

# South Korea

This document is a compilation of all questions, justifications, and sources used to determine the 2021 Global Health Security Index scores for South Korea. For a category and indicator-level summary, please see the Country Profile for South Korea.

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## Category 1: Preventing the emergence or release of pathogens with potential for international concern

### 1.1 ANTIMICROBIAL RESISTANCE (AMR)

#### 1.1.1 AMR surveillance, detection, and reporting

##### 1.1.1a

**Is there a national AMR plan for the surveillance, detection, and reporting of priority AMR pathogens?**

Yes, there is evidence of an AMR plan, and it covers surveillance, detection, and reporting = 2, Yes, there is evidence of an AMR plan, but there is insufficient evidence that it covers surveillance, detection, and reporting = 1, No evidence of an AMR plan = 0

**Current Year Score: 2**

South Korea has a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens. [1,2] The National Action Plan on Antimicrobial Resistance (2016-2020) sets out six objectives: (1) to promote the prudent use of antimicrobial medicines; (2) to prevent the spread of AMR; (3) to strengthen the surveillance system; (4) to improve awareness; (5) to strengthen research and development; and (6) to enhance international collaboration.

In the area of surveillance, the national action plan covers clinical surveillance, environmental surveillance and animal surveillance of AMR pathogens. In the area of detection, the national action plan requires increased capacity for animal AMR pathogen analysis, including an expanded national residue program and a dedicated national reference laboratory. In the area of reporting, the national action plan includes the development of a web-based antibiotics AMR pathogen surveillance portal for government-wide information sharing and policy engagement. [2]

The national action plan increases the number of AMR pathogens under surveillance from six to 11 including all of the eight pathogens covered by the World Health Organization (WHO) Global AMR Surveillance System. Of the 11 pathogens, two are subject to mandatory surveillance, while nine involve sample-based surveillance. The action plan also calls for strengthening clinical surveillance from general hospitals to primary care and long-term care facilities. The action plan incorporates an "early detection and rapid response" system for vancomycin-resistant staphylococcus aureus (VRSA) (including vancomycin-intermediate staphylococcus aureus or VISA) and carbapenem-resistant Enterobacteriaceae (CRE) among 11 priority AMR pathogens under surveillance. [1,2]

[1] World Health Organization (WHO). "Library of national action plans". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 1 December 2020.

[2] South Korean Government. 11 August 2016. "National Action Plan on Antimicrobial Resistance (2016-2020)". [[https://www.jpiamr.eu/wp-content/uploads/2018/10/National-Action-Plan-on-Antimicrobial-Resistance-2016-2020\\_Korea.pdf](https://www.jpiamr.eu/wp-content/uploads/2018/10/National-Action-Plan-on-Antimicrobial-Resistance-2016-2020_Korea.pdf)]. Accessed 1 December 2020.

##### 1.1.1b

**Is there a national laboratory/laboratory system which tests for priority AMR pathogens?**

All 7 + 1 priority pathogens = 2, Yes, but not all 7+1 pathogens = 1, No = 0

**Current Year Score: 1**

There is evidence that South Korea has a national laboratory/laboratory system that tests for 7+1 priority AMR pathogens, but these pathogens are not named. The World Health Organization (WHO)'s Joint External Evaluation (JEE) for South Korea, conducted in August/September 2017, states that both South Korea's human and animal health sectors have the capacity to detect AMR for all priority AMR pathogens. [1] The JEE also states that the national reference laboratory exists in the Korean Centers for Disease Control and Prevention (KCDC) (now the Korea Disease Control and Prevention Agency or KDCA) in collaboration with provincial laboratories based at the 17 research institutes of health and environment (RIHes) and local laboratories based at 256 public health centers, 298 hospitals, and other commercial facilities. The JEE report states, "At the national level, the KCDC performs the role of the national reference laboratory and maintains a number of dedicated laboratory sentinel surveillance functions. The KCDC provides confirmatory testing as required, testing for HRPs, as well as testing of referral samples that local or provincial level laboratories cannot perform." The JEE report also confirms that "the sentinel surveillance system monitors seasonal influenza, parasitic infectious diseases, and other designated infectious diseases such as sexually-transmitted diseases and antimicrobial-resistant infections." [1] The Center for Laboratory Control of Infectious Diseases at the (KDCA is responsible for identifying and analyzing infectious pathogens and developing laboratory testing methods and diagnostic reagents. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 1 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). "Center for Laboratory Control of Infectious Diseases". [<http://www.kdca.go.kr/contents.es?mid=a30109050000>]. Accessed 1 December 2020.

### 1.1.1c

**Does the government conduct environmental detection or surveillance activities (e.g., in soil, waterways) for antimicrobial residues or AMR organisms?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the government conducts environmental detection or surveillance activities (e.g. in soil, waterways, etc.) for antimicrobial residues or AMR organisms. The last time the Ministry of Environment conducted environmental surveillance was 2013-2014. The National Institute of Environmental Research under the Ministry of Environment released findings from its two-year survey of AMR contaminants in the environment; the 2013-14 survey found no quantitative correlation between antibiotics residues and AMR residues founds in soil and waterways. [1] There has been no follow-up survey conducted by the Ministry of Environment. [1] The World Health Organization's Joint External Evaluation for South Korea, conducted in August/September 2017, states that it may be necessary to "monitor, further understand, and manage potential AMR-driving contaminants in the environment which may also play a role in generating clinically significant AMR". [2] There is no evidence from the Ministry of Environment, the Ministry of Agriculture, Food and Rural Affairs, or the Ministry of Oceans and Fisheries that this system is yet in place. [3] The government's "National Action Plan on Antimicrobial Resistance (2016-2020) sets out the development of a system for detection and surveillance of AMR in the environment. [4]

[1] Ministry of Environment. 23 February 2015. "Survey of AMR Residues in the Environment".

[<http://me.go.kr/home/web/board/read.do?pagerOffset=0&maxPageItems=10&maxIndexPages=10&searchKey=title&searchValue=%EB%82%B4%EC%84%B1%EA%B7%A0&menuId=286&orgCd=&boardId=487400&boardMasterId=1&boardCategoryId=&decorator=>]. Accessed 2 December 2020.

[2] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 2 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). "One Health".

[[http://www.kdca.go.kr/nohas/common/monitoring/kcdc.do?menuCtg=ctg03&menuId=menu01\\_1](http://www.kdca.go.kr/nohas/common/monitoring/kcdc.do?menuCtg=ctg03&menuId=menu01_1)]. Accessed 2 December 2020.

[4] South Korean government. 11 August 2016. "National Action Plan on Antimicrobial Resistance (2016-2020)".

[[https://www.jpiaimr.eu/wp-content/uploads/2018/10/National-Action-Plan-on-Antimicrobial-Resistance-2016-2020\\_Korea.pdf](https://www.jpiaimr.eu/wp-content/uploads/2018/10/National-Action-Plan-on-Antimicrobial-Resistance-2016-2020_Korea.pdf)]. Accessed 1 December 2020.

## 1.1.2 Antimicrobial control

### 1.1.2a

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for humans?**

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

**Current Year Score: 2**

The Pharmaceutical Affairs Act of 2 December 2016 requires prescriptions for antibiotic use for humans. Article 23 of the Pharmaceutical Affairs Act draws a strict line between drug prescribing and drug dispensing in South Korea as follows: "Any doctor or dentist shall be entitled to prescribe prescription drugs and over-the-counter drugs and any pharmacist shall be entitled to dispense prescription drugs and over-the-counter drugs according to the prescriptions issued by doctors or dentists." Antibiotics require prescriptions under the law. [1]

The Ministry of Health and Welfare (MOHW) provides more details on prescription drugs under "Regulation on Pharmaceuticals Classification Criteria," which categorizes antibiotics as prescription drugs. Article 2 cites "drugs that pose the risk of resistance" and "drugs that cause social problems due to the potential of misuse or abuse" among drugs that require prescription without specific mention of antibiotics. [2] The Health Insurance Review & Assessment Service under the MOHW, the regulator of the National Health Insurance, provides guidelines on antibiotic use for humans. [3]

[1] National Assembly. Act No. 14328 of 2 December 2016. "Pharmaceutical Affairs Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=40196&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=40196&lang=ENG)]. Accessed 2 December 2020.

[2] Ministry of Health and Welfare (MOHW). "Regulation on Pharmaceuticals Classification Criteria".

[[http://www.mohw.go.kr/react/jb/sjb0406vw.jsp?PAR\\_MENU\\_ID=03&MENU\\_ID=030406&CONT\\_SEQ=320760&page=1](http://www.mohw.go.kr/react/jb/sjb0406vw.jsp?PAR_MENU_ID=03&MENU_ID=030406&CONT_SEQ=320760&page=1)].

Accessed 2 December 2020.

[3] Health Insurance Review & Assessment Service. "Antibiotic Use Guidelines".

[[http://www.hira.or.kr/re/diag/asmWrptPopup.do?evlCd=11\\_1&pgmid=HIRAA030004000000](http://www.hira.or.kr/re/diag/asmWrptPopup.do?evlCd=11_1&pgmid=HIRAA030004000000)]. Accessed 2 December 2020.

### 1.1.2b

**Is there national legislation or regulation in place requiring prescriptions for antibiotic use for animals?**

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

**Current Year Score: 2**

There are national regulations in place requiring prescriptions for antibiotic use for animals and there is no evidence of gaps in enforcement.

The Ministry of Agriculture, Food and Rural Affairs regulates antibiotics as animal drugs that require prescriptions. Article 2 of "Regulation on the Designation of Animal Drugs That Require Prescriptions" requires prescriptions for animal drugs, including antibiotics, and provides an exclusion for animal feed. The regulation prohibits the sale of animal drugs containing antibiotic

active ingredients without veterinarian prescriptions. [1] The Pharmaceutical Affairs Act of 2 December 2016 requires prescriptions for antibiotic use for animals. Article 85 of the Pharmaceutical Affairs Act states that the Ministry of Agriculture, Food and Rural Affairs controls "drugs or quasi-drugs, the purpose of which is to be used exclusively for animals." The use of animal drugs is subject to standards, which include "animals for which such drugs are used, direction, dosage, and the period banning its use." [2]

[1] Ministry of Agriculture, Food and Rural Affairs (MAFRA). 12 November 2020. "Regulation on the Designation of Animal Drugs That Require Prescriptions". [<https://www.law.go.kr/LSW/admRulLsInfoP.do?admRulSeq=2100000194598>]. Accessed 2 December 2020.

[2] National Assembly. Act No. 14328 of 2 December 2016. "Pharmaceutical Affairs Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=40196&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=40196&lang=ENG)]. Accessed 2 December 2020.

## 1.2 ZOOBOTIC DISEASE

### 1.2.1 National planning for zoonotic diseases/pathogens

#### 1.2.1a

**Is there national legislation, plans, or equivalent strategy documents on zoonotic disease?**

Yes = 1, No = 0

**Current Year Score: 1**

South Korea has a national law as well as a strategy document on zoonotic diseases. The government released the National Zoonotic Disease Management Plan (2019-2022) in May 2019 with the aim of developing a "One Health" collaboration system, to strengthen infectious disease measures, and to promote international cooperation. [1]

The "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)" calls for developing standard procedures for containing zoonotic disease outbreaks such as avian influenza, expanding inter-ministerial collaboration, and establishing a "One Health" platform covering the human-animal-environmental sector. [2] The plan also aims to link the human infectious disease surveillance system of the Korea Disease Prevention and Control Agency (KDCA) and the animal infectious disease surveillance system of the Ministry of Agriculture, Food and Rural Affairs. [2] The Infectious Disease Control and Prevention Act mandates reporting of zoonotic disease outbreaks by local governments and requires the Ministry of Health and Welfare (MOHW) as well as local governments to implement preventive measures. The Infectious Disease Control and Prevention Act also requires the Ministry of Health and Welfare to develop a master plan for preventing and controlling infectious diseases every five years. [2] The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, indicates that South Korea "has established disease-specific guidelines for notification, epidemiological investigations, laboratory diagnosis, and control measures for zoonotic diseases". [4] According to the KDCA, 11 infectious diseases have been designated as zoonotic diseases as of 7 July 2020 under the MOHW's notice, including anthrax, brucellosis, and rabies. [5]

[1] Ministry of Health and Welfare (MOHW). May 2019. "National Zoonotic Disease Management Plan 2019-2022". [[https://policy.nl.go.kr/search/searchDetail.do?rec\\_key=SH2\\_PL20190236981](https://policy.nl.go.kr/search/searchDetail.do?rec_key=SH2_PL20190236981)]. Accessed 2 December 2020.

[2] Ministry of Health and Welfare (MOHW). 7 June 2018. "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&CONT\\_SEQ=345055&page=1](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&CONT_SEQ=345055&page=1)]. Accessed 2 December 2020.

[3] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 2 December 2020.

[4] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 2 December 2020.

[5] Korea Disease Control and Prevention Agency (KDCA). "Zoonotic Disease Control". [<http://www.kdca.go.kr/contents.es?mid=a20301050600>]. Accessed 2 December 2020.

### 1.2.1b

**Is there national legislation, plans or equivalent strategy document(s) which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that national legislation, plans or equivalent strategy document(s) exists that include measures for risk identification and reduction for zoonotic disease spillover events from animals to humans.

The Korea Disease Control and Prevention Agency provides guidelines that include measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. The "2020 Zoonotic Disease Control Guidelines" cover brucellosis, rabies, Coxiella burnetii (Q fever), and melioidosis (Whitmore's disease) with details on pathways for transmission, epidemiological profiles, clinical symptoms, diagnosis and laboratory testing, treatment, and prevention and management. Chapter 1 on brucellosis, for example, identifies goat, sheep, camels, pigs, cows, dogs and other animals as carriers of pathogens; and cites typical transmission routes such as food intake and contact with bodily fluids of an infected animal. It also includes preventive measures such as inoculation and food sterilization. [1] The guidelines were updated under the National Zoonotic Disease Management Plan (2019-2022) released in May 2019. [2]

Further evidence is not available from the Ministry of Health and Welfare or the Ministry of Agriculture, Food and Rural Affairs. [3, 4]

[1] Korea Disease Control and Prevention Agency (KDCA). 3 January 2020. "2020 Zoonotic Disease Control Guidelines". [[http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list\\_no=365642&tag=&nPage=2](http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list_no=365642&tag=&nPage=2)]. Accessed 2 December 2020.

[2] Ministry of Health and Welfare (MOHW). May 2019. "National Zoonotic Disease Management Plan 2019-2022". [[https://policy.nl.go.kr/search/searchDetail.do?rec\\_key=SH2\\_PL20190236981](https://policy.nl.go.kr/search/searchDetail.do?rec_key=SH2_PL20190236981)]. Accessed 2 December 2020.

[3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 4 January 2021.

[4] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 4 January 2021.

### 1.2.1c

**Is there national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is publicly available evidence of guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern. The "2020 Zoonotic Disease Control Guidelines" of the Korea Disease Control and Prevention

Agency (KDCA) cover brucellosis, rabies, *Coxiella burnetii* (Q fever), and melioidosis (Whitmore's disease) and include the surveillance and control of multiple zoonotic pathogens. The guidelines describe reporting criteria and procedures as well as laboratory testing, contact tracing, and patient treatment for covered zoonotic diseases [1]. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that South Korea: "has established disease-specific guidelines for notification, epidemiological investigations, laboratory diagnosis, and control measures for the ten [priority] zoonotic diseases" [2]. The ten priority diseases defined by the Government of South Korea include anthrax, severe acute respiratory syndrome (SARS), animal influenza with human infection, tuberculosis (*Mycobacterium bovis*), Enterohemorrhagic *Escherichia coli*, and Japanese encephalitis, in addition to the four zoonotic diseases (brucellosis, rabies, variant Creutzfeldt-Jakob disease, and Q fever) [2]. The Ministry of Health and Welfare designated severe fever with thrombocytopenia syndrome (SFTS) as a regulated zoonotic infectious disease in 2013 [3].

[1] Korea Disease Control and Prevention Agency (KDCA). 3 January 2020. "2020 Zoonotic Disease Control Guidelines". [[http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list\\_no=365642&tag=&nPage=2](http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list_no=365642&tag=&nPage=2)]. Accessed 2 December 2020.

[2] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 2 December 2020.

[3] Medical Observer. 31 July 2013. "SFTS designated as Category IV infectious disease". [<http://www.monews.co.kr/news/articleView.html?idxno=59213>]. Accessed 2 December 2020.

### 1.2.1d

#### Is there a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries?

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea has a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries, but there is a committee. The government of South Korea has a task-force committee dedicated to zoonotic disease that functions across ministries. The Korea Disease Control and Prevention Agency, the Animal and Plant Quarantine Agency under the Ministry of Agriculture, Food and Rural Affairs, and the National Institute of Wildlife Disease Control and Prevention under the Ministry of Environment are jointly responsible for policy development and coordination at the committee. [1] The zoonotic disease committee held on 11 August 2020 discussed collaboration between different government agencies for national zoonotic disease management. The committee's membership includes officials from the Ministry of Health and Welfare, the Ministry of Environment, and the Ministry of Agriculture, Food and Rural Affairs as well as experts in the private sector. [2] No other evidence of a department, agency or similar unit dedicated to zoonotic disease that functions across ministries is found in the Ministry of Health and Welfare or the Ministry of Agriculture, Food and Rural Affairs. [3, 4]

[1] National Veterinary Research & Quarantine Service. 29 October 2020. "Operating Rules on Zoonotic Disease Measures Committee". [<https://www.law.go.kr/admRulLsInfoP.do?admRulSeq=2100000194183>]. Accessed 18 January 2021.

[2] Ministry of Health and Welfare (MOHW). 11 August 2020. "Zoonotic Disease Measures Committee convened". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=358957](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=358957)]. Accessed 2 December 2020.

[3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 4 January 2021.

[4] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 4 January 2021.



## 1.2.2 Surveillance systems for zoonotic diseases/pathogens

### 1.2.2a

**Does the country have a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency?**

Yes = 1 , No = 0

**Current Year Score: 1**

The Act on the Prevention of Contagious Animal Diseases of 27 August 2019 provides a national mechanism for owners of livestock to conduct and report on disease surveillance to a central government agency. Article 11 of the Act on the Prevention of Contagious Animal Diseases requires livestock owners and veterinarians to report to a national animal disease control agency as well as local governments in the following cases: "livestock that have died from an unidentified disease; and livestock that have been infected, or are believed to have been infected, with a contagious animal disease based on the results of an epidemiological investigation or close examination or clinical symptoms". [1] The "2020 Zoonotic Disease Control Guidelines" of the Korea Disease Control and Prevention Agency (KDCA) require doctors, military doctors and laboratory directors to report to local public health centers suspected cases of brucellosis, rabies, Q fever, and melioidosis. An electronic reporting system is provided through the KDCA's online portal (<http://is.cdc.go.kr>). [2] The WHO Joint External Evaluation for South Korea, conducted in August/September 2017, notes the existence of compensation schemes for livestock owners affected by animal outbreaks, but does not provide any additional information on the reporting mechanism. [3]

[1] National Assembly. Act No. 16537 of 27 August 2019. "Act on the Prevention of Contagious Animal Diseases". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=51677&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=51677&lang=ENG)]. Accessed 2 December 2020. [1] Korea Disease Control and Prevention Agency (KDCA). 3 January 2020. "2020 Zoonotic Disease Control Guidelines". [[http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list\\_no=365642&tag=&nPage=2](http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list_no=365642&tag=&nPage=2)]. Accessed 2 December 2020.

[3] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 2 December 2020.

### 1.2.2b

**Is there legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners)?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is a law in place in South Korea that safeguards the confidentiality of information generated through surveillance activities for animals (for owners). The Act on the Prevention of Contagious Animal Diseases of 27 August 2019 provides confidentiality of anonymous information without specific reference to livestock owners as sources of such information. Article 11 of the Act on the Prevention of Contagious Animal Diseases states that government authorities receiving a report from animal owners about surveillance findings must not disclose "the identity of a reporter to the public if the reporter makes such a request," including the name of the reporting person. [1] The WHO Joint External Evaluation for South Korea, conducted in August/September 2017, does not cite any privacy protection measure related to livestock owners or other information sources. [2]

[1] National Assembly. Act No. 16537 of 27 August 2019. "Act on the Prevention of Contagious Animal Diseases".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=51677&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=51677&lang=ENG)]. Accessed 2 December 2020.

[2] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 2 December 2020.

### 1.2.2c

**Does the country conduct surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors)?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has a system for regular surveillance of zoonotic disease in wildlife. The National Institute of Environmental Research, the Animal and Plant Quarantine Agency and the Korea Disease Control and Prevention Agency conduct observation and surveillance of wildlife for animal infectious diseases. [1] The Wildlife Protection and Management Act of 16 October 2018 mandates surveillance of zoonotic disease in wildlife. Article 34 of the Wildlife Protection and Management Act requires discoveries of "a wild animal (including a dead wild animal) confirmed as infected by a disease or which has a ground for suspicion of being infected by a disease" to be reported to the Ministry of Environment and local governments. Article 34 also requires the Ministry of Environment to inform relevant administrative agencies if the diagnosed disease of a wild animal "amounts to a zoonosis". [2] The government launched the National Institute of Wildlife Disease Control and Prevention under the Ministry of Environment in October 2020. The new agency will be responsible for investigation, surveillance and response targeting 139 designated wildlife diseases under the Wildlife Protection and Management Act. [3] The National Institute of Environmental Research operates the Wildlife Disease Information Sharing System (WADIS) as a national disaster response platform for zoonotic diseases such as avian influenza and food and mouth disease. The WADIS is comprised of databases on wildlife resources, rescued animals, and disease specimens that require regular surveillance. WADIS is accessible to government agencies, research institutes, academia, and the general public. [4]

[1] Ministry of Environment. 31 December 2015. "First Basic Plan for Wildlife Disease Control".

[<https://www.korea.kr/archive/expDocView.do?docId=38048>]. Accessed 2 December 2020.

[2] National Assembly. Act No. 15835 of 16 October 2018. "Wildlife Protection and Management Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=49116&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=49116&lang=ENG)]. Accessed 2 December 2020.

[3] Ministry of Environment. 29 October 2020. "National Institute of Wildlife Disease Control and Prevention Opened".

[<http://www.me.go.kr/home/web/board/read.do?boardMasterId=1&boardId=1406430&menuId=286>]. Accessed 2 December 2020.

[4] National Institute of Environmental Research. "Wildlife Disease Information Sharing System".

[<https://wadis.nier.go.kr/intro/viewSysIntro.do>]. Accessed 3 December 2020.

## 1.2.3 International reporting of animal disease outbreaks

### 1.2.3a

**Has the country submitted a report to OIE on the incidence of human cases of zoonotic disease for the last calendar year?**

Yes = 1 , No = 0

**Current Year Score: 0**

2019

OIE WAHIS database

## 1.2.4 Animal health workforce

### 1.2.4a

**Number of veterinarians per 100,000 people**

Input number

**Current Year Score: -**

No data available

OIE WAHIS database

### 1.2.4b

**Number of veterinary para-professionals per 100,000 people**

Input number

**Current Year Score: -**

No data available

OIE WAHIS database

## 1.2.5 Private sector and zoonotic

### 1.2.5a

**Does the national plan on zoonotic disease or other legislation, regulations, or plans include mechanisms for working with the private sector in controlling or responding to zoonoses?**

Yes = 1 , No = 0

**Current Year Score: 1**

The Act on the Prevention of Contagious Animal Diseases provides mechanisms for working with the private sector in controlling or responding to zoonoses. Article 12 of the Act on the Prevention of Contagious Animal Diseases of 27 August 2019 states that "The head of the national animal disease control agency may designate colleges, private research institutes, etc., which are equipped with facilities and capabilities to conduct diagnostic tests, such as the diagnosis of animal diseases, as institutes responsible for diagnostic tests for convenience of the owners, etc., of livestock". [1] The Ministry of Environment's Basic Plan for Wildlife Disease Control cites ongoing zoonotic disease research at universities and private research institutes. [2] The Korea Disease Control and Prevention Agency (KDCA)'s "2020 Zoonotic Disease Control Guidelines" require the KDCA to develop a cooperation platform with organizations and associations in the private sector. [3] The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that responses to zoonotic events are organized in cooperation with related ministries/agencies and private organizations, as needed". [4]

[1] National Assembly. Act No. 16537 of 27 August 2019. "Act on the Prevention of Contagious Animal Diseases". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=51677&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=51677&lang=ENG)]. Accessed 2 December 2020.

[2] Ministry of Environment. 31 December 2015. "First Basic Plan for Wildlife Disease Control".

[<https://www.korea.kr/archive/expDocView.do?docId=38048>]. Accessed 2 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). 3 January 2020. "2020 Zoonotic Disease Control Guidelines".

[[http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list\\_no=365642&tag=&nPage=2](http://www.kdca.go.kr/board/board.es?mid=a20507020000&bid=0019&act=view&list_no=365642&tag=&nPage=2)].

Accessed 2 December 2020.

[4] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the

Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 2 December

2020.

## 1.3 BIOSECURITY

### 1.3.1 Whole-of- government biosecurity systems

#### 1.3.1a

**Does the country have in place a record, updated within the past five years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that South Korea maintains a current registry of individual facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that "individuals or agencies that wish to hold, use, or transfer biological agents and toxins must first be registered with the Ministry of Trade, Industry and Energy under specific legislation that prohibits chemical and biological weapons. Inspections are jointly carried out by the Ministry of Trade, Industry and Energy, and other ministries every two years. Manufacturers or holders of select agents must maintain and keep detailed records of the production, imports and exports for selected agents, and submit them to the relevant government agencies. The Korea Biotechnology Industry Association is the designated operating body for biosecurity systems for select agents and toxins." [1] The Korea Disease Control and Prevention Agency's National Culture Collection for Pathogens is responsible for "collecting, preserving, and managing clinical isolates for pathogen resources; and searching for and discovering emerging and re-emerging pathogens." [2] The National Culture Collection for Pathogens publishes annual reports on inventories. Its "2019 Annual Report of National Culture Collection for Pathogens," released on 14 September 2020, contains details on a total of 5,131 specimens. [3] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention, access to the reports is restricted and they are not publicly available. [4]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). "National Culture Collection for Pathogens".

[<http://www.kdca.go.kr/contents.es?mid=a30332000000>]. Accessed 3 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). "Annual Report of National Culture Collection for Pathogens".

[[http://nccp.cdc.go.kr/main.do?menu\\_id=060304](http://nccp.cdc.go.kr/main.do?menu_id=060304)]. Accessed 3 December 2020.

[4] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building

Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.

### 1.3.1b

**Does the country have in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is publicly available evidence that South Korea has in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed. The Infectious Disease Control and Prevention Act of 4 March 2020 provides biosecurity provisions for "safety control of high-risk pathogens" under Article 23, which states: " (1) A person who intends to examine, possess, control, and transfer high-risk pathogens shall establish and operate a facility necessary for the examination, possession, control, and transfer thereof (hereinafter referred to as "facility handling high-risk pathogens"); (2) A person who intends to establish and operate any facility handling high-risk pathogens shall obtain permission therefor from the Minister of Health and Welfare or file a report thereon with the Minister of Health and Welfare according to the safety control level of the facility handling high-risk pathogens; (7) A person who has obtained permission or filed a report pursuant to paragraph (2) shall comply with the safety control guidelines prescribed by Presidential Decree according to the safety control levels of facilities handling high-risk pathogens." [1] The Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons of 31 October 2017 addresses requirements such as physical containment, operation practices, and failure reporting systems of facilities in which especially dangerous pathogens and toxins are stored or processed. Article 5 of the law stipulates the control of production of Category 1 chemicals, biological agents and toxins. It requires anyone seeking to produce biological agents or toxins to report to the Ministry of Trade, Industry and Energy the purpose of use and quantities of biological agents or toxins to be produced. Article 6 states the requirement for biosecurity management plan implementation by producers of biological agents or toxins. The plan must include storage facilities and transport, self-inspections, and physical access control. [2] The World Health Organization Joint External Evaluation for South Korea, conducted in August/September 2017, states that South Korea has "a well-established biosafety and biosecurity system based on a comprehensive set of legislation to protect public health, agriculture, and the environment". [3] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention, access to the reports is restricted and they are not publicly available. [4]

[1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 3 December 2020. 2] National Assembly.

Act No. 15001 of 31 October 2017. "Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=45941&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=45941&lang=ENG)]. Accessed 3 December 2020.

[3] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.

[4] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.

### 1.3.1c

**Is there an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations?**

Yes = 1 , No = 0

**Current Year Score: 1**

The Korea Disease Control and Prevention Agency is responsible for the enforcement of laboratory biosecurity and regulatory compliance. Its Division of Biosafety Evaluation and Control develops programs related to biosafety and biosecurity and provides guidelines on biosafety and biosecurity as well as technological support for the construction and operation of containment laboratories. [1] The Ministry of Trade, Industry and Energy is responsible for the enforcement of biosecurity legislation and regulations under the Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons of 31 October 2017, which is the only biosecurity law available in South Korea. International inspections of domestic facilities fall under the jurisdiction of the Ministry of Foreign Affairs. [2, 3] The World Health Organization Joint External Evaluation for South Korea, conducted in August/September 2017, states that "individuals or agencies that wish to hold, use, or transfer biological agents and toxins must first be registered with the Ministry of Trade, Industry and Energy under specific legislation that prohibits chemical and biological weapons". [4] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention, access to the reports is restricted and they are not publicly available. [5]

[1] Korea Disease Control and Prevention Agency (KDCA). "Biorisk Management".

[<http://www.kdca.go.kr/contents.es?mid=a30339000000>]. Accessed 3 December 2020.

[2] National Assembly. Act No. 15001 of 31 October 2017. "Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=45941&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=45941&lang=ENG)]. Accessed 3 December 2020.

[3] Verification Research, Training and Information Center (VERTIC). [<https://www.vertic.org/>]. Accessed 3 December 2020.

[4] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.

[5] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.

**1.3.1d**

**Is there public evidence that shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that shows South Korea has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. The Infectious Disease Control and Prevention Act of 4 March 2020 and the Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons of 31 October 2017 include no such requirement. [1] However, the Korea Disease Control and Prevention Agency requires facilities handling high-risk pathogens to file notifications or obtain permits. [2] The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, indicates that South Korea "maintains a hazardous substances registration mechanism and an inventory of major chemical sites across the country", but it does not mention consolidation of inventories or facilities. [3] No evidence was found on the websites of the Ministry of Trade, Industry and Energy, the Ministry of Health and Welfare, the Ministry of National Defense, or the Ministry of Agriculture, Food and Rural Affairs. [4, 5, 6] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [7] There is no evidence on the Verification, Research, Training and Information Center (VERTIC)

BWC Legislation Database. [8]

- [1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 3 December 2020.
- [2] National Assembly. Act No. 15001 of 31 October 2017. "Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=45941&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=45941&lang=ENG)]. Accessed 3 December 2020.
- [3] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.
- [4] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 3 December 2020.
- [5] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 3 December 2020.
- [6] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 3 December 2020.
- [7] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.
- [8] Verification Research, Training and Information Center (VERTIC). "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/k/>]. Accessed 4 January 2021.

### 1.3.1e

**Is there public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)–based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for anthrax and Ebola. The Korea Disease Control and Prevention Agency's "Combined Guidelines on Diagnostic Testing of Designated Infectious Diseases," updated in January 2020, require real-time PCR testing for Ebola and anthrax. The guidelines list facilities and organizations capable of conducting PCR tests for designated infectious diseases and also provide methods for safe packaging of infectious substances. [1]

[1] Korea Disease Control and Prevention Agency (KDCA). January 2020. "Combined Guidelines on Diagnostic Testing of Designated Infectious Diseases". [<http://icdc.incheon.kr/upload/20200102090508683.pdf>]. Accessed 3 December 2020.

## 1.3.2 Biosecurity training and practices

### 1.3.2a

**Does the country require biosecurity training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient publicly available evidence that South Korea requires biosecurity training, using a standardized, required approach for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. The Transboundary Movement, Etc. of Living Modified Organisms Act of 12 December 2017 mandates biosafety training without further details. [1] The "Korea Biosafety Standard and Guideline," released in February 2020 by the government, the Korea Biotechnology Industry Organization, and the Korea Biological Safety Association, elaborates on required biosafety training, which should address safe handling, physical and biological containment, and emergency response. However, it has no provision on biosecurity training. [2] The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that biosecurity education and training is made available through cooperation between the private sector and the government, but does not specify if the training is required or uses a standardized approach. [3] The Korea Disease Control and Prevention Agency's biosecurity and biosafety information page has no evidence of a required approach to personnel training. [4] There is no evidence found at the Ministry of Health and Welfare, the Ministry of National Defense, or the Ministry of Agriculture, Food and Rural Affairs. [5, 6, 7] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [8] There is no evidence available from the Verification, Research, Training and Information Center (VERTIC) BWC Legislation Database. [9]

[1] National Assembly. Act No. 15181 of 12 December 2017. "Transboundary Movement, Etc. of Living Modified Organisms Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?lang=ENG&hseq=46334&joseq=JO0027000](https://elaw.klri.re.kr/kor_service/lawView.do?lang=ENG&hseq=46334&joseq=JO0027000)]. Accessed 3 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). "Korea Biosafety Standard and Guideline". [[http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list\\_no=138020&tag=&nPage=18](http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list_no=138020&tag=&nPage=18)]. Accessed 3 December 2020.

[3] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.

[4] Korea Disease Control and Prevention Agency (KDCA). "Biorisk". [<http://www.kdca.go.kr/contents.es?mid=a30339000000>]. Accessed 3 December 2020.

[5] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 3 December 2020.

[6] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 3 December 2020.

[7] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 3 December 2020.

[8] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.

[9] Verification Research, Training and Information Center (VERTIC). "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/k/>]. Accessed 4 January 2021.

### 1.3.3 Personnel vetting: regulating access to sensitive locations

#### 1.3.3a

**Do regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks?**

Personnel are subject to all three of these checks = 3, Personnel are subject to two of these checks = 2, Personnel are subject to one of these checks = 1, Personnel are not subject to any of these checks = 0



**Current Year Score: 1**

South Korea has regulations or licensing conditions specifying that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to background checks. Article 6 of the Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons of 31 October 2017 bars anyone deemed disqualified based on the following criteria from production of regulated biological agents or toxins: "a person for whom three years have not passed since the date on which his/her permission for production was cancelled"; "an incompetent person under the adult guardianship"; "a person declared bankrupt and yet to be reinstated"; "a person for whom two years have not passed since his/her imprisonment without labor or greater punishment declared by a court, for violation of this Act or an order issued under this Act, was completed or the non-execution of the sentence became final"; and "a person who is under the suspension of the execution declared by a court, for violation of this Act or an order issued under this Act". [1] The Korea Disease Control and Prevention Agency's biosecurity information website shows that biosecurity personnel should go through "a certain level of vetting" to work at research facilities without specifying what constitutes this vetting process. Different facilities apply different levels of vetting, including personality tests conducted at the time of employment. [2] The "Korea Biosafety Standard and Guideline," released in February 2020 by the government, the Korea Biotechnology Industry Organization, and the Korea Biological Safety Association, mentions "health monitoring" conducted for laboratory personnel, which includes blood and urinalysis tests but not mental fitness. [3] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention, access to the reports is restricted and they are not publicly available. [4]

[1] National Assembly. Act No. 15001 of 31 October 2017. "Act on the Control of the Manufacture, Export, and Import, Etc. of Specific Chemicals and Chemical Agents for the Prohibition of Chemical and Biological Weapons".

[https://elaw.klri.re.kr/kor\_service/lawView.do?hseq=45941&lang=ENG]. Accessed 3 December 2020. [2] Korea Disease Control and Prevention Agency (KDCA). 13 August 2019. "Biosecurity".

[http://www.kdca.go.kr/contents.es?mid=a40601020000]. Accessed 3 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). "Korea Biosafety Standard and Guideline".

[http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list\_no=138020&tag=&nPage=18]. Accessed 3 December 2020.

[4] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [https://bwc-ecbm.unog.ch/state/republic-korea]. Accessed 3 December 2020.

### 1.3.4 Transportation security

#### 1.3.4a

**Does the country have publicly available information on national regulations on the safe and secure transport of infectious substances (specifically including Categories A and B)?**

Yes = 1, No = 0

**Current Year Score: 1**

South Korea has publicly available information on national regulations on the safe and secure transport of infectious substances (including both Categories A and B). The Korea Disease Control and Prevention Agency (KDCA)'s "Guidelines on Safe Transport of Infectious Substances," released on 19 January 2019, regulates infectious substances transport protocol. The guidelines contain packaging, labelling, and transport requirements for both Categories A and B substances. For transportation outside an institution, triple package systems must be used, and all specimens must be packed in double containers, according to the guidelines. [1] The "Korea Biosafety Standard and Guideline," released in February 2020 by the

government, the Korea Biotechnology Industry Organization, and the Korea Biological Safety Association, details the protocol for transport and exports and imports of infectious substances. [2] The KDCA's "2020 Infectious Disease Control Work Guidelines" also contain required procedures for transporting various infectious specimens. [3] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [4]

[1] Korea Disease Control and Prevention Agency (KDCA). 10 January 2019. "Guidelines on Safe Transport of Infectious Substances". [<http://www.bwckorea.or.kr/bbs/bbsView.do?bbsid=notice&bbsseq=1033>]. [Accessed 3 December 2020].

[2] Korea Disease Control and Prevention Agency (KDCA). February 2020. "Korea Biosafety Standard and Guideline". [[http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list\\_no=138020&tag=&nPage=18](http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list_no=138020&tag=&nPage=18)]. Accessed 3 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). 4 February 2020. "2020 Infectious Disease Control Work Guidelines". [<http://www.kdca.go.kr/npt/biz/npp/portal/nppPblctDtaMain.do?pblctDtaSeAt=7>]. Accessed 3 December 2020.

[4] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 March 2019.

### 1.3.5 Cross-border transfer and end-user screening

#### 1.3.5a

**Is there legislation and/or regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins, and pathogens with pandemic potential?**

Yes = 1, No = 0

**Current Year Score: 1**

There is public evidence that a national legislation, regulation, or other guidance exists in South Korea to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins and pathogens with pandemic potential. The government operates the Biological Weapons Convention portal at the Korea Biological Safety Association, detailing export and import procedures for biological agents and toxins. Imports require permits from the Ministry of Trade, Industry and Energy (MOTIE), while exports require special MOTIE permits through the MOTIE's strategic export control portal. Permitted exports and imports should be followed up with notifications of specific delivery destinations. [1, 2] The "Korea Biosafety Standard and Guideline," released in February 2020 by the government, the Korea Biotechnology Industry Organization, and the Korea Biological Safety Association, lists laws, agencies, and pathogens involved in the export and import permit system. End-user verification is required for imports, but the same requirement is not clear for exports. [3] World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states as follows: "Manufacturers or holders of select agents must maintain and keep detailed records of the production, imports, and exports for selected agents and submit them to the relevant government agencies. The Korea Biotechnology Industry Association is the designated operating body for biosecurity systems for select agents and toxins". [4] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention, access to the reports is restricted and they are not publicly available. [5]

[1] Korea Biological Safety Association. "BWC Portal". [<http://www.bwckorea.or.kr/main.do>]. Accessed 3 December 2020.

[2] Ministry of Trade, Industry and Energy. "Strategic Export Control Portal".

[<https://www.yestrade.go.kr/user/main.do?method=main>]. Accessed 3 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). February 2020. "Korea Biosafety Standard and Guideline". [[http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list\\_no=138020&tag=&nPage=18](http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list_no=138020&tag=&nPage=18)]. Accessed 3 December 2020.

[4] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.

[5] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.

## 1.4 BIOSAFETY

### 1.4.1 Whole-of-government biosafety systems

#### 1.4.1a

**Does the country have in place national biosafety legislation and/or regulations?**

Yes = 1 , No = 0

**Current Year Score: 1**

The Infectious Disease Control and Prevention Act of 4 March 2020 is South Korea's mainstay national biosafety legislation that sets out basic safety regulations. Article 23 of the Infectious Disease Control and Prevention Act states that anyone seeking to "examine, preserve, control, and transfer high-risk pathogens" should comply with safety control standards with respect to facilities, equipment, etc. necessary for the examination, preservation, control, and transfer thereof. [1] The Korea Disease Control and Prevention Agency (KDCA) provides the "Laboratory Biosafety Guideline," which describes biosafety safeguards relevant to laboratory personnel. [2] The KDCA's biosafety literature includes the "Biosafety Management Regulation and Biosafety Management Guideline," last updated in August 2018. [3] The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that South Korea has "multiple laws, decrees and guidance documents that regulate biosafety and biosecurity". [4] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [5]

[1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 3 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). 20 April 2020. "Laboratory Biosafety Guideline 2019". [<http://www.kdca.go.kr/board/board.es?mid=a40606010000&bid=0041>]. Accessed 3 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). 23 August 2018. "Biosafety Management Regulation and Biosafety Management Guideline". [<http://www.kdca.go.kr/board/board.es?mid=a40606010000&bid=0041>]. Accessed 3 December 2020.

[4] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.

[5] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.

#### 1.4.1b

**Is there an established agency responsible for the enforcement of biosafety legislation and regulations?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is an established agency responsible for the enforcement of biosafety legislation and regulations in South Korea. The Ministry of Health and Welfare (MOHW) is responsible for the enforcement of biosafety legislation and regulations. [1] Article 23 of the Infectious Disease Control and Prevention Act of 4 March 2020 establishes the MOHW's jurisdiction over safety control of high-risk pathogens. [2] The Korea Disease Control and Prevention Agency (KDCA) is responsible for national biorisk management with the aim to "prevent diseases among personnel and to protect the community from harm by preventing the release of infectious pathogens." The former Korea Centers for Disease Control and Prevention under the MOHW was upgraded to the KDCA as an independent agency in October 2020. [3] The National Institute of Health (NIH) under the MOHW is a working-level organization handling national biosafety management to prevent diseases and the release of infectious pathogens under the Infectious Diseases Control and Prevention Act. [4] The World Health Organization (WHO) Joint External Evaluation (JEE) for South Korea, conducted in August/September 2017, states that human pathogen use is regulated by the MOHW, while animal pathogens and plant pathogens are regulated by the Ministry of Agriculture, Food and Rural Affairs. Specific ministries/agencies have also been assigned to regulate aquatic pathogens, wildlife animal pathogens, laboratory animals, select agents and toxins, and living modified organisms under various laws according to the JEE report. [5] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [6]

[1] Ministry of Health and Welfare (MOHW).

[[http://www.mohw.go.kr/react/policy/index.jsp?PAR\\_MENU\\_ID=06&MENU\\_ID=062901](http://www.mohw.go.kr/react/policy/index.jsp?PAR_MENU_ID=06&MENU_ID=062901)]. Accessed 3 December 2020.

[2] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 3 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). "Biorisk Management".

[<http://www.kdca.go.kr/contents.es?mid=a30339000000>]. Accessed 3 December 2020.

[4] National Institute of Health. [<http://www.nih.go.kr/contents.es?mid=a50101040000>]. Accessed 3 December 2020.

[5] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 3 December 2020.

[6] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 3 December 2020.

## 1.4.2 Biosafety training and practices

### 1.4.2a

**Does the country require biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea requires biosafety training, using a standardized, required approach for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. The Transboundary Movement, Etc. of Living Modified Organisms Act of 12 December 2017 mandates biosafety training without further details. [1] The "2017 Korea Biosafety Standard and Guideline," developed by the government, the Korea Biotechnology Industry Organization, and the Korea Biological Safety Association, elaborates on required biosafety training, which should address safe handling, physical and biological containment, and emergency response. Different levels of biosafety training is available from different providers. For example, biosafety training for supervisors is mandated by the Occupational Safety and Health Act and provided by the Korea Occupational Safety and

Health Agency. Biosafety training for laboratory personnel is provided by the National Research Safety Headquarters. [2] The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that biosecurity education and training is made available through cooperation between the private sector and the government, but does not specify if the training is required or uses a standardized approach. [3] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [4]

[1] National Assembly. Act No. 15181 of 12 December 2017. "Transboundary Movement, Etc. of Living Modified Organisms Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?lang=ENG&hseq=46334&joseq=JO0027000](https://elaw.klri.re.kr/kor_service/lawView.do?lang=ENG&hseq=46334&joseq=JO0027000)]. Accessed 4 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). 18 November 2019. "Korea Biosafety Standard and Guideline". [[http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list\\_no=138020&tag=&nPage=18](http://www.kdca.go.kr/board/board.es?mid=&bid=0019&act=view&list_no=138020&tag=&nPage=18)]. Accessed 4 December 2020.

[3] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 4 December 2020.

[4] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 4 December 2020.

## 1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

### 1.5.1 Oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

#### 1.5.1a

**Is there publicly available evidence that the country has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential, and/or other dual-use research. The Korea Disease Control and Prevention Agency (KDCA) regulates 36 designated "high-risk pathogens" with notification and permit requirements for transportation and imports. However, there is evidence of activity tracking ongoing research. [1] The KCDA's National Culture Collection for Pathogens keeps track of registered pathogens used for research. For example, in 2017, *Escherichia coli* was used for research on "antioxidant and antimicrobial activities of quinoa seeds cultivated in Korea." [2] The Agency for Defense Development has been approved as a facility handling high-risk pathogens. The details of its approved activities are not available from the agency's website. [3] There is no additional information on dual-use research status assessment available from the Ministry of Health and Welfare, the Ministry of National Defense, or the Ministry for Food, Agriculture, Forestry and Fisheries. [4, 5, 6] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [7] There is no evidence available from the Verification, Research, Training and Information Center (VERTIC) BWC Legislation Database. [8]

[1] Korea Disease Control and Prevention Agency (KDCA). "National Safety Management of High-Risk Pathogens". [<http://www.kdca.go.kr/contents.es?mid=a20302080100>]. Accessed 4 December 2020.

- [2] KCDA. National Culture Collection for Pathogens. "Pathogen Resources Utilization". [[http://nccp.cdc.go.kr/main.do?menu\\_id=060302](http://nccp.cdc.go.kr/main.do?menu_id=060302)]. Accessed 4 December 2020.
- [3] Agency for Defense Development. [<https://www.add.re.kr/kps>]. Accessed 4 December 2020.
- [4] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 4 December 2020.
- [5] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 4 December 2020.
- [6] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 4 December 2020.
- [7] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 4 December 2020.
- [8] Verification Research, Training and Information Center (VERTIC). "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/k/>]. Accessed 4 January 2021.

### 1.5.1b

#### Is there legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that a national policy exists in South Korea to require oversight of dual-use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, South Korea has laws in place to prohibit dual-use research of concern for high-risk pathogens and all living modified organisms. [1] The Agency for Defense Development has been approved as a facility handling high-risk pathogens. The details of its approved activities are not available from the agency's website. [2] The Armed Forces Medical Research Institute (AFMRI) is another military research institute affiliated with the Ministry of National Defense. There is no information about oversight of research at the AFMRI. According to JoongAng Ilbo, the AFMRI has filed patent applications related to several high-risk pathogens including Ebola and anthrax. [3] US Forces Korea (USFK) is believed to maintain the capacity for dual-use research involving high-risk pathogens. South Korea's role in oversight over USFK's research program is not known. According to the US Army's report on 12 March 2014, "the Joint United States Forces Korea Portal and Integrated Threat Recognition, known as JUPITR, a program led by the Joint Program Executive Office for Chemical and Biological Defense, or JPEO-CBD, and supported by the US Army Edgewood Chemical Biological Center, or ECBC, will provide unique biological detection capabilities to address the demand for stronger biosurveillance capabilities on the Korean Peninsula." [4] There is no additional information on dual-use research status assessment available from the Ministry of Health and Welfare, Ministry of National Defense, or Ministry for Food, Agriculture, Forestry and Fisheries. [5, 6, 7] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [8] There is no evidence available from the Verification, Research, Training and Information Center (VERTIC) BWC Legislation Database. [9]

- [1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 4 December 2020.
- [2] Agency for Defense Development. [<https://www.add.re.kr/kps>]. Accessed 4 December 2020.
- [3] JoongAng Ilbo. 28 December 2015. [<https://news.joins.com/article/19314135>]. Accessed 4 December 2020.
- [4] US Department of the Army. 12 March 2014. "JUPITR program takes shape on Korean Peninsula". [[https://www.army.mil/article/121633/jupitr\\_program\\_takes\\_shape\\_on\\_korean\\_peninsula](https://www.army.mil/article/121633/jupitr_program_takes_shape_on_korean_peninsula)]. Accessed 4 December 2020.

- [5] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 4 December 2020.
- [6] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 4 December 2020.
- [7] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 4 December 2020.
- [8] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 4 December 2020.
- [9] Verification Research, Training and Information Center (VERTIC). "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/k/>]. Accessed 4 January 2021.

### 1.5.1c

#### Is there an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea has an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual-use research. The Act on the Promotion of Collection, Management, and Utilization of Pathogen Resources (Act No. 13992, 3 February 2016) requires the Ministry of Health and Welfare (MOHW) to oversee the "collection, management, and utilization of pathogen resources" through designation of "specialized pathogen resource banks". There is no specific mention of medical research or dual-use research. [1] The Korea Disease Control and Prevention Agency's National Culture Collection for Pathogens is responsible for overseeing specialized pathogen resource banks. However, details are not available for any research oversight taking place. [2] There is no additional information on dual-use research status assessment available from the MOHW, Ministry of National Defense, or Ministry for Food, Agriculture, Forestry and Fisheries. [3, 4, 5] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention(BWC), access to the reports is restricted and they are not publicly available. [6] There is no evidence available from the Verification, Research, Training and Information Center (VERTIC) BWC Legislation Database. [7]

- [1] National Assembly. Act No. 14839 of 26 July 2017. "Act on the Promotion of Collection, Management, and Utilization of Pathogen Resources". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=49006&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=49006&lang=ENG)]. Accessed 4 December 2020.
- [2] Korea Disease Control and Prevention Agency (KDCA). National Culture Collection for Pathogens. [<http://nccp.cdc.go.kr/main.do>]. Accessed 4 December 2020.
- [3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 4 December 2020.
- [4] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 4 December 2020.
- [5] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 4 December 2020.
- [6] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 4 December 2020.
- [7] Verification Research, Training and Information Center (VERTIC). "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/k/>]. Accessed 4 January 2021.

## 1.5.2 Screening guidance for providers of genetic material

### 1.5.2a

**Is there legislation and/or regulation requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that South Korea has national legislation requiring the screening of synthesized DNA before it is sold. The Transboundary Movement, Etc. of Living Modified Organisms Act of 12 December 2017 provides a basis for domestic enforcement to require the screening of synthesized DNA before it is sold. Article 7 of the Transboundary Movement, Etc. of Living Modified Organisms Act requires anyone seeking to import, produce, or use new living modified organisms to clear risk assessment reviews by the government. The law does not include specific mention of synthesized DNA. The law defines living modified organism as "any living organism that possesses a novel combination of genetic material" obtained through the use of biotechnology that artificially recombines genes or directly injects nucleic acids comprising a gene into cells or organelles. [1] The Korea Disease Control and Prevention Agency conducts verification and monitoring of the status of transport, distribution, and use of living modified organisms for healthcare purposes. [2] There is no additional information available from the Ministry of Health and Welfare, Ministry of National Defense, or Ministry for Food, Agriculture, Forestry and Fisheries. [3, 4, 5] Although South Korea has submitted Confidence Building Measures every year since 1992 under the Biological Weapons Convention (BWC), access to the reports is restricted and they are not publicly available. [6] There is no evidence available from Verification, Research, Training and Information Center (VERTIC) BWC Legislation Database. [7]

[1] National Assembly. Act No. 15181 of 12 December 2017. "Transboundary Movement, Etc. of Living Modified Organisms Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?lang=ENG&hseq=46334&joseq=JO0027000](https://elaw.klri.re.kr/kor_service/lawView.do?lang=ENG&hseq=46334&joseq=JO0027000)]. Accessed 4 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). "National safety control of living modified organisms". [<http://www.kdca.go.kr/contents.es?mid=a40603010000>]. Accessed 4 December 2020.

[3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 4 December 2020.

[4] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 4 December 2020.

[5] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 4 December 2020.

[6] United Nations Office at Geneva BWC Electronic Confidence Building Measures Portal. "Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/republic-korea>]. Accessed 4 December 2020.

[7] Verification Research, Training and Information Center (VERTIC). "BWC Legislation Database".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/k/>]. Accessed 4 January 2021.

## 1.6 IMMUNIZATION

### 1.6.1 Vaccination rates

#### 1.6.1a

**Immunization rate (measles/MCV2)**

Immunization rate (measles/MCV2), 95% or greater = 2, 80-94.9% = 1, Less than 80%, or no data = 0



**Current Year Score: 2**

2019

World Health Organization

### **1.6.1b**

**Are official foot-and-mouth disease (FMD) vaccination figures for livestock publicly available through the OIE database?**

Yes = 1 , No = 0

**Current Year Score: 0**

2020

OIE WAHIS database

## **Category 2: Early detection and reporting for epidemics of potential international concern**

### **2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY**

#### **2.1.1 Laboratory testing for detection of priority diseases**

##### **2.1.1a**

**Does the national laboratory system have the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests?**

Evidence they can conduct 5 of the 10 core tests and these tests are named = 2, Evidence they can conduct 5 of the 10 core tests and the tests are not named = 1, No evidence they can conduct 5 of the 10 core tests = 0

**Current Year Score: 2**

The national laboratory system in South Korea has the capacity to conduct diagnostic tests for at least 5 of the 10 World Health Organization (WHO)-defined core tests. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, South Korea is able to test all 10 priority diseases as specified in the IHR (2005), and laboratory testing is available throughout the laboratory network. [1] The Korea Disease Control and Prevention Agency (KDCA)'s "Combined Guidelines on Diagnostic Testing of Designated Infectious Diseases" lists testing methods and testing laboratories available for designated infectious diseases, including influenza (polymerase chain reaction (PCR)), polio (PCR), HIV (antigen detection), TB (microscopy), malaria (PCR/microscopy), and typhoid (bacterial culture). Tests for specific pathogens are named and available from the KDCA, the National Institute of Health and other national laboratories. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 4 December

2020.

[2] Korea Disease Control and Prevention Agency (KDCA). January 2020. "Combined Guidelines on Diagnostic Testing of Designated Infectious Diseases". [<http://icdc.incheon.kr/upload/20200102090508683.pdf>]. Accessed 4 December 2020.

### 2.1.1b

**Is there a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing?**

Yes, there is evidence of a plan, and it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 2, Yes, there is evidence of a plan, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 1, No evidence of a plan = 0

**Current Year Score: 1**

There is a national plan, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing.

The Ministry of Health and Welfare's "Second Master Plan for Preventing and Controlling Infectious Diseases," implemented for the current plan period of 2018-2022, sets out an emergency testing strategy involving testing capacity build-ups at a local government level. The plan requires collaboration among the national reference laboratory, regional hub laboratories, and private laboratories participating in a network of laboratories. The plan also prioritizes the development of rapid testing methods for previously unknown pathogens. However, this plan does not set goals for testing coverage. [1]

The Central Disaster Management Headquarters and the Central Disease Control Headquarters, which jointly handle South Korea's response to Covid-19, issued "Guidelines for the Operation of Covid-19 Screening Clinics" in May 2020 with the aim to facilitate "access to diagnostic tests for the novel coronavirus (SARS-CoV-2) and detect patients with possible Covid-19 as early as possible through safe and fast testing." [2] According to the Ministry of Health and Welfare, there were 617 Covid-19 testing stations in operation nationwide as at 5 December 2020. [3]

[1] Ministry of Health and Welfare (MOHW). 30 July 2018. "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)".

[[http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR\\_MENU\\_ID=03&MENU\\_ID=032901&CONT\\_SEQ=345550&page=1](http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=032901&CONT_SEQ=345550&page=1)]. Accessed 5 December 2020.

[2] Ministry of Health and Welfare (MOHW). "Guidelines for the Operation of Covid-19 Screening Clinics".

[[ncov.mohw.go.kr/en/guidelineView.do?brdId=18&brdGubun=181&dataGubun=&ncvContSeq=2937&contSeq=2937&board\\_id=&gubun=#](http://ncov.mohw.go.kr/en/guidelineView.do?brdId=18&brdGubun=181&dataGubun=&ncvContSeq=2937&contSeq=2937&board_id=&gubun=#)]. Accessed 4 December 2020.

[3] Ministry of Health and Welfare (MOHW). 5 December 2020. "Covid-19 Testing Stations".

[[https://www.mohw.go.kr/react/popup\\_200128\\_3.html](https://www.mohw.go.kr/react/popup_200128_3.html)]. Accessed 4 December 2020.

## 2.1.2 Laboratory quality systems

### 2.1.2a

**Is there a national laboratory that serves as a reference facility which is accredited (e.g., International Organization for Standardization [ISO] 15189:2003, U.S. Clinical Laboratory Improvement Amendments [CLIA])?**

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence of accreditation of a national laboratory in South Korea. Macrogen Inc., a private laboratory involved in genomics research, is the only known CLIA-certified laboratory in South Korea. [1] The Korea Laboratory Accreditation Scheme (KOLAS) provides ISO compatible certification for laboratories. There are currently nine KOLAS-accredited medical laboratories. No national laboratory is currently KOLAS accredited. [2] There is no additional information from the Ministry of Health and Welfare, the Korea Disease Control and Prevention Agency, or the Ministry of Agriculture, Food and Rural Affairs. [3, 4, 5]

[1] Macrogen. [[https://www.macrogen.com/ko/company/certi\\_2.php](https://www.macrogen.com/ko/company/certi_2.php)]. Accessed 4 December 2020.

[2] Korea Laboratory Accreditation Scheme. "Medical Testing." [[https://www.knab.go.kr/en/Medical\\_Testing\\_Search.do](https://www.knab.go.kr/en/Medical_Testing_Search.do)]. Accessed 4 December 2020.

[3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 4 December 2020.

[4] Korea Disease Control and Prevention Agency (KDCA). [<http://www.kdca.go.kr/>]. Accessed 4 December 2020.

[5] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 4 December 2020.

### 2.1.2b

**Is there a national laboratory that serves as a reference facility which is subject to external quality assurance review?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that South Korea has a national laboratory that serves as a reference facility which is subject to external quality assurance review. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, the Korea Centers for Disease Control and Prevention (now Korea Disease Control and Prevention Agency) regularly participates in various international external quality assurance (EQA) programs, while public laboratories are required by law to participate in the EQA programs arranged by the KCDC. The JEE report recommends expansion of KCDC's participation in international EQA programs and expansion of the number of target pathogens for EQA programs at research institutes of health and environment. [1] The Ministry of Health and Welfare announced a plan in May 2018 to develop a legal and institutional framework for operating an EQA system, citing a lack of an assurance scheme consistent with international standards. There has been no follow-up policy announcement. There is no evidence that this improvement has been implemented. [2] There is no evidence available from the Ministry of Agriculture, Food and Rural Affairs. [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 4 December 2020.

[2] Ministry of Health and Welfare (MOHW). 16 May 2018. "2018 Implementation Plan for the Fourth Basic Plans for National Standards". [<http://www.mohw.go.kr/react/al/sal0101vw.jsp>]. Accessed 4 December 2020.

[3] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 5 January 2021.

## 2.2 LABORATORY SUPPLY CHAINS

### 2.2.1 Specimen referral and transport system

#### 2.2.1a

**Is there a nationwide specimen transport system?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is a nationwide specimen transport system in South Korea. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, a nationwide specimen transportation system exists for transferring specimens from sites of collection to research institutes. [1] The Korea Disease Control and Prevention Agency provides the "Guidelines on Safe Transport of Infectious Substances," which include pathogens, cultures, and patient specimens and cover all parts of the country. These guidelines address packaging, labelling, and transport protocols and requirements. The source laboratory can use its own transportation or courier delivery as long as it complies with packaging and transport protocol. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 4 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). 10 January 2019. "Guidelines on Safe Transport of Infectious Substances". [<http://www.bwckorea.or.kr/bbs/bbsView.do?bbsid=notice&bbsseq=1033>]. Accessed 4 December 2020.

### 2.2.2 Laboratory cooperation and coordination

#### 2.2.2a

**Is there a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak?**

Yes = 2 , Yes, but there is evidence of gaps in implementation = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea has a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak.

The Ministry of Health and Welfare (MOHW) designated about 50 private laboratories as Covid-19 testing laboratories in February 2020. [1] The MOHW operates a system of outsourcing Covid-19 testing to laboratories outside the national public health laboratory system. As of 19 November 2020, 20 such laboratories have been contracted to conduct Covid-19 tests. [2]

The government's Covid-19 Response brief describing testing capacity states: "There are currently 118 testing facilities—23 public facilities, 81 medical institutions, and 14 entrusted facilities—that provide diagnostic tests." The maximum daily testing capacity increased from 3,000 people in February 2020 to approximately 20,000 people in April in 2020. [3]

The MOHW's "Second Master Plan for Preventing and Controlling Infectious Diseases," implemented for the current plan period of 2018-2022, requires emergency collaboration among the national reference laboratory, regional hub laboratories, and private laboratories participating in a network of laboratories. This plan does not include provisions on rapidly

authorizing or licensing laboratories during an outbreak. [4]

- [1] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 5 January 2021.
- [2] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 5 January 2021.
- [3] Korea Disease Control and Prevention Agency (KDCA). [<http://www.kdca.go.kr/index.es?sid=a2>]. Accessed 5 January 2021.
- [4] Ministry of Health and Welfare (MOHW). 6 February 2020. [[https://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=352735](https://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=352735)]. Accessed 4 December 2020.

## 2.3 REAL-TIME SURVEILLANCE AND REPORTING

### 2.3.1 Indicator and event-based surveillance and reporting systems

#### 2.3.1a

**Is there evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease?**

Yes, there is evidence of ongoing event-based surveillance and evidence that the data is being analyzed on a daily basis = 2,  
Yes, there is evidence of ongoing event-based surveillance, but no evidence that the data are being analyzed on a daily basis = 1, No = 0

**Current Year Score: 1**

There is evidence that the country is conducting ongoing event-based surveillance for infectious diseases, but there is no evidence that the data are being analyzed on a daily basis. There is an event-based surveillance unit (EBS) within the national emergency operations center (EOC) in South Korea. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, there is an EBS system in place to detect potential public health threats within the EOC. Within the EOC there is a dedicated team who "monitors multiple sources of information including EBS 24/7 and conduct risk assessments." [1] The Korea Disease Control and Prevention Agency (KDCA) is responsible for the enforcement of mandatory surveillance covering all health facilities and sentinel surveillance covering sentinel facilities. [2] The KDCA operates a web-based "integrated system" updating and analyzing surveillance data on an ongoing basis. [3] No further evidence is available from the Ministry of Health and Welfare or the Ministry of Agriculture, Food and Rural Affairs. [4, 5]

- [1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 4 December 2020.
- [2] Korea Disease Control and Prevention Agency (KDCA). 4 February 2020. "2020 Infectious Disease Control Work Guidelines". [<http://www.kdca.go.kr/npt/biz/npp/portal/nppPblctDtaMain.do?pblctDtaSeAt=7>]. Accessed 3 December 2020.
- [3] Korea Disease Control and Prevention Agency (KDCA). [<https://is.cdc.go.kr/>]. Accessed 4 December 2020.
- [4] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 5 January 2021.
- [5] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 5 January 2021.

#### 2.3.1b

**Is there publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is publicly available evidence that South Korea reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years.

On 21 January 2020, South Korea reported the first novel coronavirus case in the country to the World Health Organization (WHO). The report filed by the National IHR Focal Point (NFP) for the Republic of Korea cited a case involving a 35-year-old female, Chinese national, residing in Wuhan, Hubei province in China. This was the fourth internationally exported case of 2019 nCoV [Covid-19] from Wuhan City, China by travelers since the initial report of cases on 31 December 2019, according to the WHO. [1]

[1] World Health Organization (WHO). 21 January 2020. "Daily outbreak news". [<https://www.who.int/csr/don/21-january-2020-novel-coronavirus-republic-of-korea-ex-china/en/>]. Accessed 5 December 2020.

## 2.3.2 Interoperable, interconnected, electronic real-time reporting systems

### 2.3.2a

**Does the government operate an electronic reporting surveillance system at both the national and the sub-national level?**

Yes = 1 , No = 0

**Current Year Score: 1**

The South Korean government operates an electronic reporting surveillance system at both the national and sub-national level. The World Health Organization (WHO) Joint External Evaluation (JEE) for South Korea, conducted in August/September 2017, notes the existence of an "IT-based reporting system" that enables notifications from healthcare facilities to local public health centers and the Korea Centers for Disease Control and Prevention (now Korea Disease Control and Prevention Agency). [1] The JEE notes that the "Infectious Disease Control and Prevention Act, last revised on 4 March 2020, mandates 80 types of infectious diseases (120 diseases total) to be reported by all public and private healthcare facilities and laboratories" as part of the national notifiable infectious disease surveillance system. [1] The Korea Disease Control and Prevention Agency (KDCA)'s Infectious disease automated reporting system provides direct linkage between electronic health records and the KDCA's surveillance system, which facilitates the real-time transmission of pathogen discoveries from local hospitals to the central system. The electronic reporting software program installed in end-user computers facilitates electronic reporting and data access to the KDCA's open application programming interface (API) platform. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). "Infectious disease automated reporting support program". [<http://www.kdca.go.kr/npt/biz/npp/portal/nppAtRptMain.do>]. Accessed 5 December 2020.

### 2.3.2b

**Does the electronic reporting surveillance system collect ongoing or real-time laboratory data?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea's electronic reporting surveillance system collects ongoing/real-time laboratory data. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that the IT-based reporting system operates on a real-time basis and provides real-time access to data generated from epidemiological and laboratory investigations. [1] The Korea Disease Control and Prevention Agency's electronic reporting software program interlinks reporting units and the central server to convey real-time data on infectious disease case patients. Alert functions are also built into the system. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). "Infectious disease automated reporting support program". [<http://www.kdca.go.kr/npt/biz/npp/portal/nppAtRptMain.do>]. Accessed 5 December 2020.

## 2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

### 2.4.1 Coverage and use of electronic health records

#### 2.4.1a

##### Are electronic health records commonly in use?

Electronic health records are commonly in use = 2, Electronic health records are not commonly in use, but there is evidence they are used = 1, No evidence electronic health records are in use = 0

**Current Year Score: 2**

Electronic health records (EHR) are commonly in use in South Korea. EHR adoption rates are 100% at top-tier hospitals and lower-tier general hospitals and clinics. [1] The Ministry of Health and Welfare (MOHW)'s current priority is to make different EHR platforms interoperable through standardization and certification. The MOHW has begun to roll out a system certification scheme with the Korea Health Industry Development Institute designated as a standardization certification agency. [2]

[1] Health Insurance Review & Assessment Service. 2017. "Status of Electronic Health Records at Domestic Healthcare Institutions".

[<http://repository.hira.or.kr/bitstream/2019.oak/1147/2/%EA%B5%AD%EB%82%B4%EC%9D%98%EB%A3%8C%EA%B8%B0%EA%B4%80%EC%9D%98%20%EC%A0%84%EC%9E%90%EC%9D%98%EB%AC%B4%EA%B8%B0%EB%A1%9D%EC%8B%9C%EC%8A%A4%ED%85%9C%20%ED%98%84%ED%99%A9%20%EB%B0%8F%20%EB%B0%9C%EC%A0%84%EB%B0%A9%ED%96%A5.pdf>]. Accessed 5 December 2020.

[2] Ministry of Health and Welfare (MOHW). 21 June 2019. "Electronic Medical Record certification".

[[https://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=349846](https://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=349846)]. Accessed 5 December 2020.

#### 2.4.1b

##### Does the national public health system have access to electronic health records of individuals in their country?

Yes = 1, No = 0

**Current Year Score: 1**

The national public health system, which provides universal healthcare and is operated by the Ministry of Health and Welfare and the National Health Service, has access to electronic health records of individuals South Korea. The Health Insurance Review & Assessment Service (HIRA), which handles insurance reimbursement data, such as medical claims, to run universal healthcare infrastructure, collects medical records of all people covered by the national health insurance. [1] The Medical Service Act of 4 March 2020 mandates all medical facilities to be enabled for electronic health records. Article 23 of the Medical Service Act states that "a medical person and the founder of each medical institution shall have facilities and equipment required for managing, controlling and preserving electronic medical records safely". [2] Article 96 of the National Health Insurance Act of 7 April 2020 states: "The Review and Assessment Service may request the State, local governments, health care institutions, insurance companies, and actuarial organizations under the Insurance Business Act, public institutions under the Act on the Management of Public Institutions, other public organizations, etc. to furnish the data prescribed by Presidential Decree on resident registration, immigration control, medical records, supply of medicine and medical supplies, etc. to examine the costs of health care benefits and to assess the appropriateness of health care benefits." [3]

[1] Health Insurance Review & Assessment Service. "HIRA System".

[[http://www.hira.or.kr/eng/ebook/00\\_Page\\_img/extra/00.pdf](http://www.hira.or.kr/eng/ebook/00_Page_img/extra/00.pdf)]. Accessed 5 December 2020.

[2] National Assembly. Act No. 17069 of 4 March 2020. "Medical Service Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53532&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53532&lang=ENG)]. Accessed 6 December 2020.

[3] National Assembly. Act No. 17196 of 7 April 2020. "National Health Insurance Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53994&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53994&lang=ENG)]. Accessed 5 December 2020.

### 2.4.1c

**Are there data standards to ensure data is comparable (e.g., ISO standards)?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has data standards for electronic health records (EHR) to ensure data is comparable, even though they have not kept up with the pace of EHR adoption. The Ministry of Health and Welfare's Electronic Medical Record System Certification platform is currently up and running. There are three categories of EHR data certification criteria: functionality, interoperability, and safety and security. The system currently covers all hospitals except dental clinic, mental hospitals, and long-term care facilities. As of October 2020, 13 different HER programs have been certified. There is also evidence that this certification has improved communication with the medical staff on standardized electronic medical records. Securing medical information interoperability and improving quality through national standards and conformity verification for electronic medical record system functions. [1]

[1] Ministry of Health and Welfare (MOHW). "Electronic Medical Record System Certification".

[<http://emrcert.mohw.go.kr/index.es?sid=a1>]. Accessed 5 December 2020.

## 2.4.2 Data integration between human, animal, and environmental health sectors

### 2.4.2a

**Is there evidence of established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data (e.g., through mosquito surveillance, brucellosis surveillance)?**

Yes = 1 , No = 0



**Current Year Score: 1**

There is evidence of established mechanisms at the relevant ministries responsible for animal, human, and wild life surveillance to share data. The government of South Korea has a taskforce committee dedicated to zoonotic disease that functions across ministries. Rules establishing the committee took effect in January 2006. The Korea Centers for Disease Control and Prevention (now Korea Disease Control and Prevention Agency) and the National Veterinary Research & Quarantine Service (now Animal and Plant Quarantine Agency) are jointly responsible for policy development and coordination at the committee. [1, 2] The zoonotic disease committee held on 11 August 2020 discussed collaboration between different government agencies for national zoonotic disease management. The committee's membership includes officials from the Ministry of Health and Welfare, the Ministry of Environment, and the Ministry of Agriculture, Food and Rural Affairs as well as experts in the private sector. [3]

[1] National Veterinary Research & Quarantine Service. 16 December 2005. "Operating Rules on Zoonotic Disease Measures Committee".

[[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwif9cvY66\\_tAhW0sp4KHVDJAI4ChAWMAB6BAgGEAI&url=http%3A%2F%2Fqia.go.kr%2Fbbs%2FlawAnn%2FgetZipLawAction.do%3Fid%3D456%26type%3D1&usg=AOvVaw0v701b41c6-y1tGdzlp0eJ](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwif9cvY66_tAhW0sp4KHVDJAI4ChAWMAB6BAgGEAI&url=http%3A%2F%2Fqia.go.kr%2Fbbs%2FlawAnn%2FgetZipLawAction.do%3Fid%3D456%26type%3D1&usg=AOvVaw0v701b41c6-y1tGdzlp0eJ)]. Accessed 5 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). 25 May 2016. "Zoonotic Disease Committee Operation Rules".

[<http://www.law.go.kr/LSW/admRulLsInfoP.do?admRulSeq=2100000047909>]. Accessed 5 December 2020.

[3] Ministry of Health and Welfare (MOHW). 11 August 2020. "Zoonotic Disease Measures Committee convened".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=358957](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=358957)]. Accessed 5 December 2020.

## 2.4.3 Transparency of surveillance data

### 2.4.3a

**Does the country make de-identified health surveillance data on infectious diseases publicly available via reports (or other format) on government websites (such as the Ministry of Health, Ministry of Agriculture, or similar)?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea makes de-identified health surveillance data on disease outbreaks publicly available on a weekly basis.

Infectious disease surveillance data, including the number of cases of particular disease outbreaks, is shared with relevant government departments and organizations along with the general public. [1] According to the World Health Organization (WHO) Joint External Evaluation of South Korea, completed in August/September 2017, data are made available to the public through the Public Health Weekly Report, Sentinel Surveillance Weekly Newsletters, Infection Disease Surveillance Yearbook, and the Infection Disease Web Statistics System. [1, 2] The Ministry of Health and Welfare operates a Covid-19 task force website, which provides updated case statistics. [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). Infection Disease Portal.

[<http://www.kdca.go.kr/npt/biz/npp/portal/nppPblctDtaMain.do>]. Accessed 5 December 2020.

[3] Ministry of Health and Welfare (MOHW). Covid-19. [<http://ncov.mohw.go.kr/>]. Accessed 5 December 2020.

### 2.4.3b

**Does the country make de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea makes de-identified Covid-19 surveillance data (including details such as daily case count, mortality rate, etc.) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar). The Ministry of Health and Welfare operates a Covid-19 task force website, which provides updated case statistics, including confirmed cases, people released from isolation (quarantine), people newly isolated and put in quarantine, and Covid-19 deaths. Regional breakdowns of case statistics are provided. Regularly updated data on tests performed and the positivity rate are also available. [1]

[1] Ministry of Health and Welfare (MOHW). "Covid-19". [<http://ncov.mohw.go.kr/>]. Accessed 5 December 2020.

## 2.4.4 Ethical considerations during surveillance

### 2.4.4a

**Is there legislation and/or regulations that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities?**

Yes = 1 , No = 0

**Current Year Score: 1**

Identifiable personal health information is strictly protected in South Korea under the Personal Information Protection Act of 4 January 2020. Exceptions are provided for "personal information processed temporarily where it is urgently necessary for the public safety and security, public health". There is no specification of "public health" reasons for exemption. The law defines personal information as "information relating to a living individual that makes it possible to identify the individual by his/her full name, resident registration number, image, etc. (including information which, if not by itself, makes it possible to identify any specific individual if combined with other information)". [1] The Medical Service Act of 4 March 2020 protects medical data privacy by prohibiting the disclosure of confidential information. Article 19 states that "no medical personnel or person working for a medical institution shall divulge or disclose any person's information he/she becomes aware of in the course of performing medical treatment, assistance in childbirth, or nursing, or preparing and issuing medical certificates, reports on postmortem examination or certificates, preparing and issuing medical prescriptions, inspecting medical records and issuing transcripts thereof, keeping medical records, and preparing, keeping and managing electronic medical records". [2]

[1] National Assembly. Act No. 16930 of 4 February 2020. "Personal Information Protection Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53044&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53044&lang=ENG)]. Accessed 5 December 2020.

[2] National Assembly. Act No. 17069 of 4 March 2020. "Medical Service Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53532&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53532&lang=ENG)]. Accessed 5 December 2020.

### 2.4.4b

**Is there legislation and/or regulations safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware)?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has a guideline safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware). The Medical Service Act of 4 March 2020 does not include mention of protections from cyber attacks. [1] However, the "Personal Information Protection Guidelines" of the Ministry of Health and Welfare, released in December 2016, contains system requirements to provide safeguards against cyber attacks. The guideline requires strict system access control, encryption of personal information, and implementation of data security measures such as security software. The guidelines require notification of any data breach to affected individuals and authorities without delay. [2]

[1] National Assembly. Act No. 17069 of 4 March 2020. "Medical Service Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53532&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53532&lang=ENG)]. Accessed 5 December 2020.

[2] Ministry of Health and Welfare (MOHW). 14 December 2016. "Personal Information Protection Guidelines".

[<https://law.go.kr/LSW/admRulInfoP.do?admRulSeq=2100000071313>]. Accessed 5 December 2020.

## 2.4.5 International data sharing

### 2.4.5a

**Has the government made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region?**

Yes, commitments have been made to share data for more than one disease = 2, Yes, commitments have been made to share data only for one disease = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the government of South Korea has made specific commitments to share surveillance data during a public health emergency with other countries in the region.

The Infectious Disease Control and Prevention Act of 4 March 2020 requires a commitment to share surveillance data with other countries in the region. Article 4 of the Infectious Disease Control and Prevention Act cites "international cooperation for the exchange [of] infectious disease control information" as among the duties of the central and local governments in preventing and controlling infectious diseases. However, there is no mention of cases of public health emergency. [1]

In addition, South Korea established a trilateral network with China and Japan for "information sharing, joint research, and joint response" to infectious disease threats according to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017. This network was used to ensure a timely, joint response across the three countries during the MERS outbreak in 2015. [2]

The Ministry of Health and Welfare offered "technical cooperation" to the US Centers for Disease Control and Prevention (CDC) during the MERS outbreak in 2015. [3] The Korea Disease Control and Prevention Agency signed a memorandum of understanding with the US CDC on 21 October 2019 with the aim to "systematize existing channels of cooperation between the Republic of Korea and US agencies, such as laboratory networks, the standardization of diagnostic tests, dispatch of

human resources and information exchanges, and to create the first platform for disease control and prevention so as to enhance cooperation in responding to emerging infectious diseases." [4]

[1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 5 December 2020.

[2] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

[3] Ministry of Health and Welfare (MOHW). 23 June 2015.

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=323631](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=323631)].

Accessed 5 December 2020.

[4] Ministry of Health and Welfare (MOHW). 21 October 2019. "ROK, U.S. CDC Work Together to Strengthen Global Health Security".

[[https://www.mohw.go.kr/eng/nw/nw0101vw.jsp?PAR\\_MENU\\_ID=1007&MENU\\_ID=100701&page=1&CONT\\_SEQ=351257](https://www.mohw.go.kr/eng/nw/nw0101vw.jsp?PAR_MENU_ID=1007&MENU_ID=100701&page=1&CONT_SEQ=351257)].

Accessed 5 December 2020.

## 2.5 CASE-BASED INVESTIGATION

### 2.5.1 Case investigation and contact tracing

#### 2.5.1a

**Is there a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency?**

Yes, there is evidence that the national government supports sub-national systems to prepare for future public health emergencies = 2, Yes, there is evidence that the national government supports sub-national systems, but only in response to active public health emergencies = 1, No = 0

**Current Year Score: 1**

There is evidence that South Korea has a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of an active public health emergency.

There is no evidence from the Ministry of Health and Welfare (MOHW) or the Korea Disease Control and Prevention Agency that there is such a system in place. [1, 2] The government's response measures during the Middle East respiratory syndrome coronavirus outbreak in 2018 do not include contact tracing support at the sub-national level. [3, 4]

South Korea's Covid-19 strategy prioritizes contact tracing at the central and local government level. The MOHW's Covid-19 task force website states: "The central and local governments respond to Covid-19 cases by tracing the source of infection through prompt epidemiological investigation and quarantine of contacts." [5] Article 18 of the Infectious Disease Control and Prevention Act requires the MOHW to "regularly provide education and training on epidemiological investigations." [6]

The Ministry of Land, Infrastructure and Transport provides the "Smart Management System" contract tracing technology platform for use by local governments. The system facilitates analysis on the movement of confirmed case patients, management of access to personal information, and coordination between organizations. [7]

- [1] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 5 January 2021.
- [2] Korea Disease Control and Prevention Agency (KDCA). [<http://www.kdca.go.kr/index.es?sid=a2>]. Accessed 5 January 2021.
- [3] Ministry of the Interior and Safety. 10 September 2018. "Press Release". [[https://mois.go.kr/frt/bbs/type010/commonSelectBoardArticle.do?bbsId=BBSMSTR\\_000000000008&nttId=65899](https://mois.go.kr/frt/bbs/type010/commonSelectBoardArticle.do?bbsId=BBSMSTR_000000000008&nttId=65899)]. Accessed 5 January 2021.
- [4] Ministry of Health and Welfare (MOHW). 14 September 2018. "Press Release". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&CONT\\_SEQ=346088&page=1](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&CONT_SEQ=346088&page=1)]. Accessed 5 January 2021.
- [5] Ministry of Health and Welfare (MOHW). "Covid-19". [<http://ncov.mohw.go.kr/>]. Accessed 5 December 2020.
- [6] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 5 December 2020.
- [7] Ministry of Land, Infrastructure and Transport. "Covid-19 Smart Management System". [[https://smartcity.go.kr/wp-content/uploads/2019/08/200410\\_%EC%8A%A4%EB%A7%88%ED%8A%B8%EC%8B%9C%ED%8B%B0\\_%EC%BD%94%EB%A1%9C%EB%82%9819-%EC%97%AD%ED%95%99%EC%A1%B0%EC%82%AC-%EC%A7%80%EC%9B%90%EC%8B%9C%EC%8A%A4%ED%85%9C\\_%EC%98%81%EB%AC%B8.pdf](https://smartcity.go.kr/wp-content/uploads/2019/08/200410_%EC%8A%A4%EB%A7%88%ED%8A%B8%EC%8B%9C%ED%8B%B0_%EC%BD%94%EB%A1%9C%EB%82%9819-%EC%97%AD%ED%95%99%EC%A1%B0%EC%82%AC-%EC%A7%80%EC%9B%90%EC%8B%9C%EC%8A%A4%ED%85%9C_%EC%98%81%EB%AC%B8.pdf)]. Accessed 5 December 2020.

### 2.5.1b

**Does the country provide wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention?**

Yes, both economic support and medical attention are provided = 2, Yes, but only economic support or medical attention is provided = 1, No = 0

**Current Year Score: 2**

South Korea provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention.

The program, funded by the national government, covers the entire country. Article 41-2 of the Infectious Disease Control and Prevention Act of 4 March 2020 contains provisions on the protection of workers isolated in quarantine: "(1) Where an employee is hospitalized, quarantined, or isolated under this Act, the relevant employer may grant a paid leave during the period of such hospitalization, quarantine, or isolation, in addition to the paid leave provided for in Article 60 of the Labor Standards Act. In such cases, if the cost of granting paid leave is subsidized by the State, the employer shall provide the paid leave. (2) No employer shall dismiss, or otherwise treat unfavorably, an employee on the reason of paid leave granted under paragraph (1) or dismiss such employee during the period of the paid leave: provided that this shall not apply where the employer is unable to continue his/her business. (3) The State may subsidize the cost of granting paid leave under paragraph (1)." [1]

The Ministry of Health and Welfare provides subsidies to employers to cover the cost of employee isolation on paid leave due to quarantine and hospitalization. The program offers living expenses for self-isolating people not covered by paid leave protection. [2]

[1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 5 December 2020.

[2] Ministry of Health and Welfare (MOHW). October 2020. "Paid leave and living expenses support program". [<http://ncov.mohw.go.kr/shBoardView.do?brdId=2&brdGubun=22&ncvContSeq=384>]. Accessed 5 December 2020.

### 2.5.1c

**Does the country make de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar)?**

Yes = 1, No = 0

**Current Year Score: 1**

South Korea makes de-identified data on contact tracing efforts for Covid-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar). Article 34-2 of the Infectious Disease Control and Prevention Act of 4 March 2020, mandates the public disclosure of de-identified data on contact tracing: "(1) Where the spread of an infectious disease harmful to citizens' health results in the issuance of a crisis alert of the caution level or higher prescribed in Article 38 (2) of the Framework Act on the Management of Disasters and Safety, the Minister of Health and Welfare shall promptly disclose information with which citizens are required to be acquainted for preventing the infectious disease, such as the movement paths, transportation means, medical treatment institutions, and contacts of patients of the infectious disease, by posting such information on the information and communications network, distributing a press release, etc. <Amended by Act No. 17067, Mar. 4, 2020> (2) Where any information disclosed under paragraph (1) falls under any of the following subparagraphs, the relevant person may file an objection with the Minister of Health and Welfare, in writing, orally, or using the information and communications network: <Newly Inserted by Act No. 17067, Mar. 4, 2020> 1. Where any disclosed information is different from the actual fact; 2. Where he/she has any opinion on any disclosed information." [1] The Ministry of Health and Welfare's Covid-19 taskforce websites provides up-to-date daily de-identified information on the movement of confirmed case patients, including places they visited, exposure time ranges, and occupation. [2]

[1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 5 December 2020.

[2] Ministry of Health and Welfare (MOHW). "Covid-19". 5 December 2020.

[[http://ncov.mohw.go.kr/bdBoardList\\_Real.do?brdId=1&brdGubun=12&ncvContSeq=&contSeq=&board\\_id=&gubun=](http://ncov.mohw.go.kr/bdBoardList_Real.do?brdId=1&brdGubun=12&ncvContSeq=&contSeq=&board_id=&gubun=)]. Accessed 5 December 2020.

## 2.5.2 Point of entry management

### 2.5.2a

**Is there a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency?**

Yes, plan(s)/agreement(s) are in place to prepare for future public health emergencies = 2, Yes, but plan(s)/agreement(s) are in place only in response to active public health emergencies = 1, No = 0

**Current Year Score: 1**

There is evidence that South Korea has a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active public health emergency, but only in response to an ongoing emergency.

Article 29-7 of the Quarantine Act of 4 March 2020 simply stipulates that "national quarantine stations (hereinafter referred to as "quarantine stations") shall be established and operated at airports, ports, railway stations and land-border crossings in order to prevent the spread of quarantinable infectious diseases in the Republic of Korea and overseas and to safely protect

the health of citizens." Article 24 describes cooperation with the Ministry of Justice, which has jurisdiction over border controls, as follows: "Where the Minister of Health and Welfare deems that the following persons are likely to pose a substantial risk to public health, the Minister of Health and Welfare may request the Minister of Justice to prohibit or suspend the entry and departure of such persons: Provided, That a request for prohibition or suspension of entry shall apply to foreigners alone: <Amended by Act No. 9932, Jan. 18, 2010; Act No. 13980, Feb. 3, 2016; Act No. 17068, Mar. 4, 2020> 1. A patient of a quarantinable infectious disease, etc.; 2. A contact of a patient of a quarantinable infectious disease, etc.; 3. A person exposed to a risk factor of a quarantinable infectious disease; 4. A person entering the Republic of Korea from or via a quarantine inspection required area or similar area." [1]

The Korea Disease Control and Prevention Agency operates quarantine stations at ports of entry. [2] Since 1 April 2020, all travelers entering South Korea are subject to a 14-day quarantine from the day of arrival. Arriving passengers are subject to special screening procedures at the point of entry. Korean nationals and foreign nationals who reside in Korea will self-quarantine at their place of residence for 14 days. Korean nationals and/or foreign residents whose place of residence is deemed not suitable for quarantine, will serve the quarantine at a designated government facility at their own cost. The Agreement to Facility Quarantine must be completed and submitted to the airlines.[3] There is no further evidence available from the Ministry of Health and Welfare or the Ministry of Justice, which enforces border controls. [4, 5]

[1] National Assembly. Act No. 17068 of 4 March 2020. "Quarantine Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53531&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53531&lang=ENG)]. Accessed 5 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). [<https://nqs.cdc.go.kr/nqs/main.do>]. Accessed 5 December 2020.

[3] Ministry of Foreign Affairs. [[https://overseas.mofa.go.kr/sg-en/brd/m\\_2444/view.do?seq=761451](https://overseas.mofa.go.kr/sg-en/brd/m_2444/view.do?seq=761451)]. Accessed 5 December 2020.

[4] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 5 January 2021.

[5] Ministry of Justice. [<https://www.moj.go.kr/moj/index.do>]. Accessed 4 January 2021.

## 2.6 EPIDEMIOLOGY WORKFORCE

### 2.6.1 Applied epidemiology training program, such as the field epidemiology training program, for public health professionals and veterinarians (e.g., Field Epidemiology Training Program [FETP] and Field Epidemiology Training Program for Veterinarians [FETPV])

#### 2.6.1a

Does the country meet one of the following criteria?

- Applied epidemiology training program (such as FETP) is available in country
- Resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP)

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

Applied epidemiology training program (such as the Field Epidemiology Training Program (FETP)) is available in South Korea. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, there are three levels of educational training programs (public health basic course, FMTP, and FETP) that are currently being conducted to train public health responders in the country. [1] South Korea has been operating a field epidemiologist system since 1999 to ensure a ready supply of experts for epidemiological investigations and enable an effective response for new and reemerging infectious diseases. FETP has been available to train field epidemiologists since

2000. [2] Article 18-3 of the Infectious Disease Control and Prevention Act of 4 March 2020 requires the Ministry of Health and Welfare to "regularly provide education and training on epidemiological investigations." [3] The Korea Disease Control and Prevention Agency (KDCA) issued a notice on training epidemiological investors in 2017, which requires it to operate FETP courses. [4] Resources are also provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP). The KDCA signed a memorandum of understanding with the WHO Western Pacific Regional Office to participate in the WHO's Western Pacific Regional Office (WPRO) FETP Fellowship program. [5]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). December 2017. "16 Years (1999-2015) Experiences and Challenges of the Field Epidemiology Training Program (FETP) in Korea; After 2015 MERS-CoV Outbreak in Korea".

[[https://www.researchgate.net/publication/322055910\\_Field\\_Epidemiology\\_Training\\_ProgramFETP\\_in\\_Korea\\_16\\_Years\\_1999-2015\\_Experiences\\_and\\_Challenges\\_after\\_2015\\_MERS-CoV\\_Outbreak](https://www.researchgate.net/publication/322055910_Field_Epidemiology_Training_ProgramFETP_in_Korea_16_Years_1999-2015_Experiences_and_Challenges_after_2015_MERS-CoV_Outbreak)]. Accessed 5 December 2020.

[3] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 5 December 2020.

[4] Korea Disease Control and Prevention Agency (KDCA). 6 March 2017. "Regulation on Training Epidemiological Investigators". [<https://law.go.kr/LSW/admRulLsInfoP.do?admRulSeq=2100000078355>]. Accessed 5 December 2020.

[5] Ministry of Health and Welfare (MOHW). 2 May 2016.

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=9&CONT\\_SEQ=331391&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%A9%94%EB%A5%B4%EC%8A%A4](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=9&CONT_SEQ=331391&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%A9%94%EB%A5%B4%EC%8A%A4)]. Accessed 5 December 2020.

### 2.6.1b

**Are the available field epidemiology training programs explicitly inclusive of animal health professionals or is there a specific animal health field epidemiology training program offered (such as FETPV)?**

Yes = 1 , No = 0

**Current Year Score: 1**

The available field epidemiology training programs in South Korea cover animal health professionals. The World Health Organization's Joint External Evaluation for South Korea, conducted in August/September 2017, confirms that "there is also integration between the Field Epidemiology Training Program (FETP) and veterinary programs where veterinarians can complete the full FETP training" [1] The Ministry of Agriculture, Food and Rural Affairs provides FETP courses for animal health professionals, which covers a veterinary epidemiological approach to infectious animal diseases. [2] South Korea participated in the ASEAN plus Three Field Epidemiology Training Network (ASEAN+3 FETN) in July 2019. [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

[2] Ministry of Environment. 31 March 2019. "Education Course Development to Strengthen Health Impact Investigation Capabilities".

[[http://www.prism.go.kr/homepage/theme/retrieveThemeDetail.do?sessionId=B8464C0C234AD2F391094E5F745676D5.nod e02?cond\\_research\\_name=&cond\\_organ\\_id=&cond\\_research\\_year\\_start=&cond\\_research\\_year\\_end=&cond\\_brm\\_super\\_id=NB000120061207100091168&research\\_id=1480000-201900517&pageIndex=35&leftMenuLevel=110](http://www.prism.go.kr/homepage/theme/retrieveThemeDetail.do?sessionId=B8464C0C234AD2F391094E5F745676D5.nod e02?cond_research_name=&cond_organ_id=&cond_research_year_start=&cond_research_year_end=&cond_brm_super_id=NB000120061207100091168&research_id=1480000-201900517&pageIndex=35&leftMenuLevel=110)]. Accessed 5 December 2020.

[3] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). July-September 2019. "Field Epidemiology Training Program (FETP) Updates". [<https://www.tephinet.org/sites/tephinet/files/content/attachment/2019->



10-19/FETP%20Updates%20July-September%202019%20TEPHINET%20Newsletter.pdf]. Accessed 5 December 2020.

## 2.6.2 Epidemiology workforce capacity

### 2.6.2a

Is there public evidence that the country has at least 1 trained field epidemiologist per 200,000 people?

Yes = 1, No = 0

Current Year Score: 1

2020

Completed JEE assessments; Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## Category 3: Rapid response to and mitigation of the spread of an epidemic

### 3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

#### 3.1.1 National public health emergency preparedness and response plan

##### 3.1.1a

Does the country have an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential?

Evidence that there is a plan in place, and the plan is publicly available = 2, Evidence that the plan is in place, but the plan is not publicly available OR, Disease-specific plans are in place, but there is no evidence of an overarching plan = 1, No evidence that such a plan or plans are in place = 0

Current Year Score: 2

South Korea has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with pandemic potential. The plan is publicly available. The Ministry of Health and Welfare's "Second Master Plan for Preventing and Controlling Infectious Diseases." implemented for the current plan period of 2018-2022, sets out the roles of the central and local governments in formulating a rapid response to pandemic crises. The plan calls for the development of a "one health" platform for a coordinated response across different government ministries. [1] The World Health Organization's Joint External Evaluation for South Korea, conducted in August/September 2017, notes that South Korea has a Master Plan for National Safety Management, which focuses on preparedness and response planning for natural and manmade disasters. [2]

[1] Ministry of Health and Welfare (MOHW). 30 July 2018. "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)".

[[http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR\\_MENU\\_ID=03&MENU\\_ID=032901&CONT\\_SEQ=345550&page=1](http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=032901&CONT_SEQ=345550&page=1)]. Accessed 5 December 2020.

[2] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the

Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

### 3.1.1b

**If an overarching plan is in place, has it been updated in the last 3 years?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 1**

The plan that is currently in place has been updated in the last three years. The Ministry of Health and Welfare's "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)," was released on 8 June 2018 and is an updated version of the previous plan set for the years 2013 through 2017. [1]

[1] Ministry of Health and Welfare (MOHW). 30 July 2018. "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)".

[[http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR\\_MENU\\_ID=03&MENU\\_ID=032901&CONT\\_SEQ=345550&page=1](http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=032901&CONT_SEQ=345550&page=1)]. Accessed 5 December 2020.

### 3.1.1c

**If an overarching plan is in place, does it include considerations for pediatric and/or other vulnerable populations?**

Yes = 1 , No /no plan in place= 0

**Current Year Score: 1**

There is evidence that considerations for pediatric and other vulnerable populations are provided. The Infectious Disease Control and Prevention Act of 4 March 2020 mandates special consideration for vulnerable groups. Article 49-2 states: "(1) Where a crisis alert of the caution level or higher prescribed in Article 38 (2) of the Framework Act on the Management of Disasters and Safety is issued, in order to protect children, senior citizens, etc. (hereinafter referred to as "persons vulnerable to infection") using social welfare facilities from respiratory infectious diseases, the Minister of Health and Welfare, a Mayor/Do Governor, or the head of a Si/Gun/Gu may take necessary measures, such as providing face masks to persons vulnerable to infection. (2) Matters necessary for the types of infectious diseases, the scope of persons vulnerable to infection, the procedures for provision, and other relevant matters under paragraph (1) shall be prescribed by Ordinance of the Ministry of Health and Welfare. [1] The Ministry of Health and Welfare's "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)," implemented for the current plan period of 2018-2022, provides vaccination programs for children and elderly people as safeguards against infectious diseases to which they are vulnerable. [2] There is no further evidence available from the Ministry of Health and Welfare or the Prime Minister's Secretariat involved in emergency management. [3, 4]

[1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 5 January 2021.

[2] Ministry of Health and Welfare (MOHW). 30 July 2018. "Second Master Plan for Preventing and Controlling Infectious Diseases (2018-2022)".

[[http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR\\_MENU\\_ID=03&MENU\\_ID=032901&CONT\\_SEQ=345550&page=1](http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=032901&CONT_SEQ=345550&page=1)]. Accessed 5 December 2020.

[3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 5 January 2021.

[4] Prime Minister's Secretariat. [<https://www.opm.go.kr/opm/index.do>]. Accessed 5 January 2021.

### 3.1.1d

Does the country have a publicly available plan in place specifically for pandemic influenza preparedness that has been updated since 2009?

Yes = 1, No = 0

Current Year Score: 0

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

## 3.1.2 Private sector involvement in response planning

### 3.1.2a

Does the country have a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response?

Yes = 1, No = 0

Current Year Score: 1

South Korea has a specific mechanism for engaging with the private sector to assist with outbreak emergency preparedness and response. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that both the central and local governments can request specialized healthcare personnel from both the public and private sectors as part of their emergency response, both in terms of treatment and epidemiological investigations. [1] The government launched a policy panel of government officials and private-sector experts in May 2020 as part of an effort to establish the South Korean epidemiological model as an international standard. The so-called "K-Epidemiological Model" incorporates public-private collaboration in the testing-tracing-treatment cycle of a public health emergency. [2] According to the United Nations Development Program (UNDP) Seoul Policy Center for Knowledge Exchange through SDG Partnerships, private sector responses to Covid-19 in South Korea included private sector companies "developing real-time dashboards and mobile apps to further increase public awareness and effectively disseminate disease information" and "utilizing digital technology including Artificial Intelligence to facilitate fast-track yet accurate screening and diagnosis of Covid-19 patients." [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 5 December 2020.

[2] Ministry of Trade, Industry and Energy. 8 May 2020. "K-Epidemiological Model".

[<https://www.korea.kr/news/pressReleaseView.do?newsId=156389293>]. Accessed 5 December 2020.

[3] UNDP Seoul Policy Centre for Knowledge Exchange through SDG Partnerships. 22 April 2020. "Private sector responses". [[https://www.undp.org/content/seoul\\_policy\\_center/en/home/presscenter/articles/2019/Collection\\_of\\_Examples\\_from\\_the\\_Republic\\_of\\_Korea/covid-private-sector-responses.html](https://www.undp.org/content/seoul_policy_center/en/home/presscenter/articles/2019/Collection_of_Examples_from_the_Republic_of_Korea/covid-private-sector-responses.html)]. Accessed 5 December 2020.

## 3.1.3 Non-pharmaceutical interventions planning

### 3.1.3a

Does the country have a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic?

Yes, a policy, plan and/or guidelines are in place for more than one disease= 2, Yes, but the policy, plan and/or guidelines exist only for one disease = 1, No = 0

**Current Year Score: 2**

South Korea has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic that apply for more than one disease.

The Infectious Disease Control and Prevention Act of 4 March 2020 provides the legal basis for NPIs. Article 49 stipulates "preventive measures against infectious diseases," which include "restricting or prohibiting performances, assemblies, religious ceremonies, or any other large gathering of people" and "issuing an order to disinfect or take other necessary measures for, facilities or places related to public sanitation." [1]

The Central Disaster Management Headquarters, which operates a centralized task force during the Covid-19 pandemic, enforces a set of social distancing guidelines. Currently, guidelines are tiered into Level 1, Level 1.5, Level 2, Level 2.5, and Level 3. The highest level of restrictions, Level 3, is triggered when confirmed cases number more than 800 on weekly average nationwide. Level 3 restrictions ban gatherings of 10 or more. [2] The "Plan to Enhance Infection Prevention and Control Measures in the Seoul Metropolitan Region" was released on 18 August 2020 to implemented tiered social distancing restrictions on the capital region. [3] The Central Disaster and Safety Countermeasures Headquarters upgraded social distancing guidelines from Level 2 to Level 2.5 for the capital region and from Level 1.5 to Level 2 for the rest of the country, effective 8 December 2020. [4]

[1] National Assembly. Act No. 17067 of 4 March 2020. "Infectious Disease Control and Prevention Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=53530&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=53530&lang=ENG)]. Accessed 5 January 2021.

[2] Central Disaster Management Headquarters. 3 May 2020. "Covid-19 Guidelines of the Republic of Korea for distancing in daily life". [<http://ncov.mohw.go.kr/socdisBoardView.do?brdId=6&brdGubun=1>]. Accessed 6 December 2020.

[3] Central Disaster Management Headquarters. 18 August 2020. " Plan to Enhance Infection Prevention and Control Measures in the Seoul Metropolitan Region".

[[http://ncov.mohw.go.kr/en/infoBoardView.do?brdId=14&brdGubun=141&dataGubun=&ncvContSeq=3415&contSeq=3415&board\\_id=&gubun=](http://ncov.mohw.go.kr/en/infoBoardView.do?brdId=14&brdGubun=141&dataGubun=&ncvContSeq=3415&contSeq=3415&board_id=&gubun=)]. Accessed 6 December 2020.

[4] Central Disaster and Safety Countermeasures Headquarters. 6 December 2020. "Press Release".

[<https://www.opm.go.kr/opm/news/press-release.do?mode=view&articleNo=131616&article.offset=0&articleLimit=10>]. Accessed 8 December 2020.

## 3.2 EXERCISING RESPONSE PLANS

### 3.2.1 Activating response plans

#### 3.2.1a

Does the country meet one of the following criteria?

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak in the past year?
- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

**Current Year Score: 1**

There is evidence that South Korea has activated a national emergency response plan for an infectious disease outbreak in the past year. There is also evidence that South Korea has completed a national-level biological threat-focused exercise (either with the World Health Organization (WHO) or separately) in the past year.

South Korea launched coordinated national response efforts on 27 January 2020 when the national infectious disease risk alert level was upgraded from the third to the second highest level of severity and a taskforce led by the Korea Disease Control and Prevention Agency (KDCA) was activated with the aim to coordinate emergency measures covering governance; testing, tracing, and treatment (3Ts); immigration and screening measures, social measures; education; the economy; assistance to Korean nationals overseas; and international cooperation. [1]

The Ministry of Health and Welfare (MOHW) conducted the annual Safety Korea Exercise simulating an Ebola outbreak in October-November 2019. There has been no announcement of the Safety Korea Exercise held in 2020. [2] There is no further evidence available from the MOHW or the Prime Minister's Secretariat involved in emergency management. [3, 4]

[1] Ministry of Health and Welfare (MOHW). 27 January 2020. "Press Release". [https://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\_MENU\_ID=04&MENU\_ID=0403&page=1&CONT\_SEQ=352517]. Accessed 28 January 2021.

[2] Ministry of Health and Welfare (MOHW). 28 October 2019. "2019 Safety Korea Exercise". [http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\_MENU\_ID=04&MENU\_ID=0403&page=1&CONT\_SEQ=351320]. Accessed 6 December 2020.

[2] Ministry of Health and Welfare (MOHW). [http://www.mohw.go.kr/react/index.jsp]. Accessed 5 January 2021.

[3] Prime Minister's Secretariat. [https://www.opm.go.kr/opm/index.do]. Accessed 5 January 2021.

**3.2.1b**

**Is there evidence that the country in the past year has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities?**

Yes, the country has developed and published a plan to improve response capacity = 2 , Yes, the country has developed a plan to improve response capacity, but has not published the plan = 1 , No = 0

**Current Year Score: 0**

There is no evidence that South Korea has, in the past year, identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities. The World Health Organization (WHO) Strategic Partnership for International Health Regulations (2005) and Health Security (SPH) website shows no evidence of such activity in South Korea. [1, 2] The Ministry of Health and Welfare conducted the annual Safety Korea Exercise under an Ebola outbreak scenario in October-November 2019. No such exercise has been conducted in 2020. There is no evidence of after-action review for the 2019 exercise. [3]

[1] World Health Organization (WHO). "After Action Review". [https://extranet.who.int/sph/after-action-review]. Accessed 6 December 2020.

[2] World Health Organization (WHO). "Simulation Exercise". [https://extranet.who.int/sph/simulation-exercise]. Accessed 5 December 2020.

[3] Ministry of Health and Welfare (MOHW). 28 October 2019. "2019 Safety Korea Exercise".

[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\_MENU\_ID=04&MENU\_ID=0403&page=1&CONT\_SEQ=351320].

Accessed 6 December 2020.

### 3.2.2 Private sector engagement in exercises

#### 3.2.2a

**Is there evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no evidence that South Korea in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives. The Ministry of Health and Welfare conducted the annual Safety Korea Exercise simulating an Ebola outbreak in October-November 2019. Participation from private sector representatives is not cited. There has been no announcement of the Safety Korea Exercise held in 2020. [1] The World Health Organization (WHO) Strategic Partnership for International Health Regulations (2005) and Health Security (SPH) website shows no evidence of such activity in South Korea. [2, 3] The South Korea page of the WHO does not have any relevant information. [4]

[1] Ministry of Health and Welfare (MOHW). 28 October 2019. "2019 Safety Korea Exercise".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=351320](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=351320)].

Accessed 6 December 2020.

[2] World Health Organization (WHO). "After Action Review". [<https://extranet.who.int/sph/after-action-review>]. Accessed 6 December 2020.

[3] World Health Organization (WHO). "Simulation Exercise". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 6 December 2020.

[4] World Health Organization (WHO). "Republic of Korea". [<https://www.who.int/republicofkorea/>]. Accessed 6 December 2020.

## 3.3 EMERGENCY RESPONSE OPERATION

### 3.3.1 Emergency response operation

#### 3.3.1a

**Does the country have in place an Emergency Operations Center (EOC)?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has in place an Emergency Operations Center (EOC). The Korean Disease Control and Prevention Agency (KDCA) operates the EOC, which oversees outbreak situations. [1] The EOC operates on a 24/7/365 basis to respond to public health crises caused by infectious diseases. Its activities include acquisition and dissemination of information and rapid response deployment and coordination. The EOC functions as the command-and-control center for public health crisis management. [2] A new EOC facility was opened at the KDCA in March 2019. [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 6 December 2020.

[2] Korean Disease Control and Prevention Agency. Emergency Operations Center.

[[http://www.kdca.go.kr/gallery.es?mid=a20503020000&bid=0003&b\\_list=9&act=view&list\\_no=144578&nPage=1&vlist\\_no\\_npage=1&keyField=&keyWord=&orderBy=](http://www.kdca.go.kr/gallery.es?mid=a20503020000&bid=0003&b_list=9&act=view&list_no=144578&nPage=1&vlist_no_npage=1&keyField=&keyWord=&orderBy=)]. Accessed 6 December 2020.

[3] Ministry of Health and Welfare (MOHW). 8 March 2019. "Press Release"

[[https://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=348024](https://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=348024)].

Accessed 6 December 2020.

### 3.3.1b

**Is the Emergency Operations Center (EOC) required to conduct a drill for a public health emergency scenario at least once per year or is there evidence that they conduct a drill at least once per year?**

Yes = 1 , No = 0

**Current Year Score: 1**

The South Korean Emergency Operations Center (EOC) is required to conduct a drill at least once per year.

The EOC participates in the Ministry of Health and Welfare's annual infectious disease emergency preparedness exercise. The 2019 exercise was conducted in October-November 2019 to simulate crisis response and post-emergency response under an Ebola outbreak scenario. The EOC's annual drill is required as part of the Ministry of Health and Welfare's participation in the annual government-wide "Safe Korea" disaster response exercise. There has been no announcement of the Safety Korea Exercise held in 2020. [1]

The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that "various exercises have been conducted to test EOC function and to strengthen the capacities of the EOC staff." [2]

[1] Ministry of Health and Welfare (MOHW). 28 October 2019. "2019 Safety Korea Exercise".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=351320](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=351320)].

Accessed 6 December 2020.

[2] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 6 December 2020.

### 3.3.1c

**Is there public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence to show that the Emergency Operations Center (EOC) has conducted, within the last year, a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that "the public health EOC has been activated rapidly in less than 120 minutes on more than one occasion". [1] The Korea Disease Control and Prevention Agency's EOC operating procedures require operation 24/7 all year around. EOC monitoring personnel must issue an alert immediately in the event of an emergency. [2] The EOC participates in the Ministry of Health and Welfare's annual infectious disease emergency preparedness exercise. The

2019 exercise was conducted in October-November 2019 to simulate crisis response and post-emergency response under an Ebola outbreak scenario. The EOC's annual drill is required as part of the Ministry of Health and Welfare's participation in the government-wide "Safe Korea" disaster response exercise. There has been no announcement of the Safety Korea Exercise held in 2020. [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 6 December 2020.

[2] Korean Disease Control and Prevention Agency. Emergency Operations Center. [[http://www.kdca.go.kr/gallery.es?mid=a20503020000&bid=0003&b\\_list=9&act=view&list\\_no=144578&nPage=1&vlist\\_no\\_npage=1&keyField=&keyWord=&orderBy=](http://www.kdca.go.kr/gallery.es?mid=a20503020000&bid=0003&b_list=9&act=view&list_no=144578&nPage=1&vlist_no_npage=1&keyField=&keyWord=&orderBy=)]. Accessed 6 December 2020.

[3] Ministry of Health and Welfare (MOHW). 28 October 2019. "2019 Safety Korea Exercise". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=351320](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=351320)]. Accessed 6 December 2020.

## 3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

### 3.4.1 Public health and security authorities are linked for rapid response during a biological event

#### 3.4.1a

Does the country meet one of the following criteria?

- Is there public evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e., bioterrorism attack)?
- Are there publicly available standard operating procedures, guidelines, memorandums of understanding (MOUs), or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is publicly available evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, South Korea conducts annual multisectoral exercises to "develop response capacity and ensure multisectoral coordination to prepare for bioterrorism events". [1] There is an MOU in place between the Korean Disease Control and Prevention Agency and the Ministry of National Defense since 2014 for joint response to biological warfare and bioterrorism events. [1, 2] The Ministry of the Interior and Safety organizes the government-wide "Safe Korea" disaster response exercise annually, which includes the central and local governments, public institutions and covers counterterrorism drills. The 2019 exercise was held in October-November 2019.[3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 6 December 2020.

[2] Ministry of Health and Welfare (MOHW). 29 August 2014. "Press Release" [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=261&CONT\\_SEQ=304673](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=261&CONT_SEQ=304673)]. Accessed 6 December 2020.

[3] Ministry of the Interior and Safety. "Disaster response exercise".



[[https://www.mois.go.kr/frt/sub/a06/b11/disasterTraining\\_2/screen.do](https://www.mois.go.kr/frt/sub/a06/b11/disasterTraining_2/screen.do)]. Accessed 6 December 2020.

## 3.5 RISK COMMUNICATIONS

### 3.5.1 Public communication

#### 3.5.1b

**Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) outline how messages will reach populations and sectors with different communications needs (eg different languages, location within the country, media reach)?**

Yes = 1 , No = 0

**Current Year Score: 0**

South Korea does not have a strategy, legislation, or regulations on how messages will reach populations and sectors with different communications needs. The Ministry of Health and Welfare's "Infectious Disease Crisis Management Standard Manual" does not include information on how messages will reach populations and sectors with different communications needs. The manual mandates activation of nationwide communication channels under the jurisdiction of relevant ministries to cover all geographies and sectors including the military, education, transportation and international travel. The manual does not provide considerations for multilingual communication. The national disaster communication system covers all central and local government agencies and fire departments to disseminate disaster information nationwide through TV and other real-time media. [1] The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that "information access needs to be improved especially for non-Koreans and the international community by making available content in other languages". [2] The government released a multilingual disaster communication plan for foreign residents in South Korea in December 2017. This plan does not cover public health emergencies. [3]

[1] Ministry of Health and Welfare (MOHW). December 2014. "Infectious Disease Crisis Management Standard Manual". [<http://www.documentcloud.org/documents/2096990-20141215.html>]. Accessed 6 December 2020.

[2] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 6 December 2020.

[3] Ministry of the Interior and Safety. 28 December 2017. "Press Release".

[[https://www.mois.go.kr/frt/bbs/type010/commonSelectBoardArticle.do?bbsId=BBSMSTR\\_000000000008&nttId=61261](https://www.mois.go.kr/frt/bbs/type010/commonSelectBoardArticle.do?bbsId=BBSMSTR_000000000008&nttId=61261)]. Accessed 6 December 2020.

### 3.5.1 Risk communication planning

#### 3.5.1a

**Does the country have in place, either in the national public health emergency response plan or in other legislation, regulation, or strategy documents, a section detailing a risk communication plan that is specifically intended for use during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has a risk communication management system for infectious diseases and public health emergencies. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that

South Korea has "a robust risk communication management system for infectious diseases and public health emergencies". [1] The Korea Disease Control and Prevention Agency (KDCA) operates a risk communication system based on color-based infectious disease alerts: blue for "interest," yellow for "caution," orange for "alert," and red for "serious." Each alert level triggers a commensurate emergency response. The Yellow alert activates the Central Disease Control Headquarters at the KDCA. The Orange alert activates the Central Disaster Management Headquarters at the Ministry of Health and Welfare. The Red alert activates the Central Disaster and Safety Countermeasures Headquarters under the prime minister. [2, 3].

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 6 December 2020.

[2] Ministry of Health and Welfare (MOHW). December 2014. "Infectious Disease Crisis Management Standard Manual". [<http://www.documentcloud.org/documents/2096990-20141215.html>]. Accessed 6 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). 16 July 2019. "Infectious Disease Crisis Management". [<http://www.kdca.go.kr/contents.es?mid=a20301020300>]. Accessed 6 December 2020.

### 3.5.1c

**Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 1**

The risk communication plan designates a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. Under the Yellow alert, the commissioner of the Korea Disease Control and Prevention Agency serves as the primary spokesperson as head of the Central Disease Control Headquarters. Under the Orange alert, the minister of health and welfare serves as the primary spokesperson as head of the Central Disaster Management Headquarters. Under the Red alert, the prime minister serves as the primary spokesperson as head of the Central Disaster and Safety Countermeasures Headquarters. [1, 2]

[1] Ministry of Health and Welfare (MOHW). December 2014. "Infectious Disease Crisis Management Standard Manual". [<http://www.documentcloud.org/documents/2096990-20141215.html>]. Accessed 6 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). 16 July 2019. "Infectious Disease Crisis Management". [<http://www.kdca.go.kr/contents.es?mid=a20301020300>]. Accessed 6 December 2020.

## 3.5.2 Public communication

### 3.5.2a

**In the past year, is there evidence that the public health system has actively shared messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation?**

Public health system regularly shares information on health concerns = 2, Public health system shares information only during active emergencies, but does not regularly utilize online media platforms = 1, Public health system does not regularly utilize online media platforms, either during emergencies or otherwise = 0

**Current Year Score: 2**

There is evidence that the public health system regularly shares information on health concerns and regularly utilize online media platforms. According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, the government uses a "variety of communication channels used such as media, web-based platforms, social networks, and the Korea Centers for Disease Control and Prevention (KCDC, now known as Korea Disease Control and Prevention Agency (KDCA)) Call Center". [1] In the past year, the Central Disease Control Headquarters and the Central Disaster Management Headquarters have operated the Covid-19 task force website, which is also accessible via Facebook, YouTube and Twitter. [2] The KDCA and the Ministry of Health and Welfare (MOHW) actively share information on public health concerns via websites and social media. [3, 4] The KDCA's Infectious Disease Portal covering various infectious diseases provides related health information for the general public. [5] The MOHW's YouTube channel covers general and disease-specific health concerns. [6]

[1] World Health Organization (WHO). 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report." [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 29 January 2021.

[2] Central Disease Control Headquarters. "Coronavirus Disease-19". [<http://ncov.mohw.go.kr/en>]. Accessed 6 December 2020.

[3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 6 December 2020.

[4] Korea Disease Control and Prevention Agency (KDCA). [<http://www.kdca.go.kr/cdc/>]. Accessed 6 December 2020.

[5] Korea Disease Control and Prevention Agency (KDCA). Infectious Disease Portal.

[<http://www.kdca.go.kr/npt/biz/npp/nppMain.do>]. Accessed 28 January 2020.

[6] Ministry of Health and Welfare (MOHW). YouTube. [[https://www.youtube.com/channel/UCRsetXyMdNsR4M9KvA-a\\_fg](https://www.youtube.com/channel/UCRsetXyMdNsR4M9KvA-a_fg)]. Accessed 28 January 2020.

### 3.5.2b

**Is there evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years?**

No = 1, Yes = 0

**Current Year Score: 1**

There is no evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years. There are no news reports suggesting communication of misinformation by either the president of South Korea or any member of the Cabinet. [1, 2]

[1] The Chosun Ilbo. [<https://www.chosun.com/>]. Accessed 6 December 2020.

[2] KBS. [<https://news.kbs.co.kr/common/main.html>]. Accessed 6 December 2020.

## 3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

### 3.6.1 Internet users

#### 3.6.1a

**Percentage of households with Internet**

Input number

**Current Year Score: 96.16**

2019

International Telecommunication Union (ITU)

### 3.6.2 Mobile subscribers

#### 3.6.2a

Mobile-cellular telephone subscriptions per 100 inhabitants

Input number

Current Year Score: 134.49

2019

International Telecommunication Union (ITU)

### 3.6.3 Female access to a mobile phone

#### 3.6.3a

Percentage point gap between males and females whose home has access to a mobile phone

Input number

Current Year Score: 2.0

2019

Gallup; Economist Impact calculation

### 3.6.4 Female access to the Internet

#### 3.6.4a

Percentage point gap between males and females whose home has access to the Internet

Input number

Current Year Score: 1.0

2019

Gallup; Economist Impact calculation

## 3.7 TRADE AND TRAVEL RESTRICTIONS

### 3.7.1 Trade restrictions

#### 3.7.1a

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak?

Yes = 0, No = 1

**Current Year Score: 0**

In the past year, South Korea has issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak. The Ministry of Food and Drug Safety (MFDS) issued a restriction on the export of masks, effective 26 February 2020, as part of the country's Covid-19 response. The restriction limited allowable export volume to 10% of daily production per manufacturer. [1] The MFDS lifted the ban on 23 October 2020. [2]

[1] Ministry of Food and Drug Safety (MFDS). 26 February 2020. "Emergency Supply and Demand Adjustment Measure for Masks and Hand Sanitizers". [<https://www.law.go.kr/LSW/admRulLsInfoP.do?chrClsCd=&admRulSeq=2100000187014>]. Accessed 6 December 2020.

[2] Ministry of Food and Drug Safety (MFDS). 20 October 2020. "Press Release". [<https://www.korea.kr/news/policyNewsView.do?newsId=148878945>]. Accessed 6 December 2020.

### 3.7.1b

**In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak?**

Yes = 0, No = 1

**Current Year Score: 0**

There is evidence that in the past year, South Korea has issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc.) due to an infectious disease outbreak. The Ministry of Agriculture, Food and Rural Affairs (MAFRA) has implemented a restriction on some food imports, citing an animal disease outbreak. This quarantine action has taken place on many occasions throughout 2020. The MAFRA issued an import ban on poultry products from Belgium, effective 27 November 2020, due to a highly pathogenic avian influenza (HPAI) outbreak. [1] The MAFRA issued an import ban on German pork and pork products, effective 10 September 2020, due to an African swine fever outbreak. [2]

[1] Ministry of Agriculture, Food and Rural Affairs (MAFRA). 28 November 2020. "Press Release". [<https://www.mafra.go.kr/mafra/293/subview.do?enc=Zm5jdDF8QE88JTJGYmJzJTJGZWFmcmEIMkY2OCUyRjMyNTM5MSUyRmFydGNsVmldy5kbyUzRmJic0NsU2VxJTNEJTI2cmdzRW5kZGVtdHlIM0QIMjZiYnNpCmV3JkU2VxJTNEJTI2cGFzc3dvcmQIM0QIMjZzcmNoQ29sdW1uJTNEc2oIMjZwYWdlJTNEMSUyNnJnc0JnbmRIU3RyJTNEJTI2cm93JTNEMTAImjZpc1ZpZXdnZW5lJTNEZmFsc2UIMjZzcmNoV3JkU2VxJTNEJUVBUi4JTg4JUVDJUE3JTgwJTJ2>]. Accessed 6 December 2020.

[2] Ministry of Agriculture, Food and Rural Affairs (MAFRA). 10 September 2020. "Press Release". [<https://www.mafra.go.kr/english/756/subview.do?enc=Zm5jdDF8QE88JTJGYmJzJTJGZWF5bnBGlzaCUyRj11JTJGMz11MzM5JTJGYXJOY2xWaWV3LmRvJTNGYmJzQ2xTZXEIM0QIMjZyZ3NFbmkzVn0ciUzRCUyNmJic09wZW5XcmRTZXEIM0QIMjZyZ3NCZ25kZVN0ciUzRCUyNmBhc3N3b3JkU2VxJTNEJTI2c3JjaENvbHVtbiUzRCUyNmJvdYUzRDEwJTJ2aXNWaWV3TWluZSUzRGZhbHNIJTJ2cGFnZSUzRDEwIMjZzcmNoV3JkU2VxJTNEJTI2>]. Accessed 6 December 2020.

## 3.7.2 Travel restrictions

### 3.7.2a

**In the past year, has the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak?**

Yes = 0, No = 1

**Current Year Score: 0**

In the past year, South Korea has implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. Citing reciprocity reasons, South Korea suspended the visa-free travel status of nationals of countries imposing entry bans on South Korean nationals, effective 13 April 2020. [1] Earlier in March 2020, the Ministry of Foreign Affairs suspended the visa-free travel status of Japanese nationals, effective 9 March 2020, in response to the Japanese government's ban on visa-free entry by South Korean nationals. [2]

[1] Ministry of Foreign Affairs. [[https://english.visitkorea.or.kr/enu/TRV/TV\\_ENG\\_2\\_1.jsp](https://english.visitkorea.or.kr/enu/TRV/TV_ENG_2_1.jsp)]. Accessed 6 December 2020.

[2] The Chosun Ilbo. 6 March 2020. "Japanese nationals' visa-free entry suspended".

[[https://www.chosun.com/site/data/html\\_dir/2020/03/06/2020030602939.html](https://www.chosun.com/site/data/html_dir/2020/03/06/2020030602939.html)]. Accessed 6 December 2020.

## **Category 4: Sufficient and robust health sector to treat the sick and protect health workers**

### **4.1 HEALTH CAPACITY IN CLINICS, HOSPITALS, AND COMMUNITY CARE CENTERS**

#### **4.1.1 Available human resources for the broader healthcare system**

##### **4.1.1a**

**Doctors per 100,000 people**

Input number

**Current Year Score: 236.08**

2017

WHO; national sources

##### **4.1.1b**

**Nurses and midwives per 100,000 people**

Input number

**Current Year Score: 730.09**

2018

WHO; national sources

### 4.1.1c

Does the country have a health workforce strategy in place (which has been updated in the past five years) to identify fields where there is an insufficient workforce and strategies to address these shortcomings?

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has a public health workforce strategy in place. The Act on Providing Assistance With Health Professionals requires the Ministry of Health and Welfare to develop a five-year health workforce master plan. [1] This plan has not been completed as of December 2020. [2] The Ministry of Health and Welfare's "First Basic Plan for Public Health (2016-2020)," released in March 2016, addresses shortcomings in workforce availability. The plan calls for the establishment of a mechanism regulating workforce supply and demand. The plan also aims to establish an educational institute specializing in training public health workers. [3] The Second Basic Plan for Public Health is currently under development. [4]

[1] National Assembly. Act No. 16371 of 23 April 2019. "Act on Providing Assistance With Health Professionals". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=52698&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=52698&lang=ENG)]. Accessed 6 December 2020.

[2] Ministry of Health and Welfare (MOHW). 15 October 2019. "Press Release". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=351176](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=351176)]. Accessed 6 December 2020.

[3] Ministry of Health and Welfare (MOHW). 16 March 2016. "First Basic Plan for Public Health (2016-2020)". [[http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR\\_MENU\\_ID=03&MENU\\_ID=0319&CONT\\_SEQ=330502&page=1](http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=0319&CONT_SEQ=330502&page=1)]. Accessed 6 December 2020.

[4] Ministry of Science and ICT. 20 March 2020. "Second Basic Plan for Public Health". [<https://www.ntis.go.kr/rndgate/eg/un/ra/view.do?roRndUid=868170&flag=rndList>]. Accessed 6 December 2020.

## 4.1.2 Facilities capacity

### 4.1.2a

Hospital beds per 100,000 people

Input number

**Current Year Score: 1243**

2018

WHO/World Bank; national sources

### 4.1.2b

Does the country have the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit located within the country?

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation facility located within the country. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that South Korea has a system in place for "transferring symptomatic suspected cases to designated hospitals with isolation units". [1] The Enforcement Rule of the Medica Service

Act requires general hospitals with 300 or more beds to have at least one negative pressure isolation room. [2] The Korea Disease Control and Prevention Agency (KDCA) has regulations that require facilities designated for treatment of patients during an outbreak of a new infectious disease to maintain the capacity for biocontainment. [3] The Ministry of Health and Welfare issued requirements for negative pressure isolation rooms in July 2018. [4] In May 2020, the KDCA announced a plan to add 83 negative pressure isolation rooms at 17 healthcare facilities, bringing the number of negative pressure isolation rooms to 244 at 39 facilities. [5]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 9 December 2020.

[2] Ministry of Health and Welfare (MOHW). 12 September 2020. "Enforcement Rule of the Medica Service Act". [[https://www.law.go.kr/#54665;#51221;#44508;#52825;/#51656;#48337;#44288;#47532;#48376;#48512;#44397;#44032;#51077;#50896;#52824;#47308;#48337;#49345;#50868;#50689;#44508;#51221;/\(216,20130319\)](https://www.law.go.kr/#54665;#51221;#44508;#52825;/#51656;#48337;#44288;#47532;#48376;#48512;#44397;#44032;#51077;#50896;#52824;#47308;#48337;#49345;#50868;#50689;#44508;#51221;/(216,20130319))]. Accessed 9 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). 19 March 2013. [<https://www.law.go.kr/LSW/admRulLsInfoP.do?admRulSeq=2000000094263>]. Accessed 9 December 2020.

[4] Ministry of Health and Welfare (MOHW). 31 July 2018. "Detailed Guidelines for Installation and Operation of Negative Pressure Isolation Rooms". [[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj9oKSA38HtAhXhHjQIHUW-BtkQFjAHegQIFBAC&url=http%3A%2F%2Fwww.mohw.go.kr%2Freact%2Fmodules%2Fdownload.jsp%3FBOARD\\_ID%3D145%26CONT\\_SEQ%3D346022%26FILE\\_SEQ%3D237380&usg=AOvVaw1kyXA6ObzxpAQR8rNRIPM](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj9oKSA38HtAhXhHjQIHUW-BtkQFjAHegQIFBAC&url=http%3A%2F%2Fwww.mohw.go.kr%2Freact%2Fmodules%2Fdownload.jsp%3FBOARD_ID%3D145%26CONT_SEQ%3D346022%26FILE_SEQ%3D237380&usg=AOvVaw1kyXA6ObzxpAQR8rNRIPM)]. Accessed 9 December 2020.

[5] Korea Disease Control and Prevention Agency (KDCA). 29 May 2020. "Press Release". [<http://ncov.mohw.go.kr/tcmBoardView.do?contSeq=354783>]. Accessed 9 December 2020.

#### 4.1.2c

Does the country meet one of the following criteria?

- Is there evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years?
- Is there evidence that the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years?

Yes = 1, No = 0

**Current Year Score: 1**

There is evidence that the country has updated a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years.

The Ministry of Health and Welfare issued a set of guidelines ("음압격리병실 설치 및 운영 세부기준") in July 2018 requiring all general hospitals (with 300 or more beds) to have negative pressure isolation rooms set up by the end of 2018. [1]

In May 2020, the Korea Disease Control and Prevention Agency announced a plan to add 83 negative pressure isolation rooms at 17 healthcare facilities, bringing the number of negative pressure isolation rooms to 244 at 39 facilities. [2]

[1] Ministry of Health and Welfare (MOHW). 31 July 2018. "Detailed Guidelines for Installation and Operation of Negative Pressure Isolation Rooms".



[[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj9oKSA38HtAhXhHjQIHUW-BtkQFjAHegQIFBAC&url=http%3A%2F%2Fwww.mohw.go.kr%2Freact%2Fmodules%2Fdownload.jsp%3FBOARD\\_ID%3D145%26CONT\\_SEQ%3D346022%26FILE\\_SEQ%3D237380&usg=AOvVaw1kyXA6ObzxpAQR8rNRIPM](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj9oKSA38HtAhXhHjQIHUW-BtkQFjAHegQIFBAC&url=http%3A%2F%2Fwww.mohw.go.kr%2Freact%2Fmodules%2Fdownload.jsp%3FBOARD_ID%3D145%26CONT_SEQ%3D346022%26FILE_SEQ%3D237380&usg=AOvVaw1kyXA6ObzxpAQR8rNRIPM)]. Accessed 19 April 2021.

[2] Korea Disease Control and Prevention Agency (KDCA). 29 May 2020. "Press Release".

[<http://ncov.mohw.go.kr/tcmBoardView.do?contSeq=354783>]. Accessed 19 April 2021.

## 4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

### 4.2.1 Routine health care and laboratory system supply

#### 4.2.1a

**Is there a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs?**

Yes for both laboratory and medical supply needs = 2, Yes, but only for one = 1, No = 0

**Current Year Score: 2**

South Korea has a national procurement protocol in place which can be utilized by the Ministry of Health and Welfare for the acquisition of laboratory supplies and medical supplies.

The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, indicates that while many required reagents for laboratory testing can be produced within South Korea, "both domestic and foreign products can be procured through the national electronic procurement system". [1]

There is a national procurement portal in place which can be utilized by the Ministries of Health and Agriculture, the Korea Disease Control and Prevention Agency (KDCA), or other emergency management agencies for the acquisition of laboratory needs and medical supplies. The Korea Online E-Procurement System portal operated by the Public Procurement Service provides a national procurement protocol for individual projects launched by various government agencies including procurement of laboratory supplies and medical supplies. [2] The Korea Online E-Procurement System portal list of MOHW and KDCA procurement orders include reagents and medical supplies including PPE. [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 9 December 2020.

[2] Korea Online E-Procurement System. [[www.g2b.go.kr/index.jsp](http://www.g2b.go.kr/index.jsp)]. Accessed 6 January 2021.

[3] Korea Online E-Procurement System.

[<http://www.g2b.go.kr/pt/menu/selectSubFrame.do?framesrc=/pt/menu/frameTgong.do?url=http://www.g2b.go.kr:8101/ep/tbid/tbidList.do?taskCICds=&bidNm=&searchDtType=1&fromBidDt=2020/12/30&toBidDt=2021/01/29&fromOpenBidDt=&toOpenBidDt=&radOrgan=1&instNm=%BA%B8%B0%C7&area=&regYn=Y&bidSearchType=1&searchType=1>]. Accessed 28 January 2021.

## 4.2.2 Stockpiling for emergencies

### 4.2.2a

**Does the country have a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 2**

South Korea maintains a stockpile of medical supplies and medical countermeasures for national use during a public health emergency and there is available evidence about what the stockpile contains.

According to the World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, South Korea maintains "stockpiles of appropriate medical countermeasures, equipment, and other supplies" at all levels of government and at local public health centers. [1]

In June 2020, the Ministry of the Interior and Safety designated masks, thermographic cameras, goggles, disinfectants, hazmat suits and biocontainment equipment among disaster management supplies for stockpiling at the central and local government levels. [2] The Ministry of Food and Drug Safety (MFDS) has a list of national essential drugs. The list currently has 351 drugs, which include infectious disease drugs. [3] The Korea Disease Control and Prevention Agency (KDCA) maintains stockpiles of drugs for the treatment of malaria, Ebola, leishmaniasis, Chagas disease, diphtheria, and filariasis. [4]

During the coronavirus pandemic in 2020, the Ministry of Health and Welfare has entered into agreements with AstraZeneca (UK), Pfizer (US), Moderna (US), and Janssen Pharmaceutica (US) to procure Covid-19 vaccines. [5] The KDCA has influenza vaccine procurement agreements with seven influenza vaccine makers and importers participating in the government's influenza vaccination program. [6]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 9 December 2020.

[2] Ministry of the Interior and Safety. 3 June 2020. [[https://www.mois.go.kr/frt/bbs/type010/commonSelectBoardArticle.do?bbsId=BBSMSTR\\_000000000008&nttId=77611](https://www.mois.go.kr/frt/bbs/type010/commonSelectBoardArticle.do?bbsId=BBSMSTR_000000000008&nttId=77611)]. Accessed 9 December 2020.

[3] Ministry of Food and Drug Safety (MFDS). 4 July 2019. "Notice on Designated National Essential Drugs". [[https://www.mfds.go.kr/brd/m\\_76/view.do?seq=14508](https://www.mfds.go.kr/brd/m_76/view.do?seq=14508)]. Accessed 9 December 2020.

[4] Korea Disease Control and Prevention Agency (KDCA). 29 March 2019. [<https://law.go.kr/LSW/admRulLsInfoP.do?admRulSeq=2100000177231>]. Accessed 9 December 2020.

[5] Ministry of Health and Welfare (MOHW). 8 December 2020. "Press Release". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=361543&SEARCHKEY=TITLE&SEARCHVALUE=%EB%B0%B1%EC%8B%A0](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=361543&SEARCHKEY=TITLE&SEARCHVALUE=%EB%B0%B1%EC%8B%A0)]. Accessed 9 December 2020.

[6] Korea Disease Control and Prevention Agency (KDCA). 9 October 2020. "Press Release" [<https://nip.cdc.go.kr/irgd/index.html>]. Accessed 9 December 2020.

### 4.2.2b

**Does the country have a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency?**

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. The Korea Disease Control and Prevention Agency (KDCA) launched a study on stockpiling reagents for public health emergency needs in May 2020. [1] The government announced a plan to stabilize the supply of Covid-19 testing kits in June 2020. According to the plan, the government will monitor domestic production and demand and request a production increase, when needed, with the aim to maintain a two-week stockpile of testing kits in demand from public health centers. The government will set aside another 350,000 testing kits for emergency purposes. [2] There is no further evidence available from the Ministry of Health and Welfare, the KDCA, the Ministry of National Defense, or the Prime Minister's Secretariat. [3, 4, 5, 6]

[1] Korea Disease Control and Prevention Agency (KDCA). 12 May 2020.

[[http://prism.go.kr/homepage/progress/retrieveProgressDetail.do;jsessionid=843456ECF18C8E95629997304BA15DF1.node02?research\\_id=1351000-202000177&cond\\_research\\_name=&cond\\_organ\\_id=&cond\\_status\\_type=&pageIndex=4&leftMenuLevel=130](http://prism.go.kr/homepage/progress/retrieveProgressDetail.do;jsessionid=843456ECF18C8E95629997304BA15DF1.node02?research_id=1351000-202000177&cond_research_name=&cond_organ_id=&cond_status_type=&pageIndex=4&leftMenuLevel=130)]. Accessed 6 January 2021.

[2] Central Disaster and Safety Countermeasures Headquarters. 8 June 2020. "Press Release".

[<https://www.korea.kr/news/policyNewsView.do?newsId=148873197>]. Accessed 9 December 2020.

[3] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 6 January 2021.

[4] Korea Disease Control and Prevention Agency (KDCA). [<http://www.kdca.go.kr/index.es?sid=a2>]. Accessed 6 January 2021.

[5] Ministry of National Defense. [<https://www.mnd.go.kr/mbs/mnd/index.jsp>]. Accessed 6 January 2021.

[6] Prime Minister's Secretariat. [<https://www.opm.go.kr/en/index.do>]. Accessed 6 January 2021.

#### 4.2.2c

**Is there evidence that the country conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency.

The World Health Organization's "Joint external evaluation of IHR cope capacities of the Republic of Korea Mission report of September 2017" states: "For major public health threats, stockpiles of appropriate medical countermeasures, equipment, and other supplies are maintained at all levels of government, from the Strategic National Stockpile to stocks maintained at local public health centers. Each sector is also responsible for maintaining stockpiles for responses to threats under their sector. A joint resource utilization system was initiated in 2014 to coordinate inventory management and material deployment across sectors and is currently in the process of implementation." [1]

In January 2019, the Ministry of Food and Drug Safety (MFDS) launched the joint resource utilization portal (<https://nedrug.mfds.go.kr/index>) to provide information on all authorized drugs in South Korea. Jointly operated by the MFDS and the Korea Institute of Drug Safety & Risk Management, the online portal does not provide inventory data specific to national stockpiles. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. ""Joint external evaluation of IHR core capacities of the Republic of Korea Mission report"". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 19 April

2021.

[2] Ministry of Food and Drug Safety (MFDS). [<https://nedrug.mfds.go.kr/index>]. Accessed 19 April 2021.

### 4.2.3 Manufacturing and procurement for emergencies

#### 4.2.3a

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 0**

There is no evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. Medical Countermeasures (MCM), medicines, vaccines, equipment, PPE) for national use during a public health emergency. However, there is evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency.

The Ministry of Food and Drug Safety (MFDS) issued an emergency measures on 26 February 2020 to place a 10% limit on exports of masks and to require manufacturers to report domestic supply volumes, including sales to designated public sales channels. This restriction has been relaxed in the following months. This measure is based on the Price Stabilization Act of 2 May 2011. [1, 2, 3] The MFDS has been operating a public-private channel of communication since July 2020 to stabilize the supply of masks to healthcare facilities. [4] The government's economic policy plan for the second half of 2020 included a plan to provide funding for the localization of latex gloves and goggles. [5]

The Medical Devices Act of 23 April 2019 has provisions on procurement of medical devices. Article 15-2 of the Medical Devices Act states: "To expand treatment opportunities for patients with rare or intractable diseases and facilitate the management of such diseases, the Minister of Food and Drug Safety may introduce a medical device falling under any of the following subparagraphs (hereinafter referred to as "medical device scarce or in urgent need of introduction") into the Republic of Korea by means of import, etc. or provide relevant information to patients with rare or intractable diseases: 1. A medical device used for the purpose of diagnosing or treating any rare disease under subparagraph 1 of Article 2 of the Rare Disease Management Act, for which no substitute exists in the Republic of Korea; 2. A medical device that is recognized by the MFDS as requiring urgent introduction or stable supply, or a medical device requested by the head of the relevant central administrative agency, for public health." [6]

The MFDS has a list of national essential drugs. The list currently has 351 drugs, which include infectious disease drugs. [7] An inter-ministerial council set up under the MFDS coordinates procurement of national essential drugs, as required by the Pharmaceutical Affairs Act of 2 December 2016. The council issued an emergency approval for the import of Remdesivir Covid-19 treatment drug from Gilead Sciences (US) in June 2020. [8, 9] During the coronavirus pandemic in 2020, the Ministry of Health and Welfare has entered into agreements with AstraZeneca (UK), Pfizer (US), Moderna (US), and Janssen Pharmaceutica (US) to procure Covid-19 vaccines. [10] The Korea Disease Control and Prevention Agency (KDCA) has influenza vaccine procurement agreements with seven influenza vaccine makers and importers participating in the government's influenza vaccination program. [11]

The government launched a joint task force for developing Covid-19 vaccines and treatment drugs. This taskforce is headed

by the Minister of Health and Welfare and the Minister of Science and ICT with members including the Minister of Food and Drug Safety, the commissioner of the Korea Disease Control and Prevention Agency, and private-sector scientists. The joint task force has a one-stop service center set up at the Korea Health Industry Development Institute to provide coordinated support for companies developing vaccines and drugs. [12] The task force has identified plasma-based treatments, antibody drugs, and drug repositioning as three strategic areas. Emergency imports of vaccines and drugs developed abroad will be allowed under the plan. [13] The government task force has selected five drug candidates and three vaccine candidates for clinical testing support. [14] There is no further evidence from the MOHW, the KDCA, the Ministry of National Defense, or the Prime Minister's Secretariat. [15, 16, 17, 18]

- [1] Ministry of Food and Drug Safety (MFDS). 26 February 2020. "Emergency Supply and Demand Adjustment Measure for Masks and Hand Sanitizers". [<https://www.law.go.kr/LSW/admRulLsInfoP.do?chrClsCd=&admRulSeq=2100000187014>]. Accessed 9 December 2020.
- [2] Ministry of Food and Drug Safety (MFDS). 23 October 2020. "Press Release". [<https://nedrug.mfds.go.kr/bbs/23/858/>]. Accessed 9 December 2020.
- [3] National Assembly. Act No. of 23 April 2011. "Price Stabilization Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=22059&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=22059&lang=ENG)]. Accessed 6 January 2021
- [4] Ministry of Food and Drug Safety (MFDS). 10 September 2020. "Press Release". [[http://overseas.mofa.go.kr/us-losangeles-ko/brd/m\\_22346/view.do?seq=100](http://overseas.mofa.go.kr/us-losangeles-ko/brd/m_22346/view.do?seq=100)]. Accessed 9 December 2020.
- [5] Ministry of Economy and Finance. "Economic Policy Direction for Second Half of 2020". [[https://www.moef.go.kr/nw/nes/detailNesDtaView.do?searchBbsId1=MOSFBBS\\_00000000028&searchNttId1=MOSF\\_00000000039951&menuNo=4010100](https://www.moef.go.kr/nw/nes/detailNesDtaView.do?searchBbsId1=MOSFBBS_00000000028&searchNttId1=MOSF_00000000039951&menuNo=4010100)]. Accessed 9 December 2020.
- [6] National Assembly. Act No. 16402 of 23 April 2019. "Medical Devices Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=50798&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=50798&lang=ENG)]. Accessed 9 December 2020.
- [7] Ministry of Food and Drug Safety (MFDS). 4 July 2019. "Notice on Designated National Essential Drugs". [[https://www.mfds.go.kr/brd/m\\_76/view.do?seq=14508](https://www.mfds.go.kr/brd/m_76/view.do?seq=14508)]. Accessed 9 December 2020.
- [8] National Assembly. Act No. 14328 of 2 December 2016. "Pharmaceutical Affairs Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=40196&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=40196&lang=ENG)]. Accessed 9 December 2020.
- [9] Ministry of Food and Drug Safety (MFDS). 3 June 2020. "Press Release". [[https://www.mfds.go.kr/brd/m\\_99/view.do?seq=44259&srchFr=&srchTo=&srchWord=&srchTp=&itm\\_seq\\_1=0&itm\\_seq\\_2=0&multi\\_itm\\_seq=0&company\\_cd=&company\\_nm=&page=2](https://www.mfds.go.kr/brd/m_99/view.do?seq=44259&srchFr=&srchTo=&srchWord=&srchTp=&itm_seq_1=0&itm_seq_2=0&multi_itm_seq=0&company_cd=&company_nm=&page=2)]. Accessed 9 December 2020.
- [10] Ministry of Health and Welfare (MOHW). 8 December 2020. "Press Release". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=361543&SEARCHKEY=TITLE&SEARCHVALUE=%EB%B0%B1%EC%8B%A0](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=361543&SEARCHKEY=TITLE&SEARCHVALUE=%EB%B0%B1%EC%8B%A0)]. Accessed 9 December 2020.
- [11] Korea Disease Control and Prevention Agency (KDCA). 9 October 2020. "Press Release" [<https://nip.cdc.go.kr/irgd/index.html>]. Accessed 9 December 2020.
- [12] Ministry of Health and Welfare (MOHW). 17 April 2020. "Press Release". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=4&CONT\\_SEQ=354090&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=4&CONT_SEQ=354090&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0)]. Accessed 9 December 2020.
- [13] Ministry of Health and Welfare (MOHW). 3 June 2020. "Press Release". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=3&CONT\\_SEQ=354855&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=3&CONT_SEQ=354855&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0)]. Accessed 9 December 2020.
- [14] Ministry of Health and Welfare (MOHW). 21 August 2020. "Press Release". [[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=359112&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=359112&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0)]. Accessed 9 December 2020.
- [15] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 6 January 2021.
- [16] Korea Disease Control and Prevention Agency (KDCA). [<http://www.kdca.go.kr/index.es?sid=a2>]. Accessed 6 January 2021.

[17] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 6 January 2021.

[18] Prime Minister's Secretariat. [<https://www.opm.go.kr/en/index.do>]. Accessed 6 January 2021.

#### 4.2.3b

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

- Is there evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 0**

There is no evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency. There is no evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency. The government announced a plan to stabilize the supply of Covid-19 testing kits in June 2020. According to the plan, the government will monitor domestic production and demand and request a production increase, when needed, with the aim to maintain a two-week stockpile of testing kits in demand from public health centers. The government will set aside another 350,000 testing kits for emergency purposes. [1] The government's economic policy plan for the second half of 2020 included a plan to provide collaborative research and equipment support for rapid development and production of testing kits during an infectious disease outbreak. According to the plan, policy support will be provided for testing startups in the areas of regulatory approval, funding and sales. [2] There is a national procurement portal in place which can be utilized by the Ministries of Health and Agriculture, the Korea Disease Control and Prevention Agency, or other emergency management agencies for the acquisition of laboratory supplies. The Korea Online E-Procurement System portal operated by the Public Procurement Service provides a national procurement protocol for individual projects launched by various government agencies including procurement of laboratory supplies. However, there is no distinction between emergency and non-emergency procurement needs for access to this portal. [3] There is no further evidence from the Ministry of Health and Welfare, Korea Disease Control and Development Agency (KDCA), Ministry of National Defense, or the Prime Minister's Secretariat. [4, 5, 6, 7]

[1] Central Disaster and Safety Countermeasures Headquarters. 8 June 2020. "Press Release".

[<https://www.korea.kr/news/policyNewsView.do?newsId=148873197>]. Accessed 9 December 2020.

[2] Ministry of Economy and Finance. "Economic Policy Direction for Second Half of 2020".

[[https://www.moef.go.kr/nw/nes/detailNesDtaview.do?searchBbsId1=MOSFBBS\\_000000000028&searchNttId1=MOSF\\_00000000039951&menuNo=4010100](https://www.moef.go.kr/nw/nes/detailNesDtaview.do?searchBbsId1=MOSFBBS_000000000028&searchNttId1=MOSF_00000000039951&menuNo=4010100)]. Accessed 9 December 2020.

[3] Korea Online E-Procurement System. [[www.g2b.go.kr/index.jsp](http://www.g2b.go.kr/index.jsp)]. Accessed 6 January 2021.

[4] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 6 January 2021.

[5] Korea Disease Control and Prevention Agency. [<http://www.kdca.go.kr/index.es?sid=a2>]. Accessed 6 January 2021.

[6] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 6 January 2021.

[7] Prime Minister's Secretariat. [<https://www.opm.go.kr/en/index.do>]. Accessed 6 January 2021.

## 4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

### 4.3.1 System for dispensing medical countermeasures (MCM) during a public health emergency

#### 4.3.1a

Does the country have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics)?

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that South Korea has a plan in place for dispensing medical countermeasures for national use during a public health emergency. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that "guidelines have been developed to guide the stockpiling, management, storage and distribution of medication and other medical supplies including personal protective equipment (PPE) for priority infectious diseases". [1] The Korea Disease Control and Prevention Agency's Infectious Disease Portal has a set of guidelines for outbreaks of different infectious diseases, including annual guidelines and disease-specific guidelines. [2] The "2020 Infectious Disease Control Work Guidelines" include vaccination and drug dispensing requirements and procedures for all covered infectious diseases, including previously unknown diseases. [3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). Infectious Disease Portal. [<http://www.kdca.go.kr/npt/biz/npp/portal/nppPblctDtaMain.do>]. Accessed 28 January 2021.

[3] Korea Disease Control and Prevention Agency (KDCA). 4 February 2020. "2020 Infectious Disease Control Work Guidelines". [<http://www.kdca.go.kr/npt/biz/npp/portal/nppPblctDtaMain.do?pblctDtaSeAt=7>]. Accessed 28 January 2021.

### 4.3.2 System for receiving foreign health personnel during a public health emergency

#### 4.3.2a

Is there a public plan in place to receive health personnel from other countries to respond to a public health emergency?

Yes = 1 , No = 0

**Current Year Score: 0**

South Korea has no public plan in place to receive health personnel from other countries to respond to a public health emergency. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, notes that there is currently no system in place in South Korea for receiving international medical personnel assistance during public health emergencies. [1] International provisions in the current disaster relief legislation are confined to outgoing support. [2, 3] There is no evidence of a plan found on the websites of the Ministry of Health and Welfare, Ministry of National Defense, or Ministry of the Interior and Safety. [4, 5, 6]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

- [2] National Assembly. Act No. 15344 of 16 January 2018. "Framework Act on the Management of Disasters and Safety". [https://elaw.klri.re.kr/kor\_service/lawView.do?hseq=46614&lang=ENG]. Accessed 10 December 2020.
- [3] National Assembly. Act No. 15789 of 16 October 2018. "Overseas Emergency Relief Act". [https://elaw.klri.re.kr/kor\_service/lawView.do?hseq=49078&lang=ENG]. Accessed 10 December 2020.
- [4] Ministry of Health and Welfare (MOHW). [http://www.mohw.go.kr/react/index.jsp]. Accessed 10 December 2020.
- [5] Ministry of National Defense. [https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp]. Accessed 10 December 2020.
- [6] Ministry of the Interior and Safety. [https://www.mois.go.kr/frt/a01/frtMain.do]. Accessed 10 December 2020.

## 4.4 HEALTHCARE ACCESS

### 4.4.1 Access to healthcare

#### 4.4.1a

**Does the constitution explicitly guarantee citizens' right to medical care?**

Guaranteed free = 4, Guaranteed right = 3, Aspirational or subject to progressive realization = 2, Guaranteed for some groups, not universally = 1, No specific provision = 0

**Current Year Score: 0**

2020

World Policy Analysis Center

#### 4.4.1b

**Access to skilled birth attendants (% of population)**

Input number

**Current Year Score: 100**

2015

WHO/World Bank/United Nations Children's Fund (UNICEF)

#### 4.4.1c

**Out-of-pocket health expenditures per capita, purchasing power parity (PPP; current international \$)**

Input number

**Current Year Score: 1003.39**

2017

WHO Global Health Expenditure database

### 4.4.2 Paid medical leave

#### 4.4.2a

**Are workers guaranteed paid sick leave?**



Paid sick leave = 2, Unpaid sick leave = 1, No sick leave = 0

**Current Year Score: 0**

2020

World Policy Analysis Center

### 4.4.3 Healthcare worker access to healthcare

#### 4.4.3a

**Has the government issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency?**

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the government has issued legislation, a policy or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency.

The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, includes no evidence of such a policy. [1] The Korea Hospital Association issued a recommendation to the government for priority distribution of vaccines and treatment drugs to doctors and nurses in August 2009 during a H1N1 outbreak. [2] The Korean Society for Medical Ethics issued a statement urging the establishment of principles for priority dispensing of medical countermeasures during the Covid-19 pandemic in December 2020. [3] Jeong Eun-kyeong, commissioner of the Korea Disease Control and Prevention Agency, said on 30 November 2020 that the government's Covid-19 vaccination strategy would be consistent with WHO priority guidelines. [4] There is no further evidence from the Ministry of Health, Labor and Welfare, Korea Disease Control and Development Agency, Ministry of National Defense, or the Prime Minister's Secretariat websites. [5, 6, 7, 8]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

[2] Korea Hospital Association. 25 August 2009. "Press Release". [<https://www.kha.or.kr/board/dept/view>]. Accessed 10 December 2020.

[3] Korean Society for Medical Ethics. 7 December 2020. "Press Release".

[[https://medicalethics.jams.or.kr/co/com/EgovMenu.kci?s\\_url=/po/community/notice/noticeView.kci&s\\_MenuId=MENU-00000000061000&notiSeq=000000023357](https://medicalethics.jams.or.kr/co/com/EgovMenu.kci?s_url=/po/community/notice/noticeView.kci&s_MenuId=MENU-00000000061000&notiSeq=000000023357)]. Accessed 10 December 2020.

[4] The Chosun Ilbo. 1 December 2020. [<https://www.chosun.com/national/welfare-medical/2020/12/01/FGK4F23FDZEXRN33XLTU7OS3YY/>]. Accessed 10 December 2020.

[5] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 6 January 2021.

[6] Korea Disease Control and Prevention Agency. [<http://www.kdca.go.kr/index.es?sid=a2>]. Accessed 6 January 2021.

[7] Ministry of National Defense. [<https://www.mnd.go.kr/mbshome/mbs/mnd/index.jsp>]. Accessed 6 January 2021.

[8] Prime Minister's Secretariat. [<https://www.opm.go.kr/en/index.do>]. Accessed 6 January 2021.

## 4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

### 4.5.1 Communication with healthcare workers

#### 4.5.1a

**Is there a system in place for public health officials and healthcare workers to communicate during a public health emergency?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency in South Korea.

The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that the Korea Disease Control and Prevention Agency has rapid response teams comprising public officers and healthcare workers from the private sector. [1] The standard operating procedures for infectious disease response prioritize communication between all stakeholders in the public and private sectors. Health officials and healthcare professionals in the public and private sectors are required to share information constantly during a public health emergency. There is a nationwide monitoring system that covers public institutions, public health centers, local governments, hospitals, schools, welfare facilities, and other relevant organizations to facilitate communication. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). 4 February 2020. "2020 Infectious Disease Control Work Guidelines". [<http://www.kdca.go.kr/npt/biz/npp/portal/nppPblctDtaMain.do?pblctDtaSeAt=7>]. Accessed 10 December 2020.

#### 4.5.1b

**Does the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency in South Korea including workers in both the public and private sector.

The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that the Korea Disease Control and Prevention Agency has rapid response teams comprising public officers and healthcare workers from the private sector. [1]

The standard operating procedures for infectious disease response prioritize communication between all stakeholders in the public and private sectors. Health officials and healthcare professionals in the public and private sectors are required to share information constantly during a public health emergency. There is a nationwide monitoring system that covers public

institutions, public health centers, local governments, hospitals, schools, welfare facilities, and other relevant organizations to facilitate communication. [2]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

[2] Korea Disease Control and Prevention Agency (KDCA). 4 February 2020. "2020 Infectious Disease Control Work Guidelines". [<http://www.kdca.go.kr/npt/biz/npp/portal/nppPblctDtaMain.do?pblctDtaSeAt=7>]. Accessed 10 December 2020.

## 4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

### 4.6.1 Healthcare associated infection (HCAI) prevention and control programs

#### 4.6.1a

**Is there evidence that the national public health system is monitoring for and tracking the number of healthcare associated infections (HCAI) that take place in healthcare facilities?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea's national public health system monitors and tracks the number of healthcare-associated infections (HCIA) that take place in healthcare facilities via the Korean National HCAI Surveillance System (KONIS) within the Korea Development Control and Agency (KDCA). [1, 2]

According to the World Health Organization (WHO) Joint External Evaluation for South Korea, completed in August/September 2017, KONIS was implemented through a collaborative private-public partnership. [1] KONIS has been in operation since 2006 with a focus on intensive care unit HCAI and post-surgery infections. KONIS data are fed into the KDCA's integrated infectious disease control system. [2, 3] The KDCA's infectious disease portal provides HCAI statistics. [4]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

[2] Korea Development Control and Agency. 28 January 2020. "Health Care Associated Infections". [<http://www.kdca.go.kr/contents.es?mid=a20301080100>]. Accessed 10 December 2020.

[3] Korea Disease Control and Prevention Agency (KDCA). [<https://is.cdc.go.kr/>]. Accessed 10 December 2020.

[4] Korea Disease Control and Prevention Agency (KDCA). Infectious Disease Portal. [<http://www.kdca.go.kr/npt/biz/npp/iss/haiStatisticsMain.do>]. Accessed 10 December 2020.

## 4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

### 4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

#### 4.7.1a

**Is there a national requirement for ethical review (e.g., from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is a national requirement for ethical review before beginning a clinical trial. The Bioethics and Safety Act sets out national standards for ethical review. Article 10 of the Bioethics and Safety Act of 12 December 2017 mandates the establishment of institutional bioethics committees authorized to review the following before the beginning of a clinical trial: ethical and scientific validity of a research plan; whether consent has been duly obtained from human subjects of research or donors; matters regarding the safety of human subjects of research or donors; measures for protecting personal information of human subjects of research or donors; and other matters regarding bioethics and biosafety in the relevant institution. [1] The institutional bioethics committee establishment requirement applies to educational institutions, research institutes, and hospitals conducting research on human subjects or human materials, including human embryos. [2]

[1] National Assembly. Act No. 15188 of 12 December 2017. "Bioethics and Safety Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=46341&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=46341&lang=ENG)]. Accessed 10 December 2020.

[2] Korea National Institute for Bioethics Policy. "Institutional Bioethics Committee".

[<http://www.irb.or.kr/menu01/summary.aspx#>]. Accessed 10 December 2020.

#### 4.7.1b

**Is there an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics?**

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that South Korea has an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing pandemics.

The Ministry of Food and Drug Safety (MFDS) has standing guidelines on expedited evaluation of therapeutics meeting certain criteria, including the lack of existing MCM. [1] The government's Covid-19 joint taskforce announced measures to expedite the institutional review board (IRB) process for Covid-19 research and non-Covid-19 projects. The lead time for the start of an IRB review will be shortened from 1-2 months to less than a week, according to the plan. [2] In October 2020, the MFDS launched an expedited approval process that reduces the time it takes to get approval from 120 days to 90 days for innovative or essential MCM treating life-threatening diseases and new infectious diseases or contributing to the containment of a public health crisis. The MFDS approved two non-Covid-19 therapeutics for expedited processing on 23 October 2020. [3] Article 46-2 of the Medical Devices Act of 23 April 2019 provides emergency use authorization: "At the request of a relevant central administrative agency (including the Centers for Disease Control and Prevention), the Minister of Food and Drug Safety may engage in the following activities to adequately respond to infectious disease pandemic

(including an outbreak of an infectious disease that could turn into a pandemic) under the Infectious Disease Control and Prevention Act or radiological emergencies under Article 2 (1) 7 of the Act on Physical Protection and Radiological Emergency: 1. Notwithstanding Article 6 (2), an act of having manufacturers who have not been granted manufacturing permission or manufacturing certification or who have not filed a manufacturing notification with respect to medical devices engage in manufacturing; 2. Notwithstanding Article 15 (2), an act of having importers who have not been granted import permission or import certification or who have not filed an import notification with respect to medical devices engage in importing." [4] The MFDS issued emergency use authorization approval for four Covid-19 testing kit applications under the Medical Devices Act provision in March 2020. The MFDS cited a "clinical performance review" by experts as one of the procedures involved in approving emergency use. [5] Article 85-2 of the Pharmaceutical Affairs Act of 2 December 2016 provides similar exemptions from clinical trial requirements: "In order to properly address the violent spread of bioterror infectious diseases prescribed in the Infectious Disease Control and Prevention Act and other infectious diseases, or address circumstances in a nuclear emergency prescribed in Article 2 (1) 7 of the Act on Measures for the Protection of Nuclear Facilities, etc. and Prevention of Radiation Disasters, the Minister of Food and Drug Safety may perform any of the following acts at the request of the heads of relevant ministries: 1. Notwithstanding Article 31 (2), allowing a drug manufacturer to manufacture a drug not approved or notified for marketing; 2. Notwithstanding Article 42 (1), allowing an importer to import a drug not approved or notified for marketing; 3. Allowing a drug manufacturer to manufacture a drug or an importer to import a drug not approved or notified for marketing, specifying other uses, dosage, efficacy, effect, period of use, etc. inconsistent with the details approved or notified." [6] Remdesivir Covid-19 treatment drug from Gilead Sciences (US) received emergency approval under the Pharmaceutical Affairs Act provision in June 2020. The MFDS cited no clinical trial requirement. [7]

[1] Ministry of Food and Drug Safety (MFDS). July 2018. "Guideline on Expedited Review Application Criteria for Pharmaceuticals".

[[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwieoq2EhcTtAhUXIDQIHcdyCjMQFjAEEgQIBhAC&url=https%3A%2F%2Fwww.nifds.go.kr%2Fbrd%2Fm\\_15%2Fdown.do%3Fbrd\\_id%3D167%26seq%3D12431%26data\\_tp%3DA%26file\\_seq%3D1&usg=AOvVaw0ySgmBGDSjZzeM6bjn9LUL](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwieoq2EhcTtAhUXIDQIHcdyCjMQFjAEEgQIBhAC&url=https%3A%2F%2Fwww.nifds.go.kr%2Fbrd%2Fm_15%2Fdown.do%3Fbrd_id%3D167%26seq%3D12431%26data_tp%3DA%26file_seq%3D1&usg=AOvVaw0ySgmBGDSjZzeM6bjn9LUL)]. Accessed 10 December 2020.

[2] Ministry of Health and Welfare (MOHW). 24 April 2020. "Press Release".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=4&CONT\\_SEQ=354192&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=4&CONT_SEQ=354192&SEARCHKEY=CONTENT&SEARCHVALUE=%EB%B0%B1%EC%8B%A0)]. Accessed 10 December 2020.

[3] Ministry of Food and Drug Safety (MFDS). 10 March 2020. "Press Release".

[[https://www.mfds.go.kr/brd/m\\_99/view.do?seq=44010&srchFr=&srchTo=&srchWord=&srchTp=&itm\\_seq\\_1=0&itm\\_seq\\_2=0&multi\\_itm\\_seq=0&company\\_cd=&company\\_nm=&page=1](https://www.mfds.go.kr/brd/m_99/view.do?seq=44010&srchFr=&srchTo=&srchWord=&srchTp=&itm_seq_1=0&itm_seq_2=0&multi_itm_seq=0&company_cd=&company_nm=&page=1)]. Accessed 10 December 2020.

[4] National Assembly. Act No. 16402 of 23 April 2019. "Medical Devices Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=50798&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=50798&lang=ENG)]. Accessed 10 December 2020.

[5] Ministry of Food and Drug Safety (MFDS). 23 October 2020. "Press Release".

[[https://www.mfds.go.kr/brd/m\\_99/view.do?seq=44690&srchFr=&srchTo=&srchWord=%EC%8B%AC%EC%82%AC&srchTp=0&itm\\_seq\\_1=0&itm\\_seq\\_2=0&multi\\_itm\\_seq=0&company\\_cd=&company\\_nm=&Data\\_stts\\_gubun=C9999&page=1](https://www.mfds.go.kr/brd/m_99/view.do?seq=44690&srchFr=&srchTo=&srchWord=%EC%8B%AC%EC%82%AC&srchTp=0&itm_seq_1=0&itm_seq_2=0&multi_itm_seq=0&company_cd=&company_nm=&Data_stts_gubun=C9999&page=1)].

Accessed 10 December 2020.

[6] National Assembly. Act No. 14328 of 2 December 2016. "Pharmaceutical Affairs Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=40196&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=40196&lang=ENG)]. Accessed 10 December 2020.

[7] Ministry of Food and Drug Safety (MFDS). 3 June 2020. "Press Release".

[[https://www.mfds.go.kr/brd/m\\_99/view.do?seq=44259&srchFr=&srchTo=&srchWord=&srchTp=&itm\\_seq\\_1=0&itm\\_seq\\_2=0&multi\\_itm\\_seq=0&company\\_cd=&company\\_nm=&page=2](https://www.mfds.go.kr/brd/m_99/view.do?seq=44259&srchFr=&srchTo=&srchWord=&srchTp=&itm_seq_1=0&itm_seq_2=0&multi_itm_seq=0&company_cd=&company_nm=&page=2)]. Accessed 10 December 2020.

## 4.7.2 Regulatory process for approving medical countermeasures

### 4.7.2a

**Is there a government agency responsible for approving new medical countermeasures (MCM) for humans?**

Yes = 1 , No = 0

**Current Year Score: 1**

The Ministry of Food and Drug Safety (MFDS) is responsible for approving new medical countermeasures for humans. The MFDS has the sole authority over whether to approve new medical countermeasures for humans, either for routine or emergency purposes. The MFDS approves pharmaceuticals based on safety, efficacy and quality tests as well as manufacturing and distribution inspections under the Pharmaceutical Affairs Act. [1] Article 31 of the Pharmaceutical Affairs Act states that anyone seeking to manufacture drugs should obtain permission from the MFDS. [2] The MFDS also handles certification and approval of medical devices under the Medical Device Act. [3, 4] The Center for New Health Technology Assessment under the Ministry of Public Health is responsible for assessing new health technologies to determine eligibility for reimbursement by the National Health Insurance Service. [5]

[1] Ministry of Food and Drug Safety (MFDS). "Approval Process". [[https://www.mfds.go.kr/eng/wpge/m\\_17/denofile.do](https://www.mfds.go.kr/eng/wpge/m_17/denofile.do)]. Accessed 10 December 2020.

[2] National Assembly. Act No. 14328 of 2 December 2016. "Pharmaceutical Affairs Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=40196&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=40196&lang=ENG)]. Accessed 10 December 2020.

[3] Ministry of Food and Drug Safety (MFDS). "Approval Process". [[https://www.mfds.go.kr/eng/wpge/m\\_39/de011026l001.do](https://www.mfds.go.kr/eng/wpge/m_39/de011026l001.do)]. Accessed 10 December 2020.

[4] National Assembly. Act No. 16402 of 23 April 2019. "Medical Devices Act". [[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=50798&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=50798&lang=ENG)]. Accessed 10 December 2020.

[5] Centre for New Health Technology Assessment. [<https://nhta.neca.re.kr/nhta/eng/nhtaENG0101V.ecg>]. Accessed 10 December 2020.

### 4.7.2b

**Is there an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies?**

Yes = 1 , No = 0

**Current Year Score: 1**

South Korea has an expedited process for approving medical countermeasures for human use during public health emergencies. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that South Korea "has legislation in place to grant rapid approval and introduction of necessary medication in the event of an infectious disease outbreak". [1] Article 46-2 of the Medical Devices Act of 23 April 2019 provides emergency use authorization: "At the request of a relevant central administrative agency (including the Centers for Disease Control and Prevention), the Minister of Food and Drug Safety may engage in the following activities to adequately respond to infectious disease pandemic (including an outbreak of an infectious disease that could turn into a pandemic) under the Infectious Disease Control and Prevention Act or radiological emergencies under Article 2 (1) 7 of the Act on Physical Protection and Radiological Emergency: 1. Notwithstanding Article 6 (2), an act of having manufacturers who have not been granted manufacturing permission or manufacturing certification or who have not filed a manufacturing notification with respect to medical devices engage in manufacturing; 2. Notwithstanding Article 15 (2), an act of having importers who have not been granted import permission or import certification or who have not filed an import notification with respect to medical devices engage in importing." [2] The Ministry of Food and Drug Safety issued emergency use

authorization approval for four Covid-19 testing kit applications under the Medical Devices Act provision in March 2020. [3] Article 85-2 of the Pharmaceutical Affairs Act of 2 December 2016 provides similar exemptions from clinical trial requirements: "In order to properly address the violent spread of bioterror infectious diseases prescribed in the Infectious Disease Control and Prevention Act and other infectious diseases, or address circumstances in a nuclear emergency prescribed in Article 2 (1) 7 of the Act on Measures for the Protection of Nuclear Facilities, etc. and Prevention of Radiation Disasters, the Minister of Food and Drug Safety may perform any of the following acts at the request of the heads of relevant ministries: 1. Notwithstanding Article 31 (2), allowing a drug manufacturer to manufacture a drug not approved or notified for marketing; 2. Notwithstanding Article 42 (1), allowing an importer to import a drug not approved or notified for marketing; 3. Allowing a drug manufacturer to manufacture a drug or an importer to import a drug not approved or notified for marketing, specifying other uses, dosage, efficacy, effect, period of use, etc. inconsistent with the details approved or notified." [4] Remdesivir Covid-19 treatment drug from Gilead Sciences (US) received emergency approval under the Pharmaceutical Affairs Act provision in June 2020. [5]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

[2] National Assembly. Act No. 16402 of 23 April 2019. "Medical Devices Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=50798&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=50798&lang=ENG)]. Accessed 10 December 2020.

[3] Ministry of Food and Drug Safety (MFDS). 10 March 2020. "Press Release".

[[https://www.mfds.go.kr/brd/m\\_99/view.do?seq=44010&srchFr=&srchTo=&srchWord=&srchTp=&itm\\_seq\\_1=0&itm\\_seq\\_2=0&multi\\_itm\\_seq=0&company\\_cd=&company\\_nm=&page=1](https://www.mfds.go.kr/brd/m_99/view.do?seq=44010&srchFr=&srchTo=&srchWord=&srchTp=&itm_seq_1=0&itm_seq_2=0&multi_itm_seq=0&company_cd=&company_nm=&page=1)]. Accessed 10 December 2020.

[4] National Assembly. Act No. 14328 of 2 December 2016. "Pharmaceutical Affairs Act".

[[https://elaw.klri.re.kr/kor\\_service/lawView.do?hseq=40196&lang=ENG](https://elaw.klri.re.kr/kor_service/lawView.do?hseq=40196&lang=ENG)]. Accessed 10 December 2020.

[5] Ministry of Food and Drug Safety (MFDS). 3 June 2020. "Press Release".

[[https://www.mfds.go.kr/brd/m\\_99/view.do?seq=44259&srchFr=&srchTo=&srchWord=&srchTp=&itm\\_seq\\_1=0&itm\\_seq\\_2=0&multi\\_itm\\_seq=0&company\\_cd=&company\\_nm=&page=2](https://www.mfds.go.kr/brd/m_99/view.do?seq=44259&srchFr=&srchTo=&srchWord=&srchTp=&itm_seq_1=0&itm_seq_2=0&multi_itm_seq=0&company_cd=&company_nm=&page=2)]. Accessed 10 December 2020.

## Category 5: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

### 5.1 INTERNATIONAL HEALTH REGULATIONS (IHR) REPORTING COMPLIANCE AND DISASTER RISK REDUCTION

#### 5.1.1 Official IHR reporting

##### 5.1.1a

Has the country submitted IHR reports to the WHO for the previous calendar year?

Yes = 1 , No = 0

Current Year Score: 1

2020

World Health Organization

## 5.1.2 Integration of health into disaster risk reduction

### 5.1.2a

**Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?**

Yes = 1, No = 0

**Current Year Score: 1**

There is a standalone national disaster risk reduction strategy for pandemics in South Korea. The Ministry of Health and Welfare's "Second Master Plan for the Prevention and Control of Infectious Diseases (2018-2022) is South Korea's standalone national disaster risk reduction strategy for pandemics. The five-year plan addresses response, preparedness, adaptation, prevention and control with regard to infectious diseases. The five-year plan's risk reduction component includes international cooperation and tighter quarantine surveillance. The plan introduces the concept of One Health into a multisectoral approach to pandemic risk reduction efforts. To that end, the plan calls for upgrading national infrastructure for handling infectious diseases, including government agencies and related law. [1]

[1] Ministry of Health and Welfare (MOHW). 7 June 2018. "Second Master Plan for Preventing and Controlling Infectious Diseases".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&CONT\\_SEQ=345055&page=1](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&CONT_SEQ=345055&page=1)].

Accessed 10 December 2020.

## 5.2 CROSS-BORDER AGREEMENTS ON PUBLIC HEALTH AND ANIMAL HEALTH EMERGENCY RESPONSE

### 5.2.1 Cross-border agreements

#### 5.2.1a

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 2**

There is evidence that South Korea has cross-border agreements, protocols, or MOUs with neighboring countries with regard to public health emergencies. The health ministers of South Korea, China and Japan signed the "Joint Statement of the Twelfth Tripartite Health Ministers Meeting (THMM)" on 15 December 2019. The annual agreement reiterated the three countries' commitment to "continue to improve rapid information sharing among the three countries, monitor public health threats in the region, and promote capacity building to respond to threats resulting from infectious diseases outbreaks." [1] The three East Asian countries signed the "Joint Statement of the Special Video Conference of Tripartite Health Ministers' Meeting (THMM) on Coronavirus Disease 2019 (Covid-19) Response" on 15 May 2020. The three countries agreed to "enhance free, open, transparent and timely sharing of information, data and expertise on prevention, detection, control and response measures, epidemiologic surveillance updates, risk assessment results, epidemiological, clinical, virological, and



laboratory characteristics on Covid-19, treatment experience, including diagnostics, pharmaceuticals, vaccine and technical guidelines." [2] Additionally, the Pyeongyang Joint Declaration issued from a summit between North and South Korea in September 2018 includes an inter-Korean agreement to "strengthen cooperation in the areas of prevention of epidemics, public health and medical care, including emergency measures to prevent the entry and spread of contagious diseases". [3]

[1] Ministry of Health and Welfare (MOHW). 15 December 2019. "Press Release".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=2&CONT\\_SEQ=351894&SEARCHKEY=TITLE&SEARCHVALUE=%ED%98%91%EB%A0%A5](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=2&CONT_SEQ=351894&SEARCHKEY=TITLE&SEARCHVALUE=%ED%98%91%EB%A0%A5)]. Accessed 10 December 2020.

[2] Ministry of Health and Welfare (MOHW). 15 May 2020. "Press Release".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=2&CONT\\_SEQ=354566&SEARCHKEY=TITLE&SEARCHVALUE=%ED%98%91%EB%A0%A5](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=2&CONT_SEQ=354566&SEARCHKEY=TITLE&SEARCHVALUE=%ED%98%91%EB%A0%A5)]. Accessed 10 December 2020.

[3] South Korean Ministry of Unification. 21 September 2018. "Pyeongyang Joint Declaration of September 2018".

[[http://unikorea.go.kr/eng\\_unikorea/news/releases/?boardId=bbs\\_000000000000034&amp;mode=view&amp;cntId=54193&amp;category=&amp;pageldx=](http://unikorea.go.kr/eng_unikorea/news/releases/?boardId=bbs_000000000000034&amp;mode=view&amp;cntId=54193&amp;category=&amp;pageldx=)]. Accessed 28 November 2020.

### 5.2.1b

**Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?**

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that South Korea has cross-border agreements, protocols or MOUs with neighboring countries, or as part of a regional group, with regard to animal health emergencies.

The trilateral summit between the leaders of South Korea, China and Japan addresses cooperation issues on animal disease outbreaks. The Eighth Trilateral Summit held on 24 December 2019 in Chengdu, China produced an agreement on the "Trilateral Cooperation Vision for the Next Decade," which pledged joint efforts to address various issues, including "trans-boundary animal diseases." [1] The Third Japan-China-Korea Trilateral Agricultural Ministers' Meeting (TAMM), held in Beijing, China on 10 November 2018, confirmed the ongoing commitment to "the sharing of animal health information, the surveillance, reporting and epidemiological investigation of diseases, the exchange of virus and other materials, research and development of diagnostic methodology and vaccines and collaborative research on Transboundary Animal Diseases such as avian influenza, foot and mouth disease and African swine fever." [2] The "Memorandum of Cooperation on Response against Transboundary Animal Diseases", signed by the three East Asian countries' agricultural ministers on 13 September 2015 in Tokyo, Japan, proposed trilateral efforts to "enhance and expand cooperative efforts in prevention and control of transboundary animal diseases." [3] In December 2017, the South Korean Ministry of Agriculture, Food and Rural Affairs signed a memorandum of understanding (MOU) with its Chinese counterpart on animal health and quarantine cooperation. [1] Under the MOU, the two countries will strengthen "joint efforts [to] prevent livestock infectious diseases", which includes rapid sharing of information on livestock epidemics. The agreement also covers joint research, joint vaccine development, animal medicine registration and information sharing, and expert exchanges. [4] In May 2019, Lee Gae-ho, minister of agriculture, food and rural affairs filed South Korea's request with his Chinese counterpart for joint response to livestock diseases and early conclusion of negotiations to launch a bilateral animal health and quarantine cooperation agreement. [5] However, none of these agreements address aid in response operations to animal public health emergencies.

[1] Xinhua. 24 December 2019. "Full text of China-ROK-Japan Cooperation Vision for the Next Decade".

[[http://www.xinhuanet.com/english/2019-12/24/c\\_138655249.htm](http://www.xinhuanet.com/english/2019-12/24/c_138655249.htm)]. Accessed 10 December 2020.

[2] Trilateral Cooperation Secretariat. November 2018. "Third Japan-China-Korea Trilateral Agricultural Ministers' Meeting".



Current Year Score: 1

2021

Biological Weapons Convention

### 5.3.1d

Extent of United Nations Security Council Resolution (UNSCR) 1540 implementation related to legal frameworks and enforcement for countering biological weapons:

Very good (60+ points) = 4, Good (45–59 points) = 3, Moderate (30–44 points) = 2, Weak (15–29 points) = 1, Very weak (0–14 points) or no matrix exists/country is not party to the BWC = 0

Current Year Score: 4

2021

Biological Weapons Convention

## 5.3.2 Voluntary memberships

### 5.3.2a

Does the country meet at least 2 of the following criteria?

- Membership in Global Health Security Agenda (GHSA)
- Membership in the Alliance for Country Assessments for Global Health Security and IHR Implementation (JEE Alliance)
- Membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP)
- Membership in the Australia Group (AG)
- Membership in the Proliferation Security Initiative (PSI)

Needs to meet at least two of the criteria to be scored a 1 on this measure. , Yes for five = 1 , Yes for four = 1 , Yes for three = 1 , Yes for two = 1 , Yes for one = 0 , No for all = 0

Current Year Score: 1

2021

Global Health Security Agenda; JE Alliance; Global Partnership; Australia Group; PSI

## 5.4 JOINT EXTERNAL EVALUATION (JEE) AND PERFORMANCE OF VETERINARY SERVICES PATHWAY (PVS)

### 5.4.1 Completion and publication of a Joint External Evaluation (JEE) assessment and gap analysis

#### 5.4.1a

Has the country completed a Joint External Evaluation (JEE) or precursor external evaluation (e.g., GHSA pilot external assessment) and published a full public report in the last five years?

Yes = 1 , No = 0

Current Year Score: 1

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

#### 5.4.1b

Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?

Yes = 1 , No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

### 5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

#### 5.4.2a

Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

OIE PVS assessments

#### 5.4.2b

Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5 FINANCING

### 5.5.1 National financing for epidemic preparedness

#### 5.5.1a

Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?

Yes = 1 , No = 0

Current Year Score: 1

South Korea has allocated national funds to improve capacity to address epidemic threats within the past three years. The Ministry of Health and Welfare (MOHW)'s 2021 budget includes funding for nursing personnel and facility expansion at national and sub-national hubs for infectious disease response. [1] The MOHW's supplementary budget for 2020 allocates funding for Covid-19 capacity needs, including PPE stockpiling and vaccine research. The funding program also covers digital technology solutions and dedicated respiratory clinics. [2]

[1] Ministry of Health and Welfare (MOHW). 2 December 2020. "Press Release".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=361465&SEARCHKEY=TITLE&SEARCHVALUE=%EC%98%88%EC%82%B0](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=361465&SEARCHKEY=TITLE&SEARCHVALUE=%EC%98%88%EC%82%B0)]. Accessed 10 December 2020.

[2] Ministry of Health and Welfare (MOHW). 3 July 2020. "Press Release".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=1&CONT\\_SEQ=355285&SEARCHKEY=TITLE&SEARCHVALUE=%EB%89%B4%EB%94%9C](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=1&CONT_SEQ=355285&SEARCHKEY=TITLE&SEARCHVALUE=%EB%89%B4%EB%94%9C)]. Accessed 10 December 2020.

### 5.5.2 Financing under Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS) reports and gap analyses

#### 5.5.2a

Does the Joint External Evaluation (JEE) report, National Action Plan for Health Security (NAPHS), and/or national GHSA roadmap allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a JEE = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

#### 5.5.2b

Does the Performance of Veterinary Services (PVS) gap analysis and/or PVS assessment allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a PVS = 0

Current Year Score: 0

2021

OIE PVS assessments

### 5.5.3 Financing for emergency response

#### 5.5.3a

Is there a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency (such as through a dedicated national reserve fund, an established agreement with the World Bank pandemic financing facility/other multilateral emergency funding mechanism, or other pathway identified through a public health or state of emergency act)?

Yes = 1, No = 0

**Current Year Score: 1**

South Korea has a dedicated national reserve fund it can access in the face of a public health emergency. The World Health Organization (WHO) Joint External Evaluation for South Korea, conducted in August/September 2017, states that South Korea has "allocated regular and supplementary annual budgets and reserve funds to support public health emergency programs of relevant ministries, agencies, and local governments". [1] The Ministry of Health and Welfare administers two national reserve funds: Emergency Medical Fund available for emergency medicine and National Health Promotion Fund available for broader health programs, including vaccination, research and community healthcare. [2, 3]

[1] World Health Organization (WHO). 28 August-1 September 2017. "Joint external evaluation of IHR core capacities of the Republic of Korea Mission report". [<http://www.who.int/ihr/publications/jee-mission-report-rok/en/>]. Accessed 10 December 2020.

[2] National Emergency Medical Center. "Emergency Medical Fund". [[https://www.e-gen.or.kr/nemc/emergency\\_medical\\_fund.do](https://www.e-gen.or.kr/nemc/emergency_medical_fund.do)]. Accessed 10 December 2020.

[3] Korea Health Promotion Institute. "National Health Promotion Fund". [[https://www.khealth.or.kr/board;jsessionid=7ZQgS12CWwlhw1wNxxze24aLypn2qtc129eEm6POK5oOpbQQ0VKAoOpZouVBDQaOX.khealth-was\\_servlet\\_khealth2018?menuId=MENU00874&siteId=null](https://www.khealth.or.kr/board;jsessionid=7ZQgS12CWwlhw1wNxxze24aLypn2qtc129eEm6POK5oOpbQQ0VKAoOpZouVBDQaOX.khealth-was_servlet_khealth2018?menuId=MENU00874&siteId=null)]. Accessed 10 December 2020.

### 5.5.4 Accountability for commitments made at the international stage for addressing epidemic threats

#### 5.5.4a

Is there evidence that senior leaders (president or ministers), in the past three years, have made a public commitment either to:

- Support other countries to improve capacity to address epidemic threats by providing financing or support?
- Improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is evidence that senior leaders (president or ministers), in the past three years, have made a public commitment to support other countries to improve their capacity to address epidemic threats by providing financing and to improve the country's domestic capacity to address epidemic threats by expanding financing. During a telephone conference with the Japanese Minister of Health, Labor and Welfare on 17 February 2020, Minister of Health and Welfare offered to provide

information on PCR testing capabilities and cooperation in other areas. [1] In his address to the 75th Session of the United Nations General Assembly on 23 September 2020, President Moon Jae-in offered support for "inter-Korean cooperation in disease prevention and control and public health" to bring North Korea to peace dialogue. [2] South Korean Unification Minister Lee In-young has expressed willingness to help North Korea through cooperation on Covid-19 vaccines. He said on 20 November 2020: "When vaccines and treatment for Covid-19 are developed and distributed in the near future, a new environment will be created in the Korean Peninsula in which people and goods can come and go." [3] President Moon Jae-in has expressed commitment to improve the country's domestic capacity to address current and future epidemic threats by expanding financing. In his speech to the National Assembly on 28 October 2020, he said: "The epidemic prevention and control measures against Covid-19 and the strengthening of our system for responding to infectious diseases are very important tasks for next year as well. The funds earmarked for Korea's response to Covid-19 has been greatly increased to KRW1.8 trillion. The full-cycle epidemic prevention and control system, ranging from prevention to diagnosis to treatment, will be strengthened. We will build 500 treatment facilities solely for respiratory ailments in addition to establishing three new hospitals specialized in infectious diseases." [4]

[1] Ministry of Health and Welfare (MOHW). 17 February 2020. "Press Release".

[[http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\\_MENU\\_ID=04&MENU\\_ID=0403&page=2&CONT\\_SEQ=352949&SEARCHKEY=TITLE&SEARCHVALUE=%ED%98%91%EB%A0%A5](http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR_MENU_ID=04&MENU_ID=0403&page=2&CONT_SEQ=352949&SEARCHKEY=TITLE&SEARCHVALUE=%ED%98%91%EB%A0%A5)]. Accessed 10 December 2020.

[2] Yonhap News Agency. 23 September 2020. "Full text of President Moon Jae-in's speech at 75th Session of United Nations General Assembly". [<https://en.yna.co.kr/view/AEN20200922010300315>]. Accessed 10 December 2020.

[3] Yonhap News Agency. 20 November 2020. "Unification minister renews calls for inter-Korean virus cooperation amid criticism". [<http://www.koreaherald.com/view.php?ud=20201120000719>]. Accessed 10 December 2020.

[4] Office of the President. 28 October 2020. "Address by President Moon Jae-in at National Assembly to Propose Government Budget for 2021". [<https://english1.president.go.kr/BriefingSpeeches/Speeches/898>]. Accessed 10 December 2020.

### 5.5.4b

Is there evidence that the country has, in the past three years, either:

- Provided other countries with financing or technical support to improve capacity to address epidemic threats?
- Requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

**Current Year Score: 1**

There is publicly available evidence that South Korea has invested finances and provided technical support to support other countries to improve capacity to address epidemic threats in the past three years.

The Korea Foundation for International Healthcare (KOFIH), the public-sector provider of overseas development assistance specializing in healthcare, provides financial and technical support for developing countries. For 2019, the KOFIH's overseas development assistance amounted to KWN29bn (US\$26.7m). [1]

The government approved a US\$10m contribution to the Covid-19 Vaccines Advance Market Commitment (COVAX AMC), launched by Gavi, the Vaccine Alliance, to provide Covid-19 vaccines to developing countries in October 2020. [2] In July 2020, the government announced a plan to provide a total of US\$52m in pandemic assistance to other countries. [3]

Additionally, according to the Global Health Security Funding Tracker, Korea committed US\$245.90m between 2014 and 2020 to support other countries. Top funding categories included immunization, real-time surveillance, and workforce

development. [4]

[1] Korea Foundation for International Healthcare. "Major Programs".

[<http://www.alio.go.kr/popReportTerm.do?apbald=C0379&reportFormRootNo=31501>]. Accessed 10 December 2020.

[2] United Nations Office for the Coordination of Humanitarian Affairs. 29 October 2020. "ROK Government Pledges US\$10 Million to COVAX AMC". [<https://reliefweb.int/report/world/rok-government-pledges-us10-million-covax-amc>]. Accessed 10 December 2020.

[3] Ministry of Foreign Affairs. 16 July 2020. "Press Release".

[[http://www.mofa.go.kr/www/brd/m\\_4080/view.do?seq=370348&srchFr=&srchTo=&srchWord=%EC%A7%80%EC%9B%90&srchTp=0&multi\\_itm\\_seq=0&itm\\_seq\\_1=0&itm\\_seq\\_2=0&company\\_cd=&company\\_nm=&page=3](http://www.mofa.go.kr/www/brd/m_4080/view.do?seq=370348&srchFr=&srchTo=&srchWord=%EC%A7%80%EC%9B%90&srchTp=0&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=3)]. Accessed 10 December 2020.

[4] Global Health Security Funding Tracker. 2020. "Republic of Korea - Funding Profile".

[<https://tracking.ghscosting.org/details/1030/funder>]

### 5.5.4c

**Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?**

Yes = 1 , No = 0

**Current Year Score: 1**

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

## 5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

### 5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

#### 5.6.1a

**Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?**

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available plan or policy for sharing genetic data, epidemiological data, clinical specimens, and/or isolated specimens (biological materials) with international organizations and/or other countries that goes beyond influenza. The sharing of genetic data, epidemiological data, clinical specimens, and/or isolated specimens (biological materials) remains confined to the domestic arena. In 2008, the Korea Biobank Project (KBP) was launched with the aim of collecting human biosources (biospecimens and data) systematically and on a large scale for biomedical research in South Korea. The Korea Biobank Network (KBN), which comprises the National Biobank of Korea (NBK) at the Korea National Institute of Health (KNIH) and 17 regional biobanks at university-affiliated hospitals, has been established. [1] There is no evidence of a publicly available plan or policy found at the Ministry of Health and Welfare or the Ministry of Agriculture, Food and Rural Affairs on a



policy sharing these on the international stage. [2, 3]

[1] Korea Disease Control and Prevention Agency (KDCA). "Korea Biobank Project".

[<http://www.kdca.go.kr/contents.es?mid=a30326000000>]. Accessed 10 December 2020.

[2] Ministry of Health and Welfare (MOHW). [<http://www.mohw.go.kr/react/index.jsp>]. Accessed 10 December 2020.

[3] Ministry of Agriculture, Food and Rural Affairs (MAFRA). [<https://www.mafra.go.kr/sites/mafra/index.do>]. Accessed 10 December 2020.

### 5.6.1b

**Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?**

Yes = 0, No = 1

**Current Year Score: 1**

There is no public evidence that South Korea has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years. The World Health Organization (WHO) in its Review of the Pandemic Influenza Preparedness Framework, a report by the Director-General released in April 2017, does not cite any non-compliance by South Korea. [1] There is no other public evidence from WHO and top international and local media outlets that South Korea has not shared samples in accordance with the PIP framework in the past two years. The only reference available on the internet is a report by The Yomiuri Shimbun dated April 2004, more than two years ago. The report headlined "Dispute over ownership of virus could cost lives", which cited delays in accessing South Korean samples of influenza viruses. The report referred to viruses as valuable "assets" and the "tacit agreement in the world of researchers that a disease agent belonged to whoever found it first." [2]

[1] World Health Organization (WHO). 10 April 2017. "Review of the Pandemic Influenza Preparedness Framework: report by the Director-General". [[https://apps.who.int/iris/bitstream/handle/10665/274774/A70\\_17-en.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/274774/A70_17-en.pdf?sequence=1&isAllowed=y)]. Accessed 10 December 2020.

[2] Infectious Diseases in the New Millennium. 2020; 82: 167-191. Published online 2020 May 16. "Restricting Access to Pathogen Samples and Epidemiological Data: A Not-So-Brief History of 'Viral Sovereignty' and the Mark It Left on the World". [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7226898/>]. Accessed 10 December 2020.

### 5.6.1c

**Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?**

Yes = 0, No = 1

**Current Year Score: 1**

There is no public evidence that South Korea has not shared pandemic pathogen samples during an outbreak in the past two years. No evidence was found in news stories carried by major international and local media outlets or the World Health Organization Disease Outbreak News. [1] On 20 January 2020, National IHR Focal Point (NFP) for South Korea reported the first case of novel coronavirus in the country. The case was a 35-year-old female, Chinese national, residing in Wuhan, Hubei province in China. [2]

[1] World Health Organization (WHO). Disease Outbreak News. [<https://www.who.int/csr/don/archive/year/2020/en/>]. Accessed 10 December 2020.

[2] World Health Organization (WHO). 21 January 2020. Disease Outbreak News. [<https://www.who.int/csr/don/21-january-2020-novel-coronavirus-republic-of-korea-ex-china/en/>]. Accessed 10 December 2020.

## Category 6: Overall risk environment and vulnerability to biological threats

### 6.1 POLITICAL AND SECURITY RISK

#### 6.1.1 Government effectiveness

##### 6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

##### 6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

##### 6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

##### 6.1.1d

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

### 6.1.1e

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 61

2020

Transparency International

### 6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

### 6.1.1g

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

## 6.1.2 Orderly transfers of power

### 6.1.2a

How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?

Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

Current Year Score: 4

2021

Economist Intelligence

### 6.1.3 Risk of social unrest

#### 6.1.3a

**What is the risk of disruptive social unrest?**

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

**Current Year Score: 2**

2021

Economist Intelligence

### 6.1.4 Illicit activities by non-state actors

#### 6.1.4a

**How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?**

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

**Current Year Score: 4**

2021

Economist Intelligence

#### 6.1.4b

**What is the level of illicit arms flows within the country?**

4 = Very high, 3 = High, 2 = Moderate, 1 = Low, 0 = Very low

**Current Year Score: 4**

2020

UN Office of Drugs and Crime (UNODC)

#### 6.1.4c

**How high is the risk of organized criminal activity to the government or businesses in the country?**

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

**Current Year Score: 3**

2021

Economist Intelligence

## 6.1.5 Armed conflict

### 6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 2

2021

Economist Intelligence

## 6.1.6 Government territorial control

### 6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.1.7 International tensions

### 6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 0

2021

Economist Intelligence

## 6.2 SOCIO-ECONOMIC RESILIENCE

### 6.2.1 Literacy

#### 6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

**Current Year Score: 99.9**

2008-2018

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);  
The Economist Intelligence Unit

## 6.2.2 Gender equality

### 6.2.2a

**United Nations Development Programme (UNDP) Gender Inequality Index score**

Input number

**Current Year Score: 0.94**

2018

United Nations Development Programme (UNDP); The Economist Intelligence Unit

## 6.2.3 Social inclusion

### 6.2.3a

**Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)**

Input number

**Current Year Score: 0.1**

2012

World Bank; Economist Impact

### 6.2.3b

**Share of employment in the informal sector**

Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0

**Current Year Score: 1**

According to an International Labor Organization report released on 30 April 2018, the share of informal employment in total employment was 31.5% in South Korea. [1] Official statistics on informal employment in South Korea are not available. The latest study on the issue is a January 2013 Korea Labor Institute report, which estimated the proportion of informal employment at 40.2% of the entire labor force. The report defined informal employment as workers not protected by national labor standards, such as minimum wages, severance pay and public pensions. [2]

[1] International Labor Organization. 30 April 2018. "Women and men in the informal economy: A statistical picture. Third edition". [[https://www.ilo.org/global/publications/books/WCMS\\_626831/lang--en/index.htm](https://www.ilo.org/global/publications/books/WCMS_626831/lang--en/index.htm)]. Accessed 23 December 2020.

[2] Korea Labor Institute. 22 January 2013. "A Study on Informal Employment".

[[http://www.kefplaza.com/labor/relations/normal\\_view.jsp?nodeId=124&idx=12430&prod\\_id=17765&pageNum=9&urlparam=](http://www.kefplaza.com/labor/relations/normal_view.jsp?nodeId=124&idx=12430&prod_id=17765&pageNum=9&urlparam=)]. Accessed 10 December 2020.

### 6.2.3c

#### Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

**Current Year Score: 2**

2016, or latest available

World Bank; Economist Impact calculations

## 6.2.4 Public confidence in government

### 6.2.4a

#### Level of confidence in public institutions

Input number

**Current Year Score: 2**

2021

Economist Intelligence Democracy Index

## 6.2.5 Local media and reporting

### 6.2.5a

#### Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

Input number

**Current Year Score: 2**

2021

Economist Intelligence Democracy Index

## 6.2.6 Inequality

### 6.2.6a

#### Gini coefficient

Scored 0-1, where 0=best

**Current Year Score: 0.31**

Latest available.

World Bank; Economist Impact calculations

## 6.3 INFRASTRUCTURE ADEQUACY

### 6.3.1 Adequacy of road network

#### 6.3.1a

What is the risk that the road network will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

### 6.3.2 Adequacy of airports

#### 6.3.2a

What is the risk that air transport will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

### 6.3.3 Adequacy of power network

#### 6.3.3a

What is the risk that power shortages could be disruptive?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 4

2021

Economist Intelligence

## 6.4 ENVIRONMENTAL RISKS

### 6.4.1 Urbanization

#### 6.4.1a

Urban population (% of total population)

Input number



Current Year Score: 81.43

2019

World Bank

## 6.4.2 Land use

### 6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: -1.36

2008-2018

World Bank; Economist Impact

## 6.4.3 Natural disaster risk

### 6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 2

2021

Economist Intelligence

## 6.5 PUBLIC HEALTH VULNERABILITIES

### 6.5.1 Access to quality healthcare

#### 6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 82.63

2018

United Nations; World Bank, UNICEF; Institute for Health Metrics and Evaluation (IHME); Central Intelligence Agency (CIA)  
World Factbook

#### 6.5.1b

Age-standardized NCD mortality rate (per 100 000 population)

Input number

Current Year Score: 237.1

2019

WHO

### **6.5.1c**

**Population ages 65 and above (% of total population)**

Input number

Current Year Score: 15.06

2019

World Bank

### **6.5.1d**

**Prevalence of current tobacco use (% of adults)**

Input number

Current Year Score: 22

2018

World Bank

### **6.5.1e**

**Prevalence of obesity among adults**

Input number

Current Year Score: 4.7

2016

WHO

## **6.5.2 Access to potable water and sanitation**

### **6.5.2a**

**Percentage of homes with access to at least basic water infrastructure**

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

### 6.5.2b

**Percentage of homes with access to at least basic sanitation facilities**

Input number

**Current Year Score: 99**

2017

UNICEF; Economist Impact

## 6.5.3 Public healthcare spending levels per capita

### 6.5.3a

**Domestic general government health expenditure per capita, PPP (current international \$)**

Input number

**Current Year Score: 1878.6**

2018

WHO Global Health Expenditure database

## 6.5.4 Trust in medical and health advice

### 6.5.4a

**Trust medical and health advice from the government**

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018

### 6.5.4b

**Trust medical and health advice from medical workers**

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

**Current Year Score: 2**

2018

Wellcome Trust Global Monitor 2018