

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

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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: 0

There is no publicly available evidence that Syria has a national antimicrobial resistance (AMR) plan for the surveillance, detection, and reporting of priority AMR pathogens.

Neither the Ministry of Health website nor the Syrian e-Gov Web Portal mentions a national AMR plan. [1, 2]

The World Health Organization (WHO) Damascus field office-administered Early Warning and Response System (EWARS) that monitors the ability of existing disease surveillance systems to handle certain public health crises with the support of the Ministry of Health, however, this does not include AMR. [3,4]

A World Health Organization (WHO) report from November 2017 mentioned efforts to increase awareness of antibiotic resistance by the Syrian Pharmacists Association, but it did not indicate that there was a national government-led campaign to do so. [5] The WHO Library of National Action Plans does not include any reference to an AMR plan for Syria. [6]

The 2018 WHO Humanitarian Response Plan note that the country's ongoing civil war and international sanctions have resulted in the large-scale debilitation of critical healthcare infrastructure in much of the country, without referring to a national AMR plan. [7] By the end the fourth quarter of 2019, the WHO estimates that only 47 per cent of Syrian public health facilities are still fully functional. [8]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[2] Syrian e-Gov Web Portal. [<http://www.egov.sy/cat/en/88/0/Health.html>]. Accessed 10 December 2020.

[3] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 10 December 2020.

[4] The Lancet. An Early Warning and response System for Syria. [<https://www.thelancet.com/journals/a/article/PIIS0140-6736>]

[13] 62691-4/fulltext]. Accessed 10 December 2020.

[5] World Health Organization (WHO). 1 November 2017. "Antibiotic resistance - tackling a danger of a different kind in the Syrian Arab Republic". [<https://www.who.int/en/news-room/feature-stories/detail/antibiotic-resistance-tackling-a-danger-of-a-different-kind-in-the-syrian-arab-republic>]. Accessed 10 December 2020.

[6] World Health Organization (WHO). Library of National Action Plans. [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en>]. Accessed 10 December 2020.

[7] World Health Organization (WHO). 2018. "Syrian Arab Republic Humanitarian Response Plan 2018".

[<https://www.who.int/emergencies/response-plans/2018/syria/en/>]. Accessed 10 December 2020.

[8] World Health Organization (WHO). 2019. "HeRAMS Annual Report: Public Health Centers in the Syrian Arab Republic".

[<https://applications.emro.who.int/docs/syr/EMRLIBSYR233E-eng.pdf?ua=1>]. Accessed 10 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: 0

There is no publicly available evidence that Syria has a national laboratory system that tests for antimicrobial resistance (AMR) priority pathogens.

The World Health Organization (WHO) Annual Report 2018 for the Syrian Arab Republic indicates that there are currently 1,550 Early Warning and Response System (EWARS) sentinel sites for surveillance of epidemic-prone diseases and halting their spread, including acute diarrhoea, bloody diarrhoea, acute watery diarrhoea, acute jaundice syndrome, influenza-like illness; severe acute respiratory infection, acute flaccid paralysis, suspected measles, suspected meningitis. [1, 2, 3] However, according to a study published in the International Journal of Infectious Diseases in June 2018, neither this system nor another WHO-administered system based out of Gaziantep, Turkey, and servicing northern Syria where government control is limited, "requires reporting on AMR, nosocomial infections, or response to therapy." [4]

The Ministry of Health also notes that it tracks cases of resistant tuberculosis, but there is no evidence of other 7+1 AMR strains being tested for. [5,6,7] There is no further evidence of all of the 7+1 AMR priority pathogens been tested for on the Ministry of Health website. [8] Additionally, there is no WHO National Action plan for Syria. [9]

[1] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[2] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 10 December 2020.

[3] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpZq8%3D&portalid=0&language=ar-YE>]. Accessed 10 December 2020.

[4] Abbara, Aula, et al. International Journal of Infectious Disease. 14 June 2018. "A summary and appraisal of existing evidence of antimicrobial resistance in the Syrian conflict."

[<https://reader.elsevier.com/reader/sd/pii/S120197121834445X?token=4B54AE033FCF91A36EF8EABA028A826A4C92A8F0FEF7DCD407AA68B19A993E56E79AFC3323E40A49C7D1AE6CE2C2F8D9>]. Accessed 10 December 2020.

[5] Syrian Ministry of Health. "Statistics of Quarterly Reported Epidemic Diseases."

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=0ypTrz4P-wE%3d&portalid=0&language=ar-YE>]. Accessed 10 December 2020.

[6] Syrian Ministry of Health. "Statistics of Reported Epidemic Diseases by Governorate."

[http://www.moh.gov.sy/LinkClick.aspx?fileticket=Q_LBjsMre10%3d&portalid=0&language=ar-YE]. Accessed 10 December 2020.

[7] Syrian Ministry of Health. "Statistics of Reported Epidemic Diseases by Age."

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=LdysU5Z6bhW%3d&portalid=0&language=ar-YE>]. Accessed 10 December 2020.

[8] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[9] World Health Organization (WHO). Library of National Action Plans. [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 10 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 no publicly available evidence that the Syrian Government conducts environmental detection or surveillance activities for antimicrobial residues or antimicrobial resistant (AMR) organisms.

The websites of the Syrian Ministry of Health, Ministry of Agriculture and Agrarian Reform, and Ministry of Local Administration and Environment do not provide information regarding environmental surveillance for AMR organisms or residues. [1, 2, 3].

The country also does not have a national antimicrobial resistance (AMR) plan for the surveillance, detection, and reporting of priority AMR. [4,1]

Although a Memorandum of Understanding was signed between the Ministry of Agriculture and Agrarian Reform and the Ministry of Local Administration and Environment to cooperate in the area of agricultural research, including animal welfare and disease, there is no indication of a focus on AMR organisms. [5]

The Department of Environmental Health, within the Ministry of Health, conducts research on epidemiological and medical waste, but there is no evidence that it conducts AMR surveillance specifically. [6]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

[3] Syrian Ministry of Local Administration and Environment. [<http://www.mola.gov.sy/mola/>]. Accessed 10 December 2020.

[4] World Health Organization (WHO). Library of National Action Plans. [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 10 December 2020.

[5] Syrian Ministry of Agriculture and Agrarian Reform. 28 September 2013. "Memorandum of Understanding Between Agriculture and Environment". [<http://moaar.gov.sy/main/archives/10670>]. Accessed 10 December 2020.

[6] Syrian Ministry of Health. "Department of Environmental Health". [<http://www.moh.gov.sy/pages/Environment/missions.html>]. Accessed 10 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: 0

There is no national legislation in place requiring a prescription for antibiotic use in Syria.

According to Law Number 12 of 1970 "On the Practice of Medical Professions in the Syrian Arab Republic," antibiotics do not fall under the list of drugs that require a prescription. [1]

A 2018 study by researchers at the Arab International University in Syria estimated that over 80% of pharmacists across the country also did not require prescriptions for antibiotics in practice. [2]

The 2017 Syrian National Drug Policy emphasizes the need to rationalize drug prescribing and dispensing through awareness-raising campaigns for both practitioners and communities, without specifically mentioning antibiotics or referring to regulations or national legislations. [3]

No information on the Ministry of Health website indicates that any such law requiring a prescription for antibiotics has been passed since 1970. [4] There is no WHO National Action Plan for Syria. [4,5]

[1] Parliament of the Syrian Arab Republic: Legal Database. 5 January 1970. "Law No. 12 of 1970 On the Practice of Medical Professions in the Syrian Arab Republic". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 10 December 2020.

[2] Jakovljevic, Mihajlo, et al. 2 August 2018. "Antibiotic Resistance in Syria: A Local Problem Turns Into a Global Threat". Front Public Health. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6084506/>]. Accessed 10 December 2020.

[3] Syrian Ministry of Health. "The Syrian National Drug Policy." 2017. [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=idsNvHJsPi0%3d&portalid=0&language=ar-YE>]. Accessed 10 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[5] World Health Organization (WHO). Library of National Action Plans. [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 10 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: 0

There is no publicly available evidence that Syria has a national legislation or regulation in place requiring prescriptions for antibiotic use on animals.

Neither the Ministry of Health website, the Ministry of Agriculture and Agrarian Reform website, the Parliament of the Syrian Arab Republic's Legal Database, nor the Syrian e-Gov Web Portal contain any mention of legislation restricting antibiotic use in animal feed. [1, 2, 3, 4]

The 2017 Syrian National Drug Policy does not mention any information relevant to antibiotic use on animals. [5]

Law No. 18 of 2004 Regulating the Trade and Handling of Vaccines, Feed, Fertilizers and Pesticides does not include any restrictions on the use of antibiotics. [6]

Likewise, there is no mention of restrictions of any kind on antibiotic use in animals through the World Organization for

Animal Health (OIE) "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria," published in July 2008, nor are there any relevant academic studies. [7] Additionally, there is no World Health Organization (WHO) National Action Plan for Syria. [8,1]

- [1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.
- [2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.
- [3] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 10 December 2020.
- [4] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 10 December 2020.
- [5] Syrian Ministry of Health. "The Syrian National Drug Policy." 2017. [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=idsNvHJsPi0%3d&portalid=0&language=ar-YE>]. Accessed 10 December 2020.
- [6] FAOLEX Database. 20 May 2004. "Law No. 18 of 2004 Regulating the Trade and Handling of Vaccines, Feed, Fertilizers and Pesticides". [<http://extwprlegs1.fao.org/docs/pdf/syr48953.pdf>]. Accessed 10 December 2020.
- [7] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 December 2020.
- [8] World Health Organization (WHO). Library of National Action Plans. [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 10 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: 0

There is no publicly available evidence suggesting that Syria has a national plan on zoonotic diseases.

According to the World Organization of Animal Health (OIE) "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria," published in July 2008, there is a National Emergency Plan For Prevention of Avian Influenza in Syria from October 2006 and a brucellosis surveillance for technical workers at animal breeding stations. [1] However, this plan does not appear to have been updated since 2008, and it is not clear if its function has been impacted by the ongoing civil war.

According to the World Health Organization (WHO) Annual Report 2018, certain infectious zoonotic diseases such as leishmaniosis and brucellosis have spread among the Syrian population due to the ongoing civil war in Syria and ensuing blockade that has restricted the supply of vaccines. Nonetheless, the report does not refer to national legislation, plans, or equivalent strategy documents on zoonotic disease in the country [2]

In collaboration with the Ministry of Health, the World Health Organization (WHO) has launched an Early Warning and Response System (EWARS) to detect and respond to certain epidemic-prone communicable diseases. [3,4] However, according to the "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, the system is limited to acute diarrhoea, bloody diarrhoea, acute watery diarrhoea, acute jaundice syndrome, influenza-like illness; severe acute

respiratory infection, acute flaccid paralysis, suspected measles, and suspected meningitis and does not address zoonotic diseases specifically. [5]

The Ministry of Health or Ministry of Agriculture and Agrarian Reform websites provide no further indication of a plan to combat zoonotic diseases on. [6,7]

[1] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 December 2020.

[2] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018". [https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[3] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 10 December 2020.

[4] The Lancet. An Early Warning and response System for Syria. [<https://www.thelancet.com/journals/a/article/PIIS0140-6736>

[13] 62691-4/fulltext]. Accessed 10 December 2020.

[5] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 10 December 2020.

[6] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[7] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 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: 0

There is no publicly available evidence indicating that Syria has 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.

The World Health Organization (WHO) provides technical support to the Syrian Ministry of Health in several areas including those of tuberculosis, malaria, HIV/AIDS, leishmaniasis, zoonotic diseases, immunization, surveillance and polio. Together with the Ministry, WHO works on updating standard case management, improving the surveillance system and conducting regular monitoring and supervision to reduce rates of communicable diseases. Nonetheless, there is no mention of any 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. [1]

WHO has launched an Early Warning and Response System (EWARS) to detect and respond to certain epidemic-prone communicable diseases in collaboration with the Syrian Ministry of Health. [2,3] However, according to the "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, the system is limited to acute diarrhoea, bloody diarrhoea, acute watery diarrhoea, acute jaundice syndrome, influenza-like illness; severe acute respiratory infection, acute flaccid paralysis, suspected measles, and suspected meningitis without addressing zoonotic diseases specifically. [4]

Syria does not have a national plan on zoonotic diseases. According to the World Organization of Animal Health (OIE) "Tool

for the evaluation of Performance of Veterinary Services (PVS): Syria," published in July 2008, there is a National Emergency Plan For Prevention of Avian Influenza in Syria from October 2006 and brucellosis surveillance for technical workers at animal breeding stations. [5] However, this plan does not appear to have been updated since 2008, and it does not include any reference to any measures for reduction of transmission of zoonotic diseases from animals to humans.

The WHO Annual Report 2018 states that certain infectious zoonotic diseases such as leishmaniosis and brucellosis have spread among the Syrian population due to the ongoing civil war in Syria and ensuing blockade that has restricted the supply of vaccines. Nonetheless, there is no mention of legislation, plans, or equivalent strategy documents on spillover control from animals to humans. [6] The websites of Syrian Ministry of Health and Ministry of Health or Ministry of Agriculture and Agrarian Reform provide no further indication on this matter. [7,8]

[1] World Health Organization (WHO). Eastern Mediterranean Regional Office (EMRO).

[<http://www.emro.who.int/syr/programmes/communicable-disease-control.html>]. Accessed 10 December 2020.

[2] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 10 December 2020.

[3] The Lancet. An Early Warning and response System for Syria. [<https://www.thelancet.com/journals/a/article/PIIS0140-6736>

[13] 62691-4/fulltext]. Accessed 10 December 2020.

[4] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles".

[5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[5] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 December 2020.

[6] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[7] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[8] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

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: 0

There is no publicly available evidence of a national plan, guidelines, or laws that account for the surveillance and control of multiple zoonotic pathogens of public health concern in Syria.

According to the World Health Organization (WHO) Annual Report 2018, certain infectious zoonotic diseases such as leishmaniosis and brucellosis have spread among the Syrian population due to the ongoing civil war in Syria and ensuing blockade that has restricted the supply of vaccines. [1]

In collaboration with the Ministry of Health, the WHO has launched an Early Warning and Response System (EWARS) to detect and respond to certain epidemic-prone communicable diseases. [2,3] However, the system is limited to acute

diarrhoea, bloody diarrhoea, acute watery diarrhoea, acute jaundice syndrome, influenza-like illness; severe acute respiratory infection, acute flaccid paralysis, suspected measles, and suspected meningitis without addressing zoonotic diseases specifically. [4]

While the Ministry of Health website also tracks brucellosis and malaria as of 2013; [5] but there is no indication of a plan to for the surveillance and control zoonotic diseases on the ministry's website. [6]

According to the World Organization of Animal Health (OIE) "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria," published in July 2008, some national surveillance programmes have been put in a place by the Veterinary Services Department within the Ministry of Agriculture and Agrarian Reform for Rinderpest, Avian Influenza, brucellosis, and foot-and-mouth disease, but they are only partially implemented and remains subject to adequate planning and sustainability. [7]

Additionally, there is no information on a plan for the surveillance and control of zoonotic diseases on the Ministry of Agriculture and Agrarian Reform website [8]

Although Syria also utilizes the WHO HeRAMS (Health resources and services availability mapping system) for assessing and reporting the availability of services in public facilities, there is no publicly available evidence suggesting that there is any private sector involvement or particular focus on zoonoses. [9]

- [1] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018". [https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.
- [2] Syrian Ministry of Health. "Early Warning and Response Program". [http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE]. Accessed 10 December 2020.
- [3] The Lancet. An Early Warning and response System for Syria. [https://www.thelancet.com/journals/a/article/PIIS0140-6736-13] 62691-4/fulltext]. Accessed 10 December 2020.
- [4] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE]. Accessed 10 December 2020.
- [5] Syrian Ministry of Health. 2013. "Infectious Disease Bulletin". [http://www.moh.gov.sy/LinkClick.aspx?fileticket=0ypTrz4P-wE%3d&portalid=0&language=ar-YE]. Accessed 10 December 2020.
- [6] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 10 December 2020.
- [7] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 December 2020.
- [8] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 10 December 2020.
- [9] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic: HeRAMS". [http://www.emro.who.int/syr/herams/index.html]. Accessed 10 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 no publicly available evidence suggesting that Syria has a department or agency dedicated to zoonotic disease that functions across ministries.

Although according to the World Organization for Animal Health (OIE) "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria," there is a Department of Zoonoses within the Animal Health Directorate of the Ministry of Agriculture and Agrarian Reform, there is no evidence that it functions across departments. [1]

The Animal Health Directorate and the Directorate of Veterinary Medicine within the Ministry of Agriculture and Agrarian Reform manage the vaccination and treatment of diseases within the livestock population of the Syrian Arab Republic, but there is no evidence that it specifically addresses zoonotic diseases in humans or that it works across agencies. [2, 3, 4]

The Directorate of Communicable and Chronic Diseases within the Ministry of Health does not focus solely on zoonotic diseases, although it does track brucellosis, malaria, and other zoonotic diseases of note as of 2013. [5]

There is no evidence in the World Health Organization (WHO) Annual Report 2018, Ministry of Health website, Ministry of Agriculture and Agrarian Reform website, or a relevant academic study of a dedicated department or agency for zoonotic disease. [6, 7, 8]

[1] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. 5 February 2014. "Animal Health is Self-Sustaining in the Production of Vaccines". [<http://moaar.gov.sy/main/archives/11246>]. Accessed 10 December 2020.

[3] Syrian Ministry for Agriculture and Agrarian Reform. 11 May 2014. "Achievements of the Directorate of Veterinary Medicine". [<http://moaar.gov.sy/main/archives/11803>]. Accessed 10 December 2020.

[4] FAOLEX Database. 18 December 1994. "Resolution No. 50/T of 1994 establishing the Department of Medicines and Veterinary Vaccines Control, at the Animal Health Department". [<http://extwprlegs1.fao.org/docs/pdf/syr11190.pdf>]. Accessed 10 December 2020.

[5] Syrian Ministry of Health. "Directorate of Communicable and Chronic Diseases". [<http://www.moh.gov.sy/Default.aspx?tabid=188&language=ar-YE>]. Accessed 10 December 2020.

[6] World Health Organization (WHO). "Syrian Arab Republic: Annual Report 2018". [https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[7] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[8] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

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: 0

There is no publicly available evidence suggesting that there is a national mechanism for owners of livestock to conduct and report on disease surveillance to a central government agency in Syria. However, as of 2013, there is evidence of that the

Directorate of Animal Health at the Ministry of Agriculture and Agrarian Reform maintains records of animal vaccinations and disease through the Animal Health Directorate and the Veterinary Laboratory Department. [1, 2, 3, 4, 5]

There is no additional evidence of a national mechanism in recent years for reporting on diseases for livestock owners through the Ministry of Health, the Ministry of Agriculture and Agrarian Reform, the General Authority for Scientific Agricultural Research within the Ministry of Agriculture and Agrarian Reform, the 2018 World Health Organization (WHO) annual report for Syria, or any relevant academic studies. [6, 7, 8, 9]

[1] Syrian Ministry of Agriculture and Agrarian Reform. 14 January 2014. "Animal health: There were 10,402 animal disease tests conducted in 2013". [<http://moaar.gov.sy/main/archives/11164>]. Accessed 10 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. 20 November 2013. "Activities of the Animal Health Directorate". [<http://moaar.gov.sy/main/archives/10936>]. Accessed 10 December 2020.

[3] Syrian Ministry of Agriculture and Agrarian Reform. 3 November 2013. "Laboratory Diagnosis of Animal Diseases in Training Course". [<http://moaar.gov.sy/main/archives/10820>]. Accessed 3 January 2019.

[4] Syrian Ministry of Agriculture and Agrarian Reform. 11 May 2014. "Achievements of the Veterinary Medicine Directorate". [<http://moaar.gov.sy/main/archives/11803>]. Accessed 10 December 2020.

[5] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 December 2020.

[6] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[7] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

[8] Syrian Ministry for Agriculture and Agrarian Reform. General Authority for Scientific Agricultural Research. [<http://gcsar.gov.sy/>]. Accessed 10 December 2020.

[9] World Health Organization (WHO). "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 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: 0

There is no publicly available evidence that there is legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners) in Syria.

There is no indication of any data privacy guidelines generally or for animal surveillance specifically on the Ministry of Health website, Ministry of Agriculture and Agrarian Reform website, the Parliament of the Syrian Arab Republic's Legal Database, the General Authority for Scientific Agricultural Research within the Ministry of Agriculture and Agrarian Reform, the World Organization for Animal Health (OIE) "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria," or in relevant academic studies. [1, 2, 3, 4, 5]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

[3] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>].

Accessed 10 December 2020.

[4] Syrian Ministry for Agriculture and Agrarian Reform. General Authority for Scientific Agricultural Research.

[<http://gcsar.gov.sy/>]. Accessed 10 December 2020.

[5] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 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: 0

There is no publicly available evidence that Syria conducts surveillance of zoonotic diseases in wildlife. The websites of the Ministry of Health, Ministry of Agriculture and Agrarian Reform, and Ministry of Local Administration and Environment do not indicate that any coordinated surveillance of zoonotic disease in wildlife is being conducted by the Syrian government. [1, 2, 3]

Also, there is no indication of surveillance of zoonotic disease in wildlife in Syria in the World Organization for Animal Health (OIE) "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria," published in July 2008, or in relevant academic studies. [4]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

[3] Syrian Ministry of Local Administration and Environment. [<http://www.mola.gov.sy/mola/>]. Accessed 10 December 2020.

[4] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 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: 1

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: 25.02

2019

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: 59.19

2019

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: 0

There is no publicly available evidence that there is a national plan on zoonotic disease or another form of legislation, regulation, or plan for working with the private sector in controlling and responding to zoonoses in Syria.

According to the World Organization for Animal Health (OIE) "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria," the Veterinary Services Department within the Ministry of Agriculture and Agrarian Reform does not have a legislative framework granting it the authority and the capability to accredit, authorize, or delegate tasks to the private sector. [1]

Neither the Ministry of Health website, Ministry of Agriculture and Agrarian reform website, Centre for Strategic Health Studies website, Parliament of the Syrian Arab Republic's Legal Database, nor the World Health Organization (WHO) Annual Report 2018 mention any form of private sector involvement in the control of zoonotic disease. [2, 3, 4, 5, 6]

According to the WHO Regional Office for the Eastern Mediterranean Health System Profile of Syria, as of 2006, the private sector's involvement in Syria was significant and all private providers were required to submit regular reports to the Ministry of Health. [7] However, there is no reference to a formal mechanism of cooperation between the private and public sector elements, and it is unclear what effect the ongoing civil war has had on any pre-existing data sharing mechanism. Syria also utilizes the WHO HeRAMS (Health resources and services availability mapping system) for assessing and reporting the availability of services in public facilities, but it does not appear that there is any private sector involvement or particular focus on zoonoses. [8]

- [1] World Organization of Animal Health (OIE). July 2008. "Tool for the evaluation of Performance of Veterinary Services (PVS): Syria". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/FinalReport-Syria.pdf]. Accessed 10 December 2020.
- [2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.
- [3] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.
- [4] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 10 December 2020.
- [5] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 10 December 2020.
- [6] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018." [https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.
- [7] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. 2006. "Syria: Health System Profile". [<http://apps.who.int/medicinedocs/documents/s17311e/s17311e.pdf>]. Accessed 10 December 2020.
- [8] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic: HeRAMS". [<http://www.emro.who.int/syr/herams/index.html>]. Accessed 10 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: 0

There is no publicly available evidence of a record, updated within the past 5 years, of the facilities in which especially dangerous pathogens or toxins are stored and processed in Syria.

There is no reference for an inventory of dangerous pathogens or toxins on the websites of the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, or the Centre for Strategic Health Studies. [1, 2, 3, 4, 5]

According to the Syrian e-Gov Web Portal, there is no Ministry of Research for Syria. [6] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [7] The VERTIC database for Syria does not include information relevant to this matter. [8]

- [1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.
- [2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.
- [3] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 10 December 2020.
- [4] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 10 December 2020.
- [5] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 10 December 2020.
- [6] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 10 December 2020.

[7] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 10 December 2020.

[8] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 11 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: 0

There is no publicly available indication of legislation or regulations in place related to biosecurity which address requirements such as physical containment, failure reporting systems, and cybersecurity for facilities in which dangerous pathogens and toxins are stored in Syria.

In 2004, Syria among other countries joined the Cartagena Protocol on Biosafety to the Convention on Biological Diversity agreement, that aims at ensuring safe handling, transport and use of living modified organisms emerging from modern biotechnology that could have risks to human health through strengthening human resources and building institutional capacities in preventing deliberate, malicious misuse and release of dangerous pathogens or toxins.[1, 2, 3]

The Ministry of Local Administration and Environment as the party responsible for the implementation of the protocol, issued in 2006 the National Biosafety Framework for Syria that puts forward priority programs to improve the health and agricultural sectors in this regard, and designated a National Biosafety Committee to implement the strategy. [1]

In 2012, the Syrian Government declared the law 24 "Biosafety Act for Genetically Modified Organisms (GMOs) and Their Products," that relates solely to the regulation of genetically modified agriculture in accordance with the Cartagena Protocol. [4]

There is no further evidence on public recognition of such legislation or regulation or an inventory of dangerous pathogens or toxins via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, or the Centre for Strategic Health Studies. [5, 6, 7, 8, 9] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [10] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [11] The VERTIC database for Syria does not include information relevant to this matter. [12]

[1] Syrian Ministry of Local Administration and Environment. 2016. "National Biosafety Framework for the Syrian Arab Republic."

[http://www.fao.org/fileadmin/user_upload/gmfp/docs/National%20Biosafety%20Framework%20of%20Syrian%20Arab%20Republic%202006.pdf]. Accessed 11 December 2020.

[2] Biosafety Clearing-House. [<https://bch.cbd.int/protocol/background/>]. Accessed 11 December 2020. Accessed 11 December 2020.

[3] Julian Kinderlerer. "The Cartagena Protocol on Biosafety."

[<https://www.conacyt.mx/cibiogem/images/cibiogem/comunicacion/publicaciones/CBR-V4/Kinderlerer.pdf>]. Accessed 11 December 2020.

[4] Parliament of the Syrian Arab Republic. "Legal Database".

- [<http://www.parliament.gov.sy/arabic/index.php?node=201&nid=16310&ref=tree&>]. Accessed 10 December 2020.
- [5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.
- [6] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.
- [7] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 10 December 2020.
- [8] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 10 December 2020.
- [9] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 10 December 2020.
- [10] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 10 December 2020.
- [11] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 10 December 2020.
- [12] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 11 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: 0

There is no established agency responsible for the enforcement of biosecurity legislation and regulation in Syria.

The Scientific Studies and Research Centre (SSRC) and Atomic Energy Commission of Syria (AECS) have each conducted research on the dual-use applications of biological, chemical, radiological, and nuclear materials, and international monitors have speculated that they are currently or have in the past developed weapons systems. [1, 2] However, these claims have not been acknowledged by the Syrian government, and the role of both of these Organizations in enforcing any biosecurity legislation is unknown.

Additionally, there is no evidence of a biosecurity enforcement body via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, or the Centre for Strategic Health Studies. [3, 4, 5, 6, 7]

Additionally, there is no reference to any legislation regarding biosecurity in Syria via the Parliament of the Syrian Arab Republic's Legal Database. [8] According to the Syrian e-Gov Web Portal, there is no Ministry of Research for Syria. [9] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [10] The VERTIC database for Syria does not include information relevant to this matter. [13]

[1] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 11 December 2020.

[2] Nuclear Threat Initiative. "Atomic Energy Commission of Syria". [<https://www.nti.org/learn/facilities/446/>]. Accessed 11 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 11 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 11 December 2020.

[5] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 11 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 11 December 2020.

[7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 11 December 2020.

[8] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 11 December 2020.

[9] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 11 December 2020.

[10] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 11 December 2020.

[11] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 11 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 Syria has taken steps to consolidate its inventories of especially dangerous pathogens and toxins.

International monitors, including the U.S. government, speculate that the government of the Syrian Arab Republic is secretly stockpiling biological and chemical weapons, sometimes under the guise of medical and research facilities such as the Scientific Studies and Research Centre (SSRC). [1, 2] However, there is no public recognition of this fact or other indication of an inventory of dangerous pathogens or toxins via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, the Centre for Strategic Health Studies or the Syrian Atomic Energy Commission. [3, 4, 5, 6, 7, 8]

According to the Syrian e-Gov Web Portal, there is no Ministry of Research for Syria. [9] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [10] The VERTIC database for Syria does not include information relevant to this matter. [11]

[1] U.S. Office of the Director of National Intelligence. 2011. "Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, Covering 1 January to 31 December 2011". [https://www.odni.gov/files/documents/Newsroom/Reports%20and%20Pubs/2009_721_Report.pdf]. Accessed 11 December 2020.

[2] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 1 February 2019. Accessed 11 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 11 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 11 December 2020.

[5] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 11 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 11 December 2020.

[7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 1 February 2019.

[8] Syrian Atomic Energy Commission. [<http://www.aec.org.sy/aecs.php>]. Accessed 11 December 2020.

[9] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 11 December 2020.

[10] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 11 December 2020.

[11] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 11 December 2020.

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: 0

There is no publicly available evidence of in-country capacity to conduct polymerase chain reaction (PCR)-based diagnostic testing for anthrax and/or Ebola in Syria.

According to international monitors, there are concerns that the Syrian government conducts biological, chemical, radiological, and nuclear dual-use research through the Scientific Studies and Research Centre (SSRC) and Atomic Energy Commission of Syria (AECS). [1, 2]

According to an article in the New English Review, Syria's research has reportedly included virulent anthrax pathogens. [3] However, there is no public confirmation of this fact or that these research institutions have the capacity to conduct PCR-based diagnostic testing for anthrax or Ebola. [1, 2]

There is no evidence of the capacity to conduct PCR diagnostic testing via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Ministry of Defence, or the Centre for Strategic Health Studies. [4, 5, 6, 7] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [8]

[1] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 11 December 2020.

[2] Nuclear Threat Initiative. "Atomic Energy Commission of Syria". [<https://www.nti.org/learn/facilities/446/>]. Accessed 11 December 2020.

[3] Gordon, Jerry. December 2007. "Syria's Bio-Warfare Threat: an interview with Dr. Jill Dekker". [https://www.newenglishreview.org/custpage.cfm/frm/13108/sec_id/13108]. Accessed 11 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 11 December 2020.

[5] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 11 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 11 December 2020.

[7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 11 December 2020.

[8] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 11 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 indication that Syria requires biosecurity training for personnel working in facilities housing dangerous pathogens and toxins.

In 2001, the National Biosafety Committee under the Ministry of Local Administration and Environment published Biosafety Guidelines including the Good Laboratory Practices (GLP) that requires staff working in biosafety facilities housing dangerous pathogens and toxins to be trained. However, the document neither mentions explicitly that the adopted GLP follow international standards such as the Organization for Economic Cooperation and Development, nor does it elaborate upon the training curriculum. [1]

There is no information regarding a biosecurity training program via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Ministry of Defence, the Ministry of the Interior, or the Centre for Strategic Health Studies. [2, 3, 4, 5, 6] According the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [7]

Although international monitors have speculated that Syria has been conducting dual-use biological, chemical, radiological, and nuclear research, there is no indication that either the Scientific Studies and Research Centre (SSRC) or the Atomic Energy Commission of Syria (AECS) require biosecurity training for their staff. [8, 9] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [10] The VERTIC database for Syria does not include information relevant to this matter. [11]

[1] Syrian Ministry of Local Administration and Environment. 2016. "National Biosafety Framework for the Syrian Arab Republic."

[http://www.fao.org/fileadmin/user_upload/gmfp/docs/National%20Biosafety%20Framework%20of%20Syrian%20Arab%20Republic%202006.pdf]. Accessed 11 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 11 December 2020.

[3] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 11 December 2020.

[4] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 11 December 2020.

[5] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 11 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 11 December 2020.

[7] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 11 December 2020.

[8] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 11 December 2020.

[9] Nuclear Threat Initiative. "Atomic Energy Commission of Syria". [<https://www.nti.org/learn/facilities/446/>]. Accessed 11 December 2020.

[10] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 11 December 2020.

[11] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 11 December 2020.

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: 0

There is no publicly available evidence that special regulations or licensing conditions are placed on personnel with access to dangerous pathogens, toxins or biological materials.

Although international monitors have speculated that Syria is conducting dual-use biological, chemical, radiological, and nuclear research, there is no publicly available evidence of any regulation or licensing conditions that are placed on personnel with access to dangerous pathogens through the Scientific Studies and Research Centre (SSRC) or the Atomic Energy Commission of Syria (AECS). [1, 2]

There is no acknowledgement of a facility containing dangerous pathogens, toxins, and biological materials, and there is no special regulation for personnel in such facilities in the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, the Centre for Strategic Health Studies, or the VERTIC database for Syria. [3, 4, 5, 6, 7, 8] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [9]

Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [10]

[1] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 23 December 2020.

[2] Nuclear Threat Initiative. "Atomic Energy Commission of Syria". [<https://www.nti.org/learn/facilities/446/>]. Accessed 23 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 23 December 2020.

[5] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 23 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 23 December 2020.

[7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 23 December 2020.

[8] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 24 January 2021.

[9] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 23 December 2020.

[10] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 23 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: 0

There is no publicly available information on national regulations for the safe and secure transport of Category A and Category B infectious substances in Syria.

In 2012, the Syrian Government declared the law 24 on biosafety that ensures preventing deliberate, malicious misuse and release of dangerous and toxic materials. The decree includes articles on safe and secure transport such substances in general, without providing details about these substances or specifically mentioning categories A and B. [1]

Neither the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, the Ministry of Transportation, the Ministry of the Interior, nor the Centre for Strategic Health Studies indicate that regulations are in place for the safe and secure transport of these infectious substances. [2, 3, 4, 5, 6, 7] Furthermore, there is no regulation or law available in the Parliament of the Syrian Arab Republic's Legal Database or the Syrian e-Gov Web Portal referencing restrictions on controlled infectious disease substances. [8, 9] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [10]

Additionally, there is no information available regarding the infectious substance protocols for the Scientific Studies and Research Centre (SSRC), which conducts biological research. [11] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [12] The VERTIC database for Syria does not include information relevant to this matter. [13]

[1] Parliament of the Syrian Arab Republic. "Legal Database".

[<http://www.parliament.gov.sy/arabic/index.php?node=201&nid=16310&ref=tree&>]. Accessed 10 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[3] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

[4] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 10 December 2020.

[5] Syrian Ministry of Transportation. [<http://www.mot.gov.sy/web/main.php>]. Accessed 10 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 10 December 2020.

[7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 10 December 2020.

[8] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 10 December 2020.

[9] Syrian e-Gov Web Portal. [http://portal.egov.sy/law_ar_law/en/0/0/module.page.html]. Accessed 10 December 2020.

[10] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 10 December 2020.

[11] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 10 December 2020.

[12] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 10 December 2020.

[13] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>].

Accessed 11 December 2020.

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: 0

There is publicly available evidence suggesting that there is national legislation, regulation, or guidance in place to oversee the cross-border transfer in Syria, however, there is no public indication that end-user screening of especially dangerous pathogens is taking place.

The Syrian Government in 2012 declared law 24 on biosafety that ensures preventing deliberate, malicious misuse and release of dangerous and toxic materials. The decree includes articles on safe and secure cross-border transport of such substances and gives the Ministry of Local Administration and Environment the authority to oversee and approve the transfers. Nonetheless, the law does not include instructions on end-user screenings. [1]

Neither the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, the Ministry of Transportation, the Ministry of the Interior, or the Centre for Strategic Health Studies indicate further information on regulations for the cross-border transport and end-user screening of these infectious substances. [2, 3, 4, 5, 6] Furthermore, there is no regulation or law available on the Syrian e-Gov Web Portal referencing restrictions on controlled infectious disease substances. [7] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [8] Additionally, there is no information regarding cross-border transfer and end-user screening of especially dangerous pathogens through the Scientific Studies and Research Centre (SSRC), which conducts biological research. [9]

Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [10] The VERTIC database for Syria does not include information relevant to this matter. [11]

[1] Parliament of the Syrian Arab Republic. "Legal Database".

[<http://www.parliament.gov.sy/arabic/index.php?node=201&nid=16310&ref=tree&>]. Accessed 10 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 11 December 2020.

[3] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 11 December 2020.

[4] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 11 December 2020.

[5] Syrian Ministry of Transportation. [<http://www.mot.gov.sy/web/main.php>]. Accessed 11 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 11 December 2020.

[7] Syrian e-Gov Web Portal. [http://portal.egov.sy/law_ar_law/en/0/0/module.page.html]. Accessed 11 December 2020.

[8] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 11 December 2020.

[9] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 11 December 2020.

[10] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 11 December 2020.

[11] VERTIC. "Syria." [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/]. Accessed 11 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: 0

There is no publicly available evidence that Syria has national biosafety legislation in place for the prevention of the release of hazardous biological substances and protection of personnel who work with hazardous biological substances.

Law No. 12 of 2012, "Law for the Ministry of State for Environmental Affairs," and the related "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution," together create a Supreme Council for Environmental Protection within the Ministry of State for Environmental Affairs to establish basic rules for the safety of the environment, including preparing legislation, conducting scientific research and impact assessments, monitoring levels of certain pollutants, preparing specification and standards, and the identification and classification of hazardous biological and chemical substances for their transportation and use. [1, 2] This also includes the creation of manuals for workers, coordinating with civil society Organizations, and developing public awareness. [1, 2] However, these laws do not regulate protective measures for personnel who work with hazardous biological substances.

Law No. 24 of 2012 "Biosafety Act for Genetically Modified Organisms (GMOs) and Their Products," relates solely to the regulation of genetically modified agriculture in accordance with the Cartagena Protocol. [3] There is no additional regulation that is publicly available via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Local Administration and Environment, or the Centre for Strategic Health Studies. [4, 5, 6, 7] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [8]

Although international monitors have speculated that Syria has been conducting dual-use biological, chemical, radiological, and nuclear research, there is no indication that either the Scientific Studies and Research Centre (SSRC) or the Atomic Energy Commission of Syria (AECS) promulgate biosafety legislation. [9, 10] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [11] The VERTIC database for Syria does not include information relevant to this matter. [12]

[1] Parliament of the Syrian Arab Republic. 29 March 2012. "Law No. 12 of 2012: Law for the Ministry of State for Environmental Affairs". [http://parliament.gov.sy/arabic/index.php?node=201&nid=4323&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&]. Accessed 11 December 2020.

[2] Parliament of the Syrian Arab Republic. 29 March 2012. "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution". [http://parliament.gov.sy/arabic/index.php?node=201&nid=16170&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&]. Accessed 11 December 2020.

- [3] Parliament of the Syrian Arab Republic. 18 October 2012. "Law No. 24 of 2012: Biosafety Act on Genetically Modified Organisms and Their Products". [<http://www.parliament.gov.sy/arabic/index.php?node=201&nid=16310&ref=tree&>]. Accessed 11 December 2020.
- [4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 11 December 2020.
- [5] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 11 December 2020.
- [6] Syrian Ministry of Local Administration and Environment. [<http://www.mola.gov.sy/mola/>]. Accessed 11 December 2020.
- [7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 11 December 2020.
- [8] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 11 December 2020.
- [9] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 11 December 2020.
- [10] Nuclear Threat Initiative. "Atomic Energy Commission of Syria". [<https://www.nti.org/learn/facilities/446/>]. Accessed 11 December 2020.
- [11] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 11 December 2020.
- [12] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 11 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: 0

There is no publicly available evidence that Syria has an established agency responsible for the enforcement of biosafety legislation and regulation that prevents the release of harmful substances and protects personnel working with hazardous biological materials.

Law No. 12 of 2012, "Law for the Ministry of State for Environmental Affairs," and the related "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution," create a Supreme Council for Environmental Protection within the Ministry of State for Environmental Affairs to establish basic rules for the safety of the environment, including preparing legislation, conducting scientific research and impact assessments, monitoring levels of certain pollutants, preparing specification and standards, and the identification and classification of hazardous substances for their transportation and use. [1, 2] However, it is unclear whether this Ministry still exists or was absorbed by the Ministry of Local Administration and Environment, because it has no public website, and it does not appear to regulate personnel safety when working with hazardous biological substances.

Although Law No. 24 of 2012, "Biosafety Act on Genetically Modified Organisms (GMOs) and Their Products," creates a National Committee for Biosafety, this Organization is devoted solely to the regulation of GMO agriculture and research. [3] The Chemical Safety Directorate, within the Ministry of Local Administration and Environment, institutes policies to protect the environment from the release of hazardous chemical substances, but this does not extend to biological substances or to personnel working with such substances. [4]

There is no additional information through the Ministry of Health website, Ministry of Agriculture and Agrarian Reform website, or the Centre for Strategic Health Studies. [5, 6, 7] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [8] Although international monitors have speculated that Syria has been conducting dual-use biological,

chemical, radiological, and nuclear research, there is no indication that either the Scientific Studies and Research Centre (SSRC) or the Atomic Energy Commission of Syria (AECS) is responsible for the enforcement of biosafety legislation. [9, 10] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [11] The VERTIC database for Syria does not include information relevant to this matter. [12]

- [1] Parliament of the Syrian Arab Republic. 29 March 2012. "Law No. 12 of 2012: Law for the Ministry of State for Environmental Affairs". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=4323&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 11 December 2020.
- [2] Parliament of the Syrian Arab Republic. 29 March 2012. "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=16170&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 11 December 2020.
- [3] Parliament of the Syrian Arab Republic. 18 October 2012. "Law No. 24 of 2012: Biosafety Act on Genetically Modified Organisms and Their Products". [<http://www.parliament.gov.sy/arabic/index.php?node=201&nid=16310&ref=tree&>]. Accessed 11 December 2020.
- [4] Syrian Ministry of Local Administration and Environment. "Achievements and Actions Taken Related to the Work of the Chemical Safety Directorate in 2016". [http://www.mola.gov.sy/mola/images/Environment/salameh_kemiaeya2016.pdf]. Accessed 11 December 2020.
- [5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 11 December 2020.
- [6] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 11 December 2020.
- [7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 11 December 2020.
- [8] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 11 December 2020.
- [9] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 11 December 2020.
- [10] Nuclear Threat Initiative. "Atomic Energy Commission of Syria". [<https://www.nti.org/learn/facilities/446/>]. Accessed 11 December 2020.
- [11] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 11 December 2020.
- [12] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 11 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 no publicly available evidence that Syria requires biosafety training for personnel working in facilities with especially dangerous pathogens and toxins.

Although Law No. 12 of 2012, "Law for the Ministry of State for Environmental Affairs," and the related "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution," imbue the Supreme Council for Environmental Protection within the Ministry of State for Environmental Affairs with the authority to create national standards for the use of hazardous substances, there is no publicly available evidence of mandatory training standards in place for safely working with dangerous pathogens or toxins. [1, 2]

There is no indication of such biosafety personnel training on the Ministry of Health website, Ministry of Agriculture and Agrarian Reform website, Ministry of Local Administration and Environment website, the Centre for Strategic Health Studies website, or the VERTIC database for Syria. [3, 4, 5, 6, 7] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [8] Although international monitors have speculated that Syria has been conducting dual-use biological, chemical, radiological, and nuclear research, there is no indication that either the Scientific Studies and Research Centre (SSRC) or the Atomic Energy Commission of Syria (AECS) require biosafety training for their personnel. [9, 10] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [11]

[1] Parliament of the Syrian Arab Republic. 29 March 2012. "Law No. 12 of 2012: Law for the Ministry of State for Environmental Affairs". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=4323&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 15 December 2020.

[2] Parliament of the Syrian Arab Republic. 29 March 2012. "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=16170&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 15 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 15 December 2020.

[5] Syrian Ministry of Local Administration and Environment. [<http://www.mola.gov.sy/mola/>]. Accessed 15 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 December 2020.

[7] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 15 December 2020.

[8] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 15 December 2020.

[9] Nuclear Threat Initiative. "Scientific Studies and Research Centre". [<https://www.nti.org/learn/facilities/478/>]. Accessed 15 December 2020.

[10] Nuclear Threat Initiative. "Atomic Energy Commission of Syria". [<https://www.nti.org/learn/facilities/446/>]. Accessed 15 December 2020.

[11] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 15 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 no publicly available evidence that Syria has conducted an assessment to determine whether dual use research is occurring on pathogens or toxins with pandemic potential.

A review of the websites of the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, the Centre for Strategic Health Studies, or the VERTIC database for Syria did not yield to any indication of dual use research on pathogens or toxins with pandemic potential in Syria. [1, 2, 3, 4, 5, 6] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [7] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [8]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 15 December 2020.

[3] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 15 December 2020.

[4] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 15 December 2020.

[5] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 December 2020.

[6] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 15 December 2020.

[7] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 15 December 2020.

[8] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 15 December 2020.

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 no publicly available evidence of legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

A review of the websites of Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, Centre for Strategic Health Studies or the VERTIC database for Syria did not provide any indication of a national dual use research policy in the country. [1, 2, 3, 4, 5]

Although Law No. 12 of 2012, "Law for the Ministry of State for Environmental Affairs," and the related "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution," imbue the Supreme Council for Environmental Protection within the Ministry of State for Environmental Affairs with the authority to create national standards for the use of hazardous substances, there is no publicly available evidence that this Council oversees dual use research, as well. [6, 7] Additionally, it is not clear whether the Supreme Council and Ministry of State for Environmental Affairs are still active or were absorbed by another ministry, because there is no publicly available record of their work.

According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [8] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [9]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 15 December 2020.

[3] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 15 December 2020.

[4] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 15 December 2020.

[5] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 15 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 December 2020.

[7] Parliament of the Syrian Arab Republic. 29 March 2012. "Law No. 12 of 2012: Law for the Ministry of State for Environmental Affairs". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=4323&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 15 December 2020.

[7] Parliament of the Syrian Arab Republic. 29 March 2012. "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=16170&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 15 December 2020.

[8] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 15 December 2020.

[9] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 15 December 2020.

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 no publicly available evidence of an agency responsible for oversight of research with especially dangerous pathogens with pandemic potential or dual use research in Syria.

A review of the websites of Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, Centre for Strategic Health Studies or the VERTIC database for Syria did not provide any indication of a national

dual use research policy in the country. [1, 2, 3, 4, 5]

Although Law No. 12 of 2012, "Law for the Ministry of State for Environmental Affairs," and the related "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution," imbue the Supreme Council for Environmental Protection within the Ministry of State for Environmental Affairs with the authority to create national standards for the use of hazardous substances, there is no publicly available evidence that this Council oversees dual use research, as well. [6, 7] Additionally, it is not clear whether the Supreme Council and Ministry of State for Environmental Affairs are still active or were absorbed by another ministry, because there is no publicly available record of their work.

According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [8] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [9]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 15 December 2020.

[3] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 15 December 2020.

[4] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 15 December 2020.

[5] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 15 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 December 2020.

[7] Parliament of the Syrian Arab Republic. 29 March 2012. "Law No. 12 of 2012: Law for the Ministry of State for Environmental Affairs". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=4323&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 15 December 2020.

[7] Parliament of the Syrian Arab Republic. 29 March 2012. "Law for the Establishment of Basic Rules for Environmental Safety and Protection from Pollution". [<http://parliament.gov.sy/arabic/index.php?node=201&nid=16170&RID=-1&Last=27&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%CD%E3%C7%ED%C9%20%C7%E1%C8%ED%C6%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 15 December 2020.

[8] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 15 December 2020.

[9] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 15 December 2020.

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 public record of national legislation requiring the screening of synthesized DNA before it is sold in Syria.

There is no indication of a law or regulation relating to synthesized DNA on the Parliament of the Syrian Arab Republic's Legal Database, the Syrian e-Gov Web Portal, the Ministry of Health website, the Ministry of Agriculture and Agrarian Reform website, the Ministry of Defence website, the Centre for Strategic Health Studies website, or the VERTIC database for Syria. [1, 2, 3, 4, 5, 6,7]

Law No. 18 of 2012, "Assets of the Granting, Registration and Publication of Patents and the Rights Arising from Their Registration" prohibits the patenting of human genetic material, but it does not address the issue of synthesized material being sold. [8]

According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [9] Syria is a signatory but not a state party to the Biological Weapons Convention, and therefore, it does not share information on this subject via Confidence Building Measures reports. [10]

[1] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 15 December 2020.

[2] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 15 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 15 December 2020.

[5] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 15 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 1 February 2019.

[7] VERTIC. "Syria." [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/s/>]. Accessed 15 December 2020.

[8] Parliament of the Syrian Arab Republic. 30 March 2012. "Law No 18 of 2012: Assets of the Granting, Registration and Publication of Patents and the Rights Arising from Their Registration".

[<http://parliament.gov.sy/arabic/index.php?node=201&nid=4322&RID=-1&Last=1&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%C7%E1%CD%E3%D6%20%C7%E1%E4%E6%E6%ED&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 15 December 2020.

[9] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 15 December 2020.

[10] Biological Weapons Convention. "Confidence Building Measures." [<https://bwc-ecbm.unog.ch/browse>]. Accessed 15 December 2020.

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: 0

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: 1

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: 0

There is no publicly available evidence that the national laboratory system of Syria has the capacity to conduct at least 5 of the 10 World Health Organization (WHO)-defined core tests.

The WHO Annual Report 2018 for Syria does not mention the capacity to conduct any of the WHO-defined core tests. Although, for example, the report touches upon the outbreak of vaccine-derived poliovirus outbreak and HIV, it does not elaborate on the type of tests conducted or the capacity for testing. [1]

The Ministry of Health's Statistical Abstract reports on cases of tuberculosis, along with other communicable diseases, but there is no evidence that it conducts a microscopy test for mycobacterium tuberculosis. [2] As of 2013, the Directorate of Communicable and Chronic Diseases within the Ministry of Health issues regular reports on confirmed cases of malaria, typhoid, and influenza, but there is no information regarding the types of tests that they conduct. [3]

Additionally, in conjunction with the WHO Regional Office for the Eastern Mediterranean, the Ministry of Health is conducting active surveillance of an ongoing polio outbreak in Syria and reporting confirmed cases utilizing the Intratypic Differentiation (ITD) method of testing typically done on virus culture. [4]

There is no other indication of a capacity to test for other WHO-defined core tests in the 2019 Health Resources and Services Availability Monitoring System report for Syria, Ministry of Health, Centre for Strategic Health Studies, or Ministry of Health

Directorate of Laboratories, Research, and Pharmaceutical Research websites. [5, 6, 7, 8]

- [1] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".
[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 17 December 2020.
- [2] Syrian Ministry of Health. 2017. "Health Statistical Abstract 2017".
[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=AqR735QsC8E%3d&portalid=0&language=ar-YE>]. Accessed 17 December 2020.
- [3] Syrian Ministry of Health. 2013. "Immediately Reported Diseases".
[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=0ypTrz4P-wE%3d&portalid=0&language=ar-YE>]. Accessed 17 December 2020.
- [4] World Health Organization (WHO). Regional Office for the Eastern Mediterranean. June 2018. "Syria cVDPV2 outbreak Situation Report # 40".
[http://www.emro.who.int/images/stories/syria/WHO_UNICEF_Situation_Report_40_cVDPV2_outbreak_Syria_28.6.18.pdf?ua=1]. Accessed 17 December 2020.
- [5] World Health Organization (WHO). 2019. "HeRAMS Annual Report: Public Health Centers in the Syrian Arab Republic".
[<https://applications.emro.who.int/docs/syr/EMRLIBSYR233E-eng.pdf?ua=1>]. Accessed 17 December 2020.
- [6] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 17 December 2020.
- [7] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 17 December 2020.
- [8] Syrian Ministry of Health. "Directorate of Laboratories, Research, and Pharmaceutical Research".
[<http://www.moh.gov.sy/Default.aspx?tabid=260&language=en-US>]. Accessed 17 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: 0

There is no publicly available evidence that Syria has 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.

The Syrian Ministry of Health publishes on quarterly basis an epidemiological bulletin that includes case-reports on communicable diseases in the country such as Brucellosis and Tuberculosis, in addition to updates about relevant workshops and studies. However, the bulletin was last updated in July 2013 and did not include any indication or reference to national plans, strategies or documents on testing on regular basis or during public health emergencies. [1]

In response to COVID-19, the government devised a national response plan and designated an emergency committee to work towards containing the spread of the virus. However, the plan is not publicly available online and there is no further indication of its content. [2, 3].

There is no indication of national plan or strategy for testing during health emergencies neither on the Ministry of Health website, the Ministry of Agriculture and Agrarian Reform website, the Presidency of the Council of Ministers website, nor the

Syrian e-Gov Web Portal. [4, 5, 6, 7]

[1] Syrian Ministry of Health. "Quarterly Bulletin." [http://www.moh.gov.sy/pages/EpidemicBulletin/201304/indexe.html]. Accessed 10 December 2020.

[2] The Presidency of the Council of Ministers. "Immediate Activation of Local Councils to Participate in COVID-19 Response." [http://www.pministry.gov.sy/contents/15988/-التصدي-تدابير-تنفيذ-بالمشاركة-للمخاطر-والأحياء-لجان-الدور-لجانب-التفعيل-الفروري-للدور-لجان-الأحياء-والمخاطر-للمشاركة-بتنفيذ-تدابير-التصدي-للكورونا]. Accessed 10 December 2020.

[4] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 10 December 2020.

[5] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 10 December 2020.

[6] The Presidency of the Council of Ministers. [http://www.pministry.gov.sy/home]. Accessed 10 December 2020.

[7] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 10 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 publicly available evidence that Syria's national laboratory that serves as a reference facility is in conformity with international standards and duly accredited.

According to the Ministry of Health Directorate of Laboratories, Research, and Pharmaceutical Oversight, the Ministry of Health aims to keep its laboratory system in conformity with ISO 9002/1994, ISO 9001/2000, ISO 14001, ISO 18000, and ISO 17025. [1] However, it is unknown where specific reference facilities, including the Centre for Strategic Health Studies, conform to international standards. [2]

The Syrian Arab Organization for Standardization and Metrology (SASMO) within the Ministry of Industry has also published an Arabic-language version of draft standards for medical laboratories to comply with ISO 15189:2003. [3] There is no additional information regarding accreditation on the Ministry of Health and the Ministry of Agriculture and Agrarian Reform websites. [4, 5] The Syrian Clinical Laboratory Association website does not provide information to the national's laboratory conformity with international standards. [6]

[1] Syrian Ministry of Health. "Directorate of Laboratories, Research, and Pharmaceutical Research". [http://www.moh.gov.sy/Default.aspx?tabid=260&language=en-US]. Accessed 15 December 2020.

[2] Centre for Strategic Health Studies. [http://cshs.moh.gov.sy/]. Accessed 15 December 2020.

[3] Syrian Ministry of Industry. Syrian Arab Standards and Measurements Authority (SASMO). [http://www.sasmo.org.sy/]. Accessed 15 December 2020.

[4] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 15 December 2020.

[5] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 15 December 2020.

[6] Syrian Clinical Laboratory Association. [http://scla.org.sy/ng/ar_index.php?page=ex_42]. Accessed 15 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: 0

There is no publicly available evidence that Syria has a national reference laboratory that is subject to external quality assurance.

The Directorate of Public Health Laboratories within the Ministry of Health includes a dedicated quality assurance lab, but it is not clear if this is subject to external review. [1] Additionally, the Directorate of Laboratories, Research, and Pharmaceutical Oversight conducts extensive quality assurance exercises regarding the national laboratory system in Syria, but it is not clear if this includes impartial, external review. [2]

There is no additional information regarding external quality assurance review on the Syrian Clinical Laboratory Association, the Ministry of Health, Ministry of Agriculture and Agrarian Reform, and Centre for Strategic Health Studies websites. [3, 4, 5, 6]

[1] Syrian Ministry of Health. "Directorate of Public Health Laboratories".

[<http://www.moh.gov.sy/Default.aspx?tabid=185&language=ar-YE>]. Accessed 17 December 2020.

[2] Syrian Ministry of Health. "Directorate of Laboratories, Research, and Pharmaceutical Research".

[<http://www.moh.gov.sy/Default.aspx?tabid=260&language=en-US>]. Accessed 17 December 2020.

[3] Syrian Clinical Laboratory Association. [http://scla.org.sy/ng/ar_index.php?page=ex_42]. Accessed 17 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 17 December 2020.

[5] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 17 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 17 December 2020.

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: 0

There is no publicly available evidence that Syria maintains a nationwide specimen transport system.

According to Legislative Decree No. 42 of 2012, "On the Organization of the Operation of Medical Laboratories," the Central Laboratory Committee within the Ministry of Health maintains standards for the operation of laboratories in Syria, including the handling of specimens. [1] This decree requires that laboratories "comply with the technical conditions for the preservation and transfer of samples," although it is not clear where the applicable technical conditions are outlined. [1]

There are no indications of a national transport system found in the Syrian Clinical Laboratory Association, Ministry of Health, Ministry of Agriculture and Agrarian Reform, or Centre for Strategic Health Studies, Directorate of Laboratories, Research, and Pharmaceutical Oversight, or the Directorate of Public Health Laboratories websites. [2, 3, 4, 5, 6, 7] Furthermore, it is

not clear if the operation of any pre-existing specimen transport system has been impacted by the ongoing civil war.

- [1] Parliament of the Syrian Arab Republic. 23 May 2012. "Legislative Decree No. 42 of 2012: On the Organization of the Operation of Medical Laboratories". [<http://www.parliament.gov.sy/arabic/index.php?node=201&nid=14123&RID=-1&Last=8&First=0&CurrentPage=0&Vld=-1&Mode=-1&Service=-1&Loc1=0&Key1=%E1%E3%CE%CA%C8%D1%C7%CA%20%C7%E1%D8%C8%ED%C9&SDate=&EDate=&Year=-1&Country=&Num=&Dep=-1&>]. Accessed 4 January 2019.
- [2] Syrian Clinical Laboratory Association. [http://scla.org.sy/ng/ar_index.php?page=ex_42]. Accessed 17 December 2020.
- [3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 17 December 2020.
- [4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 17 December 2020.
- [5] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 17 December 2020.
- [6] Syrian Ministry of Health. "Directorate of Laboratories, Research, and Pharmaceutical Oversight". [<http://www.moh.gov.sy/Default.aspx?tabid=260&language=en-US>]. Accessed 17 December 2020.
- [7] Syrian Ministry of Health. "Directorate of Public Health Labs". [<http://www.moh.gov.sy/Default.aspx?tabid=265&language=en-US>]. Accessed 17 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 no publicly available evidence that there is 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 in Syria.

The legislative decree 42/2012 that outlays the operational instructions for licensing laboratories in the country although includes detailed steps such as required documentation, facility specifications and necessary equipment, it does not include indication of expedited processes in place to authorize or license laboratories in case of public health emergencies or outbreaks. [1]

According to the e-Gov website, the licensing process of medical laboratories requires seven working days on average. [2] There is no indication or relevant information on expedited laboratory licensing processes during health emergencies through the Ministry of Health, Parliament of the Syrian Arab Republic's Legal Database, or Centre for Strategic Health Studies. [3, 4, 5]

- [1] Syrian Clinical Laboratory Association. "Executive Instructions of Decree 42/2012 to Streamline Laboratory Licensing." [http://scla.org.sy/ng/ar_index.php?page=ex_42]. Accessed 18 December 2020.
- [2] Syrian e-Gov Web Portal. [<http://www.egov.sy/service/ar/77/0/ترخيص+مخبر+طبي+.html>]. Accessed 18 December 2020.
- [3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.
- [4] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>].

Accessed 15 December 2020.

[5] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 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: 0

There is no publicly available evidence that Syria is conducting ongoing event-based surveillance (EBS) and analysis for infectious disease or that this surveillance is being analysed on an ongoing basis.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease through a weekly bulletin, but the data included in the bulletin is indicator-based for particular disease threats. [1]

According to the "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, this system is also equipped to process event-based data sources generated from "rumours of unusual medical events observed in society (such as unexplained deaths); [and] warnings about sick events seen by employees in selected units in the system," but its operation does not appear to be ongoing. [2]

The Civil Defence Forces, operating within the Ministry of Defence, organizes emergency response for a variety of manmade and natural disasters, including public outreach, but it is not clear to what extent it undertakes event-based surveillance, conducts ongoing operations, or analyses data on a daily basis. [3]

Additionally, the ongoing conflict in the country introduced additional significant challenges to effective monitoring, prevention and control of communicable diseases in Syria, including the dynamic nature of fighting, the rapid population movements, the deterioration of healthcare facilities and other core infrastructure, and threats to the safety of health workers. [4]

There is no additional information regarding ongoing event-based surveillance that is analysed on a daily basis via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, and Ministry of the Interior websites. [5, 6, 7, 8]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 17 December 2020.

[2] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 17 December 2020.

[3] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 17 December 2020.

[4] International Journal of Infectious Diseases. "Communicable disease surveillance and control in the context of conflict and

mass displacement in Syria."

[https://reader.elsevier.com/reader/sd/pii/S1201971216310542?token=8EC86208A7710399CFD9F7D36EECB65ADEA7F0191A8E837CC5D1CA2016BD1155A229229949CA7C3F6EEC2083E5E598F4]. Accessed 18 December 2020.

[5] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 17 December 2020.

[6] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 17 December 2020.

[7] Syrian Ministry of Defence. [http://www.mod.gov.sy/]. Accessed 17 December 2020.

[8] Syrian Ministry of the Interior. [http://www.syriamoi.gov.sy/portal/site/arabic/]. Accessed 17 December 2020.

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: 0

There is no publicly available evidence that Syria reported a potential public health emergency of international concern (PHEIC) to the World Health Organization (WHO) within the past two years, including Covid-19.

The WHO Disease Outbreak News page do not provide evidence suggesting that Syria, over the past two years, reported a potential public health emergency. [1] The websites of the Syrian Ministry of Health, Ministry of the Interior, and Ministry of Defence do not provide further evidence. [2, 3, 4]

[1] World Health Organization (WHO). "Disease Outbreak News." [http://www.who.int/csr/don/en]. Accessed 26 January 2021.

[2] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 26 January 2021.

[3] Syrian Ministry of Interior. [http://mod.gov.sy/index.php?node=30&StartSearch=1&Keywords=%DF%E6%D1%E6%E4%C7]. Accessed 26 January 2021.

[4] Syrian Ministry of Defense. [http://www.mod.gov.sy/]. Accessed 26 January 2021.

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: 0

There is no publicly available evidence suggesting that Syria operates an electronic reporting surveillance system at both the national or sub-national level.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease through a weekly bulletin. [1, 2] Although this system collects reports of "any indications of possible outbreaks or cluster cases of pandemic diseases" to help indicate the path and spread of disease from health facilities and regional observation centres across the country, it is unknown whether this system is still functional despite the continuing civil war and lack of governmental control over certain regions of Syria. [2]

According to a Jordanian humanitarian report published in March 2018, the degradation of the EWARS system in Syria prompted a non-governmental Organization called the Assistance Coordination Unit which is based out of Gaziantep, Turkey, to create its own Early Warning and Response Network (EWARN) in 2013 to carry on epidemiological surveillance and response in the place of EWARS. [3] This system operates across 11 governorates. [4] However, it is not clear to what extent the Syrian government participates in this network, or whether it is fully operational.

There is no additional indication of an electronic reporting surveillance system on the Ministry of Health, Ministry of Defence, Ministry of the Interior websites, the Centre for Strategic Health Studies, or Syrian e-Gov Web Portal. [5, 6, 7, 8, 9]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 15 December 2020.

[2] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles of Work". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 15 December 2020.

[3] Health Cluster. March 2018. "Health Services and Population Status Report: Southern Syria". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/2018_04_10_hss_report_-_vers_4.0_final.pdf]. Accessed 15 December 2020.

[4] Assistance Coordination Unit. "Early Warning Alert and Response Network". [<https://www.acu-sy.org/en/early-warning-alert-and-response-network/>]. Accessed 15 December 2020.

[5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 15 December 2020.

[7] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 15 December 2020.

[8] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 December 2020.

[9] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 15 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: 0

There is no publicly available evidence that Syria operates an electronic reporting surveillance system that collects ongoing or real-time laboratory data at both the national or regional level.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease at the national level through a weekly bulletin. [1, 2] These reports of possible pandemic-causing diseases are collected from health facilities and observational centres through Syria. [1, 2]

Although the regional observation centres meet and upload their findings electronically to the weekly bulletin, there is no indication that ongoing, real-time electronic surveillance is being collected. [1]

There is no additional indication of an electronic reporting surveillance system on the Ministry of Health, The Directorate of Public Health Laboratories within the Ministry of Health, Ministry of Defence, Ministry of the Interior, and Centre for

Strategic Health studies websites, or Syrian e-Gov Web Portal. [1, 2, 3, 4, 5, 6, 7, 8]

- [1] Syrian Ministry of Health. "Early Warning and Response Program". [http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE]. Accessed 17 December 2020.
- [2] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpZq8%3D&portalid=0&language=ar-YE]. Accessed 17 December 2020.
- [3] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 17 December 2020.
- [4] Syrian Ministry of Health. "Directorate of Public Health Laboratories". [http://www.moh.gov.sy/Default.aspx?tabid=185&language=ar-YE]. Accessed 17 December 2020.
- [5] Syrian Ministry of Defence. [http://www.mod.gov.sy/]. Accessed 17 December 2020.
- [6] Syrian Ministry of the Interior. [http://www.syriamoi.gov.sy/portal/site/arabic/]. Accessed 17 December 2020.
- [7] Centre for Strategic Health Studies. [http://cshs.moh.gov.sy/]. Accessed 17 December 2020.
- [8] Syrian e-Gov Web Portal. [http://portal.egov.sy/law/ar_law/en/0/0/module.page.html]. Accessed 17 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: 0

There is no publicly available evidence that electronic health records are commonly in use in Syria.

There is no indication that Syria maintains electronic health records through the Ministry of Health website, the Ministry of Communications and Technology website, or the Centre for Strategic Health Studies website. [1, 2, 3] There is no indication of the use of electronic health records through the Directorate of Laboratories, Research, and Pharmaceutical Oversight or in relevant academic studies. [4]

The UN Relief and Works Agency (UNRWA) has begun implementation of an Electronic Medical Records (E-Health) system for its services provided to Palestinian refugees in Syrian camps, but there is no indication that this effort has been extended to the Syrian public health system as a whole. [5]

Additionally, a study by Syrian medical students published in June 2018 noted the lack of availability of electronic health records and its impact on the effectiveness of the public health system. [6]

- [1] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 15 December 2020.
- [2] Syrian Ministry of Communications and Technology. [http://www.moct.gov.sy/]. Accessed 15 December 2020.
- [3] Centre for Strategic Health Studies. [http://cshs.moh.gov.sy/]. Accessed 15 December 2020.
- [4] Syrian Ministry of Health. "Directorate of Laboratories, Research, and Pharmaceutical Research". [http://www.moh.gov.sy/Default.aspx?tabid=260&language=en-US]. Accessed 15 December 2020.

- [5] Elrha. November 2017. "UNRWA SYRIA: Delivery of Health Services in the Context of the Syria Crisis". [https://www.elrha.org/wp-content/uploads/2017/11/UNRWA-Syria_final-PB.pdf]. Accessed 15 December 2020.
- [6] Al Saadi, Tareq, et al. The Lancet. 23 June 2018. "Medical research in war-torn Syria: medical students' perspective". [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736 [18] 31207-8/fulltext].

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: 0

There is no publicly available evidence that the national public health system in Syria has access to electronic health records of individuals.

There is no system of electronic health records in Syria through the Ministry of Health, Centre for Strategic Health Studies, or the Ministry of Communications and Technology. [1, 2, 3]

The UN Relief and Works Agency (UNRWA) has begun implementation of an Electronic Medical Records (E-Health) system for its services provided to Palestinian refugees in Syrian camps, but there is no indication that this effort has been extended to the Syrian public health system as a whole. [4]

A study by Syrian medical students published in June 2018 noted the lack of availability of electronic health records and its impact on the effectiveness of the public health system. [5]

[1] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 15 December 2020.

[2] Syrian Ministry of Communications and Technology. [http://www.moct.gov.sy/]. Accessed 15 December 2020.

[3] Centre for Strategic Health Studies. [http://cshs.moh.gov.sy/]. Accessed 15 December 2020.

[4] Elrha. November 2017. "UNRWA SYRIA: Delivery of Health Services in the Context of the Syria Crisis". [https://www.elrha.org/wp-content/uploads/2017/11/UNRWA-Syria_final-PB.pdf]. Accessed 15 December 2020.

[5] Al Saadi, Tareq, et al. The Lancet. 23 June 2018. "Medical research in war-torn Syria: medical students' perspective". [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736 [18] 31207-8/fulltext]. Accessed 15 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: 0

There is no publicly available information regarding data standards for health records in Syria to ensure data is comparable.

The Ministry of Health's Ethics Committee for Health Research lays out the basic conditions under which scientific and medical research must be conducted without specifying the standards under which data to be collected, stored, and processed. [1]

The Syrian Arab Organization for Standardization and Metrology (SASMO) within the Ministry of Industry publishes draft standards for medical facilities, but it is not clear whether these standards have been instituted with respect to health record data. [2]

The Ministry of Health Directorate of Laboratories, Research, and Pharmaceutical Oversight notes that Ministry of Health laboratories operate in accordance with international standards, but there is no indication of data standards specifically for health records. [3]

There is no additional information regarding data standards for health records through the Ministry of Health, the Ministry of Communications and Technology, or the Centre for Strategic Health Studies. [4, 5, 6]

[1] Syrian Ministry of Health. "Ethics Committee for Health Research".

[<http://www.moh.gov.sy/Default.aspx?tabid=134&language=ar-YE>]. Accessed 15 December 2020.

[2] Syrian Ministry of Industry. Syrian Arab Standards and Measurements Authority (SASMO). [<http://www.sasmo.org.sy/>]. Accessed 15 December 2020.

[3] Syrian Ministry of Health. "Directorate of Laboratories, Research, and Pharmaceutical Research".

[<http://www.moh.gov.sy/Default.aspx?tabid=260&language=en-US>]. Accessed 15 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[5] Syrian Ministry of Communications and Technology. [<http://www.moct.gov.sy/>]. Accessed 15 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 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: 0

There is no publicly available indication of an established mechanism responsible for sharing animal, human, and wildlife surveillance data across ministries in Syria.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease at the national level through a weekly bulletin. [1] Although this system consolidates reporting from both human and animal cases, including brucellosis and parasitic infections, there is no evidence of an established mechanism responsible for sharing human, animal, and wildlife surveillance data. [2, 3] Furthermore, there is no evidence that EWARS is still operating at full capacity during the ongoing civil war.

There is no additional evidence of a shared database for data sharing for animal, human, and wildlife surveillance through the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Local Administration and the Environment, the Centre for Strategic Health Studies, or One Health. [4, 5, 6, 7, 8]

- [1] Syrian Ministry of Health. "Early Warning and Response Program". [http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE]. Accessed 15 December 2020.
- [2] Al-Arabiya. 21 October 2013. "Flesh-eating parasites, polio outbreak emerging across Syria". [http://english.alarabiya.net/en/News/middle-east/2013/10/21/Diseases-including-flesh-eating-parasites-recorded-in-Syria-.html]. Accessed 15 December 2020.
- [3] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpZq8%3D&portalid=0&language=ar-YE]. Accessed 15 December 2020.
- [4] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 15 December 2020.
- [5] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 15 December 2020.
- [6] Syrian Ministry of Local Administration and Environment. [http://www.mola.gov.sy/mola/]. Accessed 15 December 2020.
- [7] Centre for Strategic Health Studies. [http://cshs.moh.gov.sy/]. Accessed 15 December 2020.
- [8] One Health Initiative. [http://www.onehealthinitiative.com/promed_archived.php?query=syria]. Accessed 15 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: 0

There is no publicly available evidence that Syria has made de-identified health surveillance data on disease outbreaks available on government websites that is updated on weekly basis.

The Ministry of Health makes de-identified information available regarding infectious disease outbreaks through reports such as the Health Statistical Abstract. Data is updated only quarterly and annually; noting that the latest data updated on weekly basis is from 2013. [1, 2, 3, 4]

Information collected from regional Ministry of Health observation facilities includes the number of cases of certain tracked diseases, vaccination reports, and other metrics such as the number of inpatient/outpatient procedures broken down by area, gender, and age. [1] However, there is no indication to what extent, if any, this de-identified surveillance data has been impacted by the ongoing civil war and whether regular reports will be available in the future.

The Ministry of Health also coordinated with the World Health Organization (WHO) to provide de-identified health surveillance data on disease outbreaks through its Early Warning and Response System (EWARS) weekly bulletins. [5, 6, 7] There is no additional information available through the Centre of Strategic Health Studies. [8]

[1] Syrian Ministry of Health. 2019. "Health Statistical Abstract." [http://www.moh.gov.sy/LinkClick.aspx?fileticket=DqG7ly5-sG8%3d&portalid=0&language=ar-YE]. Accessed 15 December 2020.

[2] Syrian Ministry of Health. 2019. "10 Common Diseases by Region." [http://www.moh.gov.sy/Default.aspx?tabid=732&language=ar-YE]. Accessed 15 December 2020.

[3] Syrian Ministry of Health. "Health Statistics." [http://www.moh.gov.sy/Default.aspx?tabid=179&language=ar-YE]. Accessed 15 December 2020.

Additionally, there is no indication of a process by which to de-identify patient data during an outbreak through the Early Warning Alert and Response Network sample patient intake forms and sample outbreak investigation forms. [6]

[1] Syrian Ministry of Health. "Ethics Committee for Health Research".

[<http://www.moh.gov.sy/Default.aspx?tabid=134&language=ar-YE>]. Accessed 15 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[3] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 15 December 2020.

[4] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 December 2020.

[5] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 15 December 2020.

[6] Assistance Coordination Unit. 2017. "Guidelines EWARN". [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 15 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: 0

There is no publicly identifiable evidence suggesting that Syria has laws, regulations, or guidelines safeguarding the confidentiality of identifiable health information for individuals, including the protection from cyberattack.

The basic guidelines laid out for the ethical conduct of scientific and medical research by the Ministry of Health's Ethics Committee for Health Research do not include a protection of electronic data from cyberattack. [1]

Legislative Decree No. 17 of 2013, "The Application of Provisions of the Law on the Network and Combatting Cybercrime," establishes certain confidentiality obligations for internet network service providers and provides for penalties for the authorized access and release of protected internet data. [2] However, there is nothing in the decree that specifically addresses the obligation of health providers to safeguard the confidentiality of identifiable health information.

There is no other indication of any regulation providing electronic protection to individual health data in Syria through the Ministry of Health, Parliament of the Syrian Arab Republic's Legal Database, Syrian e-Gov Web Portal, Centre for Strategic Health Studies, or the Ministry of Communications and Technology. [3, 4, 5, 6, 7]

Additionally, there is no indication of laws and regulations safeguarding confidentiality through the Early Warning Alert and Response Network sample patient intake forms and sample outbreak investigation forms. [8]

[1] Syrian Ministry of Health. "Ethics Committee for Health Research".

[<http://www.moh.gov.sy/Default.aspx?tabid=134&language=ar-YE>]. Accessed 19 December 2020. January 2019.

[2] Parliament of the Syrian Arab Republic. 8 February 2012. "Legislative Decree No. 17 of 2013: The Application of Provisions of the Law on the Network and Combatting Cybercrime".

[<http://www.parliament.gov.sy/arabic/index.php?node=201&nid=4337&ref=tree&>]. Accessed 19 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December

2020.

[4] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 19 December 2020.

[5] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 19 December 2020.

[6] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 19 December 2020.

[7] Syrian Ministry of Communications and Technology. [<http://www.moct.gov.sy/>]. Accessed 19 December 2020.

[8] Assistance Coordination Unit. 2017. "Guidelines EWARN". [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 19 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, Yes, commitments have been made to share data only for one disease = 1, No = 0

Current Year Score: 0

There is insufficient evidence indicating that Syria has 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. The World Health Organization (WHO) reports on the current COVID-19 situation in Syria on daily basis, and relies on the statistics announced by the Syrian government. Nonetheless, there is no indication of a data sharing agreement or commitment. [1, 2] The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease at the national level through a weekly bulletin. [3] This information is coordinated by the World Health Organization (WHO) Regional Office for the Eastern Mediterranean and other countries in the region. [4] However, this is no information available regarding which regional countries contribute to this surveillance data sharing arrangement, and there is no information regarding Syria's participation in a regional surveillance network. There is no other indication of a commitment to share surveillance data during a public health emergency via the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Defence, Ministry of the Interior, or Centre for Strategic Health Studies websites. [5, 6, 7, 8, 9]

[1] World Health Organization (WHO). December 2020. "Syrian Arab Republic: COVID-19 Response Update." [<https://reliefweb.int/report/syrian-arab-republic/syrian-arab-republic-covid-19-response-update-no-13-9-december-2020>]. Accessed 15 December 2020.

[2] World Health Organization (WHO). Syrian Arab republic COVID-19 Situation. [<https://covid19.who.int/region/emro/country/sy>]. Accessed 15 December 2020.

[3] Syrian Ministry of Health. "Early Warning and Response Program". [<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 15 December 2020.

[4] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzWVpZq8%3D&portalid=0&language=ar-YE>]. Accessed 15 December 2020.

[5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 15 December 2020.

[6] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 15 December 2020.

[7] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 15 December 2020.

[8] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 15 December 2020.

[9] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 15 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: 0

There is no public indication that Syria has in place a national system 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. The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease through a weekly bulletin. However, there is no indication of contact tracing during routine surveillance or in the event of a public health emergency. [1] According to the "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, this system is also equipped to process event-based data sources generated from "rumours of unusual medical events observed in society (such as unexplained deaths); [and] warnings about sick events seen by employees in selected units in the system," but its operation does not appear to be ongoing. [2] According to the 2018 World Health Organization Annual Report for Syria, training and capacity building of healthcare staff is among the WHO priorities. For example, WHO helped strengthen the national polio program by improving surveillance and training health care staff. There is no reference, however, to a national system that supports on the sub-national level expanding contact tracing. [3] The Syrian Response plan, 2018, published by WHO, does not include further evidence on this matter. [4] In response to COVID-19, the government devised a national response plan and designated an emergency committee to work towards containing the spread of the virus. However, the plan is not publicly available online and it remains unclear how contact tracing is carried out, if any, or if there is a system to provide support at the sub-national level to expand contact tracing. [5, 6]. There is no further evidence on this matter neither on the Ministry of Health website, the Ministry of Agriculture and Agrarian Reform website, the Presidency of the Council of Ministers website, nor the Syrian e-Gov Web Portal. [7, 8, 9, 10]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 10 December 2020.

[2] Syrian Ministry of Health and World Health Organization (WHO).

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 10 December 2020.

[3] World Health Organization. World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[4] World Health Organization (WHO). 2018. "Syrian Arab Republic Humanitarian Response Plan 2018".

[<https://www.who.int/emergencies/response-plans/2018/syria/en/>]. Accessed 10 December 2020.

[5] The Presidency of the Council of Ministers. "Immediate Activation of Local Councils to Participate in COVID-19 Response."

[<http://www.pministry.gov.sy/contents/15988/-التصدي-بتنفيذ-تدابير-التصدي-المهندس-خمس-التفعيل-الفوري-لدور-لجان-الأحياء-والمخاتير-للمشاركة-بتنفيذ-تدابير-التصدي-للكورونا>]. Accessed 10 December 2020.

[6] RT Online. "How did Syria Control the Spread of the virus successfully?" [https://arabic.rt.com/press/1126534--كيف-تمكنت-من-النجاح-كورونا-بهذا-القدر-من-السيطرة-على-سوريا-من-السيطرة-على-كورونا-بهذا-القدر-من-النجاح]. Accessed 10 December 2020.

[7] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 10 December 2020.

[8] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 10 December 2020.

[9] The Presidency of the Council of Ministers. [http://www.pministry.gov.sy/home]. Accessed 10 December 2020.

[10] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 10 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: 0

There is no publicly available indication that Syria 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. Neither the 2018 World Health Organization Annual Report for Syria, nor the WHO Syrian Response plan, 2018, include relevant evidence. [1, 2] In response to COVID-19, the government devised a national response plan and designated an emergency committee to work towards containing the spread of the virus. However, the plan is not publicly available online and it remains unclear if necessary medical isolation and financial support such as, paycheck and job security, are part of the COVID-19 response plan. [3, 4]. There is no further evidence on this matter neither on the Ministry of Health website, the Ministry of Agriculture and Agrarian Reform website, the Presidency of the Council of Ministers website, nor the Syrian e-Gov Web Portal. [5, 6, 7, 8]

[1] World Health Organization. World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[2] World Health Organization (WHO). 2018. "Syrian Arab Republic Humanitarian Response Plan 2018".

[https://www.who.int/emergencies/response-plans/2018/syria/en/]. Accessed 10 December 2020.

[3] The Presidency of the Council of Ministers. "Immediate Activation of Local Councils to Participate in COVID-19 Response." [http://www.pministry.gov.sy/contents/15988/-التصدي-بتنفيذ-تدابير-المشاركة-بالمختار-والأحياء-واللجان-الفوري-لدور-لجان-الأحياء-والمختار-بالمشاركة-بتنفيذ-تدابير-التصدي-للكورونا]. Accessed 10 December 2020.

[4] RT Online. "How did Syria Control the Spread of the virus successfully?" [https://arabic.rt.com/press/1126534--كيف-تمكنت-من-النجاح-كورونا-بهذا-القدر-من-السيطرة-على-سوريا-من-السيطرة-على-كورونا-بهذا-القدر-من-النجاح]. Accessed 10 December 2020.

[5] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 10 December 2020.

[6] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 10 December 2020.

[7] The Presidency of the Council of Ministers. [http://www.pministry.gov.sy/home]. Accessed 10 December 2020.

[8] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 10 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: 0

There is no publicly available evidence that Syria 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.

The Syrian Ministry of Health publishes on daily basis COVID-19 active cases, recovered and deaths. While data is disaggregated by governorates, it does not include contact tracing. [1, 2] There is no further evidence available on the websites of the Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Presidency of the Council of Ministers website, nor the Syrian e-Gov Web Portal. [3, 4, 5, 6]

[1] Ministry of Public Health. "Media Center."

[<http://www.moh.gov.sy/Default.aspx?tabid=242&smid=1050&ArticleID=917&reftab=56&t=-تسجيل-١٥١-إصابة-جديدة-بفيروس-9٦-سورية-إلى>]. Accessed 10 December 2020.

[2] Ministry of Public Health. "COVID-19 Daily Statistics."

[<https://app.powerbi.com/view?r=eyJrjoiNTA0NWxZmYtMDJiMC00ZWU0LTlINTktZTViZjYwYThjZmUzIiwidCI6ImY2MTBjMG13LWJkMjQtNGlZOS04MTBiLTNkYzI4MGFmYjU5MCIsmMiOjh9>]. Accessed 16 December 2020.

[3] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

[5] The Presidency of the Council of Ministers. [<http://www.pministry.gov.sy/home>]. Accessed 10 December 2020.

[6] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 10 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: 0

There is insufficient publicly available evidence suggesting that Syria has in place 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. Enab Baladi, a local online news platform, states that in response to the COVID-19 pandemic, the Syrian government introduced restrictions on cross-border movement. The government suspended flights in March 2020, but upon the resumption of international flights in September of the same year, PCR testing within 96 hours prior to the flight became a requirement for entering the country. However, there is no indication if this comes as part of an official plan or agreement with border control authorities to monitor suspected and potential cases among international travelers. [1] Neither the 2018 World Health Organization Annual Report for Syria, nor the WHO Syrian Response plan, 2018, include evidence of a joint plan with border control authorities in cases of public health emergencies. [2, 3] There is no further indication on this matter on the Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Presidency of the Council of Ministers website, nor the Syrian e-Gov Web Portal. [4, 5, 6, 7]

[1] Enab Baladi. "Syrian Ministry of Health Announces its Online Platform for PCR Appointment Bookings."

[<https://enabbaladi.net/archives/408763>]. Accessed 10 December 2020.

- [2] World Health Organization. World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018". [https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.
- [3] World Health Organization (WHO). 2018. "Syrian Arab Republic Humanitarian Response Plan 2018". [<https://www.who.int/emergencies/response-plans/2018/syria/en/>]. Accessed 10 December 2020.
- [4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.
- [5] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.
- [6] The Presidency of the Council of Ministers. [<http://www.pministry.gov.sy/home>]. Accessed 10 December 2020.
- [7] Syrian e-Gov Web Portal. [http://portal.egov.sy/law/ar_law/en/0/0/module.page.html]. Accessed 10 December 2020.

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

There is no publicly available evidence indicating that the Syrian government has its own applied epidemiology training program (FETP) available in-country or provides resources to send public health officials and staff to other countries to participate in training.

The Eastern Mediterranean Public Health Network (EMPHNET) collaborates with the Syrian Ministry of Health and the Jordanian Ministry of Health to provide training through Jordan's FETP, but there is no evidence that the Syrian government provides funding or other resources to its staff to attend these trainings. [1]

There is no other indication of an in-country training program through the Ministry of Health, the Centre for Strategic Health Studies, the Eastern Mediterranean Public Health Network, or the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). [2, 3, 4, 5]

[1] The Eastern Mediterranean Public Health Network (EMPHNET). "Training of Syrian Physicians in Jordan FETP". [<http://emphnet.net/?news=training-of-syrian-physicians-in-jordan-fetp>]. Accessed 19 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[3] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 19 December 2020.

[4] The Eastern Mediterranean Public Health Network (EMPHNET). [<http://emphnet.net/>]. Accessed 19 December 2020.

[5] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). [<https://www.tephinet.org/training-programs>]. Accessed 19 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: 0

There is no publicly available evidence suggesting that there is field epidemiology programs in Syria inclusive of animal health professionals.

Although the Eastern Mediterranean Public Health Network (EMPHNET) collaborates with the Syrian Ministry of Health and the Jordanian Ministry of Health to provide training through Jordan's FETP, there is no evidence that this training includes animal health professionals. [1]

There is no other information regarding the availability of field training programs for animal health professionals in Syria through the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Centre for Strategic Health Studies, the Eastern Mediterranean Public Health Network (EMPHNET), or the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). [2, 3, 4, 5, 6]

[1] The Eastern Mediterranean Public Health Network (EMPHNET). "Training of Syrian Physicians in Jordan FETP". [<http://emphnet.net/?news=training-of-syrian-physicians-in-jordan-fetp>]. Accessed 18 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 18 December 2020.

[3] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 18 December 2020.

[4] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 18 December 2020.

[5] The Eastern Mediterranean Public Health Network (EMPHNET). [http://emphnet.net/?page_id=491]. Accessed 18 December 2020.

[6] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). [<https://www.tephinet.org/>]. Accessed 18 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: 0

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: 0

There is no publicly available evidence of an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential in Syria.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease at the national level through a weekly bulletin. [1] According to "The Early Warning and Response System in Syria: Guiding Principles of Work," published in 2013, this system is operated with substantial assistance from the World Health Organization (WHO) Regional Office for the Eastern Mediterranean and includes capacity to avert the spread of identified disease outbreaks. [2, 3]

The EWARS Rapid Response Team is composed of "a group of multidisciplinary people across different sectors and are ready to respond within 24 hours of emergency health event." [1] Certain triggering events lead to the automatic notification of the Rapid Response Team so that it can manage the public health response to disease outbreaks, including the supply of human and material resources, the proper notification of the public through media sources, and coordination with international Organizations. [1] EWARS is intended to change its focus from surveillance activities to emergency response during a crisis and to be integrated back into the public health system following the acute phase of the emergency. [1] However, it is not clear to what extent the Syrian government participates in this network and there is no evidence suggesting that EWARS can be utilized as a national response plan in case of public health emergencies.

There is no additional information regarding an emergency response plan in the Ministry of Health, Ministry of the Interior, or Ministry of Defence. [5, 6, 7]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 19 December 2020.

[2] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles of Work". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[3] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. May 2017. "Country Cooperation Strategy at a glance: Syrian Arab Republic".

[http://apps.who.int/iris/bitstream/handle/10665/136887/ccsbrief_syr_en.pdf?sequence=1]. Accessed 19 December 2020.

[4] Assistance Coordination Unit. EWARN Guidelines. [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 19

December 2020.

[5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 19 December 2020.

[7] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 19 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: 0

There is no publicly available information that Syria has an overarching emergency response plan in place that has been updated within the last 3 years.

The Early Warning and Response System (EWARS), within the Ministry of Health and coordinated with the World Health Organization (WHO) Regional Office for the Eastern Mediterranean, was first introduced in Syria in 2012 towards the beginning of the civil war. [1, 2] The EWARS Rapid Response Team is composed of "a group of multidisciplinary people across different sectors and are ready to respond within 24 hours of emergency health event." [1] Certain triggering events lead to the automatic notification of the Rapid Response Team so that it can manage the public health response to disease outbreaks, including the supply of human and material resources, the proper notification of the public through media sources, and coordination with international Organizations. [1] However, according to the "Early Warning and Response System in Syria: Guiding Principles of Work," the plan was last updated in 2013. [3] Also, it is not clear to what extent the Syrian government participates in this network and there is no evidence suggesting that EWARS can be utilized as an overarching national response plan in case of public health emergencies.

Additionally, according to a Jordanian humanitarian report published in March 2018, the degradation of the EWARS system in Syria prompted a non-governmental Organization called the Assistance Coordination Unit which is based out of Gaziantep, Turkey to create its own Early Warning and Response Network (EWARN) in 2013 to carry on epidemiological surveillance and response in the place of EWARS. [4] According to the EWARN guidelines, which were most recently updated in 2017, this system operates across 11 governorates. [5] There is no evidence, nonetheless, suggesting that EWARN is used as a national response plan in Syria.

There is no information that would suggest that the emergency response plan has been updated or altered in the past three years through the Ministry of Health, WHO regional country page, Ministry of the Interior, or Ministry of Defence. [6, 7, 8, 9]

[1] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[2] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 10 December 2020.

[3] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles of Work". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 10 December 2020.

[4] Health Cluster. March 2018. "Health Services and Population Status Report: Southern Syria". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/2018_04_10_hss_report_-_vers_4.0_final.pdf]. Accessed 10 December 2020.

[5] Assistance Coordination Unit. EWARN Guidelines. [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 10

December 2020.

[6] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 10 December 2020.

[7] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic". [<http://www.emro.who.int/countries/syr/index.html>]. Accessed 10 December 2020.

[8] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 10 December 2020.

[9] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 10 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: 0

There is no publicly available information that Syria has an overarching emergency response plan in place that includes explicit considerations for paediatric care or care for vulnerable populations.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease at the national level through a weekly bulletin. [1] This system is operated with substantial assistance from the World Health Organization (WHO) Regional Office for the Eastern Mediterranean and includes capacity to avert the spread of identified disease outbreaks. [2]

The EWARS Rapid Response Team is composed of "a group of multidisciplinary people across different sectors and are ready to respond within 24 hours of emergency health event." [2] Certain triggering events lead to the automatic notification of the Rapid Response Team so that it can manage the public health response to disease outbreaks, including the supply of human and material resources, the proper notification of the public through media sources, and coordination with international Organizations. [2] Although EWARS has participated in emergency vaccination campaigns as part of its response to a polio outbreak which explicitly targeted children according to the WHO Annual Report 2018, there is no information available regarding paediatric care as an ongoing priority. [1]

There is no other information that indicates that the EWARS in Syria focuses on the care of vulnerable populations on the Ministry of Health website, World Health Organization (WHO) Regional Office for the Eastern Mediterranean country page, Ministry of the Interior website, or Ministry of Defence website. [3, 4, 5, 6] Additionally, it is not clear to what extent the Syrian government participates in this EWARS network and there is no evidence suggesting that EWARS can be utilized as a national response plan in case of public health emergencies.

A parallel system that is operated by Assistance Coordination Unit, a nongovernmental Organization which is based out of Gaziantep, Turkey, conducts emergency response in 11 governorates of Syria, as well. [7] The 2017 guidelines of this system, called the Early Warning and Response Network (EWARN), indicates that it will offer preferential treatment to "high risk" individuals during public health emergencies, including children under 5 years old, children who are malnourished and have had measles within the past 6 weeks, adults over 50 years of age, and other vulnerable patients. [8] However, there is no evidence indicating that EWARN can be utilized as an overarching national response plan during health emergencies.

[1] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 10 December 2020.

[2] Syrian Ministry of Health. "Early Warning and Response Program".

[http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE]. Accessed 10 December 2020.

[3] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 10 December 2020.

[4] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic".

[http://www.emro.who.int/countries/syr/index.html]. Accessed 10 December 2020.

[5] Syrian Ministry of the Interior. [http://www.syriamoi.gov.sy/portal/site/arabic/]. Accessed 10 December 2020.

[6] Syrian Ministry of Defence. [http://www.mod.gov.sy/]. Accessed 10 December 2020.

[7] Health Cluster. March 2018. "Health Services and Population Status Report: Southern Syria". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/2018_04_10_hss_report_-_vers_4.0_final.pdf]. Accessed 10 December 2020.

[8] Assistance Coordination Unit. EWARN Guidelines. [https://www.acu-sy.org/en/guidelines-ewarn-guidelines/]. Accessed 10 December 2020.

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: 0

There is no publicly available information regarding a specific mechanism for engaging with the private sector for emergency preparedness and response in Syria.

The Ministry of Health mentions the participation of "private clinics and private hospitals" as part of its Early Warning and Response System (EWARS). [1] According to the "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, private clinics and facilities have been incorporated into emergency response planning as a part of its holistic approach. [2] However, there is no evidence of a specific mechanism of coordination with the private sector during public health emergencies.

There is no further information on the Ministry of Health website, World Health Organization (WHO) Regional Office for the Eastern Mediterranean website, or the Parliament of the Syrian Arab Republic's Legal Database. [3, 4, 5]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE]. Accessed 19 December 2020.

[2] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[4] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic". [<http://www.emro.who.int/countries/syr/index.html>]. Accessed 19 December 2020.

[5] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 19 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: 0

There is no publicly available indication of a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic in Syria.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease at the national level through a weekly bulletin. [1]

The EWARS Rapid Response Team is composed of "a group of multidisciplinary people across different sectors and are ready to respond within 24 hours of emergency health event." [2] Certain triggering events lead to the automatic notification of the Rapid Response Team so that it can manage the public health response to disease outbreaks, including the supply of human and material resources, the proper notification of the public through media sources, and coordination with international organizations. [2] EWARS is intended to change its focus from surveillance activities to emergency response during a crisis and to be integrated back into the public health system following the acute phase of the emergency. [2] According to the EWARNs guidelines from 2017, this system operates across 11 governorates. [3]

Despite the ongoing monitoring of the multiple communicable diseases, there is no publicly available indication of guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic. In response to COVID-19, the government devised a national response plan and designated an emergency committee to work towards containing the spread of the virus. However, the plan is not publicly available online and there is no further indication of its content. [4, 5].

The Syrian government introduced restrictions to contain the spread of the virus in the country such as night-time curfew, restricted movement across governorates, closure of schools and universities, in addition to banning social gatherings in public events and mosques. The government also introduced curfew on few neighborhoods where the virus spread. [6, 7, 8] Nonetheless, it is unclear if this comes as part of a broader national policy or the unpublished COVID-19 response plan.

There is no indication of national plan or strategy for testing during health emergencies neither on the Ministry of Health website, the Ministry of Agriculture and Agrarian Reform website, the Presidency of the Council of Ministers website, nor the

Syrian e-Gov Web Portal. [9, 10, 11, 12]

- [1] Regional Office for the Eastern Mediterranean (EMRO). "Syrian Arab Republic: EWARS Weekly Bulletin 2020." [http://www.emro.who.int/syr/publications-other/weekly-bulletin.html]. Accessed 19 December 2020.
- [2] Syrian Ministry of Health. "Early Warning and Response Program". [http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE]. Accessed 19 December 2020.
- [3] Assistance Coordination Unit. EWARN Guidelines. [https://www.acu-sy.org/en/guidelines-ewarn-guidelines/]. Accessed 19 December 2020.
- [4] The Presidency of the Council of Ministers. "Immediate Activation of Local Councils to Participate in COVID-19 Response." [http://www.pministry.gov.sy/contents/15988/-التصدي-بتنفيذ-تدابير-المشاركة-للمخاطر-والأحياء-لجان-الدور-لجانب-التفعيل-الفوري-لدور-لجان-الأحياء-والمخاطر-للمشاركة-بتنفيذ-تدابير-التصدي-]. Accessed 19 December 2020.
- [5] RT Online. "How did Syria Control the Spread of the virus successfully?" [https://arabic.rt.com/press/1126534--كيف-تمكنت-]. Accessed 19 December 2020.
- [6] BBC News. "COVID-19: First death case in Syria." [https://www.bbc.com/arabic/middleeast-52100693]. Accessed 19 December 2020.
- [7] Nedaa Syria. "Spread of COVID-19 in Syria: Potential Results." [https://nedaa-sy.com/researches/38]. Accessed 19 December 2020.
- [8] Enab Baladi. "Increased COVID-19 Rates Exerts Pressure on the Medical Facilities in North Syria." [https://www.enabbaladi.net/archives/417650]. Accessed 19 December 2020.
- [9] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 19 December 2020.
- [10] Syrian Ministry of Agriculture and Agrarian Reform. [http://moaar.gov.sy/main/]. Accessed 19 December 2020.
- [11] The Presidency of the Council of Ministers. [http://www.pministry.gov.sy/home]. Accessed 19 December 2020.
- [12] Syrian e-Gov Web Portal. [http://portal.egov.sy/law.ar_law/en/0/0/module.page.html]. Accessed 19 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: 0

There is no publicly available evidence suggesting that Syria activated their national emergency response plan for an infectious disease outbreak in the past year; and there is no public evidence that the country completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year.

The Early Warning and Response System (EWARS), within the Ministry of Health, is designed to conduct routine electronic surveillance, early detection of epidemic threats, response and control of pandemics, and surveillance of epidemic-prone disease at the national level through a weekly bulletin. [1] According to "The Early Warning and Response System in Syria:

Guiding Principles of Work," published in 2013, this system is operated with substantial assistance from the World Health Organization (WHO) Regional Office for the Eastern Mediterranean and includes capacity to avert the spread of identified disease outbreaks. [2, 3]

The EWARS Rapid Response Team is composed of "a group of multidisciplinary people across different sectors and are ready to respond within 24 hours of emergency health event." [1] Certain triggering events lead to the automatic notification of the Rapid Response Team so that it can manage the public health response to disease outbreaks, including the supply of human and material resources, the proper notification of the public through media sources, and coordination with international Organizations. [1] According to the EWARN guidelines from 2017, this system operates across 11 governorates. [4] However, it is not clear to what extent the Syrian government participates in this EWARS network and there is no evidence suggesting that EWARS is utilized as a national response plan in case of public health emergencies.

A Jordanian humanitarian report published in March 2018 states that the degradation of the EWARS system in Syria prompted a non-governmental Organization called the Assistance Coordination Unit which is based out of Gaziantep, Turkey to create its own Early Warning and Response Network (EWARN) in 2013 to carry on epidemiological surveillance and response in the place of EWARS. [5] However, the weekly bulletin is still operational and includes data on COVID-19 cases in the country; publications are posted on the WHO Regional Office for the Eastern Mediterranean website. [6] EWARN, nonetheless, is not considered an overarching national response plan.

Despite the ongoing routine monitoring of the multiple communicable diseases, there is no explicit indication that EWARS adopted additional monitoring measures besides the routine surveillance in response to COVID-19 outbreak or any other pandemic. In response to COVID-19, the government devised a national response plan and designated an emergency committee to work towards containing the spread of the virus. However, the plan is not publicly available online and there is no further indication of its content. [7, 8].

According to the World Health Organization's extranet online page, Syria did not conduct a national-level biological threat-focused exercise in the past year. [9] There is no further evidence that Syria activated its national emergency response plan nor conducted national-level biological threat-focused exercise. During the past year through the regional page for Syria on the WHO website, Ministry of Health website, Ministry of Agriculture [10, 11, 12]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 19 December 2020.

[2] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles of Work". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[3] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. May 2017. "Country Cooperation Strategy at a glance: Syrian Arab Republic".

[http://apps.who.int/iris/bitstream/handle/10665/136887/ccsbrief_syr_en.pdf?sequence=1]. Accessed 19 December 2020.

[4] Assistance Coordination Unit. EWARN Guidelines. [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 19 December 2020.

[5] Health Cluster. March 2018. "Health Services and Population Status Report: Southern

Syria". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/2018_04_10_hss_report_-_vers_4.0_final.pdf]. Accessed 19 December 2020.

[6] Regional Office for the Eastern Mediterranean (EMRO). "Syrian Arab Republic: EWARS Weekly Bulletin 2020."

[<http://www.emro.who.int/syr/publications-other/weekly-bulletin.html>]. Accessed 19 December 2020.

[7] The Presidency of the Council of Ministers. "Immediate Activation of Local Councils to Participate in COVID-19 Response."

[<http://www.pministry.gov.sy/contents/15988/-التصدي-بتنفيذ-تدابير-المشاركة-للمخاطر-والأحياء-ولجان-الدور-الفوري-للدور-لجان-الأحياء-والمخاطر-للمشاركة-بتنفيذ-تدابير-التصدي>]

[الكورونا]. Accessed 10 December 2020.

[8] RT Online. "How did Syria Control the Spread of the virus successfully?" [<https://arabic.rt.com/press/1126534--كيف-تمكنت-من-السيطرة-على-كورونا-بهذا-القدر-من-النجاح>]. Accessed 10 December 2020.

[9] World Health Organization. [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 19 December 2020.

[10] World Health Organization. Regional Page: Syrian Arab Republic. [<https://www.who.int/countries/syr/>]. Accessed 19 December 2020.

[11] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[12] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 December 2020.

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 publicly available evidence that Syria 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 in the past year.

The UN Office for the Coordination of Humanitarian Affairs (OCHA) conducted the "Independent Review of Central Emergency Response Fund (CERF) Allocations to Syrian Conflict and Regional Refugee Crisis" in February 2016 which was intended to assess capacity and identify gaps in its humanitarian response, but this was not focused on biological threats. [1]

There is no indication of such an exercise taking place on the WHO IHR portal, Ministry of Health website, Ministry of Agriculture and Agrarian Reform website, or through the WHO Regional Office for the Eastern Mediterranean country page or the WHO country page. [2, 3, 4, 5, 6]

[1] UN Office for the Coordination of Humanitarian Affairs (OCHA). February 2016. "Independent Review of CERF Allocations to Syrian Conflict and Regional Refugee Crisis". [<https://cerf.un.org/sites/default/files/resources/Syria%20and%20sub-region.pdf>]. Accessed 19 December 2020.

[2] World Health Organisation (WHO). "After Action Review". [<https://extranet.who.int/sph/after-action-review>]. Accessed 19 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 19 December 2020.

[5] World Health Organisation (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic: HeRAMS". [<http://www.emro.who.int/syr/herams/index.html>]. Accessed 19 December 2020.

[6] World Health Organization. Regional Page: Syrian Arab Republic. [<https://www.who.int/countries/syr/>]. Accessed 19 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 public evidence that in the past year Syria has undergone a national-level biological threat-focused exercise that has included private sector representatives.

According to the World Health Organization's extranet online page, Syria did not conduct a national-level biological threat-focused exercise in the past year. [1]

There is no further indication that such exercise took place in Syria in the past year through the regional page for Syria on the WHO website, Ministry of Health website, Ministry of Agriculture [2, 3, 4]

[1] World Health Organization. [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 19 December 2020.

[10] World Health Organization. Regional Page: Syrian Arab Republic. [<https://www.who.int/countries/syr/>]. Accessed 19 December 2020.

[2] World Health Organization. Regional Page: Syrian Arab Republic. [<https://www.who.int/countries/syr/>]. Accessed 19 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 10 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: 0

There is no publicly available evidence of an emergency operations centre in Syria that is currently operational.

The Ministry of Health's Early Warning and Response System (EWARS) is designed to monitor public health matters and respond to potential emergencies through a centralized command structure. [1] The EWARS Rapid Response Team is composed of "a group of multidisciplinary people across different sectors and are ready to respond within 24 hours of emergency health event." [1] Certain triggering events lead to the automatic notification of the Rapid Response Team so that it can manage the public health response to disease outbreaks, including the supply of human and material resources, the proper notification of the public through media sources, and coordination with international Organizations. [1] EWARS is intended to change its focus from surveillance activities to emergency response during a crisis and to be integrated back into the public health system following the acute phase of the emergency. [1]

The Civil Defence Forces, operating within the Ministry of Defence, organizes emergency response for a variety of manmade and natural disasters, including public outreach, including public health emergencies. [2] However, neither EWARS nor the Civil Defence Forces maintain a separate emergency response centre.

According to a Jordanian humanitarian report published in March 2018, the degradation of the EWARS system in Syria prompted a non-governmental Organization called the Assistance Coordination Unit which is based out of Gaziantep, Turkey to create its own Early Warning and Response Network (EWARN) in 2013 to carry on epidemiological surveillance and response in the place of EWARS. [3] However, according to its 2017 guidelines, EWARN is only intended to be incorporated into a broader emergency framework, and it is not clear to what extent the Syrian government participates in this system. [4]

There is no other indication of an emergency operations centre in Syria through the Ministry of Health, Ministry of the Interior, or Ministry of Defence websites. [5, 6, 7]

[1] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[2] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 19 December 2020.

[3] Health Cluster. March 2018. "Health Services and Population Status Report: Southern Syria". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/2018_04_10_hss_report_-_vers_4.0_final.pdf]. Accessed 19 December 2020.

[4] Assistance Coordination Unit. EWARN Guidelines. [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 19 December 2020.

[5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 19 December 2020.

[7] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 19 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: 0

There is no publicly available evidence that indicates that Syria has an emergency operations centre that is required to conduct a drill at least once a year.

The Ministry of Health's Early Warning and Response System (EWARS) is designed to monitor public health matters and respond to potential emergencies through a centralized command structure. [1] The EWARS Rapid Response Team is composed of "a group of multidisciplinary people across different sectors and are ready to respond within 24 hours of emergency health event." [1] Certain triggering events lead to the automatic notification of the Rapid Response Team so that it can manage the public health response to disease outbreaks, including the supply of human and material resources, the proper notification of the public through media sources, and coordination with international Organizations. [1] The Civil Defence Forces, operating within the Ministry of Defence, organizes emergency response for a variety of manmade and natural disasters, including public outreach, including public health emergencies. [2] However, neither EWARS nor the Civil Defence Forces maintain a separate emergency response centre. Additionally, according to "The Early Warning and Response

System in Syria: Guiding Principles," drafted in 2013, there is no requirement to conduct drills on an annual basis. [1]

It remains unclear to what extent the Syrian government participates in this EWARS network and there is no evidence suggesting that EWARS can be utilized as a national response plan in case of public health emergencies.

The Civil Defence Forces also does not have a required timeline for its drills. [2]

The Early Warning and Response Network (EWARN), a parallel emergency response planned organised by the Assistance Coordination Unit nongovernmental Organization, which is based out of Gaziantep, Turkey, conducts disease surveillance, but it is not clear whether it maintains its own emergency operations centre. [3] Additionally, according to its 2017 guidelines, EWARN is only intended to be incorporated into a broader emergency framework, and there is no requirement for a drill at least once a year. [4] And there is no evidence indicating that EWARN can be utilized a an overarching national response plan during health emergencies.

There is no other indication of an emergency operations centre drill on an annual basis in Syria through the Ministry of Health, Ministry of the Interior, or Ministry of Defence websites. [5, 6, 7]

[1] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpZq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[2] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 19 December 2020.

[3] Health Cluster. March 2018. "Health Services and Population Status Report: Southern Syria". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/2018_04_10_hss_report_-_vers_4.0_final.pdf]. Accessed 19 December 2020.

[4] Assistance Coordination Unit. EWARN Guidelines. [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 19 December 2020.

[5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 19 December 2020.

[7] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 19 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 publicly available evidence that Syria has an emergency operations centre that can conduct, or has conducted within the last year, a coordinated emergency response activated within 120 minutes of the identification of the public health emergency.

According to "The Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, the rapid response team is trained to respond within 24 hours but there is no mention of a shorter timeframe. [1] The Civil Defence Forces, operating within the Ministry of Defence, which organizes emergency response for a variety of manmade and natural disasters also

does not have a required timeline for its drills, nor does it mention having conducted previous responses within a designated timeframe. [2]

The Early Warning and Response Network (EWARN), a parallel emergency response planned organised by the Assistance Coordination Unit nongovernmental Organization, which is based out of Gaziantep, Turkey, conducts disease surveillance, but it is not clear whether it maintains its own emergency operations centre. [3] Additionally, according to its 2017 guidelines, EWARN is only intended to be incorporated into a broader emergency framework, and there is no indication that it can conduct a coordinated emergency response within 120 minutes of the identification of a public health scenario. [4]

Also, there is no evidence suggesting that EWARS and EWARN are utilized as overarching national response plans in Syria, and the involvement of the government in both systems remains unclear.

There is no other indication of an emergency operation being conducted within 120 minutes in Syria through the Ministry of Health, Ministry of the Interior, or Ministry of Defence websites. [5, 6, 7]

[1] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[2] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 19 December 2020.

[3] Health Cluster. March 2018. "Health Services and Population Status Report: Southern Syria". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/2018_04_10_hss_report_-_vers_4.0_final.pdf]. Accessed 19 December 2020.

[4] Assistance Coordination Unit. EWARN Guidelines. [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 19 December 2020.

[5] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[6] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 19 December 2020.

[7] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 19 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: 0

There is no publicly available evidence suggesting that public health authorities in Syria have carried out an exercise to respond to potential deliberate biological events, and there is no publicly available evidence that there are standard operating procedures between public health authorities and security authorities for responding to such events.

There is no mention of biological threats or cooperation with security authorities in the "Early Warning and Response System in Syria: Guiding Principles." [1] Additionally, there is no evidence of exercises to respond to potential bioterrorist events through the Ministry of Health, Ministry of the Interior, Ministry of Defence, or the Civil Defence Forces. [2, 3, 4, 5]

[1] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpZq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[3] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 19 December 2020.

[4] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 19 December 2020.

[5] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 19 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

There is no publicly available information regarding how messages will reach remote populations and sectors with different communications needs during a public health emergency in Syria.

The "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, specify that community outreach should be "appropriate for the community (cultural, local language, customs, traditions, etc.)". [1] The guiding principles also exhort emergency forces to maintain "communication with the media and community" throughout its emergency response, but there is no indication of any specific steps for communicating with remote regions and groups with different communication needs. [1]

There is no additional information regarding public health messaging for underserved communities through the Ministry of Health, Ministry of Communications and Technology, the Civil Defence Forces within the Ministry of Defence, the Syrian Arab News Agency (SANA), or the Ministry of Information. [2, 3, 4, 5, 6]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 19 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[3] Syrian Ministry of Communications and Technology. [<http://www.moct.gov.sy/>]. Accessed 19 December 2020.

[4] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 19 December 2020.

[5] Syrian Arab News Agency (SANA). [<https://sana.sy/en/>]. Accessed 19 December 2020.

[6] Syrian Ministry of Information. [<http://www.moi.gov.sy/index.php?click=MA==>]. Accessed 19 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

There is a risk communication plan that is specifically designated for use during a public health emergency in Syria.

According to the "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, each team responding to public health emergencies is to allocate a dedicated line of communication through cellular phone, fax, and text message access both internally and externally with international partners. [1] Additionally, these teams should designate individuals responsible for certain tasks, continuously maintain lists of reporting centres and participants, update team members accordingly through email, and ensure proper communication with the media to reach the public. [1]

Part of this process also includes risk assessment that seeks to evaluate and control disease outbreaks so that response is effective by taking into consideration the availability of drinking water and adequate sanitation, the health and nutritional status of any displaced population, the immunity level of vaccine-protected diseases, and the level and accessibility of health services. [1] To this end, the EWARS Guiding Principles include links to relevant risk communication information and World Health Organisation (WHO) guidance. [1]

There is no other indication of a risk communication strategy in place through the WHO 2018 annual report for Syria, the 2019 Health Resources and Services Availability Monitoring System annual report, Ministry of Health, Ministry of the Interior, or the Ministry of Defence. [2, 3, 4, 5, 6] The Civil Defence Forces, which operate through the Ministry of Defence, are charged with maintaining open lines of communication during emergencies, but there is no information regarding their risk communication strategy. [7]

[1] Syrian Ministry of Health and World Health Organisation (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpZq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[2] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018". [https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 19 December 2020.

[3] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic: HeRAMS Annual Report 2019". [<https://applications.emro.who.int/docs/syr/EMRLIBSYR233E-eng.pdf?ua=1>]. Accessed 19 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[5] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 19 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 19 December 2020.

[7] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 19 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: 0

There is no publicly available evidence that the Syrian 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.

According to the "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, each team responding to public health emergencies is to allocate a dedicated line of communication through cellular phone, fax, and text message access both internally and externally with international partners. [1] Additionally, these teams should designate individuals responsible for certain tasks, continuously maintain lists of reporting centers and participants, update team members accordingly through email, and ensure proper communication with the media to reach the public. [1] Part of this process also includes risk assessment that seeks to evaluate and control disease outbreaks so that response is effective by taking into consideration the availability of drinking water and adequate sanitation, the health and nutritional status of any displaced population, the immunity level of vaccine-protected diseases, and the level and accessibility of health services. [1]

To this end, the EWARS Guiding Principles include links to relevant risk communication information and World Health Organization (WHO) guidance. While part of the communications plan focuses on raising awareness of the community through medical staff and respected community members such as pharmacists, teachers and religious leaders, there is no indication of a specific position within the government that is designated to serve as the primary spokesperson to the public during a health emergency. [1]

There is no further evidence of a risk communication strategy in Syria through the WHO 2018 annual report for Syria, the 2019 Health Resources and Services Availability Monitoring System annual report, Ministry of Health, Ministry of the Interior, or the Ministry of Defense. [2, 3, 4, 5, 6] The Civil Defense Forces, which operate through the Ministry of Defense, are charged with maintaining open lines of communication during emergencies, but there is no information regarding their risk communication strategy. [7]

[1] Syrian Ministry of Health and World Health Organization (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpZq8%3D&portalid=0&language=ar-YE>]. Accessed 19 December 2020.

[2] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018". [https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 19 December 2020.

[3] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic: HeRAMS Annual Report 2019". [<https://applications.emro.who.int/docs/syr/EMRLIBSYR233E-eng.pdf?ua=1>]. Accessed 19 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 19 December 2020.

[5] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 19 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 19 December 2020.

[7] Syrian Ministry of Defence. "Civil Defence Forces". [<http://mod.gov.sy/index.php?node=554&cat=3251>]. Accessed 19 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: 1

There is insufficient evidence that the public health system in Syria has actively shared messages via online media platforms (eg social media, website) to inform the public about ongoing public health concerns.

The Syrian Ministry of Health created its official Facebook page in March 2019. The page includes updates on active health emergencies, such as COVID-19 situation, in addition to other health concerns. The ministry's Facebook page includes updates on the ambulance services across the country. [1]

Also, the Ministry of Transport's official Facebook page, created in 2017, publishes updates related to COVID-19 pandemic, but particularly the updates related to restrictions on cross-border movement, in addition to the news related to the activities of the ministry. [2]

[1] Syrian Ministry of Health. Media Center Facebook page. [<https://www.facebook.com/MinistryOfHealthSYR>]. Accessed 19 December 2020.

[2] Syrian Ministry of Transportation. Facebook page. [<https://www.facebook.com/وزارة-النقل-في-الجمهورية-العربية-السورية-660538387462924>]. Accessed 19 December 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 insufficient publicly available evidence suggesting that Syrian senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years.

With the outbreak of COVID-19 pandemic in early 2020, local news outlets, some of which are anti-regime, indicated that the government denied the COVID cases in the country until March 22nd when the government acknowledges the first case. [1, 2, 3] Later on, and although official reports included the caseload in the country, international and national news outlets indicate that there is widespread consensus even from within the government that the announced numbers do not reflect the real caseload with a lot of unreported cases and limited testing capacity. [4, 5]

There is no indication on disinformation on infectious diseases on the Syrian Center for Media and Freedom of Expression website, the Syria News website, and Shaam Network. [6, 7, 8]

[1] Al Hurra. "The three Governments in Syria Responding to COVID-19." [https://www.alhurra.com/different-angle/2020/04/04/كورونا-في-سوريا-في-مواجهة-فيروس-كورونا]. Accessed 19 December 2020.

[2] Enab Baladi. "Is COVID-19 an additional Crisis in Syria?" [https://enabbaladi.net/archives/366841]. Accessed 19 December 2020.

[3] Jesr Press. "Syria's devastated healthcare system is unprepared for the pandemic." [https://www.jesrpress.com/2020/04/30/نظام-الرعاية-الصحية-المدمر-في-سوريا-غي]. Accessed 19 December 2020.

[4] Reliefweb. "Obstruction and Denial: Health System Disparities and COVID-19 in Daraa, Syria." [https://reliefweb.int/report/syrian-arab-republic/obstruction-and-denial-health-system-disparities-and-covid-19-daraa]. Accessed 19 December 2020.

[5] BBC News. "Coronavirus: Syria government 'prepares for virus second wave'." [https://www.bbc.com/news/world-middle-east-54522725]. Accessed 19 December 2020.

[6] Syrian Center for Media and Freedom of Expression. [https://scm.bz]. Accessed 19 December 2020.

[7] Syria news. [https://syria.news]. Accessed 19 December 2020.

[8] Shaam Network. [http://www.shaam.org/news/syria-news.html]. Accessed 19 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: 34.25

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: 113.58

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: -

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: -

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: 1

There is no publicly available indication that Syria issued a restriction, without international/bilateral support, on the export/import of medical goods (eg: medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak in the past year.

The National Medicine Strategy states that import of medication is based on the annual manufacturing plan and is limited to medicines that cannot be produced locally or insufficiently available in the local market and based on the annual manufacturing plan. Import is only allowed from the foreign factories that are registered at the Ministry of Health. The strategy was not updated since 2017 and does not include any further information on export/import and does not touch upon response to disease outbreak situations. [1]

The Directorate of Pharmaceutical Affairs page on the website of the Ministry of Health includes restricting guidelines on medication imports and exports including quality assurances and required approvals. However, there is no information provided on any additional or exceptional restrictions introduced in the past year. [2]

The websites of the Damascus Chamber of Industry, Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Parliament of the Syrian Arab Republic's Legal Database, the Ministry of Defense, the Ministry of Transportation and the Ministry of the Interior do not include evidence of restrictions on import/export of medical goods in response to infectious disease outbreak. [3, 4, 5, 6, 7, 8, 9]

A review of the government-affiliated Syrian Arab News Agency (SANA) and the Syrian non-profit media organization Enab Baladi did not provide relevant information. [10, 11]

[1] Ministry of Health. "National Medicine Strategy."

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=idsNvHJsPi0%3d&portalid=0&language=ar-YE>]. Accessed 20 December 2020.

[2] Ministry of Health. "Directorate of Pharmaceutical Affairs."

[<http://www.moh.gov.sy/Default.aspx?tabid=367&language=ar-YE>]. Accessed 20 December 2020.

[3] Damascus Chamber of Industry. [<https://www.dci-syria.org>]. Accessed 20 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[5] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 20 December 2020.

[6] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>].

Accessed 20 December 2020.

[7] Syrian Ministry of Defense. [<http://www.mod.gov.sy/>]. Accessed 20 December 2020.

[8] Syrian Ministry of Transportation. [<http://www.mot.gov.sy/web/main.php>]. Accessed 20 December 2020.

[9] Syrian Ministry of Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 20 December 2020.

[10] Syrian Arab News Agency (SANA). [<https://sana.sy/en/>]. Accessed 20 December 2020.

[11] Enab Baladi. [<https://english.enabbaladi.net>]. Accessed 20 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: 1

There is no publicly available evidence that Syria has issued a restriction on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak in the past year.

There was no report of a disease outbreak impacting import and export of non-medical goods through the World Health Organisation (WHO) Disease Outbreak News (DONs) or the World Organisation for Animal Health (OIE) Weekly Disease Information. [1, 2]

Additionally, there was no information regarding an outbreak that impacted import and export of non-medical goods through the Ministry of Health, Ministry of Agriculture and Agrarian Reform, Ministry of Information, Ministry of the Economy and Foreign Trade, or the government-affiliated Syrian Arab News Agency (SANA) and the Syrian non-profit media organization Enab Baladi. [3, 4, 5, 6, 7, 8]

[1] World Health Organisation (WHO). Disease Outbreak News (DONs) by country. [<https://www.who.int/csr/don/en/>]. Accessed 7 January 2019.

[2] World Organisation for Animal Health (OIE). Weekly Disease Information.

[https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI]. Accessed 20 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[4] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 20 December 2020.

[5] Syrian Ministry of Information. [<http://www.moi.gov.sy/index.php?click=MA==>]. Accessed 20 December 2020.

[6] Syrian Ministry of the Economy and Foreign Trade. [<http://syrecon.gov.sy/>]. Accessed 20 December 2020.

[7] Syrian Arab News Agency (SANA). [<https://sana.sy/en/>]. Accessed 20 December 2020.

[8] Enab Baladi. [<https://english.enabbaladi.net/>]. Accessed 20 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

There is publicly available evidence that Syria in the past year implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak.

In response to COVID-19 pandemic and to prevent its spread in the country, the Syrian government introduced restrictions on travelers coming into the country and suspended flights from countries where the pandemic is expanding. [1]

Upon the resumption of the international flights and cross-border movements, the Syrian government announced the country's travel requirements and restrictions including negative PCR test conducted in one of the government-approved testing centers, maximum 96 hours prior to the flight/crossing borders into Syria, in addition to self-quarantining at hotels identified by the government. All passengers are also required to pay additional fee, between US\$100 and US\$200, to be paid either as part of the flight ticket or upon arrival to the country. [2, 3, 4, 5, 6, 7]

The websites of the Syrian Ministry of Health, Ministry of Defense, Ministry of Interior, and the Ministry of Transportation do not provide evidence of a ban on travelers due to an infectious disease outbreak. [8, 9, 10, 11]

[1] CNN Arabic. "Syria suspends cross-border trips with Jordan, Iraq and other countries affected by the pandemic." [<https://arabic.cnn.com/health/article/2020/03/08/syria-suspends-flights-jordan-iraq-amid-corona>]. Accessed 23 December 2020.

[2] Enab Baladi. "Additional 200 USD on all air and ground passengers due to COVID-19." [<https://enabbaladi.net/archives/408763>]. Accessed 23 December 2020.

[3] Sana News. "Ministry of Interior Announces Restrictions on Cross-border Movement with Lebanon." [<http://www.sana.sy/?p=1202160>]. Accessed 23 December 2020.

[4] Snack Syrian. "Ministry of Interior Announces New Restrictions on Travelers from and to Syria." [<https://snacksyrian.com/الداخلية-تعلن-عن-إجراءات-جديدة-للسفر-م/>]. Accessed 23 December 2020.

[5] Ministry of Transportation Facebook Page. [https://www.facebook.com/permalink.php?story_fbid=1529666563883431&id=660538387462924]. Accessed 23 December 2020.

[6] BBC News. "COVID-19 in Syria: Fear of wide-spread of the virus and arguments around the additional fees on travelers." [<https://www.bbc.com/arabic/trending-53518862>]. Accessed 23 December 2020.

- [7] RT Online. "Syria: Ministry of Interior Announces New Restrictions for Crossing the Borders from Lebanon." [https://arabic.rt.com/middle_east/1144811-لبنان-عبر-البلاد-دخول-بخصوص-جديدة-تعليمات-تصدر-الداخلية-سوريا-]. Accessed 23 December 2020.
- [8] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 23 December 2020.
- [9] Syrian Ministry of Defense. [http://www.mod.gov.sy/]. Accessed 23 December 2020.
- [10] Syrian Ministry of Interior. [http://mod.gov.sy/index.php?node=30&StartSearch=1&Keywords=%DF%E6%D1%E6%E4%C7]. Accessed 23 December 2020.
- [11] Syrian Ministry of Transportation. [http://www.mot.gov.sy/web/main.php]. Accessed 23 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: 128.74

2016

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 154.06

2016

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: 0

There is no publicly available evidence suggesting that Syria maintains a public workforce strategy with respect to healthcare workers that has been updated within the past five years. The most recent strategy document released by the Ministry of Social Affairs and Labour in May 2017 was an implementation plan for its near term goals. [1] This "implementation plan" included increased access to the workforce for certain populations, an expansion of employee health insurance, and other workforce capacity building. [1] However, there is no indication that there is a particular focus on health sector staffing. [1] The Centre for Strategic Health Studies, within the Ministry of Health, focused part of its 2010-2012 vision to increasing human resources capacity, but there is no additional information regarding a public workforce strategy for healthcare workers from the past year. [2, 3] There is no information available through the Ministry of Education. [4] In response to COVID-19, the government devised a national response plan and designated an emergency committee to work towards containing the spread of the virus. However, the plan is not publicly available online and there is no further indication on whether it touches upon public workforce or healthcare workers. [5, 6].

[1] Syrian Ministry of Social Affairs and Labour. May 2017. "Information about the ImplementationPlan".

[<http://www.msal.gov.sy/Ar/SitePage?sysCode=4#>]. Accessed 20 December 2020.

[2] Syrian Ministry of Health. "Research Unit at the Center for Strategic Health Studies".

[<http://www.moh.gov.sy/Default.aspx?tabid=137&language=ar-YE>]. Accessed 20 December 2020.

[3] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 20 December 2020.

[4] Syrian Ministry of Education. [<http://moed.gov.sy/site/>]. Accessed 20 December 2020.

[5] The Presidency of the Council of Ministers. "Immediate Activation of Local Councils to Participate in COVID-19 Response."

[<http://www.pministry.gov.sy/contents/15988/-المهندس-خمس-التفعيل-الفوري-لدور-لجان-الأحياء-والمختابر-للمشاركة-بتنفيذ-تدابير-التصدي-للكورونا>]. Accessed 20 December 2020.

[6] RT Online. "How did Syria Control the Spread of the virus successfully?" [<https://arabic.rt.com/press/1126534-كيف-تمكنت-سوريا-من-السيطرة-على-كورونا-بهذا-القدر-من-النجاح>]. Accessed 20 December 2020.

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 140

2017

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: 0

There is no publicly available evidence that Syria has the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit.

The National Biosafety Committee regulates the use of containment facilities for plant life, but there is no indication that they possess the capacity to isolate human patients. [1]

The "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, do not mention biocontainment or isolation capabilities. [2] There is no information regarding biocontainment facilities through the Ministry of Health, Damascus Hospital, and Douma Medical Centre. [3, 4, 5]

According to World Health Organisation (WHO) 2016 and 2017 assessments, many of Syria's hospitals remain in partial operation due to disruptions caused by the ongoing civil war, ensuing blockade, and terrorist activity, particularly in the northeast of the country, and resources have been shifted towards emergency care. [6, 7]

In response to COVID-19, according to news agencies, the government used hotels and university dorms for isolation purposes given that the already limited capacity of hospitals is overstretched with COVID-19 patients. Medical services for isolated patients is reportedly inadequate and unsatisfying. [8, 9, 10, 11]

[1] UN Food and Agriculture Organisation (FAO). 2006. "National Biosafety Framework for the Syrian Arab Republic". [http://www.fao.org/fileadmin/user_upload/gmfp/docs/National%20Biosafety%20Framework%20of%20Syrian%20Arab%20Republic%20Final%202006.pdf]. Accessed 20 December 2020.

[2] Syrian Ministry of Health and World Health Organisation (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE]. Accessed 20 December 2020.

[3] Syrian Ministry of Health. [http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US]. Accessed 20 December 2020.

[4] Damascus Hospital. [http://www.damascushospital.org.sy/]. Accessed 20 December 2020.

[5] Douma Medical. [http://www.doumamedical.com/]. Accessed 20 December 2020.

[6] World Health Organisation (WHO). 2016. "Strategy, responsiveness and preparedness of the Syrian healthcare system in the short, mid and long term". [http://www.moh.gov.sy/LinkClick.aspx?fileticket=D6y2vWTFzXU%3d&portalid=0&language=en-US]. Accessed 20 December 2020.

[7] World Health Organisation (WHO). "Syrian Arab Republic: Annual Report 2017". [https://www.who.int/emergencies/crises/syr/syria-who-annualreport2017.pdf?ua=1]. Accessed 20 December 2020.

[8] Bawaba. "Russian Agency Reveals the Reason for the High Number of COVID-19 Patients in Quarantine Centers in Damascus." [https://bawaba-sy.com/2020/05/26/وكالة-روسية-تكشف-سبب-ارتفاع-نسبة-مصابي]. Accessed 20 December 2020.

[9] Bawaba. "Syrian Government Converts Hotels and Restaurants into Quarantine Centers." [https://bawaba-sy.com/2020/03/30/حكومة-الأسد-تقرر-تحويل-فنادق-ومطاعم-سي]. Accessed 20 December 2020.

[10] Al Arabiya. "Insects in Quarantine Centers in Syria." [https://www.alarabiya.net/ar/arab-and-world/syria/2020/05/13/حشرات-من-كل-نوع-تخيف-محجوراً-عليهم-في-سوريا]. Accessed 20 December 2020.

[11] Enab Baladi. "COVID-19 Rate on the Rise with the new Arrivals to Syria." [https://www.enabbaladi.net/archives/387056]. Accessed 20 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: 0

There is no publicly available evidence that Syria has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years; neither that the country developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years. The National Biosafety Committee regulates the use of containment facilities for plant life in Syria, but there is no indication that they possess the capacity to isolate human patients. [1] The "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, do not mention biocontainment or isolation capabilities. [2] There is no information regarding isolation facilities through the Ministry of Health, Damascus Hospital, and Douma Medical Centre. [3, 4, 5] According to World Health Organisation (WHO) 2016 and 2017 assessments, many of Syria's hospitals remain in partial operation due to disruptions caused by the ongoing civil war, ensuing blockade, and terrorist activity, particularly in the northeast of the country, and resources have been shifted towards emergency care. [6, 7] In response to COVID-19, according to news agencies, the government used hotels and university dorms for isolation purposes given that the already limited capacity of hospitals is overstretched with COVID-19 patients. Medical services for isolated patients is reportedly inadequate and dissatisfactory. [8, 9, 10, 11]

[1] UN Food and Agriculture Organisation (FAO). 2006. "National Biosafety Framework for the Syrian Arab Republic".

[http://www.fao.org/fileadmin/user_upload/gmfp/docs/National%20Biosafety%20Framework%20of%20Syrian%20Arab%20Republic%202006.pdf]. Accessed 20 December 2020.

[2] Syrian Ministry of Health and World Health Organisation (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 20 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[4] Damascus Hospital. [<http://www.damascushospital.org.sy/>]. Accessed 20 December 2020.

[5] Douma Medical. [<http://www.doumamedical.com/>]. Accessed 20 December 2020.

[6] World Health Organisation (WHO). 2016. "Strategy, responsiveness and preparedness of the Syrian healthcare system in the short, mid and long term".

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=D6y2vWTFzXU%3d&portalid=0&language=en-US>]. Accessed 20 December 2020.

[7] World Health Organisation (WHO). "Syrian Arab Republic: Annual Report 2017".

[<https://www.who.int/emergencies/crises/syr/syria-who-annualreport2017.pdf?ua=1>]. Accessed 20 December 2020.

[8] Bawaba. "Russian Agency Reveals the Reason for the High Number of COVID-19 Patients in Quarantine Centers in Damascus." [<https://bawaba-sy.com/2020/05/26/وكالة-روسية-تكشف-سبب-ارتفاع-نسبة-مصابي>]. Accessed 20 December 2020.

[9] Bawaba. "Syrian Government Converts Hotels and Restaurants into Quarantine Centers." [<https://bawaba-sy.com/2020/03/30/حكومة-الأسد-تقرر-تحويل-فنادق-ومطاعم-سي>]. Accessed 20 December 2020.

[10] Al Arabiya. "Insects in Quarantine Centers in Syria." [<https://www.alarabiya.net/ar/arab-and-world/syria/2020/05/13/حشرات-من-كل-نوع-تخيف-محجوراً-عليهم-في-سوريا>]. Accessed 20 December 2020.

[11] Enab Baladi. "COVID-19 Rate on the Rise with the new Arrivals to Syria." [<https://www.enabbaladi.net/archives/387056>]. Accessed 20 December 2020.

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: 0

There is no publicly available evidence of a national procurement protocol in place in Syria 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. According to a 2016 World Health Organisation (WHO) Report "Strategy, responsiveness and preparedness of the Syrian health care system in the short, mid and long term," there is a budget in place for centralized procurement of key equipment and spare parts, but procurement remains difficult due to the ongoing civil war and ensuing sanctions. [1] There is no indication that the framework for procurement laid out in this report has been implemented by the Ministry of Health, Ministry of Agriculture and Agrarian Reform, or Centre for Strategic Health Studies, or that there is any other national protocol in place. [2, 3, 4] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [5]

[1] World Health Organisation (WHO). 2016. "Strategy, responsiveness and preparedness of the Syrian healthcare system in the short, mid and long term".

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=D6y2vWTFzXU%3d&portalid=0&language=en-US>]. Accessed 20 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[3] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 20 December 2020.

[4] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 20 December 2020.

[5] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 20 December 2020.

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

There is publicly available evidence that Syria has a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency. The Ministry of Health maintains a stockpile of "essential medicines" for basic medical care according to World Health Organisation (WHO) specifications, and the most recent list from 2018 contains a stockpile of vaccines and antitoxins including antivirals and antibacterials. [1, 2] The Ministry of Health

website states that the stockpile of the essential medicines ensures that these medicines are always available in the country in sufficient quantities and guaranteed quality, and at affordable prices. [1] The World Health Organization (WHO) maintains strategic stockpiles of equipment for healthcare staff and distributes personal protective equipment to hospitals and medical facilities, as part of the WHO's efforts to help Syria prepare for the management of chemical events. [3] However, the report does not provide information on the use of the stockpiles during public emergencies. There is no further evidence available through the Ministry of Health, Ministry of the Interior, Ministry of Defence, and the "Early Warning and Response System in Syria: Guiding Principles." [4, 5, 6, 7]

[1] Syrian Ministry of Health. "Definition of Essential Medicines".

[<http://www.moh.gov.sy/Default.aspx?tabid=405&language=ar-YE>]. Accessed 20 December 2020.

[2] Syrian Ministry of Health. "Syrian Essential Medicines List 2018".

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=JKCpP2eI3Zk%3d&portalid=0&language=ar-YE>]. Accessed 20 December 2020.

[3] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 20 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[5] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 20 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 7 January 2019.

[7] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 20 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 no publicly available evidence that Syria has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. The Health Resources and Services Availability Monitoring System (HeRAMS) 2019 annual report although outline the availability and functionality of essential and specialized medical equipment at the hospital level, does not provide information on laboratory supplies availability or functionality. [1]

There is no information provided on such stockpile in the World Health Organization (WHO) 2018 annual report for the country, the guidelines published in 2018 by the Directorate of Medical Supplies and Equipment under the Syrian Ministry of Public Health, the websites of the Syrian Ministry of Health, Ministry of Defense, or the Ministry of Interior. [2, 3, 4, 5, 6]

[1] World Health Organization (WHO). 2019. "HeRAMS Annual Report: Public Health Centers in the Syrian Arab Republic".

[<https://applications.emro.who.int/docs/syr/EMRLIBSYR233E-eng.pdf?ua=1>]. Accessed 20 December 2020.

[2] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 20 December 2020.

[3] Syrian Ministry of Health. 2018. "Directorate of Medical Supplies and Equipment: Guidelines for Staff."

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=WJ2cK-WQ-eo%3d&portalid=0&language=ar-YE>]. Accessed 20 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[5] Syrian Ministry of Defense. [<http://www.mod.gov.sy/>]. Accessed 20 December 2020.

[6] Syrian Ministry of Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 20 December 2020.

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 publicly available evidence that Syria conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. The Ministry of Health maintains a stockpile of "essential medicines" for basic medical care according to World Health Organisation (WHO) specifications, and the most recent list from 2018 contains a stockpile of vaccine and antitoxins including antivirals and antibacterials. [1, 2] The Ministry of Health website states that the stockpile of the essential medicines ensures that these medicines are always available in the country in sufficient quantities and guaranteed quality, and at affordable prices. [1] However, there is no neither the website of the Ministry of Health nor the WHO annual report mention that the country conducts or requires an annual review of the available stockpiles. The World Health Organization (WHO) maintains strategic stockpiles of equipment for healthcare staff and distributes personal protective equipment to hospitals and medical facilities, as part of the WHO's efforts to help Syria prepare for the management of chemical events. [3] However, the report does not provide information on the review of such stockpiles to ensure the supply is sufficient for a public health emergency. There is no further evidence available through the Ministry of Health, Ministry of the Interior, Ministry of Defence, and the "Early Warning and Response System in Syria: Guiding Principles." [4, 5, 6, 7]

[1] Syrian Ministry of Health. "Definition of Essential Medicines".

[<http://www.moh.gov.sy/Default.aspx?tabid=405&language=ar-YE>]. Accessed 20 December 2020.

[2] Syrian Ministry of Health. "Syrian Essential Medicines List 2018".

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=JKCpP2eI3Zk%3d&portalid=0&language=ar-YE>]. Accessed 20 December 2020.

[3] World Health Organization (WHO). 2018. "Syrian Arab Republic: Annual Report 2018".

[https://reliefweb.int/sites/reliefweb.int/files/resources/COPub_SYR_2018_EN_22335.pdf]. Accessed 20 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[5] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 20 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 7 January 2019.

[7] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 20 December 2020.

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 publicly available evidence that Syria has 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; neither there is evidence of a plan/mechanism to procure medical supplies for national use during a public health emergency. Regulations published by the Syrian Ministry of Health on drug productions, registration and imports do not include medical supplies production neither do they refer to any plan to leverage manufacturing capacity of medical supplies during Health emergencies. [1] The Syrian government issued decree 14, in July 2020, that announces the exemption of raw material required for drugs production from custom duties for one year. However, there is no indication that the decree also includes medical supplies such as equipment and PPE, and it is unclear if this decree is part of a national plan to boost capacity in response to a public health emergency, such as COVID-19. [2, 3, 4, 5] According to a 2016 World Health Organization (WHO) Report "Strategy, responsiveness and preparedness of the Syrian health care system in the short, mid and long term," there is a budget in place for centralized procurement of key equipment and spare parts, but procurement remains difficult due to the ongoing civil war and ensuing sanctions. [6] There is no indication that the framework for procurement laid out in this report has been implemented and it remains unclear if there is a specific plan for procurement during public health emergencies specifically. The websites of Damascus Chamber of Industry, Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Parliament of the Syrian Arab Republic's Legal Database, the Ministry of Defense, the Ministry of Transportation and the Ministry of the Interior do not include evidence of relevant medical supplies' production and procurement. [7, 8, 9, 10, 11, 12, 13] The websites of the government-affiliated Syrian Arab News Agency (SANA) and the Syrian non-profit media organization Enab Baladi did not provide information on this matter. [14, 15]

[1] Syrian Ministry of Health. "Pharmaceutical Services Directorate."

[<http://www.moh.gov.sy/Default.aspx?tabid=404&language=ar-YE>]. Accessed 23 December 2020.

[2] Parliament of the Syrian Arab Republic. "Decree 14".

[<http://www.parliament.gov.sy/arabic/index.php?node=5516&cat=21921&>]. Accessed 23 December 2020.

[3] Syria News. "Exemption of production requirements and raw materials used in the manufacture of medicines from specific customs duties." [<https://syria.news/950cd8a8-13072012.html>]. Accessed 23 December 2020.

[4] Sana News. "President of Syria issues a decree to exempt the production requirements and raw materials used in the manufacture of medicines from specific customs duties." [<http://www.sana.sy/?p=1183453>]. Accessed 23 December 2020.

[5] RT Online. "Exemption of production requirements and raw materials of medicines from customs."

[<https://arabic.rt.com/business/1133917-بإعفاء-مستلزمات-إنتاج-الأدوية-من-الرسوم-والضرائب-1133917>]. Accessed 23 December 2020.

[6] World Health Organization (WHO). 2016. "Strategy, responsiveness and preparedness of the Syrian healthcare system in the short, mid and long term".

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=D6y2vWTFzXU%3d&portalid=0&language=en-US>]. Accessed 20 December 2020.

[7] Damascus Chamber of Industry. [<https://www.dci-syria.org>]. Accessed 20 December 2020.

[8] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[9] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 20 December 2020.

[10] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>].

Accessed 20 December 2020.

[11] Syrian Ministry of Defense. [<http://www.mod.gov.sy/>]. Accessed 20 December 2020.

[12] Syrian Ministry of Transportation. [<http://www.mot.gov.sy/web/main.php>]. Accessed 20 December 2020.

[13] Syrian Ministry of Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 20 December 2020.

[14] Syrian Arab News Agency (SANA). [<https://sana.sy/en/>]. Accessed 20 December 2020.

[15] Enab Baladi. [<https://english.enabbaladi.net/>]. Accessed 20 December 2020.

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 publicly available evidence that Syria had a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency; neither is there evidence of a plan/mechanism on laboratory supplies' procurement.

Regulations published by the Syrian Ministry of Health on drug productions, registration and imports do not include laboratory supplies production neither does it refer to any plan to leverage manufacturing capacity of such supplies during Health emergencies. [1]

The Syrian government issued decree 14, in July 2020, that announces the exemption of raw material required for drugs production from custom duties for one year. However, there is no indication that the decree also includes laboratory supplies such as reagents and media; and it is unclear if this decree is part of a national plan to boost capacity in response to a public health emergency, such as COVID-19. [2, 3, 4, 5]

According to a 2016 World Health Organization (WHO) Report "Strategy, responsiveness and preparedness of the Syrian health care system in the short, mid and long term," there is a budget in place for centralized procurement of key equipment and spare parts, but procurement remains difficult due to the ongoing civil war and ensuing sanctions. [6] There is no indication that the framework for procurement laid out in this report has been implemented and it remains unclear if there is a specific plan for procurement during public health emergencies specifically.

The websites of Damascus Chamber of Industry, Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Parliament of the Syrian Arab Republic's Legal Database, the Ministry of Defense, the Ministry of Transportation and the Ministry of the Interior do not include evidence of relevant laboratory supplies' production and procurement. [7, 8, 9, 10, 11, 12, 13] The websites of the government-affiliated Syrian Arab News Agency (SANA) and the Syrian non-profit media organization Enab Baladi did not provide information on this matter. [14, 15]

[1] Syrian Ministry of Health. "Pharmaceutical Services Directorate."

[<http://www.moh.gov.sy/Default.aspx?tabid=404&language=ar-YE>]. Accessed 23 December 2020.

[2] Parliament of the Syrian Arab Republic. "Decree 14".

[<http://www.parliament.gov.sy/arabic/index.php?node=5516&cat=21921&>]. Accessed 23 December 2020.

[3] Syria News. "Exemption of production requirements and raw materials used in the manufacture of medicines from specific customs duties." [<https://syria.news/950cd8a8-13072012.html>]. Accessed 23 December 2020.

[4] Sana News. "President of Syria issues a decree to exempt the production requirements and raw materials used in the manufacture of medicines from specific customs duties." [<http://www.sana.sy/?p=1183453>]. Accessed 23 December 2020.

[5] RT Online. "Exemption of production requirements and raw materials of medicines from customs."

[<https://arabic.rt.com/business/1133917-الرسوم-والضرائب-من-الإنتاج-الأدوية-من-الرسوم-والضرائب-1133917>]. Accessed 23 December 2020.

[6] World Health Organization (WHO). 2016. "Strategy, responsiveness and preparedness of the Syrian healthcare system in the short, mid and long term".

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=D6y2vWTFzXU%3d&portalid=0&language=en-US>]. Accessed 20 December 2020.

[7] Damascus Chamber of Industry. [<https://www.dci-syria.org>]. Accessed 20 December 2020.

[8] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 20 December 2020.

[9] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 20 December 2020.

[10] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 20 December 2020.

[11] Syrian Ministry of Defense. [<http://www.mod.gov.sy/>]. Accessed 20 December 2020.

[12] Syrian Ministry of Transportation. [<http://www.mot.gov.sy/web/main.php>]. Accessed 20 December 2020.

[13] Syrian Ministry of Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 20 December 2020.

[14] Syrian Arab News Agency (SANA). [<https://sana.sy/en/>]. Accessed 20 December 2020.

[15] Enab Baladi. [<https://english.enabbaladi.net/>]. Accessed 20 December 2020.

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: 0

There is no publicly available evidence that Syria has a plan in place for dispensing medical countermeasures for national use during a public health emergency.

The "Early Warning and Response System in Syria: Guiding Principles" call for responders to "identify and coordinate the allocation of human and material resources for outbreak management," but they do not provide specific instructions or guidelines for deployment of countermeasures. [1]

The Ministry of Health maintains a stockpile of "essential medicines" for basic medical care according to World Health Organisation (WHO) specifications, but there is no strategy for their deployment. [2, 3]

There is no available evidence of other guidelines for the use of countermeasures through the Ministry of Health, Ministry of the Interior, and the Ministry of Defence. [4, 5, 6]

[1] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 22 December 2020.

[2] Syrian Ministry of Health. "Definition of Essential Medicines".

[<http://www.moh.gov.sy/Default.aspx?tabid=405&language=ar-YE>]. Accessed 22 December 2020.

[3] Syrian Ministry of Health. "Syrian Essential Medicines List 2018".

[<http://www.moh.gov.sy/LinkClick.aspx?fileticket=JKCpP2eI3Zk%3d&portalid=0&language=ar-YE>]. Accessed 22 December 2020.

[4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 22 December 2020.

[5] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 22 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 22 December 2020.

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

There is no publicly available evidence that Syria has a plan in place to receive health personnel from other countries to respond to a public health emergency.

There is no indication that a plan is in place to receive health personnel from other countries through the Ministry of Health, Ministry of the Interior, Ministry of Defence, the Parliament of Syrian Arab Republic's Legal Database, or in the "Early Warning and Response System in Syria: Guiding Principles." [1, 2, 3, 4, 5]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 22 December 2020.

[2] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 22 December 2020.

[3] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 22 December 2020.

[4] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 22 December 2020.

[5] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 22 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: 3

2020

World Policy Analysis Center

4.4.1b

Access to skilled birth attendants (% of population)

Input number

Current Year Score: 96.2

2009

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: -

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: 2

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 no publicly available evidence that there is a government policy, legislation or a public statement committing to provide prioritized medical care to healthcare workers who become sick during a public health emergency in Syria.

There is no indication of a policy to provide prioritized medical care to health care workers through the Ministry of Health, Ministry of Interior, Ministry of Defence, or the "Early Warning and Response System in Syria: Guiding Principles." [1, 2, 3, 4]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 22 December 2020.

[2] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 22 December 2020.

[3] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 22 December 2020.

[4] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 22 December 2020.

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 Syria has a system in place for public health officials and healthcare workers to communicate during a public health emergency.

"The Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, outline a means by which public health officials and workers should communicate during a public health emergency. [1] The principles dictate that each team responding to public health emergencies should allocate a dedicated line of communication through cellular phone, fax, and text message access both internally and externally with international partners. [1] Additionally, these teams should designate set individuals responsible for certain tasks, continuously maintain lists of reporting centres and participants, and update team members accordingly through email. [1]

There is no additional information regarding communication between national authorities and ground workers. There is no other evidence of a communication strategy through the Ministry of Health, Ministry of the Interior, or Ministry of Defence. [2, 3, 4]

[1] Syrian Ministry of Health and World Health Organisation (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzWVpZq8%3D&portalid=0&language=ar-YE>]. Accessed 22 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 22 December 2020.

[3] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 22 December 2020.

[4] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 22 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: 0

There is insufficient publicly available evidence suggesting that the system for public health officials and healthcare workers to communicate during an emergency in Syria encompass workers in both the public and private sectors.

The "Early Warning and Response System in Syria: Guiding Principles," drafted in 2013, incorporate private professionals and clinics into their overall communications strategy in response to a public health emergency. [1] Private sector health care facilities are designated as reporting centres to track new cases of disease in the event of a large emergency alongside government health centres and hospitals. [2] However, there is no indication that the EWARS guidelines include explicit instructions or plans for how to communicate with the private sector during emergencies.

There is no additional information regarding the cooperation of the private sector during an emergency in Syria through the Ministry of Health, Ministry of the Interior, or Ministry of Defence. [3, 4, 5]

[1] Syrian Ministry of Health and World Health Organisation (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. "Early Warning and Response Program". [<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 23 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[4] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 23 December 2020.

[5] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 23 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: 0

There is no publicly available evidence of a national public health system monitoring for and tracking the number of healthcare-associated infections in Syria. There is no indication that a plan is in place for monitoring healthcare-associated infections through the Ministry of Health website, the World Health Organisation (WHO) country page, WHO Annual Report for Syria 2017, the "Early Warning and Response System in Syria: Guiding Principles," or EWARS weekly bulletins. [1, 2, 3, 4, 5, 6] Even during the recent COVID-19 pandemic, there is no evidence of monitoring and tracking of the number of healthcare staff that are infected. [7, 8]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[2] World Health Organisation (WHO). Syrian Arab Republic. [<https://www.who.int/countries/syr/en/>]. Accessed 23 December 2020.

Accessed 23 December 2020.

[5] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 23 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: 0

There is no publicly available evidence of a process for expedited review and approval of clinical trials for unregistered medical countermeasures to treat ongoing pandemics in Syria.

There is no evidence of an expedited review through the Ministry of Health Ethics Committee for Health Research, the Ministry of Agriculture and Agrarian Reform, or in the "Early Warning and Response System in Syria: Guiding Principles." [1, 2, 3] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [4]

[1] Syrian Ministry of Health. "Ethics Committee for Health Research".

[<http://www.moh.gov.sy/Default.aspx?tabid=134&language=ar-YE>]. Accessed 23 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 23 December 2020.

[3] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 23 December 2020.

[4] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 23 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

There is publicly available evidence of government agencies responsible for approving new medical countermeasures for humans in Syria.

The Directorate of Drug Control within the Ministry of Health reviews all new drugs for use in Syria both "imported and manufactured locally in terms of efficiency, safety and quality, and implementation of technical procedures related to the licensing and control of health facilities." [1]

If these new medical countermeasures require the use of clinical trials, then the Ethics Committee for Health Research within the Ministry of Health is responsible for approving the clinical trials themselves, particularly those involving human subjects, which would also include the approval of medical countermeasures. [2]

There is no additional information regarding the approval of new medical countermeasures through the Centre for Strategic

Health Studies. [3] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [4]

[1] Syrian Ministry of Health. "Directorate of Drug Control". [<http://www.moh.gov.sy/Default.aspx?tabid=401&language=ar-YE#>]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. "Ethics Committee for Health Research". [<http://www.moh.gov.sy/Default.aspx?tabid=134&language=ar-YE>]. Accessed 23 December 2020.

[3] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 23 December 2020.

[4] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 23 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: 0

There is no publicly available evidence of an expedited process for the approval of medical countermeasures for human use during public health emergencies in Syria.

The Directorate of Drug Control within the Ministry of Health reviews all new drugs for use in Syria both "imported and manufactured locally in terms of efficiency, safety and quality, and implementation of technical procedures related to the licensing and control of health facilities." [1]

If these new medical countermeasures require the use of clinical trials, then the Ethics Committee for Health Research within the Ministry of Health is responsible for approving the clinical trials themselves, particularly those involving human subjects, which would also include the approval of medical countermeasures. [2] However, there is no indication of an expedited process for the approval of medical countermeasures or clinical trials for use during public health emergencies through either of these departments.

There is no information regarding an expedited process for medical countermeasure approval through the Ministry of Health, the Centre for Strategic Health Studies, or in the "Emergency Warning and Response System in Syria: Guiding Principles." [3, 4, 5] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [6]

[1] Syrian Ministry of Health. "Directorate of Drug Control". [<http://www.moh.gov.sy/Default.aspx?tabid=401&language=ar-YE#>]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. "Ethics Committee for Health Research". [<http://www.moh.gov.sy/Default.aspx?tabid=134&language=ar-YE>]. Accessed 23 December 2020. Accessed 23 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[4] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 23 December 2020.

[5] Syrian Ministry of Health and World Health Organisation (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 23 December 2020.

[6] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 23 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: 0

There is neither publicly available evidence suggesting that epidemics and pandemics are integrated into the national risk reduction strategy in Syria, nor there is a standalone national disaster risk reduction strategy for epidemics and pandemics.

There is no reference to infectious diseases or pandemics in the UN Office for Disaster Risk Reduction (UNISDR) "National progress report on the implementation of the Hyogo Framework for Action (2009-2011)" for the Syrian Arab Republic. [1] The report notes that there are "national programmes or policies to make schools and health facilities safe in emergencies" in place, but it offers so no concrete details, and It is unclear to what extent this risk reduction strategy has been impacted by the ongoing civil war. [1]

However, the Early Warning and Response System, which is managed jointly by the Ministry of Health and the World Health Organisation [WHO], explicitly includes risk assessment within its public health emergency preparedness planning, but only accounts for risk reduction during an ongoing outbreak versus preparation to reduce risk before a crisis. [2] According to the "Early Warning and Response System in Syria: Guiding Principles," "[d]uring the acute phase of the crisis, a systematic

assessment of the risks of public health events should be implemented to identify a range of high-risk diseases with the potential to generate organisms that have high morbidity and mortality rates among affected community members." [2]

There is no additional information regarding pandemics in a national risk reduction strategy through the Ministry of Health, Ministry of Local Administration and Environment, Ministry of the Interior, or Ministry of Defence. [3, 4, 5, 6]

[1] UN Office for Disaster Risk Reduction (UNISDR). PreventionWeb. 30 April 2011. "Syrian Arab Republic: National progress report on the implementation of the Hyogo Framework for Action (2009-2011)".

[https://www.preventionweb.net/files/17404_syr_NationalHFAprogress_2009-11.pdf]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. "Early Warning and Response Program".

[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 23 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[4] Syrian Ministry of Local Administration and Environment. [<http://www.mola.gov.sy/mola/>]. Accessed 23 December 2020.

[5] Syrian Ministry of the Interior. [<http://www.syriamoi.gov.sy/portal/site/arabic/>]. Accessed 23 December 2020.

[6] Syrian Ministry of Defence. [<http://www.mod.gov.sy/>]. Accessed 23 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: 0

There is no publicly available evidence of cross-border agreements, protocols, or memoranda of understanding between Syria and other countries with respect to public health emergencies.

According to the "Country Cooperation Strategy for WHO and the Syrian Arab Republic 2008-2013," several UN agencies and the European Union coordinate regularly with Syria in the public health arena, but there is no indication of emergency coordination. [1]

Other countries like Japan and Greece donate support for certain activities, such as the delivery of ambulances, but there is no indication of ongoing emergency coordination. [1] Additionally, it is unclear to what extent these relationships have been impacted by the ongoing civil war.

The "Early Warning and Response System in Syria: Guiding Principles" note that it is "It is essential to exchange information between countries hosting the vulnerable population in the border areas...in order to verify and prevent outbreaks and take appropriate control measures in cooperation between the States concerned," but there is no information regarding specific partner countries. [2]

There is no additional evidence of a cross-border agreement through the Ministry of Health, the Parliament of the Syrian

Arab Republic's Legal Database, or in any relevant studies. [3, 4]

- [1] World Health Organisation (WHO). Regional Office for the Eastern Mediterranean. "Country Cooperation Strategy for WHO and the Syrian Arab Republic 2008-2013".
[http://apps.who.int/iris/bitstream/handle/10665/113234/CCS_Syrian_Arab_Republic_2010_EN_14478.pdf?sequence=1]. Accessed 23 December 2020.
- [2] Syrian Ministry of Health. "Early Warning and Response Program".
[<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 23 December 2020.
- [3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.
- [4] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 23 December 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 no publicly available evidence of cross-border agreements, protocols, or MOUs with neighbouring countries with regard to animal health emergencies in Syria.

The Aga Khan Development Foundation held a symposium in Syria regarding diseases that cause birth defects in animals, including brucellosis, in September 2014, but there is no indication of ongoing cooperation. [1]

The "Early Warning Alert and Response Network," which is managed out of Turkey by the World Health Organisation (WHO) with financial and technical contributions from governmental aid organisations such as the United States Agency for International Development (USAID), seeks to provide infectious disease surveillance and public health emergency response to areas of northern Syria that are no longer under central government control. [2, 3] However, there is no indication that the Syrian government or its official governmental bodies such as the Ministry of Health cooperate with this effort.

There is no indication of an arrangement in place between Syria and other countries regarding animal health through the Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Parliament of the Syrian Arab Republic's Legal Database, the "Early Warning and Response System in Syria: Guiding Principles," or in any relevant studies. [4, 5, 6, 7]

- [1] Syrian Ministry of Agriculture and Agrarian Reform. 28 September 2014. "Cooperation between the Ministry of Agriculture and the Aga Khan Foundation for Animal Health". [<http://moaar.gov.sy/main/archives/12386>]. Accessed 23 December 2020.
- [2] Assistance Coordination Unit. 2017. "Guidelines EWARN". [<https://www.acu-sy.org/en/guidelines-ewarn-guidelines/>]. Accessed 23 December 2020.
- [3] World Health Organisation (WHO) Regional Office for Europe. 30 August 2018. "Preventing the next pandemic: Syrian responders tackle influenza". [<http://www.euro.who.int/en/health-topics/communicable-diseases/influenza/news/news/2018/8/preventing-the-next-pandemic-syrian-responders-tackle-influenza>]. Accessed 23 December 2020.
- [4] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.
- [5] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 23 December 2020.

[6] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 23 December 2020.

[7] Syrian Ministry of Health. "Early Warning and Response Program". [<http://www.moh.gov.sy/Default.aspx?tabid=453&language=ar-YE>]. Accessed 23 December 2020.

5.3 INTERNATIONAL COMMITMENTS

5.3.1 Participation in international agreements

5.3.1a

Does the county have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?

Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

Current Year Score: 1

2021

Biological Weapons Convention

5.3.1b

Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?

Yes = 1 , No = 0

Current Year Score: 0

2021

Biological Weapons Convention

5.3.1c

Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?

Yes = 1 , No = 0

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: 1

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: 0

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: 0

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: 0

There is no publicly available evidence that Syria has allocated national funds to improve capacity to address epidemic threats within the past three years.

The Georgetown Infectious Disease Atlas (GIDA) Global Health Security Tracking dashboard states that Syria between the years 2014 and 2020 received and continue to receive financial aid with most of the fund going to immunization, reporting and workforce development. The dashboard does not mention that Syria is using any of the fund for improving the capacity to address epidemic threats. [1]

There is no indication that Syria allocated national funds to improve capacity to address epidemic threats within the past three years through the Ministry of Health, Ministry of Foreign Affairs and Expatriates, or the World Health Organisation (WHO) country page for the Syrian Arab Republic. [2, 3, 4]

The 2020 country budget published on the Syrian Ministry of Health's website does not include further evidence on this matter. [4] According to the WHO country page, some countries including Japan have donated funding and equipment for Syrian emergency healthcare needs but this has always been through the WHO as an intermediary and not the Syrian government directly. [5]

[1] Global Health Security Funding Tracker. [<https://tracking.ghscosting.org/#/data>]. Accessed 23 December 2020.

[2] Syrian Ministry of Foreign Affairs and Expatriates. [<http://www.mofa.gov.sy/>]. Accessed 23 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[4] Syrian Ministry of Health. "National Budget 2020." [<http://www.moh.gov.sy/Default.aspx?tabid=709&language=ar-YE>]. Accessed 23 December 2020.

[5] World Health Organization (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic". [<http://www.emro.who.int/countries/syr/index.html>]. Accessed 23 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: 0

There is no publicly available evidence that Syria has a special emergency public funding mechanism and funds which it can use during a public health emergency.

According to the International Development Association (IDA), Syria was eligible for IDA support but is no longer eligible due to "protracted non-accrual status," or Syria's inability to pay back interest on previous loans. [1]

There is no additional evidence of an emergency funding facility for pandemics through the Ministry of Health website, Central Bank of Syria website, the "Early Warning and Response System in Syria: Guiding Principles," or in relevant media and academic studies. [2, 3, 4]

[1] World Bank Group. International Development Association. [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[3] Central Bank of Syria. [www.banquecentrale.gov.sy/]. Accessed 23 December 2020.

[4] Syrian Ministry of Health and World Health Organisation (WHO). 2013. "Early Warning and Response System in Syria: Guiding Principles". [<http://www.moh.gov.sy/LinkClick.aspx?fileticket=cQCWzwVpzq8%3D&portalid=0&language=ar-YE>]. Accessed 23 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: 0

There is no publicly available evidence suggesting that Syrian senior leaders have either made a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or improve its own domestic capacity to address epidemic threats by expanding financing, requesting support, or obtaining funds in the past three years.

There is no indication that Syria has supported other countries to improve their capacity to address epidemic threats or

sought to improve its own domestic capacity through the Ministry of Health, Ministry of Foreign Affairs and Expatriates, the World Health Organisation (WHO) country page for the Syrian Arab Republic, or the United Nations News portal. [1, 2, 3, 4]

According to the WHO country page, some governments including Japan have donated funding and equipment to emergency aid in Syria but this has always been through the WHO and not to the Syrian government directly. [3]

According to UN News, the WHO appealed for more funding to support the Syrian health system in 2018, but it did not appear that the government was involved in this entreaty. [5]

Funding was also pledged by the Global Fund to Fight AIDS, Tuberculosis and Malaria to support Syrian refugees in Jordan and Lebanon, but it does not appear that this funding was also extended to the Syrian government or other operations within Syria itself. [6]

[1] Syrian Ministry of Foreign Affairs and Expatriates. [<http://www.mofa.gov.sy/>]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[3] World Health Organisation (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic". [<http://www.emro.who.int/countries/syr/index.html>]. Accessed 23 December 2020.

[4] United Nations. "News." [<https://news.un.org/en/focus/syria>]. Accessed 27 January 2021.

[5] UN News. 20 August 2018. "Syria: WHO appeals for funding to sustain critical health care for millions trapped by conflict". [<https://news.un.org/en/story/2018/08/1017532>]. Accessed 23 December 2020.

[6] Friends of the Global Fund Europe. 18 December 2014. "Global Fund Approves Emergency TB Funding for Syrian Refugees". [<http://www.afmeurope.org/fr/global-fund-approves-emergency-tb-funding-for-syrian-refugees/>]. Accessed 23 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 no publicly available evidence that Syria provided other countries with financing or technical support to improve capacity to address epidemic threats; however, there is evidence that Syria has requested financing or technical support from donors to improve domestic capacity to address epidemic threats. The Georgetown Infectious Disease Atlas (GIDA) Global Health Security Tracking dashboard states that Syria between the years 2014 and 2020 has received funds, which are being utilized for building capacities including immunization, tuberculosis detection and combatting antimicrobial resistance. [1]

There is no indication that Syria has supported other countries to improve their capacity to address epidemic threats or sought to improve its own domestic capacity through the Ministry of Health, Ministry of Foreign Affairs and Expatriates, or the World Health Organisation (WHO) country page for the Syrian Arab Republic. [2, 3, 4] According to the WHO country page, some countries including Japan have donated funding and equipment for Syrian emergency healthcare needs, but this has always been through the WHO as an intermediary and not the Syrian government directly. [4]

[1] Global Health Security Funding Tracker. [<https://tracking.ghscosting.org/#/data>]. Accessed 23 December 2020.

[2] Syrian Ministry of Foreign Affairs and Expatriates. [<http://www.mofa.gov.sy/>]. Accessed 23 December 2020.

[3] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[4] World Health Organisation (WHO) Regional Office for the Eastern Mediterranean. "Syrian Arab Republic". [<http://www.emro.who.int/countries/syr/index.html>]. Accessed 23 December 2020.

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: 0

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 information about a plan or policy for sharing genetic data, epidemiological data, clinical specimens, or other biological materials with other organisations and countries beyond influenza in Syria.

There is no information regarding a sharing policy or commitment through the Ministry of Health, Ministry of Agriculture and Agrarian Reform, the Centre for Strategic Health Studies, the Parliament of the Syrian Arab Republic's Legal Database, or in relevant studies and media reporting. [1, 2, 3, 4] According to the Syrian e-Gov Web Portal, there is no Ministry of Research in Syria. [5]

[1] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[2] Syrian Ministry of Agriculture and Agrarian Reform. [<http://moaar.gov.sy/main/>]. Accessed 23 December 2020.

[3] Centre for Strategic Health Studies. [<http://cshs.moh.gov.sy/>]. Accessed 23 December 2020.

[4] Parliament of the Syrian Arab Republic. "Legal Database". [<http://parliament.gov.sy/arabic/index.php?node=206>]. Accessed 23 December 2020.

[5] Syrian e-Gov Web Portal. "Ministries". [<http://portal.egov.sy/page/en/178/0/Ministries.html>]. Accessed 23 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 publicly available evidence that Syria has not shared samples in accordance with the pandemic influenza preparedness (PIP) Framework in the past two years.

There is no indication through World Health Organisation (WHO) media coverage, the Ministry of Health, or other local or international media coverage that Syria has failed to share samples in accordance with the PIP Framework within the past two years. [1, 2]

In 2016, Syrian physicians and health officials participated in PIP training in London, but there is no other indication of noncompliance with the PIP framework. [3]

[1] World Health Organisation (WHO). Pandemic Influenza Preparedness Framework: Partnership Contribution Implementation Portal. Regional Office for the Eastern Mediterranean (EMRO). [<https://extranet.who.int/pip-pc-implementation/ro-em.aspx>]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[3] Imperial College London. WHO Collaborating Centre: Public Health Education & Training. 26 April 2016. "Training on Leadership in Epidemic and Pandemic Preparedness and Response under the PIP Framework".

[<http://www.imperialwhocc.org/2016/04/26/training-on-leadership-in-epidemic-and-pandemic-preparedness-and-response-under-the-pip-framework/>]. Accessed 23 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 Syria has not shared pandemic pathogen samples, including COVID-19 samples, during an outbreak in the past two years.

There is no evidence through the World Health Organisation (WHO) country page for Syria, the Ministry of Health, or local and international media coverage that Syria has failed to share pathogen samples during an outbreak. [1, 2]

Additionally, there is no evidence of a notifiable outbreak in Syria within the past two years through the WHO Disease Outbreak News (DONs). [3]

[1] World Health Organisation (WHO). Regional Office for the Eastern Mediterranean. "Syrian Arab Republic: News". [<http://www.emro.who.int/syr/syria-news/>]. Accessed 23 December 2020.

[2] Syrian Ministry of Health. [<http://www.moh.gov.sy/Default.aspx?tabid=246&language=en-US>]. Accessed 23 December 2020.

[3] World Health Organisation (WHO). "Emergency preparedness, response: Syrian Arab Republic".
[<https://www.who.int/csr/don/archive/country/syr/en/>]. Accessed 23 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: 0

2020

Economist Intelligence

6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 0

2020

Economist Intelligence

6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 0

2020

Economist Intelligence

6.1.1d

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 0

2020

Economist Intelligence

6.1.1e

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 14

2020

Transparency International

6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 0

2020

Economist Intelligence

6.1.1g

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 0

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: 0

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: 0

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: 0

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: 0

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: 0

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: 0

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: 0

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: 54.8

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: 0.45

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: 0.2

2004

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 the International Labour Organization policy brief 8, published in 2010, Syria's share of employment in the informal sector is 30 per cent. [1]

[1] International Labour Organization. 2010. "Policy Brief 8 - Gender, Employment and the Informal Economy in Syria." [https://www.ilo.org/gender/Informationresources/WCMS_144219/lang--en/index.htm]. Accessed 23 December 2020.

6.2.3c

Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

Current Year Score: 1

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: 0

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: 0

2021

Economist Intelligence Democracy Index

6.2.6 Inequality

6.2.6a

Gini coefficient

Scored 0-1, where 0=best

Current Year Score: 0.38

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: 1

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: 0

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: 0

2021

Economist Intelligence

6.4 ENVIRONMENTAL RISKS

6.4.1 Urbanization

6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 54.82

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: 0.23

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: 0

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: 71.78

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: 633.5

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 4.69

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 21.05

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 27.8

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: 97.22

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 91.22

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: -

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: 1

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: 1

2018

Wellcome Trust Global Monitor 2018