

THE KOREAN PENINSULA AND ITS NATIONS

Korea



Korea is located in the eastern part of the Eurasian continent on the west coast of the Pacific Ocean. People have populated the Korean Peninsula and the surrounding islands for many thousands of years, during which time the national identity has evolved through many transformations. It began with the creation and merging of multiple kingdoms and has culminated more recently with Korea's spectacular emergence as a major player on the world stage. Korea's location at this critical juncture where Eurasia meets the ocean has allowed Korea to become a literal gateway to eastern Asia, but more than that it has fostered Korea's rich and distinctive culture. Throughout its history, the relationship between Korea and its neighbors has been characterized by tremendous mutual exchanges, and it is these cultural diffusions that have helped to shape the uniqueness of Korean culture today.

Throughout the modern era, Korea suffered a series of hardships, not the least of which included the tragedy of a domestic war and the division of the nation in the midst of a rapidly changing international political landscape. Today, the Republic of Korea (South Korea) has overcome these multiple challenges to achieve both sustained economic growth and democratization. By the end of the Japanese colonial era (1910-1945) and the Korean War (1950-1953), South Korea was one of the poorest nations in the world. Its per capita income stood at 67 USD, and yet in little more than six decades the country completely transformed itself into an economic powerhouse. In 2014, Korea ranked 15th in the world economy and 8th in trade volume. Politically, the nation adopted a legal system that paved the way for democratic elections and party politics. There is also a system of local governmental autonomy that has ushered in an era of the decentralization of power. The entire political system has made such significant progress over the last six decades and it has been able to help put in place policies and procedures that have improved the quality of life for the Korean people. Whereas in 1960 the average life expectancy for a Korean citizen was 52.4 years, that number increased dramatically to 81.4 years by 2012. The nation has also made efforts to build a welfare state by initiating national health insurance and a number of social welfare systems. The driving force behind this achievement is an emphasis on education and an investment in people to parallel the creation of an effective economic policy. The illiteracy rate is near zero, and almost 70% of the population pursues higher education.

The accomplishments that resulted from a stable political system, improved economy, and a free society have led

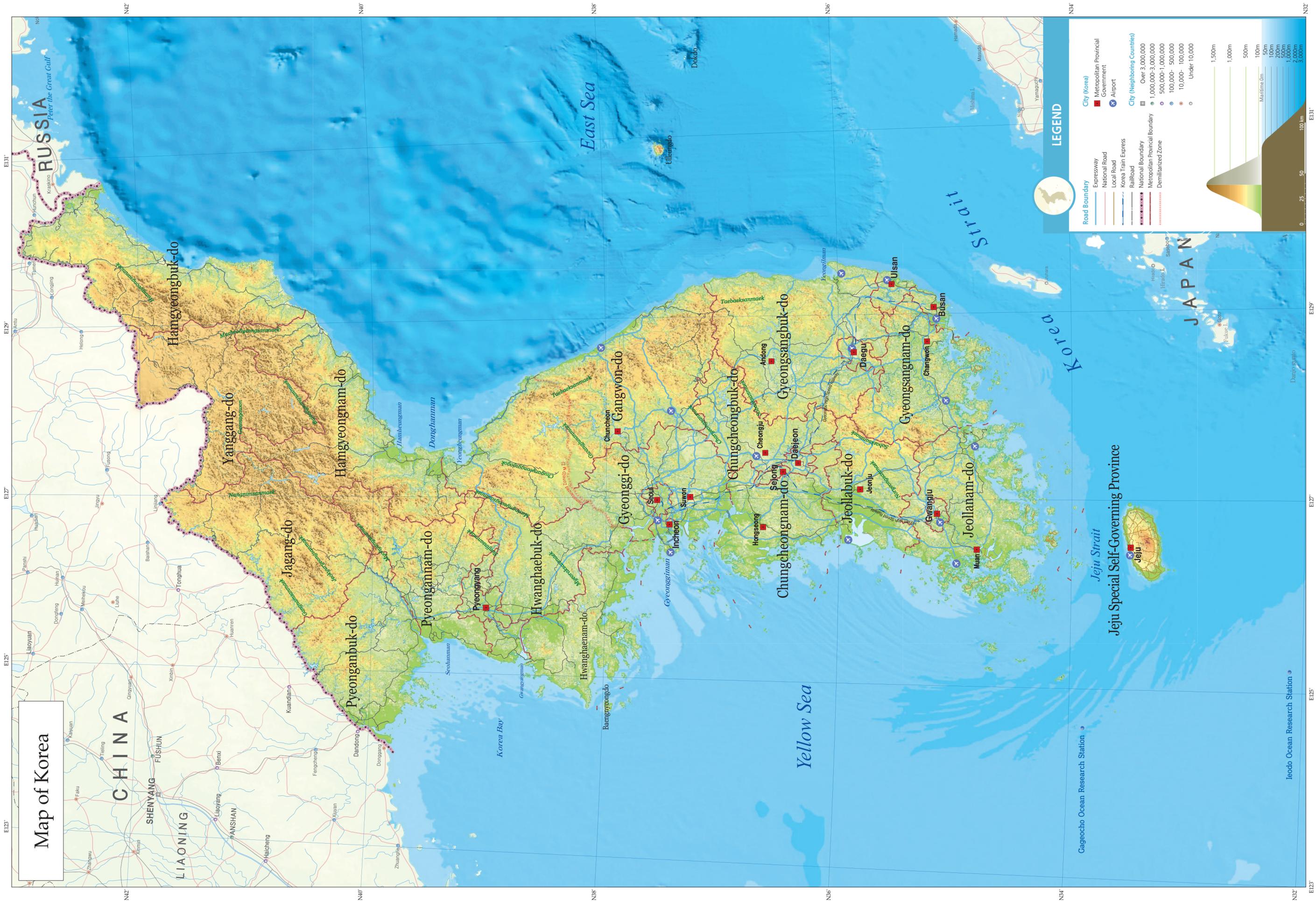
Korea to become a powerful nation. Today, the Republic of Korea, as a responsible member of many international organizations, contributes to promoting world peace and international cooperation. The Republic of Korea is a non-permanent member of the United Nations Security Council and also plays a responsible role in various international organizations. Since the 1970s, Korea has carried out various cooperative projects with numerous international organizations and has worked in conjunction with numerous private organizations. Korea has also sponsored projects that focus on community development, education, medical, and refugee relief efforts around the world.

Seoul, the capital of Korea, has a long history. It served as the seat of many dynasties from ancient times forward, and now it has become one of the largest cities in East Asia. Taegeukgi, the Korean national flag, represents core tenets of Asian philosophy—harmony and change as well as the love of peace, which is a key aspect of the Korean national identity. The national flower of Korea is Mugunghwa, a Rose of Sharon or the Korean Rose, which symbolizes the eternity of the Korean people. The official language of Korea is Korean. Hangeul, the Korean alphabet used for the writing system, is considered to be one of the most scientific and unique systems of making letters in the world.

Brief Interpretation of the Map

A very high altitude or satellite photograph of a region portrays a very different perception of the patterns on the ground in any given area than a map. This difference is generated by the cartographic specialists who create maps when they make specific choices about how to portray different components of Korea. For example, the first impression of Korea formed by looking at a satellite photograph would likely emphasize mountainous and vegetation patterns. By contrast, the maps on the following pages show a dense pattern of cities, roads, and highways, suggesting dense human occupation across most of Korea. Both representations are true but generate very different perceptions of the Korean landscape and reflect quite different geographic elements. All parts are important components of the geography of Korea. The purpose of *The National Atlas of Korea: Comprehensive Edition* is to highlight various geographic elements in order to link the patterns we see and create by living in an area. From the map on the next two pages, try to detect any differences in the density of human activity between the North and the South by paying attention to the density of cities, highways, and roads.





The Four Corners of Korea: Home to Its Land, Water, and People



This map of the Korean Peninsula merges several human and physical patterns that characterize the variable appearance of the Peninsula's landscape and the sea that surrounds it. The map also locates some of the activities of Korea's people that are set in this framework. Several of the map elements exhibit different scales and generalization of the patterns that are selectively emphasized for a broad geographic understanding of Korea at a glance. Each of the four insets in the corners of the map show a small, detailed image of the four corner areas that are the limits of the Korean domain and the range of landscapes that are home to its people.

The Land: The general pattern of the terrain of Korea is shown in colors ranging from light green for the lower terrain, grading through a yellow green for the higher areas, to a light brown/tan for the highest mountainous areas. These colors were chosen so that their light visual appearance would not conflict with rivers, cities and highways.

The highest mountains of Korea are in the northeast and continue northward into China. As we move southward on the Peninsula the land is lower and the higher elevations are more dissected with rivers contained in broader lower valleys. The lowland coastal area in the east and south is narrow, with the largest area of lowland in the northwest. The pattern of coastal islands in the south and west of the Peninsula suggests a geologic pattern of dissection extending westward into the Yellow Sea in contrast to the very few islands on the east coast, suggesting an uplifting land and a steeper coastal shelf.

The Water: The seas and ocean that surround Korea are shown in a very generalized form with four different undefined depths. The seafloor is not smooth as implied in its symbolization here but is variable and dissected with an underwater surface almost as detailed as the land terrain.

The rivers are shown in a very thin generalized blue line on this map without distinctions made to their real size and the many situations where they have been changed by dams and other modifications. The patterns of the rivers are important to the landscape of Korea since they represent important methods for transportation and tools for the erosion of the land and the locations of periodic disruptive flooding. The rivers are shown in dark blue to create a strong contrast with the terrain while insuring that they are visible against the patterns of human activity on the landscape.

The People: One might consider that human activities dominate the landscape of Korea. While human activity is probably the defining aspect of modern Korea, it is especially difficult to present its different components on a small-scale generalized map without overwhelming the other, nonhuman aspects of Korea.

Brief Interpretation of the Map

The seaward extent of all regions and nations that border the sea can be a controversial point of international debate. On this map, a Straight Baseline and a Territorial Water Line are shown prominently. A Straight Baseline is drawn in coastal areas of great indentations and/or with numerous small, scattered islands. Points are first identified on land or on islands and then joined to form the baseline. Such a baseline can then be used to define or delineate territorial waters. The Territorial Water Line sets the territorial limit of a nation's sovereignty. Sovereignty refers to the land, sea, and air space that belong to the nation; under international law, these spaces cannot be violated or accessed without permission. Offshore islands that belong to a nation also have delineated territorial water lines to limit that nation's sovereignty. In the case of South Korea, the Territorial Water Lines are clearly marked for Ulleungdo and Dokdo Islands on this map.

The next aspect of human activity illustrated on this map of Korea is the concentration of people in urban areas. While Korea has a significant portion of its population living outside major cities, these people are not shown here. Major transportation routes are shown in somewhat visually subdued symbols on this map display. Some might argue that the highways and trains are the defining component of human activity in Korea, but this is a very small map. However, it highlights questions of which aspects of geographic reality drive the others.

This type of map is very difficult to construct and even more difficult to interpret, yet it is important to study for broad patterns. This map is only an introduction to the hundreds of other maps in this atlas series. This series concentrates of human activities that will detail other aspects of Korea's daily life. But the fact that it is such a difficult map to construct accurately does not mean it should be ignored. It is useful to return to this page often to put the details from subsequent pages and maps in the series in a broad context for understanding Korea and its geographic patterns.

The Land

Seoul is a UNESCO City of Design, a modern and vibrant city

Street scene in Downtown Seoul

A typical rural landscape with farms and irrigation canals set in valleys between mountain ranges

A paddy rice field. Rice is a main diet but with declining consumption among a younger generation

The Water

Koreans harvest food from the sea. Here, squid are being dried.

An aquaculture farm is located across the road from the sea. Pumps constantly operate to recycle sea water

A small aquaculture farm docked in the middle of the bay.

Another type of aquaculture farm here that raises seaweed and/or oysters

The People

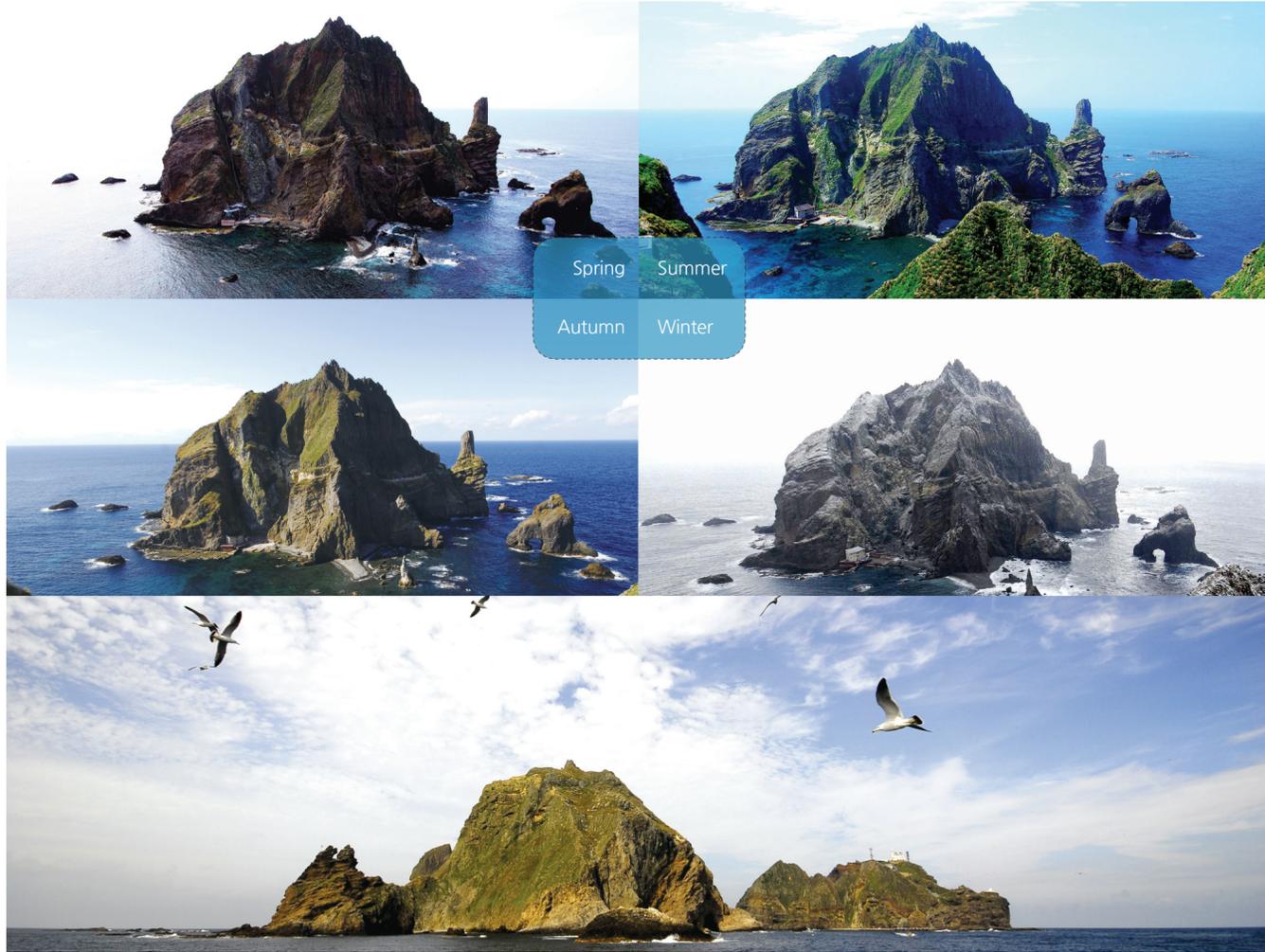
A re-creation of a traditional wedding ceremony where both bride and groom bow to each other with respect

School children have a guided visit to Korea's War Memorial

A lady in traditional dress sells several kinds of products in a street market

A Buddhist nun purchasing baked goods

Dokdo



Spring Summer
Autumn Winter

Panorama of Dokdo

Dokdo is a group of islands belonging to the Republic of Korea and is located at the easternmost edge of Korea's national boundary in the East Sea. Dokdo has historically been referred to by various names such as Sambongdo, Gajido, Usando, Jasando, and Seokdo. According to Korean historical records, the administrative name of "Dokdo" was first used in 1906 by magistrate Sim Heung-taek of Ulleung. Dokdo was officially incorporated into Gyeongsangbuk-do in 1914.

While the general reference to Dokdo is that of an island, Dokdo is not one island but consists of two large islands, Dongdo (East Island) and Seodo (West Island), and 89 smaller islands with an area of 187,554 m². The shortest distance between the two main islands is 151 m at low tide. Dokdo is 87.4 km east of Ulleungdo and 157.5 km northwest of Oki Island of the Shimane Prefecture in Japan.

Dokdo has been recognized throughout history as part of Ulleungdo, which has always been an undisputed part of Korean territory. Both islands are in fact not far apart, and both are visible to one another on a clear day, an observation that was recorded as far back as the early 15th century. In the *Sejong sillok jiriji* (Geographical Records in the Annals of King Sejong, 1432), it is noted that the two islands of Usan (Dokdo) and Mureung (Ulleungdo) lay within visible distance of one another in the eastern sea of Korea.

The Korean government's historical archives confirm that Korea has long recognized Dokdo as its territory. Most

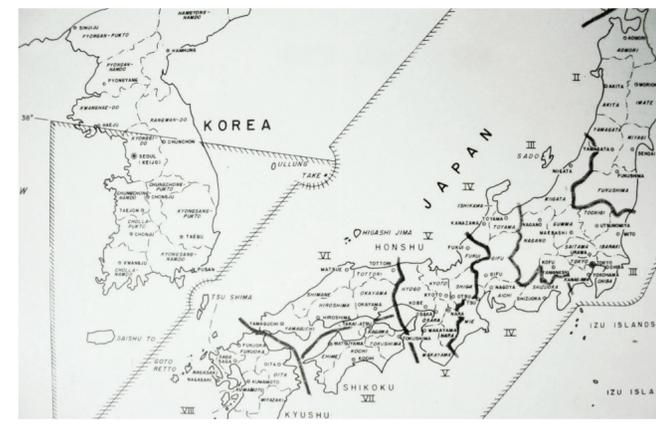
pointedly, those records provide ample documentation of Korea's reign of the island. Along with the *Sejong sillok jiriji*, *Sinjeung dongguk yeoji seungnam* (New and Expanded Complete Conspectus of the Territory of the Eastern Country, 1531), *Dongguk munheon bigo* (Reference Documents on the Eastern Country, 1770), *Mangi yoram* (Essentials of Governance, 1808), and *Jeungbo munheon bigo* (Comprehensive Study of Civilization, Revised and Expanded, 1908) all include Dokdo in discussions of Korea. In the Reference Documents on the Eastern Country it is recorded that "Ulleung and Usan are part of the State of Usan, and Usan is referred to as Songdo by the Japanese," reaffirming that Dokdo is Korea's territory. In 1900, Emperor Gojong of the Korean Empire declared in Ordinance No. 41 that the name of Ulleungdo be changed to Uldo. He then appointed a governor and assigned Uldo to administer Dokdo.

Despite Korea's longstanding sovereignty over Dokdo, Japan has made more than a few bids to claim the island as a part of its own territory, but even Japanese historical documents reveal that Dokdo has always been a part of Korean territory. In the late 17th century, the Joseon government and Edo Shogunate negotiated an agreement regarding illegal fishery activities. This was referred to as the "Ulleungdo Dispute." As a result, the Edo Shogunate officially acknowledged on December 25, 1695 that both Ulleungdo and Dokdo did not belong to the Tottorihan

of Edo Shogunate, thereby officially confirming that Ulleungdo and Dokdo were not part of Japanese territory. At that point Korea placed a ban on Japanese fishing in the Ulleungdo area. Another prime example of the Japanese acknowledgement of Korea's sovereignty over Dokdo is the Dajokan Order of 1877. This was an order given by the Dajokan, the highest administrative body of Japan at the time; the Order confirmed that Ulleungdo and Dokdo were islands outside of Japan's territory. In 1905, the Shimane Prefecture Public Notice announced the incorporation of Dokdo into Japanese territory, but this incorporation of Dokdo is widely regarded as a part of the imperialist preamble to the Japanese colonization of the entire Korean Peninsula five years later.

Since the end of World War II, the peace process continued to reveal evidence of Korea's sovereignty over Dokdo. The Cairo Declaration of December 1943 stipulated that "Japan shall be stripped of all islands she has seized or occupied by violence and greed." The General Headquarters of the Allied Powers issued the instruction code SCAPIN-677 and 1033 in 1946 to exclude Dokdo from Japan's governmental or administrative control. In addition, the Treaty of San Francisco in 1951 reaffirmed that Dokdo was under Korea's sovereignty.

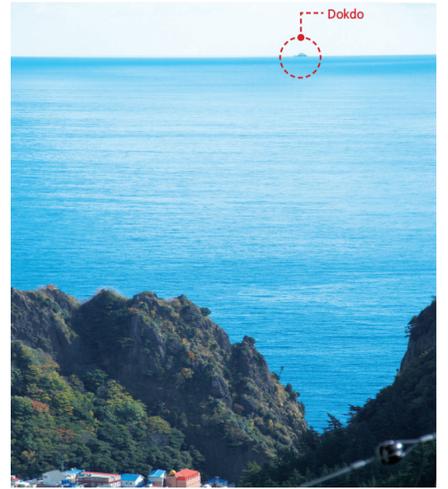
Topographic Map of Dokdo



SCAPIN-677



The mark to show that Dokdo is Korean Territory



Dokdo seen from Ulleungdo



This stone post indicates Dokdo as the easternmost point of Korea



The stone post of the territory of the Republic of Korea

Geographic Information about Dokdo

Item	Content	Remarks	
Distance	Dokdo to Ulleungdo	87.4 km (47.2 nautical miles)	The shortest distance between coasts
	Dokdo to Jukbyeon, Uljin-gun, Gyeongsangbuk-do	216.8 km (117.1 nautical miles)	
	Ulleungdo to Jukbyeon, Uljin-gun, Gyeongsangbuk-do	130.3 km (70.4 nautical miles)	
Surface Area	Dokdo	187,554 m ²	
	Dongdo	73,297 m ²	
	Seodo	88,740 m ²	
	Attached islets	25,517 m ²	
Distance between Dongdo and Seodo	151 m	The nearest distance between coasts	
Number of attached outcroppings	89 not including Dongdo and Seodo		
Coordinates	Dongdo	37°14'26.8" N 131°52'10.4" E	At peak of island
	Seodo	37°14'30.6" N 131°51'54.6" E	
Elevation	Dongdo	98.6 m	
	Seodo	168.5 m	
Circumference	Dokdo	5.4 km	
	Seodo	2.6 km	
Tidal Range		16 cm	

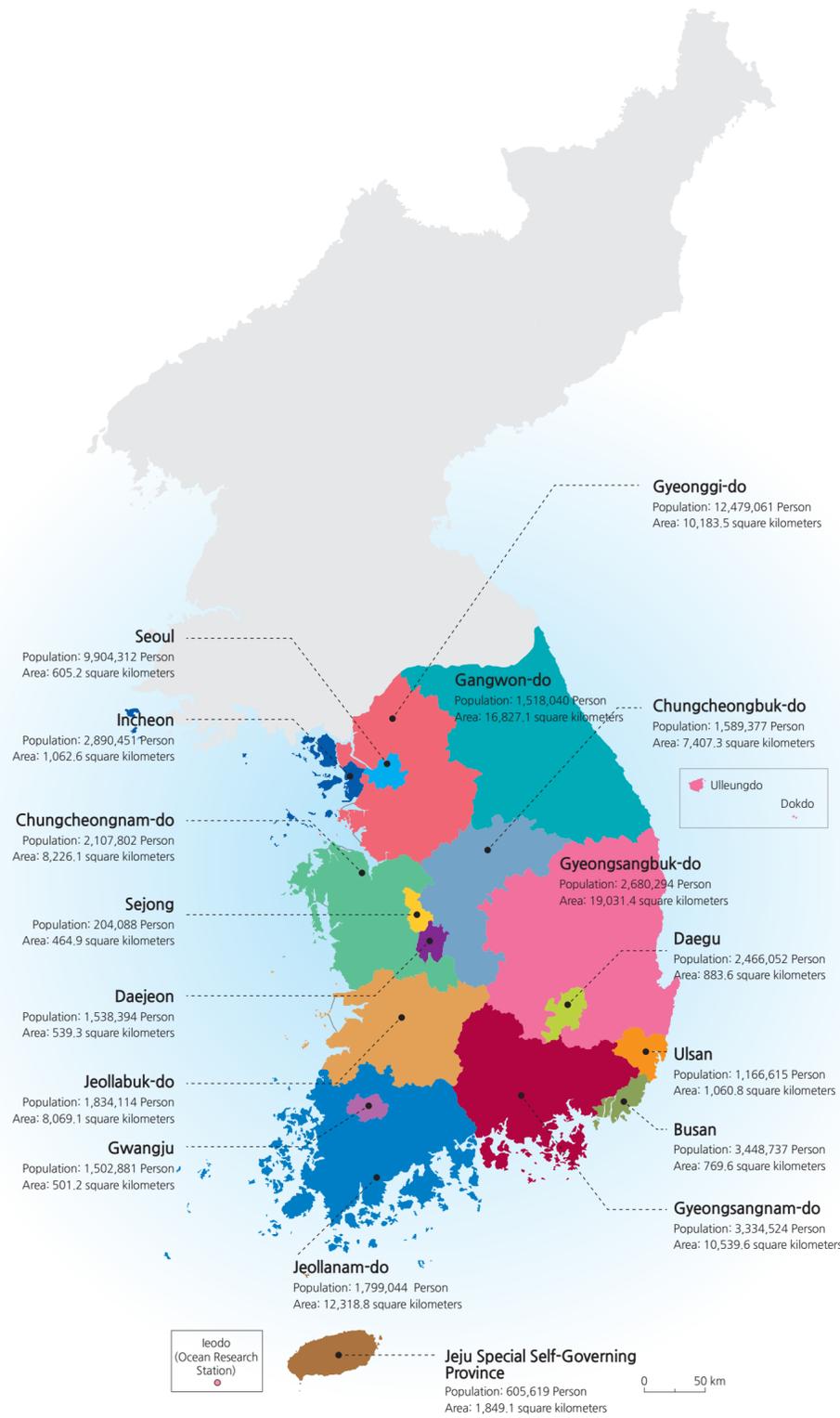
* 1 Nautical Mile = 1,852 m

The National Geographic Information Institute (2013)



Dokdo and Taegu-guk

Administrative Regions



Area	223,433 square kilometers (South Korea: 100,266 square kilometers)
Population (South Korea)	51,069,375 Person
Administrative Areas	1 Special City, 6 Metropolitan Cities, 1 Metropolitan Autonomous City, 8 Provinces (dos), 1 Special Self-governing Province

Ministry of Land, Infrastructure and Transport (2016), Statistics (2015)

Administrative districts are governmental area units for local administration, but at the same time they define regional and local identity. Since the nation's founding, Korea has promoted administrative efficiency through a number of administrative re-organizations. In the midst of these changes, a -do-oriented (province-oriented; -do is the Korean name for a province) administrative district system of the Joseon Dynasty is the basis for the modern metropolitan administrative system in Korea. In 1945, the administrative system for the whole Peninsula was comprised of one special city, 15 do (provinces), 23 bu (cities), 208 gun (counties). The following year, Jeju Island was separated from Jeollanam-do to become Jeju-do, a province of its own. In 1948, the -bu became the -si. The South Korean government carried out comprehensive reforms to harmonize living spaces and administrative districts in 1962. For example, Geumsan-gun in Jeollabuk-do was transferred into Chungcheongnam-do, and Uljin-gun in Gangwon-do was merged into Gyeongsangbuk-do. The reforms after 1960 mainly took place due to urban expansion caused by population growth in cities and suburbanization. Small towns attained cityhood as their population increased, and major cities were promoted to directly-controlled municipalities so that the central government could manage them directly. During the 1960s, as Busan was promoted to a directly-controlled city, Korea consisted of 1 special city (Seoul), 1 directly controlled city (Busan Directly-Controlled City), 9 do (Gyeonggi-do, Gangwon-do, Chungcheongbuk-do, Chungcheongnam-do, Jeollabuk-do, Jeollanam-do, Gyeongsangbuk-do, Gyeongsangnam-do, and Jeju-do), 30 si (cities), and 140 gun (counties). Large provincial cities, like Incheon, Daegu, Gwangju, and Daejeon, became directly-controlled cities in the 1980s.

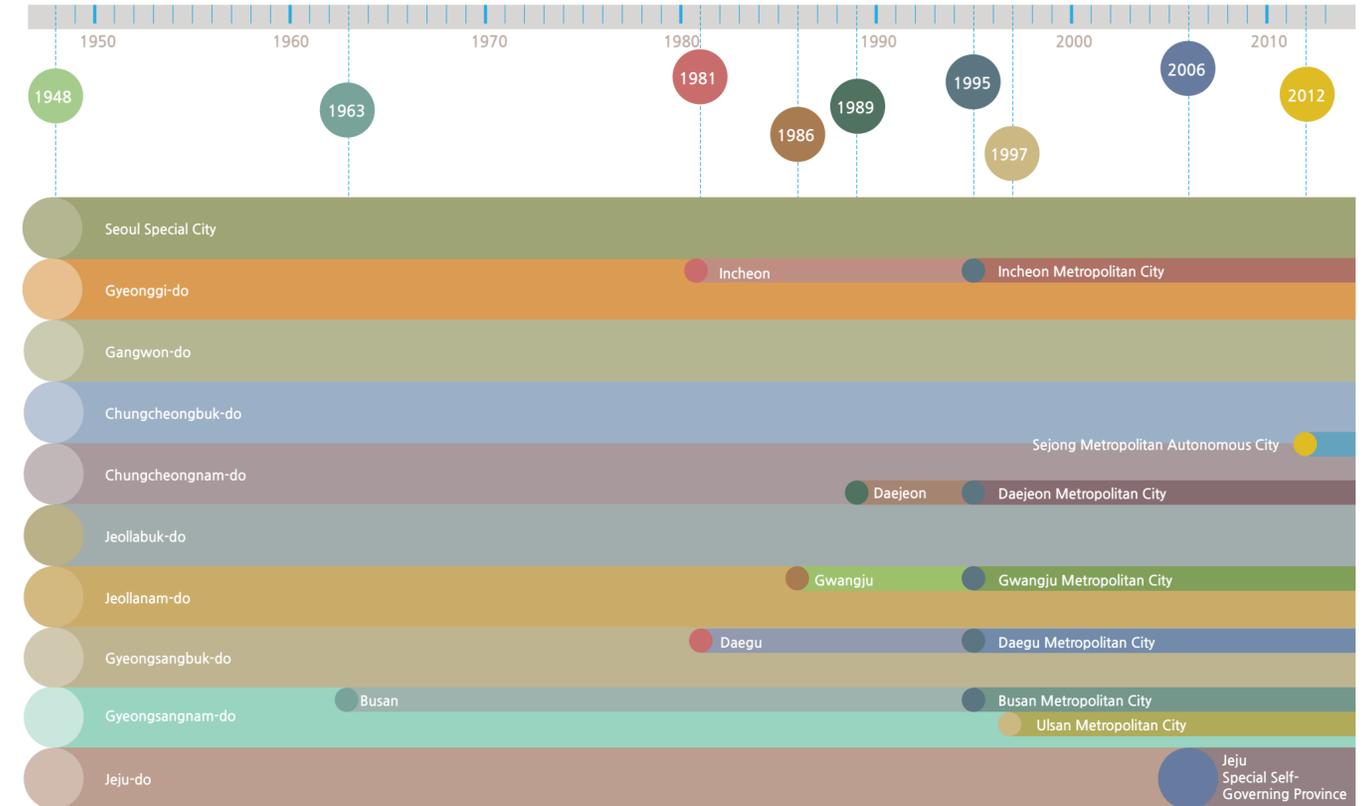
In 1995, an overall provincial administrative reform was carried out. This reshuffling integrated cities and counties and aimed at balancing development between growing urban and declining rural areas, securing land for urban development, promoting administrative efficiency, and addressing inconsistencies between spaces of daily life and administrative districts. Also, directly-controlled municipalities were re-organized into metropolitan cities by combining neighboring areas. In 1995, forty urban/rural integration cities were established, and 5 metropolitan cities were created, including Busan, Daegu, Incheon, and Daejeon. Ulsan attained metropolitan cityhood in 1997.

After the year 2000, continuous merging of cities and counties took place and Jeju Island was raised to the status of Jeju Special Self-Governing Province. Sejong, a multifunctional administrative city, became the Sejong Metropolitan Autonomous City in 2012. As of January 1, 2014, the Republic of Korea has 1 teukbyeol-si (special city), 6 gwangyeok si (metropolitan cities), 1 teukbyeol jachi-si (special autonomous city), 8 do (provinces), and 1 teukbyeol jachi-do (special self-governing autonomous province).

Brief Interpretation of the Map

The grey color for the North indicates that data for North Korea are not available. The entire administrative system of Korea is shown spatially. Why do you think that these Metropolitan cities are singled out to become important units in the administrative system when their areas are much smaller than provinces? (Clue: look at their population – some of these cities have more population than some provinces. Places with very concentrated populations have special needs that require special legislation to assist them.)

Changes in the First-tier Administrative Divisions of Korea



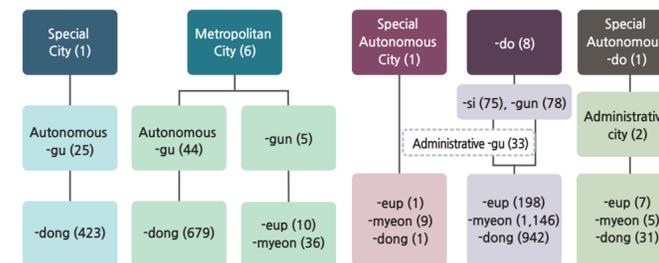
Local Autonomy

Administrative District System in Korea

-si/-do	Classification	-si/-gun/-gu			Adm. City/Non-Auto/-gu		-eup/-myeon/-dong				
		Total	-si	-gun	-gu	-si	-gu	Total	-eup	-myeon	-dong
Total (17)		227	75	83	69	2	33	3,488	216	1,196	2,076
Special City	Seoul	25			25			423			423
Metropolitan City	Busan	16		1	15			210	2	3	205
	Daegu	8		1	7			139	3	6	130
	Incheon	10		2	8			147	1	19	127
	Gwangju	5			5			95			95
	Daejeon	5			5			78			78
Ulsan	5		1	4			56	4	8	44	
Special Autonomous City	Sejong							11	1	9	1
-do	Gyeonggi-do	31	28	3		20		550	32	108	410
	Gangwon-do	18	7	11				193	24	95	74
	Chungcheongbuk-do	12	3	9		2		153	15	87	51
	Chungcheongnam-do	15	8	7		2		207	24	137	46
	Jeollabuk-do	14	6	8		2		241	14	145	82
	Jeollanam-do	22	5	17				296	33	196	67
	Gyeongsangbuk-do	23	10	13		2		331	36	202	93
Gyeongsangnam-do	18	8	10		5		315	20	176	119	
Special Autonomous -do	Jeju					2		43	7	5	31

MOIS (2014)

Administrative District System



Local autonomy refers to various activities through which a self-governing body representing the residents within a certain regional boundary carries out its political and administrative decision-making while maintaining relative independence from the central government. In this global era, the growing demands for improving regional competitiveness, inter-regional development equity, and resident-oriented administrative services have necessitated local autonomy more than ever. Local autonomy mainly consists of autonomous power over local affairs and an independent budgetary capacity in a geographical region with an explicit boundary where residents and a self-governing body are located. Local governmental autonomy has recently become a global trend.

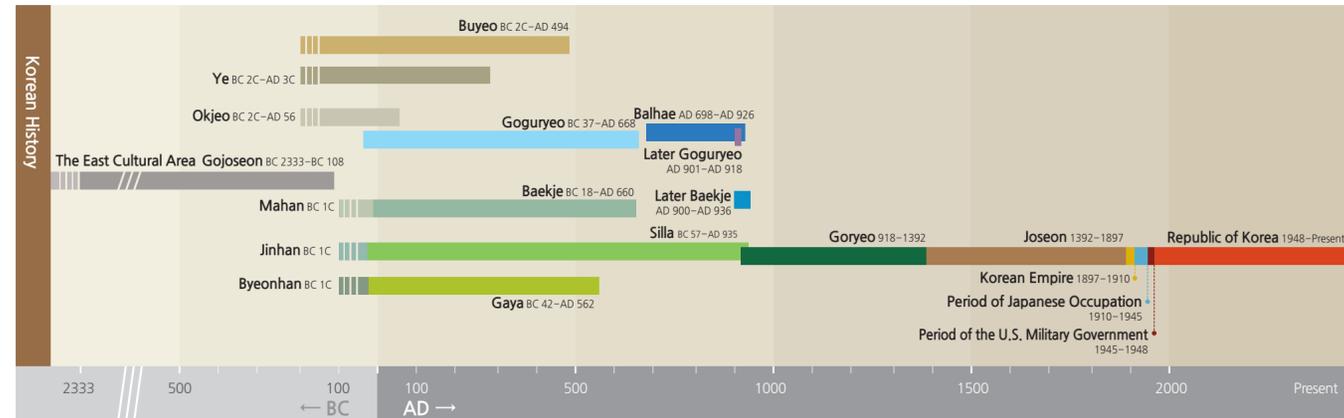
The local self-governing body that plays a key role in local autonomy in Korea is the administrative organization that maintains close relations with its residents. The local self-governing body is constituted of local residents and it forms a legal entity. There are two types of self-governing bodies in Korea: macro-level bodies such as the Special City, Metropolitan City, Special Autonomous City, -do or Special Autonomous Province, and primary level bodies such as -si, -gun or -gu.

Local residents may participate in the autonomy of their local government mainly through elections. The local residents elect both the members of local councils and the heads of local governments. The heads of local governments include the mayor of the Seoul Special City, the mayors of the Metropolitan Cities, the governors of '-do's, and heads of '-gun's and Autonomous '-gu's. The heads of local governments may request that residents vote on important matters that impose an excessive burden on the government or have a significant effect on the residents. The residents also have the right to recall the head of the local government or local council members.

After 30 years of preparation, the establishment of local councils in 1991 ushered in the era of local autonomy, and since then the scope of local affairs and local authority has been expanding. Significant local autonomy includes jurisdiction; organization and administrative management of local government; the promotion of residents' welfare; the promotion of industries including agriculture, forestry, trade, and factories; local development; the establishment and management of public and private facilities for residents; the promotion of education, athletics, culture, and art; public safety; and firefighting.

As of 2014, the macro-level local self-governing bodies in Korea are the Seoul Special City; six Metropolitan Cities including Busan, Daegu, Incheon, Gwangju, Daejeon, and Ulsan; the Sejong Special Autonomous City; eight '-do' including Gyeonggi-do, Gangwon-do, Chungcheongbuk-do, Chungcheongnam-do, Jeollabuk-do, Jeollanam-do, Gyeongsangbuk-do, and Gyeongsangnam-do; and the Jeju Special Autonomous Province. In addition, there are 262 primary-level local self-governing bodies including 77 '-si' (including 2 non-autonomous '-si'), 83 '-gun', and 102 '-gu' (including 33 non-autonomous '-gu'). There are also 216 '-eup', 1,196 '-myeon', and 2,076 '-dong', all of which are area subdivisions of the lowest level. All the self-governing bodies mentioned above constitute the localized administrative system in Korea. How is the Korean administrative system different from the administrative system of your country at the federal, state, and local levels?

Territorial History of Korea



Historically, Korea's ancient territory included Manchuria and the Korean Peninsula. The first kingdom Gojoseon was formed in 2,333 B.C. and continued for more than two millennia until 108 B.C. Later, tribal nations such as Buyeo, Dongye, Okjeo, and the Three Han States of Mahan, Jinhan, and Byeonhan were established in an era that is generally referred to as the Proto-Three Kingdoms Period. From about 100 B.C. to about 500 A.D., Korean territory still included Manchuria and the whole Korean Peninsula. Buyeo's location and sphere of influence was mainly centered around Manchuria; Dongye and Okjeo were formed in the northern and central parts of the Korean Peninsula and the Three Han States occupied the central and southern parts of the Korean Peninsula.

From the first century B.C. to the first century A.D., Goguryeo, Baekje, Silla, and Gaya were formed by succeeding and merging tribal nations. This period is referred to as the Three Kingdoms Period when Korea's territory covered Manchuria and the entire Korean Peninsula. Goguryeo encompassed Manchuria and the northern part of the Korean Peninsula; Silla occupied the southern and eastern portion of the Peninsula, and Baekje dominated the southern and western territory. In the 7th century, Silla merged with Goguryeo and Baekje, forming a unified nation in the inner region of the Peninsula, extending from Daedonggang to Wonsan. In 698 A.D., Balhae was founded by Goguryeo refugees.

During the Goryeo Dynasty (918–1392) and the Joseon Dynasty (1392–1897), efforts to pioneer and expand the northern territory were made. Goryeo blocked the first invasion from Khitai in 933, confirming its occupation of six coastal provinces (Gangdong Yuk Ju). It started building the Great Wall (Cheolli Jangseong) in 1033, which defined its border with Khitai-Qidan. With the wall, Goryeo recovered its northern territory, which stretched from the present-day city Sinuiju to Hamheung. Its efforts to expand the northern territory continued through the late Goryeo Dynasty into the Joseon Dynasty. As a result, in the 15th century, Joseon installed four forts in the Amnokgang River Basin and six posts in the Dumangang River Basin, which together form North Korea's current border with China. The combined efforts of the Goryeo and Joseon Dynasties' territorial expansion and protection firmly established Korea's territory of today, which extends from the southern

tip of the Peninsula all the way north to the Amnokgang and Dumangang rivers. In the 18th century, the Joseon Dynasty erected Baekdusan National Boundary Monument, marking its border with China's Qing Dynasty.

The modern and contemporary history of Korea is characterized by the establishment of the Korean Empire (1897–1910), Japanese colonial rule (1910–1945), liberation from Japan (1945), U.S. and Soviet military governments in Korea (1945–1948), and the Korean War (1950–1953). In 1897, in an effort to respond to growing international imperialism, Emperor Gojong officially declared the establishment of the Korean Empire. He then pushed ahead with internal reforms only to witness the temporary loss of Korea's sovereignty over its own territory when it fell under colonial rule by Japan during its invasion of large areas of East Asia. Japanese colonial rule lasted until 1945. The independence movements for recovering the sovereignty of Korea continued, and the Korean people achieved independence with Japan's defeat in the Second World War. After the war the national territory was unfortunately divided into North and South along the 38th parallel, a division that became permanent after the North and South governments were established in 1948. Korea then suffered the tragic Korean War, which began on June 25, 1950 and ended three years later with an armistice taking effect on July 27, 1953. Korea's territory is now divided into North and South by the truce line. Even though the two Koreas have co-existed in a state of truce for 60 years, much of those six decades has been defined by competition and antagonism. Despite these tensions, however, the two Koreas have also made sincere and meaningful efforts to overcome the division with trust-building events such as holding reunions for separated families, inter-Korean summits, and the joint operation of the Gaseong Industrial Complex immediately north of the DMZ.

The Demilitarized Zone (DMZ) refers to a buffer zone in which militarization is prohibited. Korea's DMZ was set up by the ceasefire agreement that put an end to the Korean War. When the agreement was signed in 1953, the military line of contact became the Military Demarcation Line (MDL), and a 4-km wide strip of land, extending 2 km north and 2 km south of the MDL, was designated as the DMZ.

The Civilian Control Zone (CCZ) is a stretch of land that lies between the DMZ and Civilian Control Line (CCL).

The CCL is a line designated to restrict public access in the area adjacent to the MDL where the legal protection of military activities is required. The CCL was initially drawn in 1954, and since then three adjustments have been made to reduce the CCZ with mitigations to resolve the infringement of property rights. The current CCL is designated within 10 km south of the MDL.

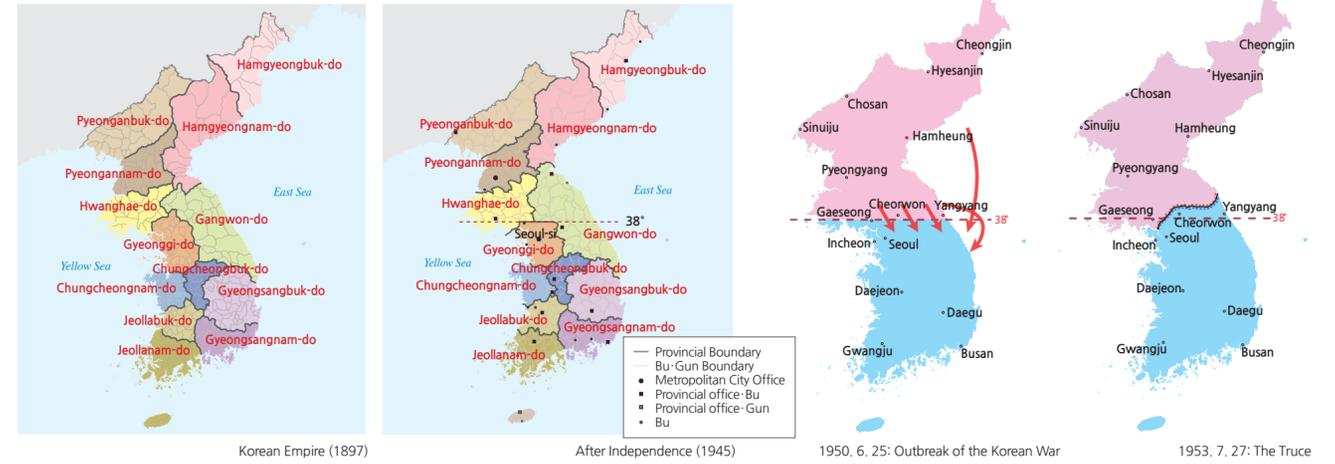
The DMZ and CCZ are areas where human activity is restricted to a minimum, with the exception of farming activities by a few villages along the CCL. Because human activities are limited, these two zones both have diverse natural environments that are well preserved and contain diverse species. Recently, tourism in these areas has become very popular as Koreans and foreign visitors alike have sought to learn more about this well-preserved environment as well as the historic sites that relate to the military activities of the tragic war.

Brief Interpretation of the DMZ Map

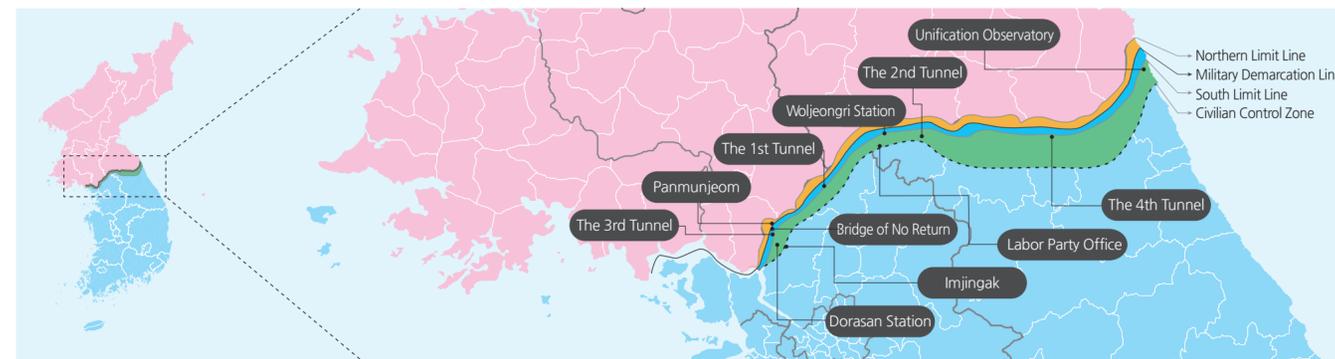
The DMZ map shows four sets of lines that define different levels of activities. The Military Demarcation Line is an absolute, rigid line that cannot be crossed by terms of the truce. There are northern limits and southern limits where no build-up of military forces is allowed, except for peace keeping forces. Since there are civilians and farmers who own land close to the southern limit line, the Civilian Control Zone is meant to respect the rights of these owners. The map also indicates locations of tunnels and several important buildings, Panmunjeon (for peace talks), stations for arranged crossings, and a Unification Observatory in the east. The existence of these structures on the map reminds us that tension still exists along the DMZ and that efforts are also underway, albeit in an on-and-off manner, to achieve unification of both sides.

Given the volatility of the situation, do you think that the DMZ is a good buffer to prevent war or are there other diplomatic avenues? Since the truce took place in 1953, military capabilities have changed such that missiles can now fly over the DMZ, is the DMZ today still an effective military buffer zone? There are and were similar barriers in the rest of the world such as the Berlin Wall, the Israeli-Palestinian West Bank Wall, and even the partial U.S.-Mexico Wall, what purpose do they serve that may be different from the purpose of the DMZ?

Korean War



Demilitarized Zone and Civilian Control Zone



The blue buildings are United Nations Command Military Armistice Commission Conference Buildings. The horizontal line on the ground between the blue buildings is the actual military demarcation line of the DMZ.



A military police (MP) officer and a South Korean soldier are constantly on patrol inside the UN Command Military Armistice Commission Conference Building.



The Bridge of No Return: no one has come back from crossing this bridge.



Daehanmun Gate at Deoksugung Palace of the Joseon Dynasty (1392-1897)



Gwanghwamun Gate at Gyeongbokgung Palace of the Joseon Dynasty (1392-1897)



Mines are still scattered in some parts of the DMZ.



A marker for the Third Tunnel at the DMZ Pavilion is a popular tourist attraction today.



Many guard posts line the border.

Expansion of Large Cities

Expansion of Seoul

1914-1963



1973



2005



Expansion of Large Cities

Seoul has experienced a rapid increase in population and area in modern times. During the Joseon Dynasty (1392-1897), Seoul was surrounded by a fortress wall and consisted of Hanseong 5 Bu, its inner districts and outer districts (Seongjeosimni). The outer districts reached approximately 4 km outside the city wall. By the end of the Joseon Dynasty (late 19th century) and extending into Japanese colonial rule (1910-1945), the city's boundaries grew as railroads and streetcar routes were constructed. A massive residential area was built in order to house the Japanese who moved to Korea and farmers who migrated to the city during this time period. By the end of the 19th century, the population of the city hovered above 200,000. Following its liberation from Japan in 1945, Seoul's population was close to 900,000 and continued growing to 1,700,000 before the Korean War in 1950, when overseas Koreans returned to their country. Seoul's population increased sharply even before industrialization. Population growth accelerated in concentrated areas of Seoul as industrialization rapidly grew after the 1960s. Such growth led to development on the outskirts of the city as the opening of subways facilitated urban expansion.

In 1963, some parts of Yangju-gun, Gwangju-gun, and Gimpo-gun were incorporated into Seoul, expanding its

total land area from 269 square kilometers to 593 square kilometers. The current area of the city is 605 square kilometers, as some parts of Siheung-gun and Goyang-gun were incorporated into Seoul in 1973. As Seoul expanded, the number of administrative districts also increased. In 1943, there were seven 'gu's (districts), and because the administrative divisions were reorganized, the number of 'gu's has grown to 25.

Like Seoul, six other cities have large increases in population and have expanded areas to be incorporated as Metropolitan Cities in Korea's administrative system; as such, each Metropolitan City is no longer under the jurisdiction of the province in which it is located. The port and harbor facilities in Busan serve international shipping logistics. Daegu incorporated several neighboring 'gun's, as did Incheon, the gateway city into Seoul. Today, Incheon, with its vast amount of reclaimed land, has evolved into an international hub with its busy airport and financial zones. Both Gwangju and Daejeon followed the path of urban expansion by incorporating neighboring 'gun's (counties). Thanks to its industrial complex, which includes the Hyundai Automobile plant, Ulsan became the 6th Metropolitan City in 1997, two years after the first five. These six cities are thriving urban centers today and have been targets of population migration for the past two

decades. Large housing projects, along with the necessary services such as schools, hospitals, cultural facilities, playgrounds, green spaces, and other infrastructure, were also built to meet the needs of the rapid population increase.

Brief Interpretation of the Maps

The set of time series maps depicting the expansion stages of Seoul clearly shows the increase in the number of 'gu's. Each of the large area 'gu's on the outskirts of Seoul had to be broken up into several small area 'gu's due to population increase. Notice also that the shape of the Han River has changed over time due to reclamation along the river banks to create more land in the central areas of Seoul for important building projects. The spatial expansion of six Metropolitan Cities is also expressed in map form. In all six cases, expansion starts from the inner core and expand outwards towards their peripheral land areas.

The outer boundary of Seoul has remained the same since 1963, what has happened to its population density since then? What are some ways to ease congestion in Seoul? Should the government provide incentives for people to move elsewhere on a voluntary basis? Will building more high-rise residential housing be a permanent or sustainable solution? Discuss the possibilities and implications of creating attractive jobs elsewhere.

A Special Administration Region Sejong Metropolitan Autonomous City

As rapid urbanization continues, Korea is realizing increasingly unbalanced development between regions as well as a high degree of concentration of governmental functions in one single city. The need for spatial diversification is clear. As early as the late 1970s, then-President Park Chung-hee developed plans to relocate the capital city to the Gongju area because Seoul was considered too close to the North Korean border. After some political decisions that involved interpretation of the Korean Constitution, a new city named Sejong was built from scratch in 2006 to house many of the government's ministries. By 2012, Sejong became part of the nation's administrative system as Sejong Metropolitan Autonomous City. By the end of 2014, 16 central government branches, 19 government-related organizations, and 14 national research and development institutes moved to the city. Large numbers of government workers had to move to Sejong from Seoul. The population is expected to increase from 145,431 in 2014 to about 800,000 by 2030. Brand new high rise residential buildings were constructed to house the city's in-migrants. All other supportive services such as schools, hospitals, food services, a police force, and a firefighting force were also created. Careful spatial planning took place to insure that the city would be well structured to deliver efficient functionality for the central government. While Sejong officially serves as a multifunctional administrative city, some argue that it has the potential to become the future capital of the Republic of Korea.

Brief Interpretation of the Maps

For the map of Sejong City, the city limit is clearly shown, as are major roads and expressways. New cities are established, planned, and grow differently than old cities that evolve or grow over time. For the identification of new buildings and construction, a satellite image should also be consulted to get the broad range of geographic features that are incorporated in a new city.

Considering Sejong is a new city, why is Osong Station in the map of Sejong City, located at the convergence of two high speed railway lines for bullet trains that can travel at 180 miles per hour, outside the city limits? What does it take to build a brand new city from scratch? What considerations must be taken into account? What environmentally-friendly facilities should be included?

Sejong MAC (2014)

Section	As of Oct. 2014
Population	145,431
Household	57,771
Administrative District	1 -eup, 9 -myeon, 2 -dong
Budget	760 Billion Won (2nd Revised Supplementary: 993 Billion Won)
Fiscal Self-reliance Ratio	47.6%
Educational Institutions	University (4), High School (8), Middle School (13), Elementary school (25)

Sejong Metropolitan Autonomous City

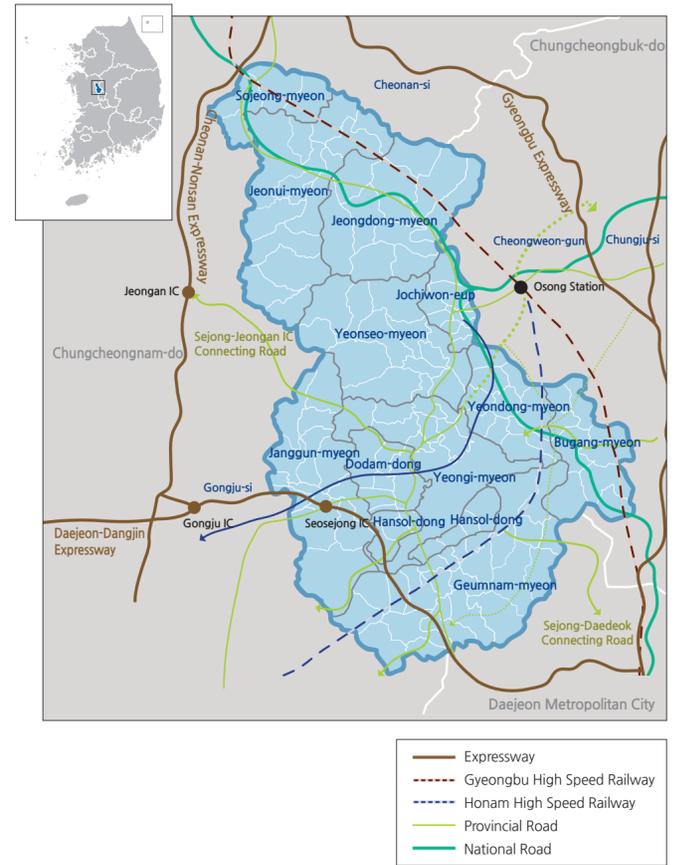
Sejong MAC (2014)

Special Administrative Region: Jeju

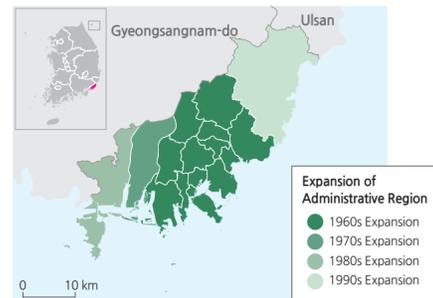
Jeju is the largest island in Korea and is known for its beautiful natural landscape and unique cultural heritage; these attributes attract large numbers of tourists. Jeju Island was created from volcanic activity and is characterized by a volcanic topography, such as Hallasan, numerous parasitic cones, and caves. Because of the unique ecological and environmental value of Jeju, the island was designated as an UNESCO Biosphere Reserve in 2002 and as a World Natural Heritage Site in 2007. Jeju was also certified as a Global Geopark in 2010.

Well-preserved natural environment and a unique ecosystem made Jeju an ideal location for various leisure and recreational facilities. The island becomes a well-known international tourist destination. Because numerous international and domestic tourists visit the island

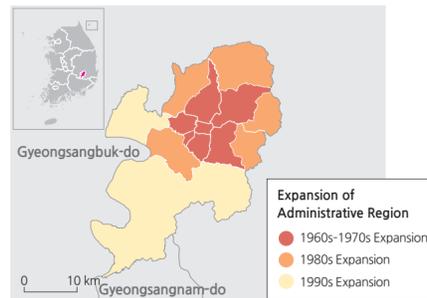
Map of Sejong Metropolitan Autonomous City



Expansion of Busan



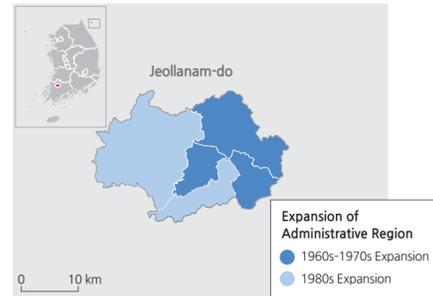
Expansion of Daegu



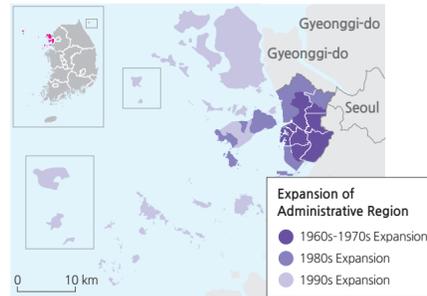
Expansion of Daejeon



Expansion of Gwangju



Expansion of Incheon



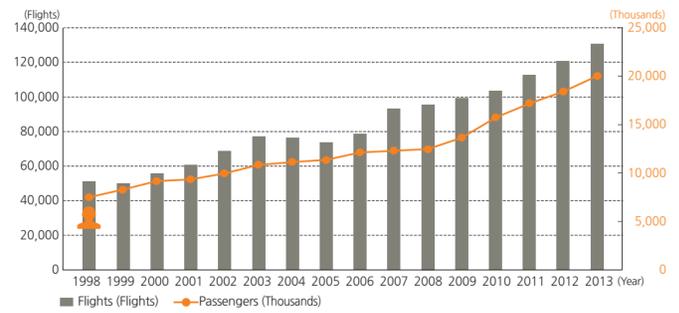
Expansion of Ulsan



International Air Routes of Jeju



Flights and Passengers of Jeju International Airport



Two unique physical features on Jeju Island: Sanbangsan (left) and Seongsan Ilchulbong Tuff Cone (right)



North Korea, officially known as the Democratic People's Republic of Korea (DPRK), is north of the demarcation line set by the Korean Armistice Agreement in July 1953. Its total area is 123,138 square kilometers, accounting for approximately 55.8% of the entire Korean Peninsula, which is 223,404 square kilometers. The population of North Korea is about 25,115,000 (2016 estimate), and its population density is 199.3 persons per square kilometer. This is close to 40% of that of South Korea, whose population density is 499.1 persons per square kilometer.

North Korea faces the East Sea on the east coast and the Yellow Sea on the west coast, and shares a border with the northeastern part of China along the Amnokgang (Yalu River) and Dumangang (Tumen River), and with Russia's Siberia along the Dumangang. The boundary with China is 1,353.2 kilometers long and features bridges such as the Amnokgang Bridge, which enables road and railway traffic to flow between Sinuiju in North Korea and Dandong in China. North Korea shares a border with Russia that is 16.2 kilometers long and is connected by a railroad bridge between North Korea's Dumangang Station in Naseon (Rason) and the Khasan Station just across the border in Russia. To the south, North Korea's border with South Korea is at the Military Demarcation Line inside the DMZ.

Since 1945 when Korea was liberated from Japan, North Korea has undergone several administrative reforms. As of 2014, it consists of one district-controlled city, Pyongyang, two special cities (Naseon and Nampo, both promoted for economic purposes), and nine provinces.

One of North Korea's prominent geographical features is the North-South running Nangrimsanmaek (Nangrim Mountain Range), which is part of the Baekdudaegan (a traditional way of representing backbone mountain ranges on the Korean Peninsula). The following ranges are also part of Baekdudaegan: the Gangnamsanmaek, Jeoguryeongsanmaek, and Myohyangsanmaek located to the west, and the Hamgyeongsanmaek and Bujollyeongsanmaek located to the east in Hamgyeongbuk-do and Hamgyeongnam-do. The northern and eastern parts of North Korea are mostly dominated by mountains and uplands whereas the southern and western parts generally consist of plains and lowlands.

Due to this topography, the rivers that run toward the Yellow Sea, including the Amnokgang, Daedonggang, Cheongcheongang, and Yesoongang, tend to wind through the mountains and meander on gentle slopes once they reach the plains. In contrast, rivers that move toward the East Sea, such as the Dumangang and Namdaecheon, are

straighter and much shorter in length than those of west-bound rivers. Consequently, North Korea's major plains are located on alluvial deposits supplied by the larger rivers that drain toward the Yellow Sea.

Many of the bedrock strata were formed between the pre-Cambrian and Cenozoic Eras, providing the country with a wide range of mineral resources. North Korea is one of the top ten countries in the world with the largest reserves of magnesite, tungsten, molybdenum, graphite, barite, gold, mica, and fluorspar, in addition to 40 kinds of natural mineral resources that have economic value.

North Korea is in a temperate climate region and has a continental climate. Its winters are very cold as a result of northwestern winds that blow from Siberia, and its summers are hot and humid due to the southeastern monsoon winds that bring moist air from the Pacific Ocean. The average annual rainfall is between 600–1,500 mm; 53–63% of all precipitation occurs from June to September. The overall rainfall is less than that of South Korea and varies widely depending on the region.

In the past, North Korea had an abundance of natural resources that had ecological value. However, its forests have been consistently damaged due to programs such as "Nationwide Fortification," one of the four military campaigns that began in the 1960s; "Terraced Field Farming," one of the five nature reformation campaigns that began in the 1970s; and the "New Field Finding Project," which began in the 1980s. Particularly in the 1990s, forests were devastated as financial difficulties forced people to find food and fuel in the mountains.

Known to many as a hermit state, North Korea is closed to most countries in the world. It trades mostly with China. With some natural resources, minerals, and ores, North Korea elected to invest heavily in the military, especially in nuclear arms and intercontinental ballistic missiles, while it has only limited investments in infrastructure, manufacturing, trade, education, and human resources. As a result, its economy is far worse than that of South Korea. The strength of a nation's economy is often measured by an index called Gross Domestic Product (GDP). It refers to the total value of manufactured goods and services rendered in a country in one year. Sometimes, it is also measured as Gross Domestic Product per capita, meaning the total GDP value divided by the country's total population. While economic data about North Korea may not be very accurate, its 2015 GDP per capita is estimated at \$1,700, compared to \$37,100 per capita in South Korea, and \$56,800 per capita for the United States for the same year.

Situated in the temperate zone, its agriculture has not been particularly productive, partly because of devastating weather conditions and partly because of lack of arable land, poor soil, and lack of fertilizers. In the 2000s, food supply diminished to famine levels until an international humanitarian food supply began in 2009. Since then, agricultural productivity has increased somewhat as international assistance has decreased. Rice production increased but it is far from the self-sufficient level.

With a young new president, North Korea embarked on a path to become a nuclear power. Its leaders believe that achieving nuclear weapon capabilities will guarantee it from being attacked. This belief is contrary to beliefs held by other nations of the world that has nuclear weapon capabilities. In 2016 and 2017, North Korea accelerated its testing of intercontinental ballistic missiles and nuclear bomb development while the rest of the world and the United Nations closely monitor and prepare for further economic sanctions. This situation is fast becoming a global concern as there is the possibility of escalating to a nuclear war confrontation.

Brief Interpretation of the Maps

These two maps show the changes in administrative units between 1946 (immediately after North Korea's liberation from Japan when there were six provinces) and 2013 (when there were nine provinces, one directly-controlled city, Pyeongyang, and two Special Cities, Naseon and Nampo). These changes reflect the government's progressive decisions to address a growing population since independence and the need to have more efficient and tighter control over the administrative units. Similar to South Korea, it also recognized the need to create special city units to deal with population concentrations in urban areas. Of particular prominence is the Special City of Naseon (also spelled Raseon) at the northeast corner where it shares a 16-kilometer border and railroad connection with Russia. At the northwest corner is the city of Sinuiju, which has a major road that connects to China.

Is the volatile political situation between North Korea and its neighbors a regional problem that is confined to East Asia? In this age of globalization, how would other world nations that have trade with North Korea be affected? North Korea shares an 800-mile border with China, a 16-kilometer (10 mile) border with Russia, and the DMZ with South Korea; if war and famine re-occur, where will starving refugees likely go?

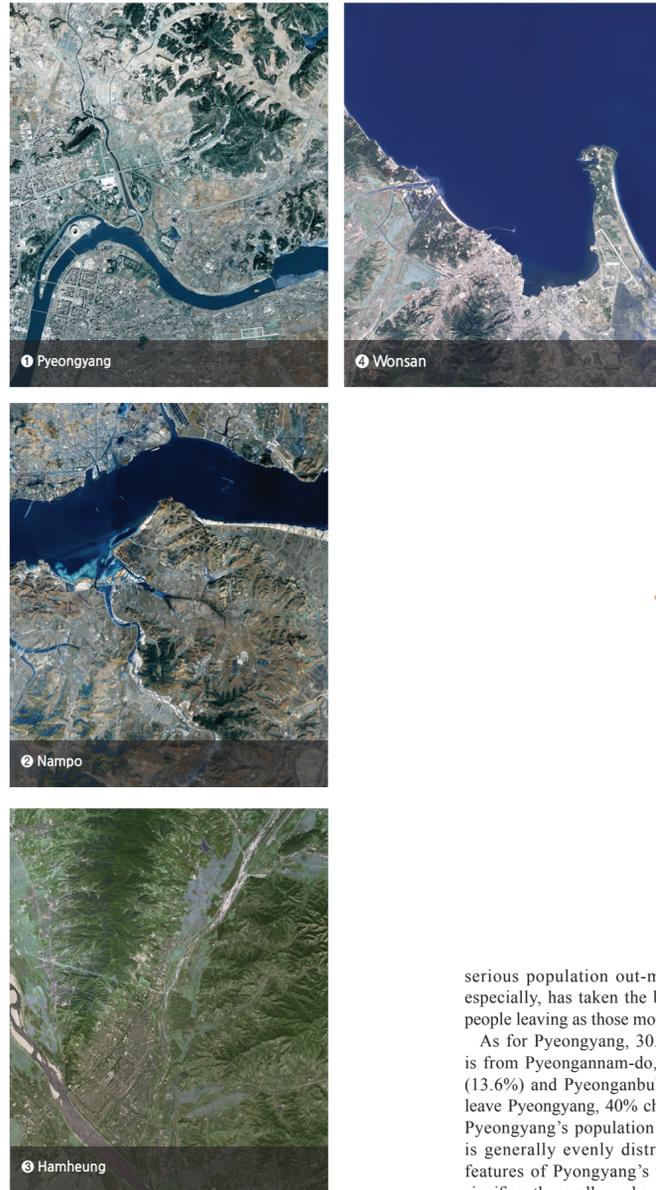
Overview of North Korea

North Korea (2013)			
 Area	123,138 km ²	 Rate of Economic Growth	1.1 %
 Population	24,545,000 Person	 GNI	309.1 (1 Hundred Million USD)
 Population Density	199.3 Person/km ²	 Per Capita GNI	1,260 USD
 Urbanization Rate	60.6 %	 Gender Ratio	95.2
 Major Administrative Divisions	1 Direct Control City Office, 2 Metropolitan City hall, 9-do	 Total Birthrate	2 Person (2006-2010)

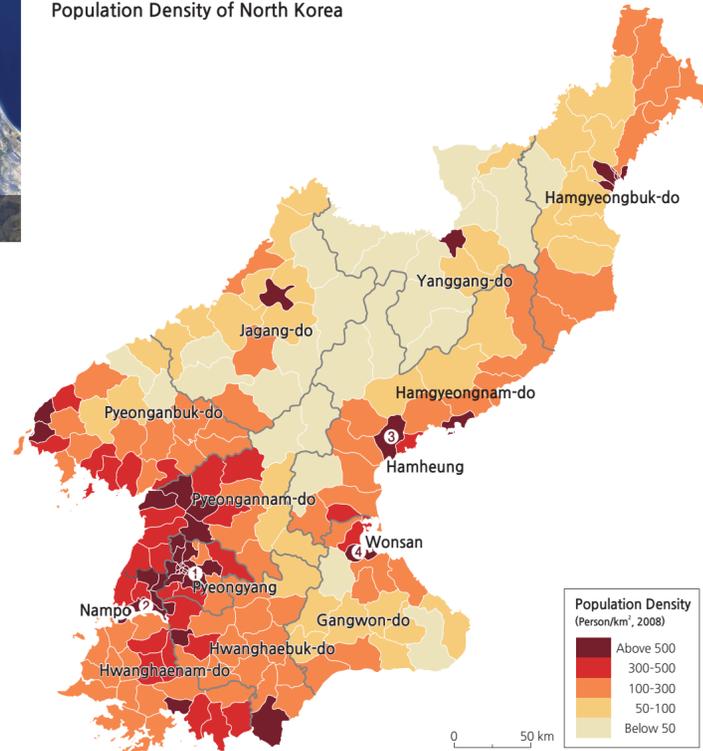
Administrative Divisions of North Korea

	2013								
	-si/-gun/Section/-gu/District				-eup/-ri/-dong/Workers' District				
	-si	-gun	Section	-gu	-district	-eup	-ri	-dong	Workers' Districts
Pyeongyang	-	2	18	-	-	1	57	284	10
Naseon	-	-	-	-	2	-	12	20	-
Nampo	-	2	5	-	-	2	49	73	5
Pyeongannam-do	5	14	-	1	2	14	347	118	26
Pyeonganbuk-do	3	22	-	-	-	22	484	88	31
Hamgyeongnam-do	3	15	7	1	1	15	465	160	35
Hamgyeongbuk-do	3	12	7	-	-	12	253	134	44
Hwanghaenam-do	1	19	-	-	-	19	419	26	11
Hwanghaebuk-do	3	18	-	-	-	19	393	78	8
Gangwon-do	2	15	-	-	-	15	379	61	7
Jagang-do	3	15	-	-	-	15	229	68	23
Yanggang-do	1	11	-	-	-	11	143	25	67
Total	24	145	37	2	5	145	3,230	1,135	267

Population and Cities of North Korea



Population Density of North Korea



serious population out-migration. Hamgyeongnam-do, especially, has taken the biggest hit, with twice as many people leaving as those moving into the province.

As for Pyongyang, 30.2% of its incoming population is from Pyeongannam-do, followed by Hwanghaebuk-do (13.6%) and Pyeonganbuk-do (13%). Among those who leave Pyongyang, 40% choose to go to Pyeongannam-do. Pyongyang's population out-migration to other regions is generally evenly distributed. One of the interesting features of Pyongyang's population movement is that a significantly small number of people move to Yanggang-do (0.01%) or Jagang-do (0.03%) compared to all of the other provinces. Similarly, the percentages of people moving from Yanggang-do and Jagang-do to Pyongyang are only 0.03% and 0.04%, respectively. This trend may be a result of the fact that the two provinces have smaller populations. However, given that the similar-sized Province of Gangwon-do accounts for as much as 8.5% of Pyongyang's incoming population and 14.3% of its outgoing population, the low migration trend for Yanggang-do and Jagang-do appears to be related to their socioeconomic conditions, as they are two of the most backward provinces in the country.

As of 2008, 64.6% of North Korea's total population live in urban regions. Pyongyang is the most urbanized area at 86.7%. Hamgyeongbuk-do, which has major cities such as the Najin-Seonbong (Rajin-Sonbong) Special Economic Zone and the city of Cheongjin, is the second most urbanized area with an urbanization rate of 70.7%, followed by Pyeongannam-do (64.9%) where the special city of Nampo is located. All of the other provinces, however, have a less than average urbanization rate. Regional inequality in urbanization is a serious problem.

North Korea once experienced rapid urbanization as it actively pursued industrialization right after Korea's liberation from Japanese colonial rule in 1945. As a result, their urbanization rate jumped from 31% in 1953 to 56.7% in 1976; the pace has significantly slowed since then.

As of 2008, the population of Pyongyang, the largest city in the North, stands at 3,255,000, followed by Hamheung in Hamgyeongnam-do (768,000) and Cheongjin in Hamgyeongbuk-do (667,000). Pyongyang is the only city whose population is more than one million; only two other cities have more than 500,000 people, and only 18 other

cities surpass the 100,000 mark.

North Korea's ranking of its cities by its 1940 population was as follows: Pyongyang, Cheongjin, Wonsan, and Hamheung. As Hamheung increased in size, the ranking changed in 1967 to: Pyeongannam-do, Hamheung, Cheongjin, and Wonsan. Then in 1982, Cheongjin became North Korea's second largest city, and the ranking changed again to the following: Pyongyang, Cheongjin, Hamheung, and Wonsan. During the 1990s, Hamheung regained its second-place rank and Nampo showed rapid growth. As of 2008, the largest cities rank as follows (largest to smallest): Pyongyang, Hamheung, Cheongjin, and Nampo.

The map shows that the two pillars of North Korea's urban development are the Pyongyang-Nampo region in the West and the Hamheung-Cheongjin region in the East. Among other cities, Hyesan, Ganggye, and Sinuju in the northern area and Pyeongsong, Gaecheon, Suncheon, and Deokcheon in the central area boast high urbanization rates of over 80%.

Brief Interpretation of the Maps

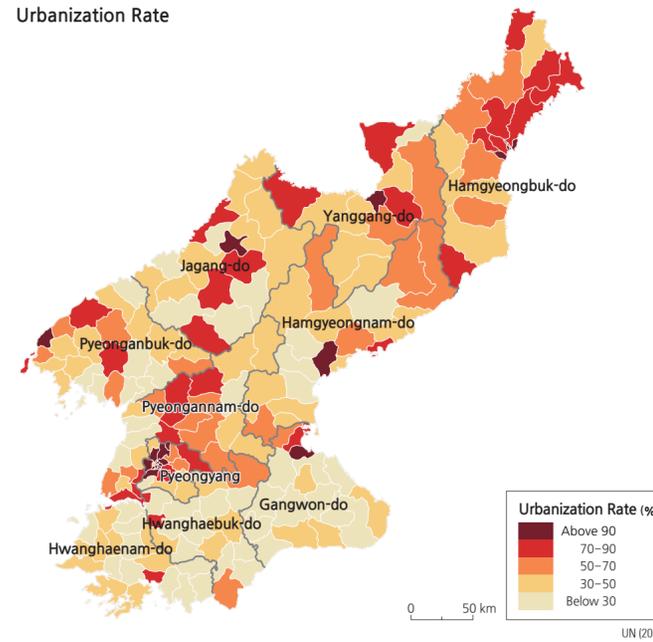
This population density map was created with United Nations data (2008). The North Korean population exhibits a classic pattern of concentration in the western lowland plains, very sparse distribution along the northeast to southwest mountain chain, a few important cities along the narrow eastern coastline, and scattered cities at corners and borders with China and South Korea. Border cities that have concentrated populations include Gaesong in the south, Naseon near the Russia border, and Hyesan and Sinuju along the Chinese border. The main population concentrations, however, are in the capital city of Pyongyang and nearby coastal city of Nampo. Hamheung and Wonsan are large cities on the east coast.

The pattern of the Urbanization Rate Map is slightly different from the Population Density Map. This variation is due to the size of the area within the mapping unit in the urbanization map and the number of urban dwellers in the urbanization map.

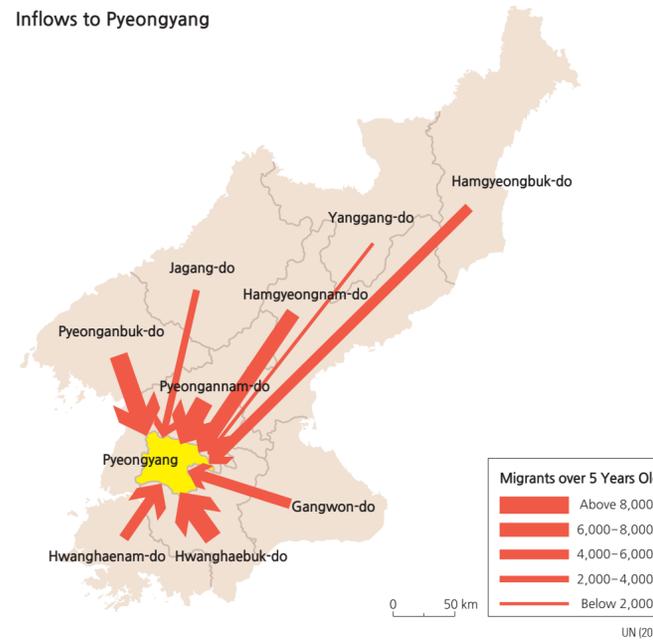
The density map includes both urban and rural people while the urbanization rate map excludes rural populations.

The migration map with the graduated circles represents both the total number of people who migrate and the

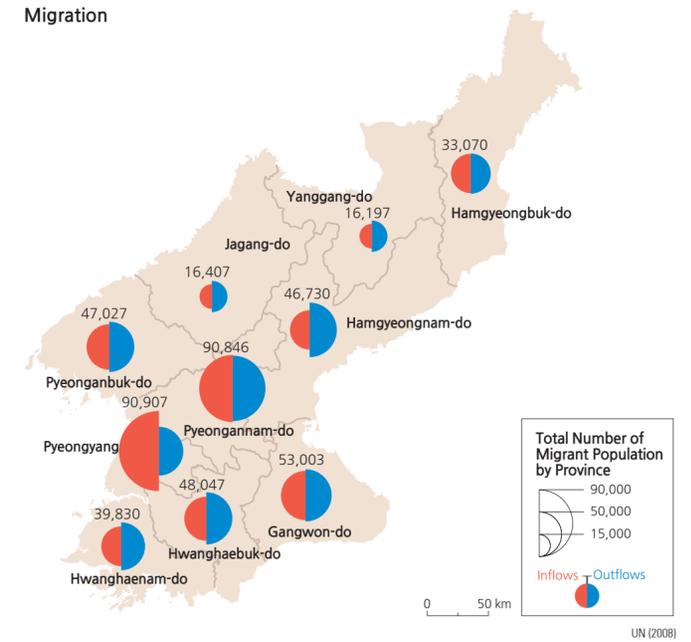
Urbanization Rate



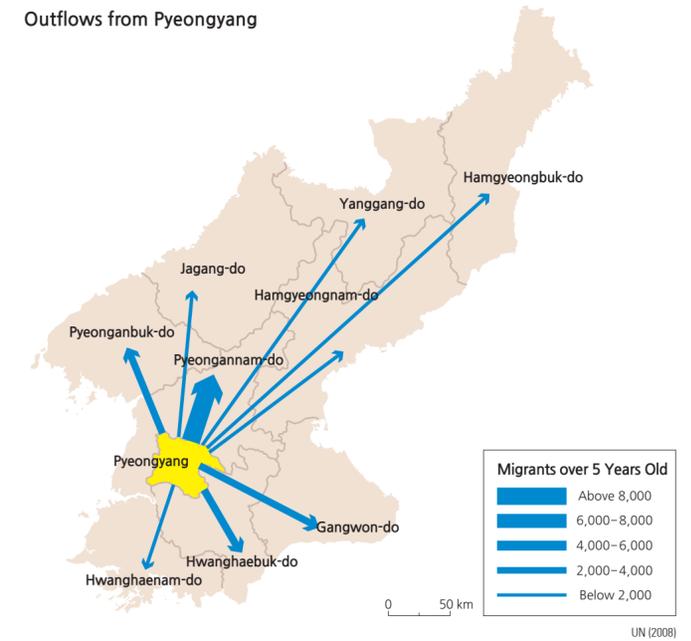
Inflows to Pyongyang



Migration



Outflows from Pyongyang

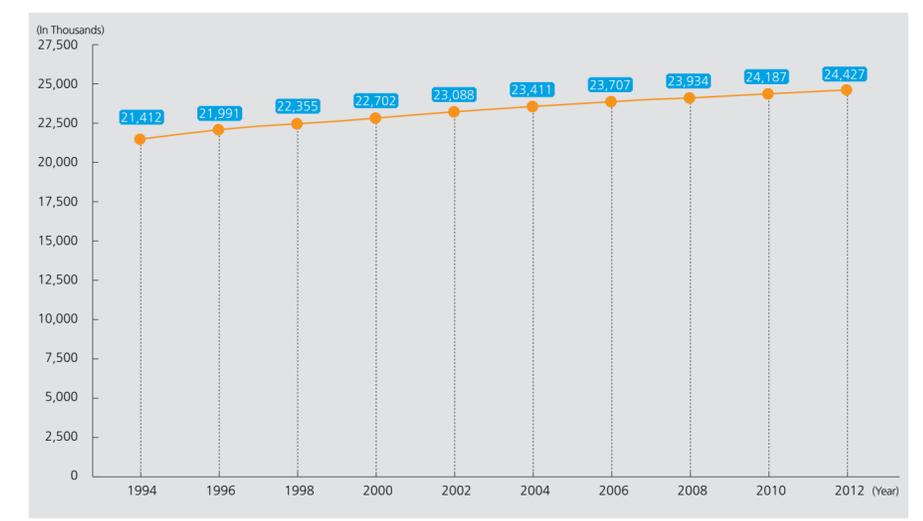


breakdown of in-migration and out-migration for each province. The blue half circles on the right represent out-migration while the red half circles on the left represent in-migration. If the red half circle is larger than the blue, that means the particular administrative unit gains more people than it loses. The map indicates that Pyongyang is the only unit that has a net gain of migrants. This is confirmed by the two Pyongyang migration maps showing the origins and destinations of migrants by volume.

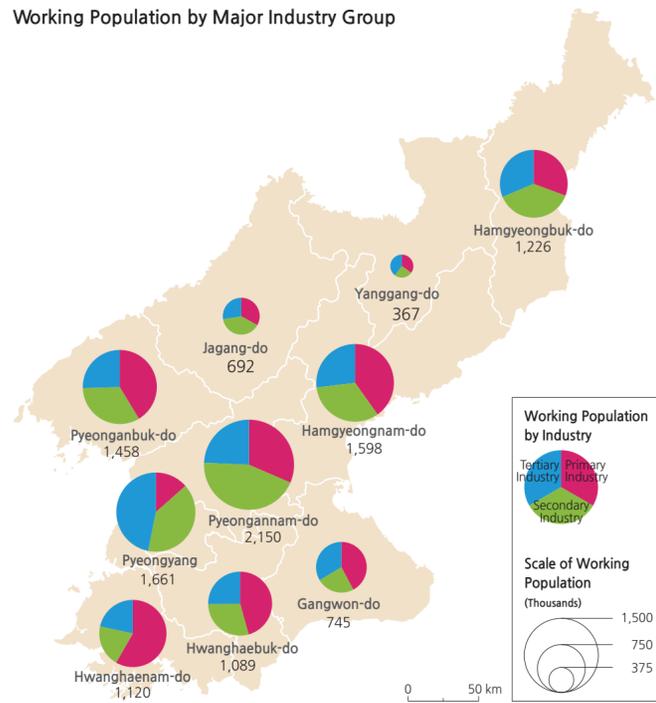
The border cities have either railroad crossings or bridges for transportation with controlled access. While the border with South Korea is almost impenetrable to N. Korean citizens, the northern borders with China (800 miles long) and Russia (10 miles long) are easier to cross, legally or illegally. Frozen rivers in the winter make crossing easy. What happens to refugees during times of famine? Would North Korean refugees be more likely to cross into China or Russia? Why? What would likely happen to refugees who are caught?

While 64.6% of North Korea's population is urban, South Korea's population is over 90% urbanized. Can you suggest a reason for such a big difference? Most developed nations have a high urbanization rate because cities attract jobs and convenient services such as hospitals and schools. What can you conclude about North Korea's 64.6% urbanization rate?

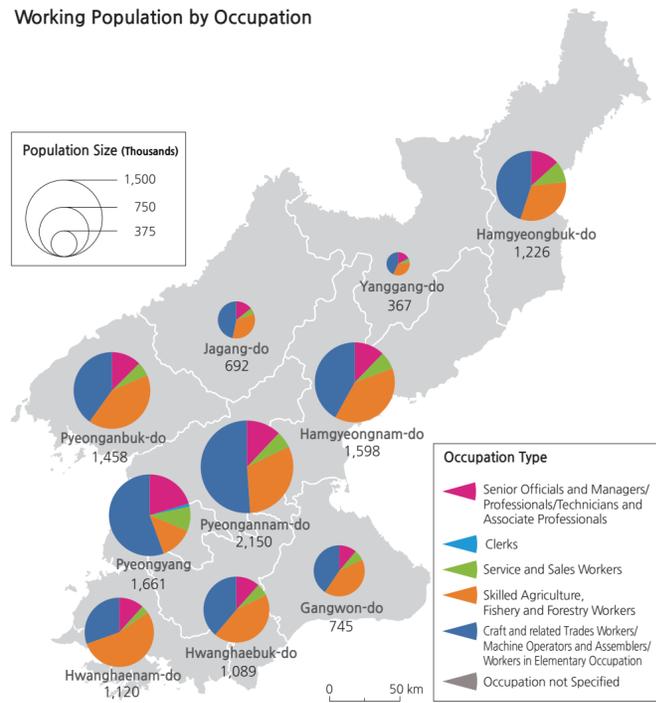
North Korea's Population Trend



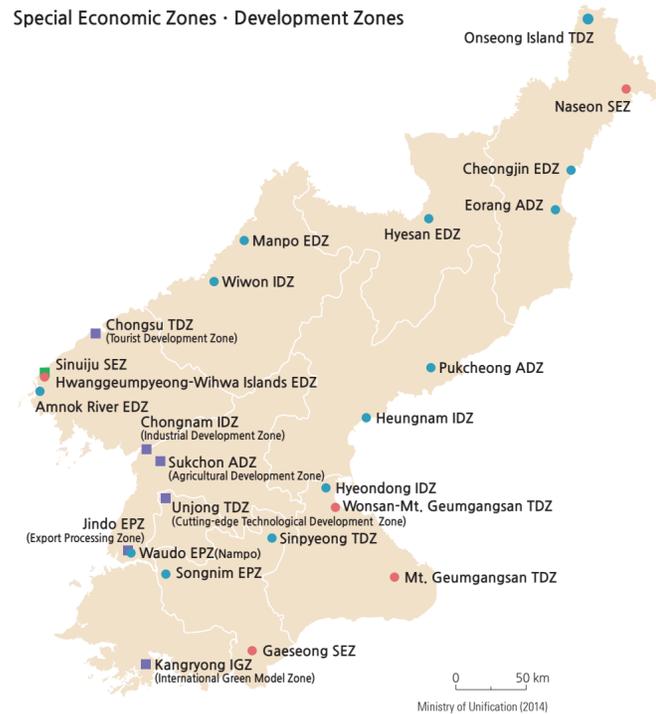
Working Population by Major Industry Group



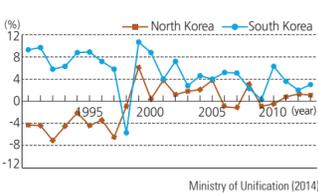
Working Population by Occupation



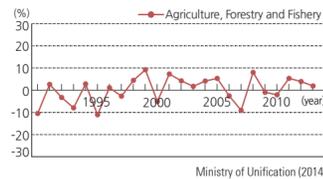
Special Economic Zones · Development Zones



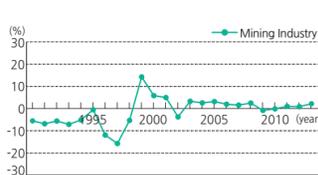
Trend in the Rate of Economic Growth



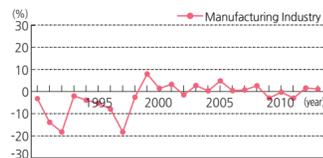
Trend in the Growth Rate of Agriculture, Forestry and Fishery



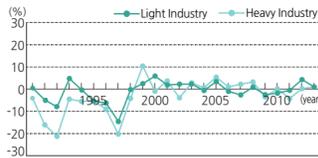
Trend in the Growth Rate of Mining Industry



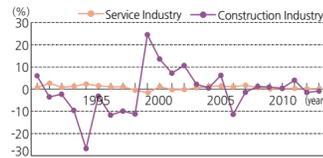
Trend in the Growth Rate of Manufacturing Industry



Trend in the Growth Rate of Light Industry and Heavy Industry



Trend in the Growth Rate of Service Industry and Construction Industry



North Korea's economy is a centrally planned and unified system in which the State Planning Commission of the central government announces economic development plans and strictly controls smaller economic units, such as regional governments, factories, and companies.

Along with a centrally planned system, another important feature of North Korea's economy is that the country included plans to assign top priority to developing heavy industry with parallel developments in agriculture and light industry. Due to the lack of capital and resources, however, heavy industry was favored over light industry and agriculture. Favoring heavy industry and ignoring agriculture and light industry led to financial difficulties and food shortages in the mid-1990s. The North's economy began to recover after 1999, but it has experienced an average annual negative growth rate since 2006.

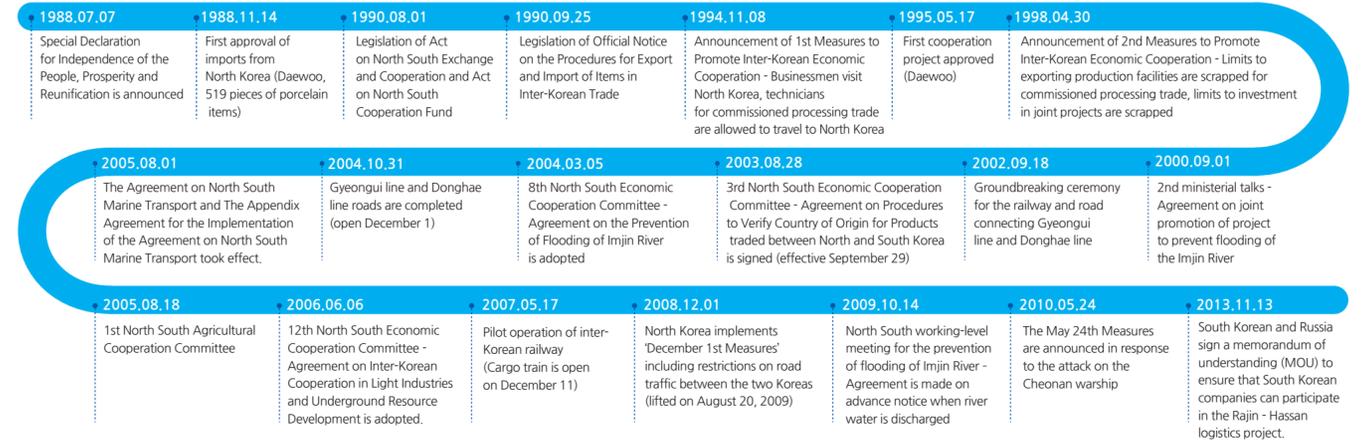
As of 2008, 36% of North Korea's population was working in primary industries, 34.3% in secondary industries, and 29.6% in tertiary industries. As for Hwanghaenam-do and Hwanghaebuk-do, the rice bowl of

North Korea, the largest share of the population is working in primary industries, with a rate of 58.1% and 45.6%, respectively. In Pyeongannam-do, the largest proportion of people (44.3%) is laboring in secondary industries because this province has the largest coal deposits in North Korea. In addition, major industrial facilities, such as Cheollima Steelworks, the Daean heavy machinery factory, and the Nampo smelting factory are located in the city of Nampo. North Korea's service industry has generally posted slow growth with the exception of Pyeongyang.

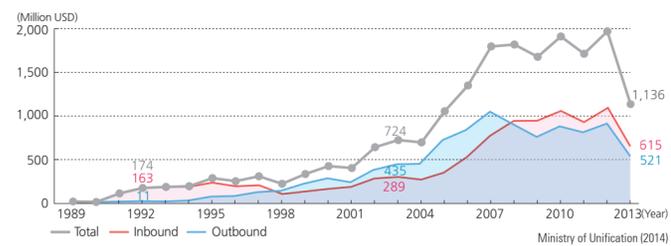
One of North Korea's most important goals is for its economy to be self-sufficient, but unfortunately this goal imperatively led the nation to underestimate the importance of economic cooperation with foreign countries. As a result, North Korea imported a minimum amount of indispensable raw materials, mostly from former socialist countries. When it realized the inefficiency of this policy, it began economic cooperation with other foreign countries, a process North Korea has engaged in since the 1970s. In 1991, the first Special Economic Zone was established in Najin-Seonbong

to more aggressively attract foreign capital. In September 2002, Sinuiju, near the border with China, was designated as a special administrative zone. In October of that year, the Gaeseong Industrial Complex was promoted to a Special Economic Zone, followed by the Geumgangsan area in November. In January 2010, North Korea promoted the Najin-Seonbong Special Economic Zone to a Special City. North Korea is now cooperating with China to develop the Najin-Seonbong region along with the Hwanggeumpyeong-Wihwado Special Economic Zone near the Amnokgang. With the enactment of the "Economic Development Zone Act," North Korea announced 13 economic development districts to attract foreign investment, with Sinuiju being designated as a new special economic zone. In November 2013, North Korea announced its intention to set up another development zone in Gaeseong, the Gaeseong Hi-Tech Industrial Park. In July 2014, North Korea designated six more economic development zones, including the Unjong cutting-edge technological development zone.

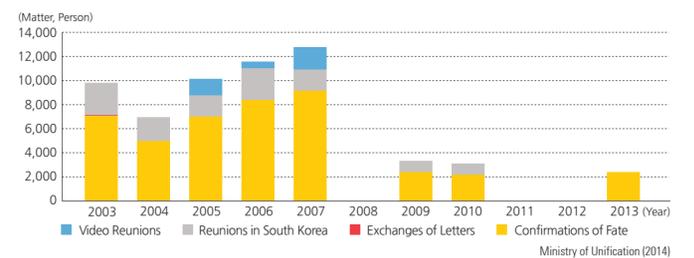
History of Inter-Korean Trade and Economic Cooperation



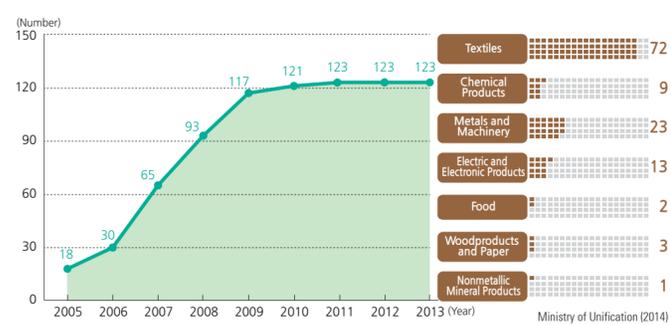
Amount of Inter-Korean Trade by Year (1989-2013)



Exchanges of Separated Families by Year



Number of Companies Operating in the Gaeseong Industrial Complex



Landscape of the Gaeseong Industrial Complex

From 1945, the year that North and South Korea were divided, to the 1960s, exchanges and cooperation between the two were nonexistent. In the early 1970s, the North and South first discussed the possibility of an exchange of goods through their respective Red Cross Societies. On November 8, 1994, the Kim Young-sam administration announced the first round of measures to activate inter-Korean economic cooperation. As the successive Kim Dae-jung administration unveiled the second round of measures and held a summit meeting with the North, inter-Korean economic cooperation entered a new phase.

South-North economic cooperation first started in general trade and then progressed into processing trade and direct investment. Economic cooperation projects include Geumgangsan tourism, the inter-Korean railway, road construction, and the Gaeseong Industrial Complex development. Tourism to Geumgangsan began on November 18, 1998 and the North designated the Geumgangsan area as a special tourist district by enacting the "Geumgangsan Tourist District Act" on November 13, 2002. However, it was suspended in July 2008 after a South Korean tourist was shot dead by a North Korean soldier. After ministerial talks in July and August of 2000, the North and South agreed to reconnect a section of the Seoul-Sinuiju Gyeongui railway line and a section of the Munsan-Gaeseong Roadway. The ground-breaking ceremony for the two cross-border railways and roadways took place on September 18, 2002. Then, in 2003, the Gyeongui line was temporarily opened for the development of the Gaeseong Industrial Complex. After the opening ceremony on February 11, 2003, the Donghae line was used to provide tourist access to Geumgangsan. In May

2007, trial runs of the Gyeongui line (Munsan-Gaeseong) and the Donghae line (Geumgangsan-Jejin) took place; in December of the same year, regular freight train service was initiated.

On June 30, 2003, the first round of the Gaeseong Industrial Complex development began on a 3.3 million square meters complex in North Korea and on December 15, 2004, the first products were brought to market. The Gaeseong Industrial Complex project faced difficulties since North Korea restricted land traffic on December 1, 2008. Since then production activity has been growing fast, with 123 companies in the complex hiring 52,000 North Korean workers. Additionally, its accumulated production output and trade volumes stand at US\$236.85 million and US\$9.45 billion, respectively. The progress in inter-Korean economic cooperation has proven to have a positive impact on separated families. Between 2003 and 2007 when inter-Korean economic exchanges were at their peak, families were able to search for their family members separated from them by the Demarcation Line, communicate with them through letters, and have reunions at governmental and non-governmental levels. As inter-Korean relations cooled in 2008, the separated families' chances of communicating with their family members significantly decreased.

Graphs in page 40 highlight some important economic trends in North Korea from 1990 to 2014. Trend in the rate of economic growth shows the general difference in economic growth between North Korea and South Korea. However, a specific timeline (1990-1998) reveals a different type trend. North Korea showed negative growth while South Korea showed a general but variable positive growth

trend from year to year. In 1998 South Korea took a strong drop into the negative trend because of the global economic crisis and then recovered and had a smaller general positive growth rate until 2013, while North Korea stabilized at about the same time, also showing a lesser general positive growth rate until 2013.

When the North Korea information is shown by breaking apart different aspects of the economy, interesting patterns are revealed, suggesting government support of different aspects of industry. After 1999, most North Korean industries achieved steady growth between -1 and 3 percent with the most variation in Construction and Primary Industries. From 1990 to 2000, there was a great deal of variation in growth, from deep dips to sudden increases. This variation in every industry except the primary and service sectors suggests changing patterns of government support of construction, manufacturing, and heavy industry. However, these data are missing a component that is common in most advanced countries of the world - military and technology investment.

The graph of trade between the two Koreas shows a large increase in outbound North Korean trade from 2001 to 2012, with a 2013 drop shortly after the change of leadership to Kim Jong Un in late 2011 after the death of his father. A similar drop in interaction between families living in North and South Korea first appeared in 2008, then appeared more strongly in 2011. Many speculated that North Korea was involved in the sinking of a South Korean Navy ship, the Cheonan, and that South Korea was forced to cool off cooperative relationships, including the closing of the Gaeseong Industrial Complex.