

Working Paper 2015-13

North Korea's First 1,000 Days Project

- Significance and Strategy



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- Significance and Strategy

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ISBN: 978-89-6827-311-7 93510

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1

Significance of the First 1,000-Day Project

1

Significance of the First 1,000-Day Project <<

North Korea's "First 1,000 Days Project" concerns the nutritional status of the mother and the child during the first 1,000 days they spend together, spanning from the 270 gestational period to until the child reaches the age of two. British epidemiologist David Barker¹⁾ has argued that nutrition during these 1,000 days exerts a decisive impact on the growth and development of a child, forming the basis for the child's lifelong health afterward in 1998.²⁾

The suffering of undernutrition in this early phase of a child's development has been implicated in various causes of childhood death. In fact, malnutrition in early childhood is often an important preceding factor for such epidemics as diarrhea, pneumonia, and measles, thus it increases the burden of healthcare on individuals and society alike. The estimated proportions of deaths in which malnutrition is an underlying cause are roughly similar for diarrhea (61 percent), malaria (57 percent), pneumonia (52 percent), and measles (45 percent).

Undernutrition in the first 1,000 days of a child's life can lead to irreversible long-term damage to physical growth and cogni-

1) A well-known advocate of the theory of fetal origins of adult diseases.

2) D. J. P. Barker, *Mothers, Babies and Health in Later Life*, 2nd edn. London: Churchill Livingstone, 1998.

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tive development. Specialized nutrition project help build healthy bodies and minds and can lead to lifelong benefits.

A pregnant woman who as a child has been malnourished is likely to be at greater risk of giving birth to low birth weight infants.^{3),4)} Undernutrition among pregnant women in developing countries is responsible for 1 of 6 cases where infants are born with low birth weight.⁵⁾ Underweight infants, in turn, are prone to infections and are at greater risk of death. Malnutrition after birth is also related to a host of other childhood health problems, including learning disorders, developmental retardation, and respiratory illnesses. Study after study shows that infant and children's undernutrition increases the risks of diabetes, hypertension and heart diseases throughout lifetime and also raises the likelihood of chronic diseases.^{6),7)} Moreover, sufficient nourishment after the age of two is nonreciprocal and cannot offset the fatal impact of earlier malnutrition on mental development.⁸⁾

Specialized nutrition support during the first 1,000 days of

3) UN, "Second Report on the World Nutrition Situation," Geneva, 1992.

4) R. E. Black et al., "Maternal and Child Undernutrition and Overweight in Low-income and Middle-income Countries," *The Lancet*, No. 382, 2013, pp. 427-451.

5) 1,000 DAYS GLOBAL PARTNERSHIP, www.thousanddays.org, 2010

6) Legro et al., "ART in Women 40 and Over. Is It Worth It?" *The Journal of Reproductive Medicine*, Vol. 42, 1997, pp. 76-82.

7) P. Katz, R. Nachigall and J. Showstack, "The Economic Impact of the Assisted Reproductive Technologies," *Nature Cell Biology*, Vol. 4, Supplement, 2002, pp. 29-32.

8) C. G. Victora et al., "Maternal and Child Undernutrition: Consequences for Adult Health and Human Capital," *The Lancet*, No. 371, 2008, pp. 340-357.

the life of each newborn baby and his/her mother carries great significance not only for individuals and families, but also for society as a whole. Countries may lose 2~3 percent of their Gross Domestic Product (GDP) as a result of malnutrition such as iron, iodine, and zinc deficiencies.^{9),10)} Better-nourished infants and young children have improved cognitive skills, which translate to higher productivity as adults. The first 1,000-Day Project thus stands to improve both public health and the national economy.

9) S. Horton, Alderman and Rivera, "Copenhagen Consensus Challenge Paper-Hunger and Malnutrition", *In Copenhagen Consensus Paper*. 2008

10) Hodinott et al., "Effect of a Nutritional Intervention during Early Childhood on Economic Productivity in Guatemalan Adults," *The Lancet*. No. 371, 2008, pp. 411-416,

2

Action Strategy for the First 1,000-Day Project

2

Action Strategy for the First 1,000-Day Project

The Scaling Up Nutrition (SUN) is a global push for action and investment to improve maternal and child nutrition. The SUN collaborative process that began in 2009 with the development of the Scale Up Nutrition Framework, has evolved into a Movement that is both stimulated and reinforced by political interest in nutrition among leaders of national governments and development partners alike. The SUN Movement can only thrive through the engagement of governments as they scale up their own efforts to address under-nutrition with nutrition specific interventions and nutrition sensitive development. This worldwide movement seeks to provide direct nutritional intervention for mothers and young children during the crucial 1,000-day “window of opportunity” and strives to have nutrition included in national agendas for public health and economic development.¹¹⁾

Of the countries in the United Nations Standing Committee on Nutrition (UNSCN)¹²⁾ Network, 56 are taking part in the SUN Movement. The majority of these countries are found in Africa (e.g., Chad and Kenya) and Asia (e.g., Bangladesh, Indonesia and Laos). North Korea is not currently a member.

11) <http://www.unscn.org/en/sun-scaling-up/>.

12) UNSCN is the food and nutrition policy harmonization forum of the United Nations.

The principles guiding the SUN movement are as follows: (a) SUN efforts are led from countries and external support processes must add value to this country-led action and must be demand-driven; (b) ongoing initiatives to improve nutrition should be linked together for greater coherence, efficiency, and impact, wherever possible; and (c) a combination of networks and movements are needed to enable a range of stakeholders to work together and contribute to lasting results¹³⁾.

A developing country participates in the SUN Movement in three stages.¹⁴⁾ In the first stage, national authorities take a comprehensive survey of their country's current situation and capacity for improving nutrition. In the second stage, national authorities develop a SUN plan based on the severity of malnutrition and the availability of resources. They then assign the roles and responsibilities of donor institutions according to the plan. In the third and final stage, the projects set out in the plan are implemented with domestic and external financing. The SUN projects are required to prioritize evidence-based and cost-effective interventions and take a multisectoral approach to improving nutrition. Once a developing country has taken the initiative and provided leadership, the UN organizations, development partners, civil society organizations, and businesses that participate in the SUN projects are required to pro-

13) <http://www.enonline.net/fex/41/scaling>

14) UN, "A Road Map for Scaling-Up Nutrition," 2010.

vide consistent and coordinated assistance.

The core measurements for ensuring 1,000 days of nutrition is the system of monitoring using the SUN's performance indicators. The SUN's indicators include chronic malnutrition (in children under the age of two and children aged two to five); acute malnutrition (in children under the age of two and children aged two to five); anemia in childbearing-age women; the exclusive breastfeeding rate for the first 6 months; the incidence of low birthweight; the rate of the population taking in less than the minimum recommended calories; and the rate of children, aged six to 23 months, taking in the minimum recommended calories.¹⁵⁾

Based on these monitoring and evaluation indicators, the SUN Movement encourages participating countries themselves to decide on appropriate goals, identify and select the most cost-effective medical and scientific means to achieve those goals, and launch organized and conscious actions accordingly, in line with the basic principles of public health planning. The Movement's emphasis on developing countries taking 'ownership' of the process and 'harmonization' among donor countries is also in line with the spirit of the Paris Declaration formulated by the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) to boost the effect of official development assistance.

15) UN, "Scaling up Nutrition: A Framework for Action," 2010.

3

Nutritional and Health Status of North Korean Mothers and Children

1. Maternal Mortality
2. Nutritional Status and Mortality Rate of Infants and Children

3

Nutritional and Health Status of North Korean Mothers and Children

1. Maternal Mortality

Motherhood is touted in North Korea as a major source of the next generation of workers who will support and maintain the socialist system. The majority of pregnant women, regardless of class and regional background, thus receive the care of professional health and social protections, and they are also rewarded for giving birth to multiple children. Nevertheless, the maternal mortality ratio in North Korea was 76 per 100,000 live birth in 2012(Figure 1),¹⁶⁾ almost seven times higher than that of South Korea.

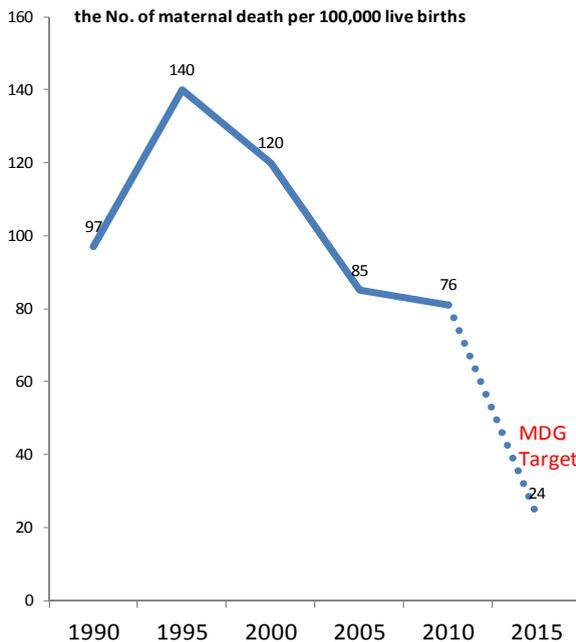
The leading cause of maternal death was postpartum hemorrhage, which accounted for 30 percent of all mothers' deaths. Postpartum hemorrhage is indeed a life-threatening crisis that requires a well-established emergency obstetric care(EmOC) system, well-stocked essential medicines and supplies, and safety of blood transfusion. The next leading cause of maternal mortality was anemia, which accounted for 13 percent of deaths. While the main cause of anemia is iron deficiency,¹⁷⁾

16) UNICEF/WFP/WHO, "Democratic People's Republic of Korea: Final Report of the National Nutrition Survey 2012," 2013.

17) WHO/NHD, *Iron Deficiency Anaemia Assessment, Prevention and Control, A Guide for Programme Managers*, 2001.

the condition can also be caused by malaria and other such parasitic infections and a deficiency in other dietary micro-nutrients, such as folic acid and vitamin B12. The prevalence of iron-deficiency anemia among North Korean mothers reached 31.2 percent in 2012,¹⁸⁾ which, although slightly lower than the 34.7 percent of 2009,¹⁹⁾ was severe enough to affect more than one out of every three mothers.

[Figure 1] Maternal Mortality Ratio Trend in North Korea



Sources: UNICEF, “Progress Report on a Promise Renewed” (2012); UNICEF/WFP/WHO (2013).

18) UNICEF/WFP/WHO, “Democratic People’s Republic of Korea: Final Report of the National Nutrition Survey 2012,” 2013.

19) UNICEF/WFP/Central Bureau of Statistics DPRK, “2009 Final Report MICS,” 2010.

2. Nutritional Status and Mortality Rate of Infants and Children

Breast milk provides the ideal nutrition for infants. It contains complex proteins, lipids, carbohydrates and other biologically active components. Babies who are breastfed exclusively for the first 6 months have fewer infections, respiratory illnesses, and bouts of diarrhea. Furthermore, breastfeeding has been proven to prevent 13 percent of death in infants and children.²⁰⁾

The breastfeeding rate in North Korea dropped from 88.6 percent in 2009 to 69 percent in 2012.²¹⁾ While breastfeeding a newborn baby within one hour of birth greatly improves the infant's capability for survival,²²⁾ ²³⁾ in North Korea only 28 percent of newborn babies were breastfed within one hour of birth, mainly due to malnourished mothers themselves being unable to produce milk.

The single most important indicator of the status of nutrition and healthcare in a given country is the rate of the chronically malnourished in the total population. The status of nutrition in North Korean children has improved somewhat thanks to con-

20) Jones et al., "How Many Child Deaths Can We Prevent This Year?" *The Lancet*. No. 362, 2003, pp. 67-71.

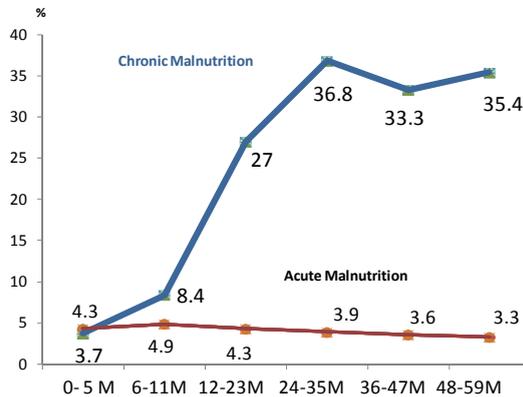
21) UNICEF/WFP/Central Bureau of Statistics DPRK, 2010.

22) Edmond et al., "Delayed Breastfeeding Initiation Increases Risk of Neonatal Mortality," *Pediatrics*, Vol. 117, No. 3, 2006, pp. 380-386.

23) UNICEF, "Programming Guide on Infant and Young Child Feeding," 2011.

tinued humanitarian aid from around the world. Nevertheless, the rate of children under the age of five with chronic malnutrition stood at 27.9 percent in 2012. Infant malnutrition was more prevalent after the first six months of life, with the rate reaching a peak of 36.8 percent at 24 months of age(Figure 2). A survey conducted for the first 1,000-Day Project revealed that in North Korea, only 26.5 percent of children aged six months to 23 months were eating the recommended minimum intake of the four food groups each day.²⁴⁾ Thus, although infants at six months of age or older require supplementary or solid food, many are left chronically malnourished in North Korea.

[Figure 2] Malnutrition prevalence by age groups in months in North Korea



Source: UNICEF/WFP/WHO, 2013.

²⁴⁾ UNICEF/WFP/WHO, 2013.

Of the North Korean children who die under the age of five, 51 percent died within first four weeks of their birth in 2010. Of these, 40 percent was born low birthweight (less than 2,500 grams at birth),²⁵⁾ indicating the severity of malnutrition in mothers.

Diarrhea, responsible for 11 percent of deaths in North Korean children under the age of five (Figure 3), is caused by an unhygienic environment that includes contaminated food and drinking water. Repeated symptoms of diarrhea worsen malnutrition and the immune system in children, increasing their vulnerability to other diseases. While mothers should be encouraged to breastfeed their children for at least two years after birth, improvements must also be made to the hygiene of child care environments to put a stop to the vicious cycle of disease.

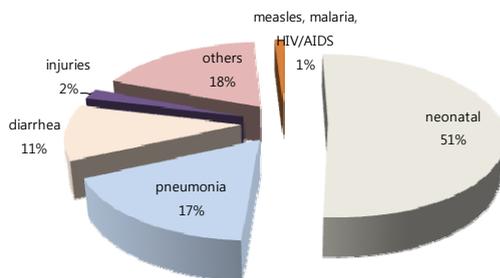
Taking a look at the source of water supply, 85 percent of North Korean Households had piped water in their dwelling units, but the majority of water pipes in the country are so worn out and corroded that they end up contaminating water. Frequent electricity shortages also cause drinking-water purification systems to break down. In North Korea, 42 percent of child-care facilities rely on nearby wells for drinking water,²⁶⁾ making it imperative to provide cleaner drinking water sources to improve the state of nutrition and health in the country's children.

25) WHO, *Count Down to 2015*, 2010.

26) Central Bureau of Statistics Pyongyang, "DPR Korea 2008 Population Census National Report," 2009.

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[Figure 3] Causes of Under-Five Deaths in North Korea



Source: WHO, 2010.

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Necessity of the First 1,000-Day Project in North Korea

1. Groundwork for the Health Security Network for Families and Local Communities
2. Targets of the First 1,000-Day Project:
Pregnant Women and Young Children

4

Necessity of the First << 1,000-Day Project in North Korea

1. Groundwork for the Health Security Network for Families and Local Communities

Prior to the 1990s, North Korea had achieved an efficient and effective free universal health care system accompanied by impressive health indicators. However, in the early 1990s the collapse of the Socialist Economy compounded by numerous natural disasters, including severe drought and flooding, that occurred in rapid succession at that time, limited international monetary support, and the consequences of economic sanctions. From that time healthcare has been a big threat in the country. ²⁷⁾ The mortality rates among infants, young children and mothers in North Korea have decreased only marginally over the last two decades.

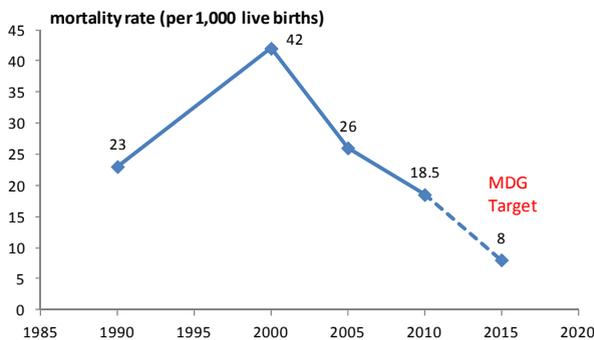
The World Health Organization (WHO) proposed the improvement of healthcare for mothers and children as the second-highest priority for North Korea in 2009 (Table 1), but it is impossible for the country to meet the targets the United Nations (UN) specified for the year 2015 (Figure 4). Given North Korea's dire situation, the first 1,000-Day Project is more important than ever

²⁷⁾ <http://www.medicalnewstoday.com/articles/195051.php>

for the country in directly addressing the lives of its most vulnerable groups and, inevitably, the issue of human security.

By promoting the means for better cognitive and physical development of newborn babies in addition to greater survival rates for mothers and infants, the first 1,000-Day Project will help to increase educational achievement and income among North Koreans in generations to come and possibly break the vicious cycle of poverty for many of them. The Project will therefore contribute to the achievement of a number of the Millennium Development Goals (MDGs) that world leaders endorsed in 2000 in the interest of human security and sustainable development, such as eradicating extreme poverty and hunger (MDG 1), reducing child mortality (MDG 4), improving maternal health (MDG 5), and combating HIV/AIDS, malaria, and other diseases (MDG 6).

[Figure 4] Infant Mortality Rate Trend in North Korea



Sources: UN, "Inter-Agency Group for Child Mortality Estimation Report" (2012); UNICEF/WFP/WHO (2013).

〈Table 1〉 WHO's Strategic Agenda for Healthcare in North Korea: 2009–2013

Rank	Description
1	Strengthening the health system to further develop capacity for policy development and implementation and planning, and improve service delivery (e.g., localization of production of medicines, vaccines, and medical supplies).
2	Addressing women's and children's health (MDGs 4 and 5).
3	Sustaining achievements made and further addressing communicable diseases (e.g., tuberculosis, malaria, hepatitis-B, parasites, new diseases, and vaccinations).
4	Addressing risk factors leading to increased prevalence of noncommunicable diseases (e.g., cancer, cerebral and cardiovascular diseases, and smoking).
5	Addressing environmental determinants of health (e.g., floods and droughts, water pollution, climate change and healthcare policy).

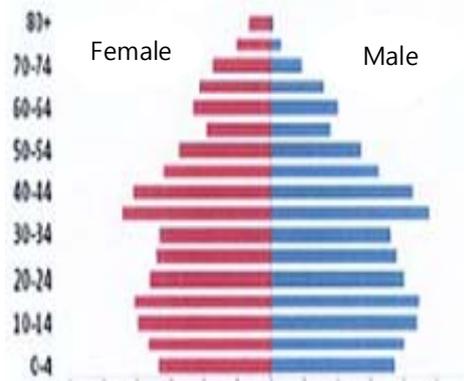
Source: WHO, "WHO Country Cooperation Strategy 2009~2013: DPRK," 2009.

The childbearing generation in North Korea today has first-hand experience of the worst food shortage crisis in North Korea's history, the so-called Arduous March of the 1990s(Figure 5). Having experienced chronic malnutrition in their own childhood, women at childbearing age in North Korea today carry greater risks of giving birth to babies that have congenital anomalies of the heart and other major organs, are susceptible to diabetes, and are likely to have learning/behavioral disorders in childhood. Malnutrition in today's mothers and infants in North Korea means less productivity from the future workforce. As a consequence, this would dramatically increase the financial burden, if the Koreas were to reunite.

The total fertility rate in North Korea stood at a low of 2.0 as of 2008. The elderly at age 65 or older make up 8.79 percent of

the North Korean population. Both Koreas are plagued with declining birth rates and aging populations. Thus, the quality and productivity of the workforce will prove to be of central importance for the future of a reunified Korea, as the entire peninsula will most likely become a post-aged society. The first 1,000-Day Project will therefore play an important role in ensuring the productivity of the future Korean workforce, thereby helping Korea minimize the cost of reunification social spending and boosting its prospects for continued economic development.

[Figure 5] North Korean Population Pyramid, 2008



Source: Central Bureau of Statistics Pyongyang, "DPR Korea 2008 Population Census National Report," 2009.

2. Targets of the First 1,000-Day Project: Pregnant Women and Young Children

Food and nutrition security is a human right and the basis for economic, social and human development. The primary targets of the first 1,000-Day Project are pregnant women and young children under the age of two. With one in every three children under the age of five chronically malnourished, however, children older than two should also be included to receive nutrition and health assistance from the Project. There are currently 964,000 underweight, chronic and acute malnourished children under the age of five in North Korea—about 56.4 percent of all children in that age range (Table 2).

〈Table 2〉 North Korean Children Under Age Five in Need of Nutrition Assistance

(Units: number of children, %)

	Number of children aged 0 to 5	Underweight		Chronic malnourished		Acute malnourished		Total number of children in need (L+S+W)
		%	Number of children (L)	%	Number of children (S)	%	Number of children (W)	
Nationwide	1,710,039	18.8	321,487	32.4	554,053	5.2	88,922	964,462
Rygangang	51,945	25.4	13,194	44.9	23,323	7.9	4,104	40,621
North Hamgyong	169,864	21.9	37,200	38.0	64,548	7.2	12,230	113,979
South Hamgyong	227,209	21.5	48,850	38.5	87,475	7.3	16,586	152,912
Kangwon	108,662	19.4	21,080	34.2	37,162	5.7	6,194	64,437
Jagang	96,671	22.0	21,268	40.9	39,538	6.9	6,670	67,476
North Phyongan	205,899	18.0	37,062	30.4	62,593	4.9	10,089	109,744

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	Number of children aged 0 to 5	Underweight		Chronic malnourished		Acute malnourished		Total number of children in need (L+S+W)
		%	Number of children (L)	%	Number of children (S)	%	Number of children (W)	
South Phyongan	297,755	17.7	52,703	30.5	90,815	4.4	13,101	156,619
North Hwanghae	153,546	18.0	27,638	30.8	47,292	4.5	6,910	81,840
South Hwanghae	165,761	17.4	28,842	29.2	48,402	4.0	6,630	83,875
Pyongyang	232,727	14.4	33,513	22.5	52,364	2.3	5,353	91,229

Sources: UNICEF, DPR Korea Multiple Indicator Cluster Survey 2009, Final Report, 2010; Central Bureau of Statistics Pyongyang, DPR Korea 2008 Population Census National Report, 2009.

The main indicators of malnutrition in mothers in developing countries are vitamin-A deficiency, which causes anemia, night blindness, and low birthweight. The low birthweight newborns may reflect other health conditions and risks in mothers, such as tuberculosis, malaria, or sexually transmitted diseases. As low birthweight is most prone to neonatal deaths, this study has defined mothers of low birthweight delivery in all the provinces of North Korea as top-priority targets in need of the Project's support.

There are 346,000 babies born each year on average in North Korea. Our estimation, based on the rate of low birthweight infants, shows that 40,000 pregnant and parturient women are in need of urgent assistance. This figure excludes women who died while pregnant or giving birth, so the number of women in need of help each year is probably closer to 50,000. The relative rates of these vulnerable women were the highest in the

provinces of Ryanggang and North Hwanghae, while the largest population of these women was in South Phyongan (Table 3).

〈Table 3〉 Estimated Number of Vulnerable Pregnant and Paturient Women in North Korea

(Units: number of persons, %)

	Total number of paturient women (W)	Women who have given birth to low birthweight infants		Number of vulnerable pregnant and paturient women (W·P)×2
		%(P)	Number of paturient women (W·P)	
Total	345,630	5.7	19,701	39,402
Ryanggang	10,464	7.7	806	1,612
North Hamgyong	34,682	6.5	2,254	4,508
South Hamgyong	45,988	5.4	2,483	4,966
Kangwon	22,711	7.0	1,590	3,180
Jagang	19,040	6.7	1,276	2,552
North Phyongan	40,834	5.6	2,287	4,574
South Phyongan	61,415	5.0	3,071	6,142
North Hwanghae	31,151	7.7	2,399	4,798
South Hwanghae	32,618	5.1	1,664	3,328
Pyongyang	46,727	3.8	1,776	3,552

Sources: UNICEF, DPR Korea Multiple Indicator Cluster Survey 2009, Final Report, 2010; Central Bureau of Statistics Pyongyang, DPR Korea 2008 Population Census National Report, 2009.

5

Action Strategies of the First 1,000-Day Project in North Korea

1. Providing a Sustainable, Integrated, and Lifecycle-Specific Health Care Project
2. Reducing Geographical Disparity in Access to Maternal and Child Health Care
3. Providing Maternal and Child Health Services in and around Kaesong Industrial Complex
4. Pursuing Development Cooperation Based on Mutual Trust

5

Action Strategies of the First 1,000-Day Project in North Korea

1. Providing a Sustainable, Integrated, and Lifecycle-Specific Health Care Project

Nutritional insecurity persists in North Korea not simply because of food shortages, but also because of other factors, such as parasites, unsafe and contaminated drinking water, and unhygienic environmental sanitation. The entire social environment appears to encourage malnutrition. Humanitarian aid that only involves the delivery of food is therefore not the solution. As well as food aid, it is crucial to implement Projects for agricultural development, vaccinations for mothers and children, and establishment of safe drinking water system. In other words, in addition to providing the necessary nutrients for mothers and children at different phases of the first 1,000-day window, we should take a holistic approach to improving their entire healthcare environment. Accordingly, we first need to identify the exact mechanisms that lead to malnutrition and other related health problems in North Korean mothers and children. Then, we need to implement a comprehensive system of Projects that ensure the fundamental improvement in the survival and health prospects of mothers and

children.

Since the status of nutrition and health in pregnant women exerts a lasting impact on infants even after birth, we should propose to develop and distribute 'Nutrition and Health Handbook for 1,000-Days' to help promote a continuity of the benefits we provide throughout the lives of both mothers and children(Table 4).

<Table 4> Key Nutrition and Health Interventions in the First 1,000 Days in North Korea

During pregnancy and birth-giving	Newborn (Weeks 0 to 4)	Months 1 to 6	Months 6 to 24
<ul style="list-style-type: none"> •Diversifying food intake •Iron folate or maternal supplements of multiple micronutrients •Calcium supplements •Deworming •Vaccinating mothers and children against hepatitis-B •Providing good-quality prenatal care •Developing a system for preventing premature birth and providing EmOC. 	<ul style="list-style-type: none"> •Safe delivery by professionals •Ensuring postpartum care •Ensuring umbilical cord care •Immediate and exclusive breastfeeding •Vaccination 	<ul style="list-style-type: none"> •Exclusive breastfeeding •Providing safe drinking water •Encouraging hand washing and other hygienic practices •Ensuring IMCI(integrated management of children's illnesses) 	<ul style="list-style-type: none"> •Continued breastfeeding •Iron supplements and fortification •Zinc in management of diarrhea •Vitamin-A supplements •Multiple micronutrient powders •Encouraging hand washing and other hygienic practices •Diatary supplementation and diversification •Nutrition interventions in chronic and acute malnutrition •Deworming •Vaccination •Ensuring IMCI

2. Reducing Geographical Disparity in Access to Maternal and Child Health Care

The WHO evaluates the performance of a nation's health care system in terms of how evenly benefits and services necessary for children's survival are distributed across different regions in that nation.²⁸⁾ ²⁹⁾ The proportion of children under the age of five who are chronically malnourished were lowest in Pyongyang, at 19.6 percent, and second-lowest in South Phyongan, at 25.8 percent. The proportion were the highest in the three provinces of Ryanggang, Jagang and South Hamgyong at 39.6 percent, 33.4 percent, and 32.9 percent, respectively in 2012(Figure 6). The Census of Population of DPR Korea 2008 shows that these mountainous provinces also have the highest infant mortality rates,³⁰⁾ while FAO/WFP (2012) shows that they are the most vulnerable in terms of food security.³¹⁾ In other words, the provinces with chronic food shortages are typically ranked highest in terms of malnutrition in children and infant mortality rates. These provinces lack vital transportation infrastructure, which means that aid organizations need to identify

28) J. Hurst and M. Jee-Hughes, "Performance Measurement and Performance Management in OECD Health Systems," *Labour Market and Social Policy Occasional Papers*, No. 47, OECD, 2001.

29) WHO, "The World Health Report 2000" 2000.

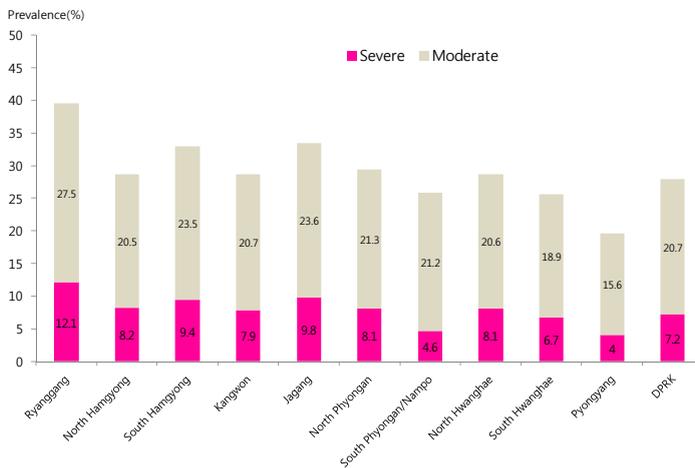
30) Central Bureau of Statistics Pyongyang, "DPR Korea 2008 Population Census National Report," 2009.

31) FAO/WFP, "Crop and Food Security Assessment Mission to the Democratic People's Republic Korea," 2012.

and develop specific modes of access to reach the target populations (particularly in mountainous and coastal areas) and effective strategies for making nutrition-specific and nutrition-sensitive interventions.

The months of May through July are marked by pre-harvest famine in North Korea, with the reserves of foodstuffs nearly exhausted, thereby increasing the risks of malnutrition and related communicable diseases, such as tuberculosis. It is therefore crucial for aid organizations to time the delivery of nutritional assistance for when it is most needed.

[Figure 6] Prevalence of Chronic Malnutrition by Province in Children Under Age Five in North Korea



Source: UNICEF/WFP/WHO, 2013.

3. Providing Maternal and Child Health Services in and around Kaesong Industrial Complex

Considering the escalating tension between the two Koreas, we will need to find an alternative means by which to convince the North Korean authorities, both directly and indirectly, of our sincerity concerning the Project.

One possible channel of communication may be the Kaesong North-South Korean Industrial Complex(KIC), through which social and economic exchange between limited numbers of South and North Koreans has taken place for years. Almost 70 percent of the 54,000 North Koreans working at the KIC are women in their 20s and 30s. We may thus generate a new momentum for the first 1,000-Day Project by tending to child-bearing-age women, mothers and infants in and around the KIC. The North Korean government guarantees 60 days of prepartum leave and 180 days of postpartum leave for female workers on maternity leave. We could thus provide key services and benefits at childbirth facilities and children's hospitals, catering specifically to women on their 240 days of maternity leave. Focusing on these women would help us drastically reduce the number of mothers who die while giving birth and the number of infants who die within a month after birth. Health and childcare problems are the main obstacles to female workers' productivity in 30 percent of cases,³²⁾ so implementing the first 1,000-Day Project would not only improve the health of

mothers and infants, but also enhance the productivity of women working for South Korean businesses at the KIC.

4. Pursuing Development Cooperation Based on Mutual Trust

The first 1,000-Day Project should be approached as a pre-condition for ensuring a brighter future for future generations of Koreans who might inhabit a reunified Korean Peninsula. We therefore need to establish a Project-based roadmap that focuses on developing cooperation between the two Koreas instead of providing unilateral help from South to North. It is in everyone's interest to encourage North Korean authorities to develop an effective and efficient management system under which they can utilize their own capabilities to the fullest extent.

The principle of recipient countries' "ownership," as stressed in the Paris Declaration on Aid Effectiveness of 2005 and the Accra Agenda for Action of 2008, is a key condition that must be met for any aid Project to succeed. Given the particular nature of relations between the two Koreas today, it is crucial to enlist the help of international organizations and encourage North Korean authorities to develop their own SUN roadmap

32) S. Hong, "Current Status of Women Workers at the Kaesong Industrial Complex: Implications," *13th Reunification and Women Forum* (2014).

based on an accurate assessment of their country's food security and nutritional status. North Korea, for its part, needs to form partnerships with international organizations and plan and implement Projects in a responsible manner, befitting a member of the international community. The international organizations, in turn, should assist North Korean initiatives and efforts in good faith. We must make North Korea realize that countries that have achieved their MDGs were able to do so thanks to their drive and commitment, successful partnerships with international organizations, and wise use of financial and technological support from the international community.

For the first step of the first 1,000-Day Project, we must take stock of the food production and nutritional improvements that North Korean authorities have in place, along with the Projects and technological resources that the international organization can make available to the country for improving its nutritional status, social protection, and food security. Next, we need to enlist North Korea's own involvement in the Project and have it establish an effective governance structure and administrative network through which we can take actions. The North Korean government, for instance, provides vitamin-A supplements and vaccines via teachers and section doctors who provide integrated firstline preventive and curative services twice a year for infants and children aged 6~59 months.