}quot;Voluntarily Donating Grains for the Sake of the Country," Choson Sinbo, January 27, 2014.

7. Reduced Grain Output Linked to Incapable Response to Natural Disasters

In addition to the country's various internal problems including the rationing system, food production policies and mandatory requisitions, North Korea's food shortages have been further aggravated by external factors such as natural disasters and COVID-19. First of all, the foundations of agriculture output in North Korea have been significantly damaged due to frequent natural disasters such as droughts, floods and typhoons annually, while crop output and yields suffer due to inadequate disaster recovery operations. (See Table III-4) In order to increase insufficient food production, irrigation, and drainage systems must be established to mitigate the damage caused by droughts or floods. However, crop production has yet to increase due to a lack of such infrastructure in North Korea.

Year	Natural Disasters	Affected Areas	Damage
2012	Floods and landslides caused by Typhoon (Bolaven)	South Pyeongan Province, South Hwanghae Province, North Hwanghae Province, Gangwon Province	Casualties: 53 killed, 45 missing Farmland damage: 101,000ha
2013	Floods	Jagang Province, South Pyeongan Province, North Pyeongan Province, Gangwon Province, North Hwanghae Province, South Hamgyeong Province	Casualties: 28 killed, 18 missing Farmland damage: 13,340ha

Table III-4	Major Natural Disasters in the DPRK: 2012-2021 ³⁸
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³⁸⁾ Compiled by the author based on the Korea Rural Economic Institute (2020), the COVID-19 pandemic and the trend of food supply and demand in the DPRK.

Year	Natural Disasters	Affected Areas	Damage
2014	Long drought (18 months)	South Hwanghae Province, North Hwanghae Province	Farmland damage: 80% of rice paddies in South Hwanghae Province and 58% of rice paddies in North Hwanghae Province
2015	Floods caused by Typhoon (Goni)	South Pyeongan Province, North Hwanghae Province, South Hwanghae Province, North Hamgyeong Province, Jagang Province	Casualties: approximately 40 killed, or missing, about 5,240 homes damaged
2016	Floods	North Hamgyeong Province	Casualties: 138 killed, 400 missing Farmland damage: 27,000ha
2017	Drought	South Pyeongan Province, North Pyeongan Province, South Hwanghae Province, North Hwanghae Province	Farmland damage: 50,000ha
2018	Drought	Gangwon Province, North Hwanghae Province, South Hwanghae Province	Farmland damage: 9,900ha
2018	Floods caused by Typhoon (Soulik)	South Hwanghae Province, North Hwanghae Province, Gangwon Province, South Hamgyeong Province	Casualties: more than 10,000 victims
2019	Floods caused by Typhoon (Lingling)	South Pyeongan Province, North Pyeongan Province, South Hwanghae Province,	Casualties: 5 killed, Farmland damage: 46,200ha

Year	Natural Disasters	Affected Areas	Damage
		North Hwanghae Province	
2020	Floods	North Hwanghae Province, Gangwon Province.	Casualties: 22 killed, 4 missing Farmland damage: 22,000ha
2021	Floods	South Hamgyeong Province, North Hamgyeong Province	Casualties: more than 1,300 flood victims Farmland damage: 4,000ha

According to an analysis of the impact that irregular climatic events have had on food output, when abnormally high temperatures occur, rice yields can decline by 5.8-16.3%, while a sudden increase in precipitation can hit yields by 1.0-2.5%. When both abnormally high temperatures and sudden increases in precipitation occur at once, this can hit yields by 8.8%-20.8%. In other words, When the incidence of abnormal weather events increases, it has a negative influence on rice yields, and this can further exacerbate food insecurity.³⁹

A special report issued by the Group on Earth Observations Global Agricultural Monitoring Initiative (GEOGLAM) in 2020 said that North Korean rainfall in the country's rice basket was at a 40-year high, with rainfall recording its highest in South Hwanghae since 1981, and dramatic spikes in rainfall in North Hwanghae, and North and South Pyeongan leading to large overall increases in precipitation there. The report noted that South Hwanghae is the largest producer of rice and corn in the North, while North Pyeongan is the second most productive, and expressed concern about the rapid rise in precipitation.⁴⁰

³⁹⁾ Korea Rural Economic Institute (2012), Explanatory Materials Analyzing the Impact of Climate Change on the Food Supply and Plans for Responding, p. 4.

^{40) &}quot;International Organization worried 'North Korean rice basket, most precipitation in 40 years... Deepening Food Problems," VOA, September 11, 2020.



Figure III-10 Flood Damage in North Korea⁴¹

Further, according to the Food and Agricultural Organization (FAO), North Korea's average temperature in 2020 was over two degrees ($^{\circ}C$) higher than the 1951-1980 average. This figure is higher than the 1.7-degree global average, or the Asian average of 1.56 degrees – in other words, North Korea is warming more quickly than other regions.⁴² In 2022, North Korea faced the worst winter, and spring droughts in half a century, with wheat and barley badly affected. The rice baskets of North and South Hwanghae, as well as South Hamgyeong saw just 20-30% of the rain they usually receive, resulting in significant damage from drought.⁴³ Kim Joung Un has ordered a reduction in the area of corn production and increased wheat and barley production. But wheat and barley are planted in spring and autumn, and because the drought was severe in spring, it impacted the harvest.

^{41) &}quot;Roofs Devastatedly Collapsed and Houses Drowned," Yonhap News Agency, August 7, 2020. (Photo= Yonhap News Agency)

^{42) &}quot;FAO 'Average Temperatures in North Korea Risen by Two Degrees... Higher than Global Average," VOA, November 5, 2021.

^{43) &}quot;Drought crisis for North Korean wheat and barley in spring... Spring Food Hardship Season worsened," VOA, May 6, 2022.



As a result, the grain output from North Korea's regions will have been negatively impacted by abnormal temperature spikes and sudden increases in precipitation resulting from torrential downfalls. The country lacks an adequate social infrastructure to respond to these natural disasters and cannot escape continued food difficulties.

⁴⁴⁾ Rodong Sinmun, June 3, 2015.; Rodong Sinmun, June 23, 2017. (Photo=News1)

(In the Kim Jong Un Era) How Is the North Korean Food Situation?



IV. Conclusion

Article 7 of North Korea's Food Administration Act stipulates: "Taking responsibility for and supplying cereals is the coherent policy scheme of the Democratic People's Republic of Korea … the State [shall] supply food at the appropriate time to the people". Thus, the state should guarantee the right of North Koreans to food. However, chronic food shortages have persisted in the Kim Joung Un era with such rights still not being properly respected.

First of all, as a whole North Koreans lack 2-3 months of food annually, with malnutrition continuing among the North Korean population. According to a report from an international organization, 41.6% of North Koreans were malnourished in 2019-2021.⁴⁵) This is higher than when the country faced the worst food difficulties during the great famine (the so-called 'arduous march') during the 1990s.

As such, North Korea's abominable conditions of food under the Kim Jong un regime are attributable to its continued concentration on nuclear weapons development while shunning away the food conditions. Also, the international sanctions on North Korea caused by the nuclear development have receded international trade, heightening difficulties in securing food. This has aggravated distress in North Korean people. In addition to this, the COVID-19 pandemic since 2020 has resulted in border closures and consequently, the disc ontinuance of human and resource flows into and out of the country. This has meant a rapid fall or complete cessation of international aid, including food, further deepening the problem.

Other reasons for the poor food conditions in North Korea include poor

⁴⁵⁾ UN FAO, the International Fund for Agricultural Development (IFAD), the WFP and the World Health Organi zation (WHO)'s jointly published report *The State of Food Security and Nutrition in the World 2022.*

harvests due to recent, repeated droughts, typhoons, and torrential rains damaging farmlands, inadequate access to farm inputs and low levels of mechanization. Recently, abnormal temperature spikes and downpours have had a direct impact on grain output.

In addition to these exogenous factors, persistent food problems can also be attributed to internal factors like the failure of food and agricultural policies.

First, the North's official system of food rationing does not function properly, and this is how food problems began to become worse for the North Korean people. In the Kim Jong Un era, the amount of grain rations provided has markedly declined, with most rations being provided to people in positions of power and workers in specific key industries (munitions, mining, foreign trade). Most North Koreans cannot solely rely on rations to survive. Further, even the military, thus far prioritized in the rationing system, has seen the quantity of rations decline. As cadre embezzlement increased, more soldiers have turned to looting civilian communities for food.

To resolve the chronic shortage of food, under Kim Jong Un's reign, the North Korean authorities instated the Field Responsibility System, which is designed to share a portion of the surplus generated among individual farmers. However, while this system was created to boost food output, excessively high production plans, unfair distributions of farmland, insufficient provision of agricultural inputs, and cadre corruption have hinted at the inefficiency of this new system, and North Korea's food situation has not improved. North Koreans have not received sufficient food rations, and have continued to utilize kitchen gardens and mountainside plots as coping strategies. But since 2015, the authorities have pushed for a reforestation campaign as part of its land management policies, and it has become more difficult to farm mountains and hills. Thus, North Korean people have fewer options to procure food. These food issues have been further exacerbated by the authorities' requisitioning ostensibility as 'Rice for the Military (*gullyangmi*)' and 'Patriotic Rice (*aegukmi*)'. Such food requisitions are propagandized in North Korea as voluntary acts on the part of the North Korean people. But North Koreans are sometimes forced into debt just to meet such demands.

In sum, North Korean food issues are ultimately not merely a consequence of excessive input of national resources into nuclear development, aggravation of economic hardships caused by sanctions on North Korea, severance with the outside world through border blockage after the COVID-19 pandemic, but also involve a complex interaction with policy failures like an irrational and inadequate food rationing system, inefficient food production policies, and unreasonable requisitioning.

Overall, the food situation is alarming and the situation is exigent. This is demonstrated by recent and continued reports of rising death counts from starvation, including in large cities like Kaesong. In other words, the food situation has reached crisis proportions in both rural and urban areas across the country.