

Chad

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

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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 Chad has a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens. According to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have a national AMR plan; however, it is one of the priority actions to conduct. (1) Moreover, Chad is not listed in the WHO Library of national action plans as having an AMR plan. (2) According to the newest report available of 2018 on "Global Progress on AMR" by the World Health Organization (WHO), Chad is currently developing a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens. (3) However, according to the website of the WHO, "Global Database for Antimicrobial Resistance Country Self Assessment", Chad has a National AMR action plan approved by government that reflects Global Action Plan objectives, with an operational plan and monitoring arrangements. (4) There is no evidence of such a plan in the Ministry of Public Health, in the Ministry of Agriculture or in the reference facility, the National General Hospital of N'Djamena. (5,6,7) Finally, according to the Prevent Epidemics website, Chad has important improvements to make concerning AMR. (8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

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

[3] World Health Organization (WHO) & Food and Agriculture Organization of the United Nations (FAO). 2018. "Monitoring Global Progress on Addressing Antimicrobial Resistance". [<http://www.fao.org/3/ca0486en/CA0486EN.pdf>]. Accessed July 2020.

[4] World Health Organization (WHO). "Global Database for Antimicrobial Resistance Country Self Assessment". [<https://amrcountryprogress.org/>]. Accessed July 2020

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[7] The National Reference General Hospital- L'hôpital général de référence nationale. [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] Prevent Epidemics. "Chad". [<https://preventepidemics.org/fr/countries/tcd-fr/?page=data#country-strengths-gaps>]. Accessed July 2020

1.1.1b

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

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

Current Year Score: 1

There is publicly available evidence that Chad can test for priority AMR pathogens such as mycobacterium tuberculosis, Salmonella spp., Shigella spp, E. coli and S. pneumonia. Nevertheless, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have a system of sentinel sites in place. (1) Indeed, there is publicly available evidence that Chad can test for mycobacterium tuberculosis, Salmonella spp., E. coli and Shigella spp at the National General Hospital of N'Djamena (1,2). There is also evidence that the S. pneumonia is tested in the National General Hospital of N'Djamena. (3) Nevertheless, evidence that Chad can test for K. pneumonia, S. aureus and N. gonorrhoea, could not be found in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (4,5)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ndoutamia, G. 2014. "Resistance profile of etiological agents of isolated diarrhea in Chad (Profil de résistance des agents étiologiques des diarrhées isolés au Tchad)". [<https://www.ajol.info/index.php/ijbcs/article/view/116645>]. Accessed July 2020.

[3] Tropical Medicine and International Health. 2017. "Four years of case-based surveillance of meningitis following the introduction of MenAfriVac in Moissala, Chad: lessons learned".

[<https://onlinelibrary.wiley.com/doi/epdf/10.1111/tmi.12987>]. Accessed July 2020.

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 government conducts detection or surveillance activities (e.g. in soil, waterways, etc.) for antimicrobial residues or AMR organisms. According to the website of the World Health Organization (WHO), "Global Database for Antimicrobial Resistance Country Self Assessment", Chad has a National AMR action plan approved by government that reflects Global Action Plan objectives, with an operational plan and monitoring arrangements. (1) However, this plan is not publicly available. Moreover, according to the WHO self-assessment questionnaire, there is no national surveillance system for AMR in animals, plants, food and environment. (1) Finally, there is no further evidence in the Ministry of Public Health or in the WHO Library of National Action Plans. (2,3) The website of the Ministry of Environment is no longer accessible. (4)

[1] World Health Organization (WHO) & Food and Agriculture Organization of the United Nations (FAO). "Global Database for Antimicrobial Resistance Country Self Assessment". [<https://amrcountryprogress.org/>]. Accessed July 2020.

[2] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[3] World Health Organization (WHO). "Library of National Action Plans". [<https://www.who.int/antimicrobial->

resistance/national-action-plans/library/en/]. Accessed July 2020.

[4] Ministry of Environment. [<http://tchadenvironnement.org/>]. Accessed July 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: 1

There is publicly available evidence that Chad has national legislation or regulation in place requiring prescriptions for antibiotic use for humans; however, there is evidence of gaps in enforcement. The Joint External Evaluation for Chad, conducted in 2017, confirms that the country requires prescriptions for antibiotics for humans. (1) Although, it is not explicitly expressed in the law N°024/PR/2000, related to the Pharmacy, there is an implicit reference that Chad requires prescriptions for antibiotics for humans since, according to article 135, those who have received substances classified as narcotics with a fake prescription will be sanctioned. (2) There is a National Order of Pharmacists of Chad ; however, it does not have its own website and a list of antibiotics requiring prescriptions could no be found. The article 34 of the law N°034 stipulates that an order of the Minister of Health defines the medical prescription and the conditions of its validity. (2) This order could not be found in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (3,4) However, in practice, the antibiotic market is not managed properly, with a major sale of illegal antibiotics. (5)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] WIPO. 2000. "LOI N°024/PR/2000, relative à la Pharmacie". [<https://www.wipo.int/edocs/lexdocs/laws/fr/td/td006fr.pdf>]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital général de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] World Health Organization (WHO). "Pharmaceutical Profile of Chad".

[<https://www.who.int/medicines/areas/coordination/Chad.pdf?ua=1>]. Accessed July 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: 1

There is publicly available evidence that Chad has national legislation or regulation in place requiring prescriptions for antibiotic use for animals; however, there is evidence of gaps in enforcement. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad requires prescriptions for antibiotics for animals. (1) Moreover, according to the law N°024/PR/2000 related to the Pharmacy, the article 123 stipulates that all antibiotics for animals require prescriptions. (2) However, according to the OIE PVS Assessment of 2019, in practice, the antibiotic market for animals is not managed properly. (3)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".
[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.
- [2] WIPO. 2000. "LOI N°024/PR/2000, relative a la Pharmacie". [<https://www.wipo.int/edocs/lexdocs/laws/fr/td/td006fr.pdf>]. Accessed July 2020.
- [3] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".
[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

1.2 ZOO NOTIC 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 that Chad has a national law, plan, or equivalent strategy document, on zoonotic disease. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad has a surveillance system in place for rabies, animal tuberculosis and Highly Pathogenic Avian Influenza (HPAI). The system is called the Animal disease epidemiological surveillance network (REPIMAT). (1) However, according to the OIE PVS Assessment of 2019, the REPIMAT is barely functioning due to financial limitations. (2) It also has a regulatory framework for the management of contagious animal diseases, which defines the disease to be mandatory declared (Law 04-009 2004-05-19 PR). It provides general guidelines to deal with infected animals, the isolation procedure, reporting and diagnosis of the existence of a legally recognized contagious disease. Nevertheless, it only deals with animal diseases not specifically transmitted from animals to humans. (3) The OIE PVS assessment also identifies an "Animal disease surveillance plan in Chad" from 2018, however, this plan could not be found in the Ministry of Agriculture, in the Ministry of Public Health and in the Ministry of Livestock. (4,5,6) There is a Ministry of Environment but the website was not accessible at the time of the research (July 2020). The Joint External Evaluation listed a contingency plan for Highly Pathogenic Avian Influenza, which could not be found. (1) There is no further evidence of a national law, plan, or equivalent strategy document, on zoonotic disease in the OIE PVS Gap analysis and in the National Development Plan for livestock (2009-2016). (7,8) Finally, in a workshop conducted between Chad, the World Health Organization (WHO) and the OIE, the need to elaborate a consistent strategic zoonotic plan is listed as one of the objectives. (9)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".
[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.
- [2] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".
[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.
- [3] Law 04-009 2004-05-19 PR. "Law organizing sanitary police and collective prophylaxis diseases considered legally contagious animals on the territory of the Republic of Chad (Loi organisant la police sanitaire et la prophylaxie collective des maladies réputées légalement contagieuses des animaux sur le territoire de la république du Tchad)".
[http://www.vertic.org/media/National%20Legislation/Chad/TD_Loi_Police_Sanitaire.pdf]. Accessed July 2020.
- [4] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] Ministry of Livestock. [https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du-Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRt4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 2020

[7] OIE. 2017. "OIE PVS Gap analysis".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/20171212_Gap_report_final.pdf]. Accessed July 2020.

[8] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[9] World Organisation for Animal Health (OIE) and World Health Organization (WHO). October 2018. "National Workshop RSI-PVS". [<https://extranet.who.int/sph/sites/default/files/NBW%20Tchad-Final-report.pdf>]. Accessed July 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 that Chad has a 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.

According to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have a cartography for risk identification. In addition, data produced by the Animal disease epidemiological surveillance network (REPIMAT) is only shared between the Ministry of Health and the Ministry of Livestock and Animal Production in case of an epidemic. There is also a decree N. 2126 of June 28, 2016 devoted to the collaboration between the animal and human health and wildlife sectors in the edge of a zoonose. However, this decree is not publicly available. (1) Chad has an ordinance N. 19 which makes compulsory the vaccination against the rinderpest for cattle; it includes some measures to contain zoonotic disease spillover, such as isolating animals that may be infected or prohibiting their transport to another place (article 2), however, no reference is made concerning the contagion from animals to humans. (2) Finally, there is a National Committee to fight animal diseases deemed contagious. (3) However, there is no evidence that this committee has introduced measures to reduce zoonotic disease spillover.

No further evidence could be found in the Ministry of Agriculture, in the Ministry of Public Health, in the Facebook page of the Ministry of Livestock (it does not have an official website) or in the OIE PVS Assessment of 2019. (4,5,6,7) There is a Ministry of Environment but the website was not accessible at the time of the research (July 2020).

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ordinance N°19. 1960. "Organizing the sanitary policy in the matter of contagious diseases of the cattle and making compulsory the vaccination against the rinderpest in the territory" (Ordonnance N° 19 organisant la police sanitaire en matière de maladies contagieuses du bétail et rendant obligatoire la vaccination contre la peste bovine sur toute la superficie du territoire de la République du Tchad). [<http://extwprlegs1.fao.org/docs/pdf/cha4440.pdf>]. Accessed July 2020.

[3] Decree 05-1009 2005-05-06 PM. 2005. "Related to the composition, powers and functioning of the National Committee

National Committee to fight against animal diseases deemed contagious" (Arrêté;1009/PM/05 du 6 mai 2005, portant composition, attributions et fonctionnement du Comité National de lutte contre les maladies réputées légalement contagieuses des animaux) [<http://extwprlegs1.fao.org/docs/pdf/cha141416.pdf>]. Accessed July 2020.

[4] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] Ministry of Livestock. [https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du-Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRt4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 2020

[7] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 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 that Chad has national plans, guidelines, or laws that account for the surveillance and control of multiple zoonotic pathogens of public health concern. Chad has an ordinance n°19 "Organizing the sanitary police in the matter of contagious diseases of the cattle and making compulsory the vaccination against the rinderpest in the territory" from 1960; there is no evidence that this ordinance has been derogated or is no longer valid. This ordinance renders mandatory to declare, isolate and present to the authorities, cattle suspected of having contracted a contagious disease that is mandatory to report; among them, animal tuberculosis; anthrax; contagious caprine pneumonia; avian influenza; rift valley fever; pest of small ruminants. Failure to declare it is liable to a fine and / or imprisonment. However, this ordinance is related to surveillance and prevention for cattle but does not deal with control. (1) There is no evidence of a more recent law in the OIE PVS assessment of 2019, which compiles all the laws and strategies concerning animal health in the country. This same report identifies an "Animal disease surveillance plan in Chad" from 2018, however, this plan could not be found in the Ministry of Agriculture, in the Ministry of Public Health and in the Ministry of Livestock. (2,3,4,5) There is a Ministry of Environment but the website was not accessible at the time of the research (July 2020). The OIE PVS assessment also states in the chapter "Prevention, control and eradication of diseases" (p 99), that there are some control or eradication programs for certain diseases, in certain geographic areas or in certain populations; they are mostly vaccination campaigns. However, the objectives are rarely achieved. (2) The Joint External Evaluation for Chad, conducted in 2017 lists a contingency plan for Highly Pathogenic Avian Influenza, which could not be found, as well as the existence of a surveillance system in place for rabies, animal tuberculosis and Highly Pathogenic Avian Influenza (HPAI). (6)

[1] Ordinance N°19. 1960. "Organizing the sanitary police in the matter of contagious diseases of the cattle and making compulsory the vaccination against the rinderpest in the territory (Ordonnance N° 19 organisant la police sanitaire en matière de maladies contagieuses du bétail et rendant obligatoire la vaccination contre la peste bovine sur toute la superficie du territoire de la République du Tchad)il". [<http://extwprlegs1.fao.org/docs/pdf/cha4440.pdf>]. Accessed July 2020.

[2] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[3] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] Ministry of Livestock. [<https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du->

Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRtd4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 2020

[6] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 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 that Chad has a department, agency or similar unit dedicated to zoonotic disease that functions across ministries. According to the OIE PVS Assessment of 2019, there is a monthly meeting between the Ministry of Livestock and other ministries such as Health, Environment and Finance around animal health at the national level. Concerning zoonotic diseases, there is since 2005, a National Committee to fight animal diseases deemed contagious (1); it is presided by the Minister of Livestock and within the members are the Minister of Agriculture, the Director of Veterinary Services, the Minister of Environment and the Minister of Public Health; among others (article 1). It has the mandate to coordinate and supervise emergency health actions following an outbreak of a zoonotic disease; as well as the application of emergency health plans (article 4); the Committee meets at least once a year in ordinary session (article 5). (2) The Joint External Evaluation for Chad, conducted in 2017 recommends the development of a national plan dedicated to zoonotic diseases that includes all sectors related to animal and human health, but also to the environment. (3) Moreover, in the national workshop conducted with the WHO and the OIE, one of the main weakness to address is the disconnected surveillance system. On July 2019, it was projected to launch an intersectoral platform to centralize all health data generated through surveillance as well as create another platform that enables consensus and discussion among sectors. (4) There is no evidence that this has occurred in the Ministry of Public Health and in the Ministry of Livestock. (5,6) There is a Ministry of Environment but the website was not accessible at the time of the research (July 2020).

[1] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[2] Order N°1009 / PM / 05. 2005. "Related to the composition, powers and functioning of the National Committee National Committee to fight against animal diseases deemed contagious (Arrêté; N°1009/PM/05 du 6 mai 2005, portant composition, attributions et fonctionnement du Comita National de lutte contre les maladies réputées légalement contagieuses des animaux) oject". [<http://extwprlegs1.fao.org/docs/pdf/cha141416.pdf>]. Accessed July 2020.

[3] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[4] World Organisation for Animal Health (OIE) and World Health Organization (WHO). October 2018. "National Workshop RSI-PVS". [<https://extranet.who.int/sph/sites/default/files/NBW%20Tchad-Final-report.pdf>]. Accessed July 2020.

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] Ministry of Livestock. [https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du-Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRtd4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 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 that Chad has a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency. Chad has an ordinance N° 19 "Organizing the sanitary police in the matter of contagious diseases of the cattle and making compulsory the vaccination against the rinderpest in the territory" from 1960; there is no evidence that this ordinance has been derogated or is no longer valid. This ordinance renders mandatory to declare any animal suspected of having contracted a contagious disease, such as animal tuberculosis; anthrax; contagious caprine pneumonia; avian influenza; rift valley fever; pest of small ruminants. The declaration has to be directed to the administration of the prefecture or sub-prefecture in the territory in which the disease was identified; there is no evidence that this declaration is compiled into a centralized system. (1) There is no evidence of such a system in the OIE PVS Assessment. (2) Moreover, in the National Plan for Health Development (2018-2022), the absence of a reliable community surveillance system is pointed out. (3) This same weakness is indicated in the Joint External Evaluation for Chad, conducted in 2017. (4) There is no further evidence in the Ministry of Public Health and in the Ministry of Livestock. (5,6)

[1] Ordinance N° 19. 1960. "Organizing the sanitary police in the matter of contagious diseases of the cattle and making compulsory the vaccination against the rinderpest in the territory (Ordonnance N° 19 organisant la police sanitaire en matière de maladies contagieuses du bétail et rendant obligatoire la vaccination contre la peste bovine sur toute la superficie du territoire de la République du Tchad". [<http://extwprlegs1.fao.org/docs/pdf/cha4440.pdf>]. Accessed July 2020.

[2] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment". [https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] Ministry of Livestock. [https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du-Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRtd4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 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 Chad has laws or guidelines that safeguard the confidentiality of information generated through surveillance activities for animals (for owners). Although Chad signed, in 2014, the African Union Convention on Cyber Security and Personal Data Protection (but has not ratified it) and adopted, in 2015, a general data privacy law, no specific mention on surveillance of owned livestock could be found. (1,2) The ordinance N° 19 "Organizing the sanitary police in the matter of contagious diseases of the cattle and making compulsory the vaccination against the rinderpest in the territory" from 1960, that renders mandatory to declare any animal suspected of having contracted a contagious disease (animal tuberculosis; anthrax; contagious caprine pneumonia; avian influenza; rift valley fever; pest of small ruminants) does not mention the necessity to safeguard the confidentiality of information generated through surveillance activities for animals (for owners). (3) There may be in part related to the lack of evidence of a voluntary or mandatory mechanism for disease reporting to the government. No further evidence could be found in the Ministry of Public Health, in the Ministry of Livestock, in the Joint External Evaluation for Chad, conducted in 2017 or in the OIE PVS Assessment (4,5,6,7)

[1] African Union. "African Union Convention on Cyber Security and Personal Data Protection".

[https://au.int/sites/default/files/treaties/29560-treaty-0048_-_african_union_convention_on_cyber_security_and_personal_data_protection_e.pdf]. Accessed July 2020

[2] Republic of Chad. Law No. 007 / PR / 2015 of 10 February 2015. "Organizes personal data protection(Organise la protection des données a caractère personnel)". [https://media2.mofo.com/documents/chad_dp_law.pdf]. Accessed July 2020

[3] Ordinance N° 19. 1960. "Organizing the sanitary police in the matter of contagious diseases of the cattle and making compulsory the vaccination against the rinderpest in the territory (Ordonnance N° 19 organisant la police sanitaire en matière de maladies contagieuses du bétail et rendant obligatoire la vaccination contre la peste bovine sur toute la superficie du territoire de la République du Tchad)". [<http://extwprlegs1.fao.org/docs/pdf/cha4440.pdf>]. Accessed July 2020.

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] Ministry of Livestock. [https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du-Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRtd4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 2020

[6] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[7] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 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 Chad conducts surveillance of zoonotic disease in wildlife (e.g. wild animals, insects, other disease vectors, etc.). Indeed, according to the OIE PVS Gap Analysis, the National Plan for Health Development (2018-2022) and the Joint External Evaluation for Chad, conducted in 2017, Chad has limited capacity to conduct epidemiological surveillance in livestock. There is no mention of surveillance conducted in wildlife. (1,2,3) In addition, the OIE PVS Assessment mentions the necessity to formalize protocols with the Ministry of the Environment to establish an active surveillance on wild species. However, there is evidence of limited surveillance of migratory birds in wetlands to detect avian influenza. (4) No further evidence concerning the surveillance of zoonotic disease in wildlife could be found in the Ministry of

Public Health and in the Facebook page of the Ministry of Livestock (it does not have an official website) (5,6)

[1] OIE. 2017. "OIE PVS Gap analysis".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/20171212_Gap_report_final.pdf]. Accessed July 2020.

[2] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[3] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[4] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] Ministry of Livestock. [https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du-Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRtd4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 2020

1.2.3 International reporting of animal disease outbreaks

1.2.3a

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

Yes = 1 , No = 0

Current Year Score: 0

2019

OIE WAHIS database

1.2.4 Animal health workforce

1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: 1.71

2018

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: 3.74

2018

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 Chad has a national plan on zoonotic disease or other legislation, regulation or plan that includes mechanisms for working with the private sector in controlling or responding to zoonoses. Tasks of surveillance, prevention and intervention to control zoonoses are managed by the veterinary services (VS) and there is no evidence of MoUs, established partnerships or other plans to include private sector involvement in disease control or response in the Joint External Evaluation for Chad, conducted in 2017, the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022), the Ministry of Public Health, the Ministry of Livestock and the reference facility, the National General Hospital of N'Djamena. (1,2,3,4,5,6) However, according to the OIE PVS Assessment, the VS have the capacity to assign a mandate to private veterinarians for collective prophylaxis and epidemiological surveillance operations. This mechanism is defined in the Order No. 021 / MEHP / 93 of October 14, 1993, which sets the conditions for granting health mandates to private veterinarians. That is, define the area of intervention, the activities to conduct and the obligations to the government (7) However, this mandate does not extend to the fight against zoonoses (page 77). (8) The official document is not publicly available.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_compresse_fr.pdf]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] Ministry of Livestock. [https://www.facebook.com/Minist%C3%A8re-de-L%C3%A9levage-de-la-R%C3%A9publique-du-Tchad-122212858335312/?hc_ref=ARR5AmN9MY22i4f4_ccP50iD2fts-7JDzK-yEiPw_P-rawVjiAXRRtd4LT-0Hfzt3hc&fref=nf&__tn__=kC-R]. Accessed July 2020

[6] The National Reference General Hospital- L'hôpital général de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[7] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[8] World Organisation for Animal Health (OIE). July 2016. "Veterinary legislation support program (Programme d'appui à la législation vétérinaire)".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20160314_FinalReport_VLSPIdentification_Tchad.pdf]. Accessed July 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 that Chad has in place a record, updated within the past 5 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. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, such a record is not in place. (1) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance or in the Ministry of Higher Education, Research and Innovation. (2,3,4,5,6) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member. (7) Finally, there is no further evidence in the VERTIC database. (8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[7] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 2020.

[8] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed July 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 evidence that Chad has in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have any legislation related to biosecurity. Moreover, the elaboration of this legislation is listed as a number one priority. (1) There is no further evidence of such a legislation in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database . (2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[7] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>].

Accessed August 2020.

[8] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 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 publicly available evidence that Chad has an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations since there is no biosecurity legislation to be enforced. There is no evidence in the Joint External Evaluation for Chad, conducted in 2017, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database . (1,2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[7] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed August 2020.

[8] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 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 publicly available evidence that Chad has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. There is no such evidence in the Joint External Evaluation for Chad, conducted in 2017, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database . (1,2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[7] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed August 2020.

[8] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 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 that Chad has in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen. According to the Joint External Evaluation for Chad, conducted in 2017, "most laboratories use rapid diagnostic methods, avoiding the prior culture of pathogens" .(1) Nevertheless, there is no evidence in the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022) and the Emergency Plan of Action for Ebola Virus Disease Preparedness, that Chad can conduct tests for anthrax and/or Ebola. (2,3,4) Moreover, in a scientific paper investigating anthrax in Chad, samples were sent to the Swiss Reference Centre in Bern, Switzerland to conduct Polymerase Chain Reaction (PCR)-based diagnostic

testing for anthrax. (5) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (6,7,8,9)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[5] Maho, A. et al. 2006. "Antibiotic Susceptibility and Molecular Diversity of Bacillus anthracis Strains in Chad: Detection of a New Phylogenetic Subgroup". [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1594716/>]. Accessed July 2020.

[6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[9] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 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 no publicly available evidence that Chad requires 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. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have any biosecurity training, such as through a common curriculum or a train-the-trainer program, for personnel working with especially dangerous pathogens. (1) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena, in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database. (2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member. (8) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. This document outlines that training will be conducted for health agents that are in contact with suspected cases (parents, nursing staff, stretcher bearers, ambulance attendants, etc.); and for

laboratory staff on the collection, processing, packaging and storage of samples in compliance with biosecurity measures at national, provincial and district levels. However, there is no mention of a standardized approach. (9)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.
- [2] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020
- [3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020
- [4] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020
- [5] Ministry of Territorial Administration, Public Safety and Local Governance. [https://interieur.gouv.td/]. Accessed July 2020
- [6] Ministry of Higher Education, Research and Innovation. [http://www.mesr.gouv.sn/tag/tchad/]. Accessed July 2020
- [7] VERTIC. "Chad". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/]. Accessed August 2020.
- [8] Confidence Building Measures. [https://bwc-ecbm.unog.ch/]. Accessed July 2020.
- [9] Ministry of Public Health. March 2020. Ç National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte l'épidémie de la maladie du coronavirus Covid-19). [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 there are regulations or licensing conditions specifying that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks. There is no such evidence in the Joint External Evaluation for Chad, conducted in 2017, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database . (1,2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(8) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. However, there is no evidence of such regulations. (9)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.
- [2] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020
- [3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

- [4] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020
- [5] Ministry of Territorial Administration, Public Safety and Local Governance. [https://interieur.gouv.td/]. Accessed July 2020
- [6] Ministry of Higher Education, Research and Innovation. [http://www.mesr.gouv.sn/tag/tchad/]. Accessed July 2020
- [7] VERTIC. "Chad". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/]. Accessed August 2020.
- [8] Confidence Building Measures. [https://bwc-ecbm.unog.ch/]. Accessed July 2020.
- [9] Ministry of Public Health. March 2020. Ç National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie du coronavirus Covid-19) [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 evidence that Chad has national regulations on the safe and secure transport of infectious substances (Categories A and B). Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have any strategy in place for the transport of biological samples, although some health agents (20) have received a certified training on the safe and secure transport of infectious substances. (1) There is no further evidence in the scientific paper that studies anthrax samples which had to be transported to Switzerland to be analysed, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance . (2,3,4,5,6) Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member.(7) Finally, there is no further evidence in the VERTIC database. (8) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. One of the activities mentioned is the development of an efficient system for the transport of samples to national reference laboratories and collaborating centers. However, no further information of this system was available. (9)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.
- [2] Maho, A. et al. 2006. "Antibiotic Susceptibility and Molecular Diversity of Bacillus anthracis Strains in Chad: Detection of a New Phylogenetic Subgroup". [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1594716/]. Accessed July 2020.
- [3] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020
- [4] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020
- [5] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020
- [6] Ministry of Territorial Administration, Public Safety and Local Governance. [https://interieur.gouv.td/]. Accessed July 2020
- [7] Confidence Building Measures. [https://bwc-ecbm.unog.ch/]. Accessed July 2020.
- [8] VERTIC. "Chad". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/]. Accessed July 2020.

[9] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie du coronavirus Covid-19) [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 no publicly available evidence that Chad has national legislation, regulation, or other guidance in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins and pathogens with pandemic potential. Indeed, although there is evidence that the RAT 18 Air Navigation Dangerous Goods Regulation oversees the secure transport of disease samples and gives details on the appropriate package to be used and the responsibilities of the sender, there is no evidence of end-user screening. In this document, infectious samples are listed as dangerous material and must follow a set of technical instructions. (1) This National Civil Aviation Authority follows certain technical instructions that are established by the International Civil Aviation Organization; however, there is no mention of cross-border transfer and end-user screening. (1) The working note issued during the Group of Experts on Dangerous Goods (DGP) Twenty-First meeting, published by the International Civil Aviation Organization, refers to the technical instructions for dangerous materials and restricts certain exports/imports from the country such as liquids that emit toxic vapours; explosives, as well as some infectious diseases or chemical weapons. No further specifications could be found, nevertheless, these materials, to be transported, require prior approval of the government. (2) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena, in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation, in the Ministry of Trade and Industry (the Facebook page of the Ministry, since the official website was not working during the period consulted) or in the VERTIC Database. (3,4,5,6,7,8,9) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member. (10)

[1] Republic of Chad. 2014. "RAT 18 Air Navigation Dangerous Goods Regulation". [http://adac-tchad.org/wp-content/uploads/2015/05/RAT-18-Marchandises-dangereuses.pdf]. Accessed July 2020

[2] International Civil Aviation Organization. "Group of experts on dangerous goods (DGP) Twenty-First meeting (Groupe d'experts sur les marchandises dangereuses (DGP) Vingt et Unième réunion)" [https://www.icao.int/safety/DangerousGoods/DGP%2021%20Working%20Papers/DGP.21.WP.007.2.fr.pdf]. Accessed July 2020.

[3] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020

[4] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

[5] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020

[6] Ministry of Territorial Administration, Public Safety and Local Governance. [https://interieur.gouv.td/]. Accessed July 2020

[7] Ministry of Higher Education, Research and Innovation. [http://www.mesr.gouv.sn/tag/tchad/]. Accessed July 2020

[8] Ministry of trade and industry (Ministère du Commerce et de l'industrie). [https://fr-fr.facebook.com/mcitchad/]. Accessed July 2020.

[9] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed August 2020.

[10] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 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 Chad has in place national biosafety legislation and/or regulations. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have any legislation related to biosafety. (1) There is no further evidence of such a legislation in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database . (2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(8) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. This document outlines that training will be conducted for health agents that are in contact with suspected cases (parents, nursing staff, stretcher bearers, ambulance attendants, etc.); and for laboratory staff on the collection, processing, packaging and storage of samples in compliance with biosecurity measures at national, provincial and district levels. However, there is no mention of any national biosafety legislation and/or regulations (9)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[7] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed August 2020.

[8] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 2020.

[9] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19) ". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 Chad has an established agency (or agencies) responsible for the enforcement of biosafety legislation and regulations since there is no biosafety legislation to be enforced. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have any legislation related to biosafety. (1) There is no further evidence of such a legislation in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database . (2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[7] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>].

Accessed August 2020.

[8] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 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 Chad requires 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. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have any biosafety training, such as through a common curriculum or a train-the-trainer program, for personnel working with especially dangerous pathogens. (1) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance, in the Ministry of Higher Education, Research and Innovation or in the VERTIC Database . (2,3,4,5,6,7) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(8)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.
- [2] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020
- [3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020
- [4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020
- [5] Ministry of Territorial Administration, Public Safety and Local Governance. [https://interieur.gouv.td/]. Accessed July 2020
- [6] Ministry of Higher Education, Research and Innovation. [http://www.mesr.gouv.sn/tag/tchad/]. Accessed July 2020
- [7] VERTIC. "Chad". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/]. Accessed August 2020.
- [8] Confidence Building Measures. [https://bwc-ecbm.unog.ch/]. Accessed July 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 Chad 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. There is no such evidence in the Joint External Evaluation for Chad, conducted in 2017, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance or in the Ministry of Higher Education, Research and Innovation. (1,2,3,4,5,6) Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member. (7) Finally, there is no further evidence in the VERTIC database. (8)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.
- [2] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020
- [3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020
- [4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020
- [5] Ministry of Territorial Administration, Public Safety and Local Governance. [https://interieur.gouv.td/]. Accessed July 2020
- [6] Ministry of Higher Education, Research and Innovation. [http://www.mesr.gouv.sn/tag/tchad/]. Accessed July 2020
- [7] Confidence Building Measures. [https://bwc-ecbm.unog.ch/]. Accessed July 2020.
- [8] VERTIC. "Chad". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/]. Accessed July 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 that Chad has a national policy requiring oversight of dual use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential. There is no such evidence in the Joint External Evaluation for Chad, conducted in 2017, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance or in the Ministry of Higher Education, Research and Innovation. (1,2,3,4,5,6) Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member. (7) Finally, there is no further evidence in the VERTIC database. (8)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.
- [2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020
- [3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020
- [4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020
- [5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020
- [6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020
- [7] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 2020.
- [8] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed July 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 that Chad has an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual use research. There is no such evidence in the Joint External Evaluation for Chad, conducted in 2017, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance or in the Ministry of Higher Education, Research and Innovation. (1,2,3,4,5,6) Finally, Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(7) Finally, there is no further evidence in the VERTIC database. (8)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.
- [2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

- [3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020
- [4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020
- [5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020
- [6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020
- [7] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 2020.
- [8] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed July 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 publicly available evidence that Chad has national legislation, regulation, policy, or other guidance, requiring the screening of synthesized DNA before it is sold. There is no such evidence in the Joint External Evaluation for Chad, conducted in 2017, in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena , in the Ministry of Territorial Administration, Public Safety and Local Governance or in the Ministry of Higher Education, Research and Innovation. (1,2,3,4,5,6) Chad has not submitted any confidence building measures report, which is a reporting mechanism set by the Biological Weapons Convention, since it is not a state member .(7) Finally, there is no further evidence in the VERTIC database. (8)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.
- [2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020
- [3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020
- [4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020
- [5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020
- [6] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020
- [7] Confidence Building Measures. [<https://bwc-ecbm.unog.ch/>]. Accessed July 2020.
- [8] VERTIC. "Chad". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/c/>]. Accessed July 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 insufficient publicly available evidence that the national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests. Moreover, according to the Joint External Evaluation for Chad, conducted in 2017, the national laboratory system is able to conduct most of the common pathologies, nevertheless a plan needs to be developed to have the capacity to perform more tests in the country. (1) There is no publicly available evidence that Chad has defined the four country-specific tests. There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (2,3,4)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).
[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 insufficient publicly available evidence of a plan, strategy or similar document for conducting testing during a public health emergency that includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing.

According to the Joint External Evaluation for Chad, conducted in 2017, Chad has a contingency plan for Highly Pathogenic Avian Influenza, which could not be found. (1) Chad also published in 2020, through the Ministry of Public Health, a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. The strategic axes are (i) strengthening the coordination, planning and management of the response; (ii) strengthening case detection, both at the borders and within the country; (iii) strengthening surveillance; (iv) implement various public health measures to limit the spread of the disease; (v) strengthening the response capacities of the health system, particularly in infection prevention and control and in the care of the sick. Coronavirus tests will be conducted using sentinel sites. However, there is no evidence that this plan can be used for multiple disease outbreaks. Also, there is no evidence of a specific testing strategy such as testing goals or roles and responsibilities. (2)

There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (3,4,5)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".
[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[3] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).
[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 the national laboratory that serves as a reference facility is accredited. Indeed, there is no evidence that the National General Hospital of N'Djamena is accredited in the Joint External Evaluation for Chad, conducted in 2017, in the National Development Plan for livestock (2009-2016) or in the National Plan for Health Development (2018-2022). (1,2,3) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (4,5,6)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

2.1.2b

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that the national laboratory that serves as a reference facility is subjected to external quality assurance review. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, the reference facility, the National General Hospital of N'Djamena, receives external quality assurance review from the South Africa National Institute for Communicable Diseases (NICD). (1) There is no further information about such quality assurance review in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (2,3)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[3] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 insufficient evidence to confirm that Chad has a specimen transport system. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, transport systems are in place, private (through DHL for instance) and public, however, it is not mentioned that these systems are nationwide along with the fact there does not exist a specimen transport strategy. (1) No further information about these public and private transport systems could be found in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the DHL Express Chad. (2,3,4,5) Moreover, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible], the need to ensure optimal specimen transport to the reference facility, as well as to accelerate the delivery time, through efficient private transport system, is listed as a main priority. Nevertheless, no further evidence could be found. (6) No further evidence could be found in the Pharmaceutical Profile of Chad, in the National Plan for Health Development (2018-2022) or in the Emergency Plan of Action for Ebola Virus Disease Preparedness. (7,8,9) Finally, it seems that in case of an emergency, the specimen transport system is reinforced and completed by international organizations or foundations. Indeed, in 2014, during the Ebola epidemics, the Mériex Foundation, through the RESAOLAB (West African Network of Biological Analysis Laboratories) offered a free specimen transport system to Chad, through mobile laboratories, which could be transported by car, plane or helicopter to facilities that conduct Ebola tests. (10) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. One of the activities mentioned is the development of an efficient system for the transport of samples to national reference laboratories and collaborating centers. However, no further information on this system is available. (11)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] DHL. "DHL Express Chad". [http://www.dhl.com/en/td/country_profile.html]. Accessed July 2020

[6] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[7] World Health Organization (WHO). "Pharmaceutical Profile of Chad".

[<https://www.who.int/medicines/areas/coordination/Chad.pdf?ua=1>]. Accessed July 2020.

[8] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[9] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[10] Mériex Foundation. September 2017. "50 years of the Mériex Foundation". [<https://www.fondation-merieux.org/wp->

content/uploads/2017/09/50-ans-fondation-merieux-projets.pdf]. Accessed July 2020.

[11] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 Chad has a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak.

The National Technical Committee for Epidemics Control is in charge of developing, regularly, a contingency plan to enable the mobilization of the necessary resources for the response to recurrent epidemics. However, there is no evidence that this Committee has issued such a plan. Additionally, according to the National Plan for Health Development (2018-2022), Chad does not have a strategy for a large-scale emergency response. (1) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. To supplement the capacity of the national public health laboratory system, a mobile laboratory has been implemented with the support of the World Health Organization (WHO). This plan also identifies as a priority, the need to reinforce the capacities of the national public health laboratory. However, there is no mention of a plan to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak. (2) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (3,4,5)

[1] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [https://untobaccocontrol.org/impldb/wp-content/uploads/chad_2018_annex-1_national_health_development_plan_2017-2021.pdf]. Accessed July 2020.

[2] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[3] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020

[4] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

[5] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 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 Chad is conducting ongoing event-based surveillance and analysis for infectious disease. According to the OIE PVS Assessment and the Master plan for neglected tropical diseases (MTN) 2016-2020, Chad conducts passive and active surveillance, nevertheless, there are no references to surveillance that looks at reports, rumours, etc. that might indicate that event-based surveillance is being conducted in Chad. (1,2) No further evidence could be found in the National Development Plan for livestock (2009-2016) and the National Plan for Health Development (2018-2022). (3,4) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena, in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] or in the Joint External Evaluation for Chad, conducted in 2017. (5,6,7,8,9,10) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. There is no evidence of ongoing event-based surveillance being conducted. (11) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[2] Ministry of Public Health. "Master plan for neglected tropical diseases (MTN) 2016-2020 (Plan directeur de lutte contre les maladies tropicales négligées (MTN) 2016-2020)"

[http://espen.afro.who.int/system/files/content/resources/CHAD_NTD_Master_Plan_2016_2020.pdf]. Accessed July 2020.

[3] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[5] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[9] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[10] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[11] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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: 1

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

From July through 20 September 2020, a total of 27 540 cases were reported. After a few hours of treatment in a health facility, patients continue with outpatient treatment. The most affected age group are those aged 15 years and over. More than three-quarters of cases developed a high fever, headache, and joint pain, while one-third developed maculopapular rashes. In July 2020 health authorities were alerted to the occurrence of a disease-causing high fever, headache, intense and disabling joint pain, and sometimes associated with vomiting. It was eventually determined to be the chikungunya virus once it was confirmed in a 63-year-old female farmer. She had no reported travel outside of Abéché district. A total of 13 samples from Abéché district, Ouaddai Province, were sent for analysis at the N'Djamena mobile laboratory on 12 August 2020 and 11 samples tested positive for chikungunya virus. The test results were corroborated by the Pasteur laboratory in Yaoundé, Cameroon (a WHO reference laboratory), with five samples sent for quality control found positive for chikungunya virus by reverse transcriptase-polymerase chain reaction (RT-PCR). The samples were also tested for other arboviruses (dengue and Zika), but not for the O'nyong-nyong virus or the yellow fever virus. [1]

Additionally, in a press release issued by the WHO, the Ministry of Public Health announced a measles epidemic on May, 2018. [2] However, there is no reference to the measles outbreak on the WHO Disease Outbreak News website. [3] There is also no evidence that Chad reported covid-19 as an epidemic to the WHO. [4]

[1] World Health Organization (WHO). 24 September 2020. "Chikungunya – Chad". [<https://www.who.int/csr/don/24-september-2020-chikungunya-chad/en/>]. Accessed June 2021.

[2] World Health Organization (WHO). "Chad vaccinates against meningitis A and at the same time responds to a measles epidemic (Le Tchad vaccine contre la méningite A et riposte en même temps contre une épidémie de rougeole)" [<https://afro.who.int/node/10593>]. Accessed July 2020.

[3] World Health Organization (WHO). "Emergencies preparedness, response: Chad". [<https://www.who.int/csr/don/archive/country/tcd/en/>]. Accessed July 2020.

[4] World Health Organization (WHO). "Chad". [<https://www.who.int/countries/tcd/fr/>]. Accessed September 2020.

2.3.2 Interoperable, interconnected, electronic real-time reporting systems

2.3.2a

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

Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence to confirm that Chad operates an electronic reporting surveillance system at both the national and sub-national level. The surveillance system has a zoonotic diseases component and a human health component. Moreover, according to the Joint External Evaluation for Chad, conducted in 2017, an electronic system exists at the central level to process and analyse epidemiological surveillance data. (1) Nevertheless, it is not specified if it is electronic at both the national and sub-national level. There is evidence that Chad's epidemiological surveillance network for zoonotic diseases

(REPIMAT) is electronic, since all data is collected with the Access 2000 software, under Windows Millennium. (2) The overall reporting surveillance system is included within the Integrated Epidemiological Surveillance Service (SSEI), under the Ministry of Health, which publishes information on disease outbreaks and gives information such as the number of cases of particular disease outbreaks, deaths, etc. (3) However, this agency does not have an official webpage. No further evidence to confirm that the reporting surveillance system is electronic at both the national and sub-national level could be found in the National Plan for Health Development (2018-2022), in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (4,5,6) In 2020, the Ministry of Public Health issued a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. This document presents a paper version to declare the health status of a person and/or notify a suspected case of coronavirus. There is no evidence of an electronic system. (7)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ouagal, M.2004. "Development of performance indicators on the functioning of the Chadian epidemiological surveillance network for animal diseases (REPIMAT) (Élaboration d'indicateurs de performance du fonctionnement du reseau tchadien d'epidemiologie des maladies animales : le REPIMAT)".

[https://www.researchgate.net/profile/Pascal_Hendriks/publication/237831696_Elaboration_d'indicateurs_de_performance_du_fonctionnement_du_reseau_tchadien_d'epidemiologie_des_maladies_animales_le_REPIMAT/links/00b7d51d1ad8672d7d000000/Elaboration-dindicateurs-de-performance-du-fonctionnement-du-reseau-tchadien-depidemiologie-des-maladies-animales-le-REPIMAT.pdf]. Accessed July 2020.

[3] Ministry of Public Health. "Department of Disease Control and Health Promotion (Direction de la Lutte contre la Maladie et de la Promotion de la Santé)". [<https://sante-tchad.org/portfolio-items/direction-de-la-lutte-contre-la-maladie-et-de-la-promotion-de-la-sante/>]. Accessed September 2020

[4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[7] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 this system collects ongoing/real time laboratory data. No evidence could be found in the OIE PVS Assessment, in the Joint External Evaluation for Chad, conducted in 2017, the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022) and the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. (1,2,3,4,5) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of

N'Djamena. (6,7,8)

- [1] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".
[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf].
Accessed July 2020.
- [2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".
[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.
- [3] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".
[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.
- [4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".
[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx].
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- [5] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.
- [6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020
- [7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020
- [8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).
[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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. There is no evidence of electronic health records (EHR) in the OIE PVS Assessment, in the Joint External Evaluation for Chad, conducted in 2017, the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022) and the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. (1,2,3,4,5) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (6,7)

- [1] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".
[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf].
Accessed July 2020.
- [2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[3] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[5] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

2.4.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that the national public health system has access to electronic health records (EHR) of individuals. The national public health system is provided by the Ministry of Health. It encompasses three levels of health care: a central level, which orientates the national health policy; an intermediate level, which coordinates the implementation of the national health policy; and a peripheral level, which coordinates the implementation of activities defined by the national health policy. (1) There is no such evidence in the OIE PVS Assessment, in the Joint External Evaluation for Chad, conducted in 2017, the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022) and the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. (2,3,4,5,6) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (7,8)

[1] Ministry of Public Health. "Master plan for neglected tropical diseases (MTN) 2016-2020 (Plan directeur de lutte contre les maladies tropicales négligées (MTN) 2016-2020)"

[http://espen.afro.who.int/system/files/content/resources/CHAD_NTD_Master_Plan_2016_2020.pdf]. Accessed July 2020.

[2] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[3] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[4] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[5] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[6] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 evidence that electronic health records (EHR) of individuals are comparable according to data standards since there is no evidence of EHR being commonly in use. There is no such evidence in the OIE PVS Assessment, in the Joint External Evaluation for Chad, conducted in 2017, the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022) and the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. (1,2,3,4,5) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (6,7)

[1] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[3] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[5] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 insufficient evidence that Chad established mechanisms at the relevant ministries responsible for animal, human and wildlife surveillance to share data (such as through mosquito surveillance, brucellosis surveillance, etc). Although the Joint External Evaluation for Chad, conducted in 2017, states that systematic communication does not exist between animal and human surveillance; (1) according to the newly publicly available OIE PVS Assessment of 2019, there is a monthly meeting between the Ministry of Livestock and other ministries such as Health, Environment and Finance around animal health at the national level. Concerning zoonotic diseases, there is since 2005, a National Committee to fight animal diseases deemed contagious (2); it is presided by the Minister of Livestock and has within its members the Minister of Agriculture, the Director of Veterinary Services, the Ministry of Environment and the Minister of Public Health; among others. It has the mandate to coordinate and supervise emergency health actions following an outbreak of a zoonotic disease; as well as the application of emergency health plans (article 4); the Committee meets at least once a year in ordinary session (article 5). (3) Finally, within the actual context of coronavirus, joint activities between human and animal health were launched in the context of cross-border transhumants from Cameroon. The program is supported by the Ministry of Public Health and National Solidarity and the Ministry of Livestock with the support of partners for comprehensive care of nomadic populations and their livestock. (4)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[3] Order N°1009 / PM / 05. 2005. "Related to the composition, powers and functioning of the National Committee National Committee to fight against animal diseases deemed contagious (Arre_té N°1009/PM/05 du 6 mai 2005, portant composition, attributions et fonctionnement du Comité National de lutte contre les maladies réputées légalement contagieuses des animaux)ed in". [<http://extwprlegs1.fao.org/docs/pdf/cha141416.pdf>]. Accessed July 2020.

[4] Ministry of Public Health. "Official launch of mixed activities in human and animal health and the fight against covid -19 (Lancement officiel des activités mixtes de santé humaine et animale et de lutte contre la covid -19)". [<https://sante-tchad.org/lancement-officiel-des-activites-mixtes-de-sante-humaine-et-animale-et-de-lutte-contre-la-covid-19/>]. Accessed July 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 publicly available evidence that Chad makes de-identified health surveillance data on disease outbreaks publicly available via reports (or other format) on government websites. However, there is more of a lag time of one month in terms of publication.

Indeed, the Integrated Epidemiological Surveillance Service (SSEI), under the Ministry of Health, is responsible for the publication of information on disease outbreaks and provides information such as the number of cases of particular disease outbreaks, deaths, etc. The SSEI does not have an official website. Moreover, according to the Joint External Evaluation for Chad, conducted in 2017, the electronic surveillance system processes and analyses epidemiological surveillance data and makes it publicly available on a monthly base. (1) Finally, in the actual context of coronavirus, Chad makes de-identified health surveillance data on covid-19 publicly available via daily reports on the Ministry of Public Health. (2)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. 27 July 2020. "PRESS RELEASE: the epidemiological situation of covid-19 in Chad of July 27, 2020 (COMMUNIQUE: la situation épidémiologique du covid-19 au Tchad du 27 juillet 2020)". [<https://sante-tchad.org/communique-la-situation-epidemiologique-du-covid-19-au-tchad-du-27-juillet-2020/>]. Accessed July 2020.

2.4.3b

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

Yes = 1, No = 0

Current Year Score: 1

There is publicly available evidence that the country makes de-identified health surveillance data on covid-19 publicly available via daily reports (or other format) on government websites. The Ministry of Public Health publishes in daily reports information concerning covid-19 in a press release format. These reports indicate the epidemiological situation of the coronavirus in the country; the number of samples analyzed; the cases detected; the sick, deceased or recovering persons; as well as the geographic location of the coronavirus infections. (1)

[1] Ministry of Public Health. 27 July 2020. "PRESS RELEASE: the epidemiological situation of covid-19 in Chad of July 27, 2020 (COMMUNIQUE: la situation épidémiologique du covid-19 au Tchad du 27 juillet 2020)". [<https://sante-tchad.org/communique-la-situation-epidemiologique-du-covid-19-au-tchad-du-27-juillet-2020/>]. Accessed July 2020.

2.4.4 Ethical considerations during surveillance

2.4.4a

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Chad has laws or guidelines that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. Although Chad signed in 2014, the African Union Convention on Cyber Security and Personal Data Protection, it has not ratified it. (1) Finally, in 2014,

Chad adopted a draft law on cybercrime and cybersecurity but it is related to electronic communications, there is no mention of health data protection. (2) No further evidence could be found in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (3,4,5)

[1] African Union. "African Union Convention on Cyber Security and Personal Data Protection".

[https://au.int/sites/default/files/treaties/29560-treaty-0048_-_african_union_convention_on_cyber_security_and_personal_data_protection_e.pdf]. Accessed July 2020

[2] COE. "Chad". [https://www.coe.int/hy/web/octopus/country-wiki/-/asset_publisher/hFPA5fbKjyCJ/content/chad/pop_up?_101_INSTANCE_hFPA5fbKjyCJ_viewMode=print&_101_INSTANCE_hFPA5fbKjyCJ_languageld=hy_AM]. Accessed July 2020

[3] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 available evidence that laws, regulations, or guidelines 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). Although Chad signed in 2014, the African Union Convention on Cyber Security and Personal Data Protection, it has not ratified it . (1) Finally, in 2014, Chad adopted a draft law on cybercrime and cybersecurity but it is related to electronic communications, there is no mention of health data protection. (2) No further evidence could be found in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (3,4,5)

[1] African Union. "African Union Convention on Cyber Security and Personal Data Protection".

[https://au.int/sites/default/files/treaties/29560-treaty-0048_-_african_union_convention_on_cyber_security_and_personal_data_protection_e.pdf]. Accessed July 2020

[2] COE. "Chad". [https://www.coe.int/hy/web/octopus/country-wiki/-/asset_publisher/hFPA5fbKjyCJ/content/chad/pop_up?_101_INSTANCE_hFPA5fbKjyCJ_viewMode=print&_101_INSTANCE_hFPA5fbKjyCJ_languageld=hy_AM]. Accessed July 2020

[3] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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: 1

There is evidence that Chad has made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data for one disease (cholera) during a public health emergency with other countries in the region.

Chad was a signatory to the Abuja Commitment in 2010, which commits it to share information on cross-border public health issues with the World Health Organisation (WHO) and sub-regional health organisations to enable joint planning, coordination and timely response to disease outbreaks. [1] Under the Abuja Commitment, in 2016 and again in 2018 Cameroon participated in developing roadmaps for sub-regional collaboration and information-sharing on cholera in the Chad Basin area; and it is one of the countries implementing the regional strategy for cholera in West and Central Africa, which involves strengthening cross-border collaboration in the surveillance and response to cholera epidemics between the countries of the Lake Chad Basin. [2,3]

Chad is part of the Regional Sahel Pastoralism Support Project which has as its main objective, to enhance the sharing of animal health information and to implement regional transboundary programs for disease surveillance and control to ameliorate animal health and collectively manage animal health emergencies. Nevertheless, it is not specified that the surveillance data exchange occurs during a public health emergency. (1) Moreover, Chad is also a member of the Economic Community of Central African States (ECCAS), within it, country members cooperate to prevent the propagation of zoonotic diseases and exchange data. In this sense, it rather focuses on ongoing surveillance. (2) Finally, Chad as a member of the WHO influenza network, is part of "an extensive international network of laboratories that conducts the necessary surveillance and provides WHO with the information it required to advise its Member States on the most effective influenza control measures". (3) In the actual context of coronavirus, there is no publicly available evidence that the government made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during this crisis, in the Ministry of Public Health, in the National General Hospital of N'Djamena or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease. (4,5,6)

[1] Health Ministers of Benin, Cameroon, Central African Republic, Chad, Equatorial Guinea, Niger and Nigeria. 18 Oct 2010. "Abuja Commitment on Public Health Issues."

[[https://plateformecholera.info/attachments/article/317/Abuja%20Commitment%202010%20\(EN\).pdf](https://plateformecholera.info/attachments/article/317/Abuja%20Commitment%202010%20(EN).pdf)]. Accessed 27 September 2020.

[2] The West and Central Africa Cholera Platform. 2018. "Lake Chad Basin - the cross-border meeting of Ndjamen (June 2018)." [<https://plateformecholera.info/index.php/coordination/workshop/542-lake-chad-basin-the-cross-border-meeting-of-ndjamena-june-2018>]. Accessed 27 September 2020.

[3] The West and Central Africa Cholera Platform. May 2017. "Overview of the strategy to control and prevent cholera in West and Central Africa: The "Shield and Sword" concept."

[https://www.plateformecholera.info/attachments/category/99/Brochure%20Strategie%20BCP%202017__may2017.pdf]. Accessed 27 September 2020.

[4] World Bank. 2015. "Regional Sahel Pastoralism Support Project".

[<http://documents.worldbank.org/curated/en/250471468000282631/pdf/PAD1091-PAD-P147674-IDA-R2015-0106-1-Box391422B-OUO-9.pdf>]. Accessed July 2020.

[5] Economic Community of Central African States (ECCAS). 2011. "Integrated Regional Coordination Mechanism (Mécanisme intégré de coordination régionale)". [<http://www.au-ibar.org/component/jdownloads/finish/25-ircm/756-stock-taking-reports-eccas>]. Accessed July 2020.

[6] Prince's Government. 2018. "Continuation of the Partnership between the Prince's Government and the Mérieux Foundation in West Africa". [<https://en.gouv.mc/Portail-du-Gouvernement/Policy-Practice/Monaco-Worldwide/Public-Aid-for-Development-and-International-Cooperation/News/Continuation-of-the-Partnership-between-the-Prince-s-Government-and-the-Merieux-Foundation-in-West-Africa>]. Accessed July 2020.

[7] PAHO. "The Global Influenza Surveillance Network". [<http://www.paho.org/hq/images/stories/AD/HSD/CD/INFLUENZA/gisn.pdf>]. Accessed July 2020.

[8] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[9] The National Reference General Hospital- L'hôpital général de référence nationale. [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[10] Ministry of Public Health. March 2020. Ç National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19) È. [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 publicly available evidence that Chad has a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency.

There is no publicly available evidence in the Ministry of Public Health, in the National General Hospital of N'Djamena, in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease, in the Joint External Evaluation for Chad, conducted in 2017, in the National Plan for Health Development (2018-2022) or in the Emergency Plan of Action for Ebola Virus Disease Preparedness. (1,2,3,4,5,6)

The National Contingency Plan for Covid-19 coronavirus disease mentions repeatedly the need to reinforce case detection at the borders, within the country and contact tracing. However, there is neither evidence of a national system in place to provide support at the sub-national level nor mention of training, metrics standardization and/or financial resources provided for this activity. (3)

[1] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[2] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[3] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[4] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[5] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[6] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 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 evidence that Chad 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.

There is no publicly available evidence in the Ministry of Public Health, in the National General Hospital of N'Djamena, in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease, in the Joint External Evaluation for Chad, conducted in 2017 or in the National Plan for Health Development (2018-2022). (1,2,3,4,5) The National Contingency Plan for the Covid-19 coronavirus disease mentions the need to apply self-isolate measures for suspected cases; however, there is no mention of any economic support (paycheck, job security) and medical attention that will be provided. (3)

[1] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[2] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[3] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[4] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[5] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 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 the country makes de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar). No such evidence could be found in the governmental facebook pages or in the Ministry of Public Health. (1,2)

[1] Facebook. "Ministry of Public Health". [https://fr-fr.facebook.com/ministeresantetchad/?ref=page_internal]. Accessed July 2020.

[2] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 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 no publicly available evidence that Chad has a joint plan or cooperative agreement between the public health system and border control authorities to monitor suspected and potential cases for international travelers in the event of a public health emergency.

According to the Joint External Evaluation (JEE) for Chad, conducted in 2017, Chad needs to improve collaboration between the public health sector and other sectors in the management of a public health emergency. Although the country has legislation to quarantine an individual who presents a risk to public health, and there is a joint training program for both public health personnel and departments responsible for law enforcement; there is a lack of written standard procedures or agreements for joint coordination of activities in the event of a public health emergency. The JEE indicates that there is an insufficient share of information on risks during public health emergencies and recommends the development of a plan to reinforce the risk communication with all the relevant actors, under a comprehensive vision of "One health". (1)

The National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus also points to insufficient coordination between public health agents and border control authorities; however, the latter will receive training programs and, at the airport, there are mixed sentinel teams conformed by nurses, hygiene / sanitation agents trained in prevention measures and equipped with protective equipment. (2) There is no further evidence in the Ministry of Public Health, in the National General Hospital of N'Djamena or in the National Plan for Health Development (2018-2022). (3,4,5)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.
- [2] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.
- [3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020
- [4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020
- [5] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 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

Although there is no evidence that Chad has an Applied epidemiology training program (such as FETP) available in the country, there is evidence that the country provides support to send citizens outside the country for FETP training. There is no evidence of a country specific program registered on TEPHINET website or the Ministry of Public Health (1,3). Nevertheless, Chad can participate to the Cameroon applied epidemiology training program (such as FETP). This program exists since 2010 and is offered at the Buea University. Between 2010 and 2015, it has trained 52 medical doctors, veterinarians, and laboratory technicians from Cameroon, Chad, and Central African Republic. (1) Moreover , according to the Joint External Evaluation for Chad, conducted in 2017, resources are provided by the government to send citizens to Cameroon for training in applied epidemiology. (2)

- [1] TEPHINET. "Cameroon field epidemiology training program". [https://www.tephinet.org/training-programs/cameroon-field-epidemiology-training-program]. Accessed July 2020.
- [2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.
- [3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

2.6.1b

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that the available field epidemiology training program includes animal health professionals. Although Chad does not have its own FETP registered on TEPHINET website, (1) it can participate to the Cameroon applied epidemiology training program (such as FETP). Moreover, the Cameroon applied epidemiology training program also trains professionals in animal health. Between 2010 and 2015, it has trained 52 medical doctors, veterinarians, and laboratory technicians from Cameroon, Chad, and Central African Republic. (1) In October 2017, the new cohort was constituted by 16 doctors and 3 veterinarians. No further evidence on how veterinarians are included to this program could be found on the Cameroon applied epidemiology training program website. (2) Moreover, according to the Joint External Evaluation for Chad, conducted in 2017, resources are provided by the government to send citizens to Cameroon for training in applied epidemiology. (3)

[1] TEPHINET. "Cameroon field epidemiology training program". [<https://www.tephinet.org/training-programs/cameroon-field-epidemiology-training-program>]. Accessed July 2020.

[2] Cameroon applied epidemiology training program. [<http://cafetp.org/index.php/2018/02/02/formation-avancee-en-epidemiologie/>]. Accessed July 2020

[3] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 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: 1

There is no publicly available evidence that Chad has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential; however, there is evidence of disease-specific plans in place. There is only evidence, according to the Joint External Evaluation for Chad, conducted in 2017, that Chad has a strategic response plan to deal with meningitis (2017) and one to deal with cholera (2014). (1) Recently, Chad has also published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus (2020). (2) Each of the plans mentioned, deal with a single disease. According to the JEE, the country does not have the financial capacity to implement a national public health emergency response plan. In this sense, the Meningitis response plan outlines specific plans to respond to a meningitis outbreak, whereas the cholera contingency plan presents an emergency response in case of a cholera outbreak. (3,4) Moreover, according to the governmental report, "Communication from Chad to the Regional Workshop on Disaster Reduction", the country does not have national emergency response plan but rather a policy for environmental protection. (5) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (6,7) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[3] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[4] Humanitarian Response. June 2014. "Cholera Contingency Plan".

[<https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/TCHAD%20plan%20de%20contingence%20chol%C3%A9ra-version%20all%C3%A9g%C3%A9e%20ACF.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2004. "Communication from Chad to the Regional Workshop on Disaster Reduction (Communication du Chad pour l'atelier régional sur la prévention des catastrophes)" [https://www.preventionweb.net/files/892_Chad-report.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 evidence that the overarching plan has been updated in the last 3 years since there is no evidence that the country has an overarching national public health emergency response plan. There is only evidence, according to the Joint External Evaluation (JEE) for Chad, conducted in 2017 that Chad has a strategic response plan to deal with meningitis (2017) and one to deal with cholera (2014). (1) Recently, Chad has also published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus (2020). (2) Each of the plans mentioned, deal with a single disease. In this sense, an overall emergency preparedness plan does not exist, which addresses planning for multiple communicable diseases. According to the JEE, the country does not have the financial capacity to implement such a national public health emergency response plan. In this sense, the Meningitis response plan outlines specific plans to respond to a meningitis outbreak, whereas the cholera contingency plan presents an emergency response in case of a cholera outbreak. (3,4) Moreover, according to the governmental report, "Communication from Chad to the Regional Workshop on Disaster Reduction", the country does not have national emergency response plan but rather a policy for environmental protection. (5) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (6,7) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[3] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>].]. Accessed July 2020.

[4] Humanitarian Response. June 2014. "Cholera Contingency Plan".

[<https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/TCHAD%20plan%20de%20contingence%20chol%C3%A9ra-version%20all%C3%A9g%C3%A9%20ACF.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2004. "Communication from Chad to the Regional Workshop on Disaster Reduction (Communication du Chad pour l'atelier régional sur la prévention des catastrophes)" [https://www.preventionweb.net/files/892_Chad-report.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 evidence that the overarching plan includes considerations for pediatric and other vulnerable populations since there is no evidence that Chad has an overarching national public health emergency response plan in place, which addresses planning for multiple communicable diseases with pandemic potential. There is only evidence, according to the Joint External Evaluation (JEE) for Chad, conducted in 2017, that Chad has a strategic response plan to deal with meningitis (2017) and one to deal with cholera (2014). (1) Recently, Chad has also published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus (2020). (2) Each of the plans mentioned, deal with a single disease. In this sense, an overall emergency preparedness plan does not exist, which addresses planning for multiple communicable diseases. According to the JEE, the country does not have the financial capacity to implement such a national public health emergency response plan. In this sense, the Meningitis response plan outlines specific plans to respond to a meningitis outbreak, whereas the cholera contingency plan presents an emergency response in case of a cholera outbreak. (3,4) Moreover, according to the governmental report, "Communication from Chad to the Regional Workshop on Disaster Reduction", the country does not have national emergency response plan but rather a policy for environmental protection. (5) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (6,7) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[3] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[4] Humanitarian Response. June 2014. "Cholera Contingency Plan".

[<https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/TCHAD%20plan%20de%20contingence%20chol%C3%A9ra-version%20all%C3%A9g%C3%A9e%20ACF.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2004. "Communication from Chad to the Regional Workshop on Disaster Reduction (Communication du Chad pour l'atelier régional sur la prévention des catastrophes)" [https://www.preventionweb.net/files/892_Chad-report.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 evidence that Chad has specific mechanisms for engaging with the private sector to assist with outbreak emergency preparedness and response. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, there is no formal plan in place for engaging human resources to assist with outbreak emergency preparedness and response. (1) No further evidence of mechanisms for working with the private sector could be found in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible], in the Master plan for neglected tropical diseases (MTN) 2016-2020 or in the National Plan for Health Development. (2,3,4,5) Recently, Chad has also published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus, there is no such evidence for engaging with the private sector. (6) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (7,8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[3] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[4] Ministry of Public Health. "Master plan for neglected tropical diseases (MTN) 2016-2020 (Plan directeur de lutte contre les maladies tropicales négligées (MTN) 2016-2020)"

[http://espen.afro.who.int/system/files/content/resources/CHAD_NTD_Master_Plan_2016_2020.pdf]. Accessed July 2020.

[5] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-

2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[6] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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: 1

There is publicly available evidence that the country has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) but it is specific to only one disease.

Chad has published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus, where are mentioned some NPIs such as social distancing, hand hygiene, cancellation of mass gatherings and the closure of schools. However, it does not include language that says the plan can be used for other diseases. (1)

There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (2,3) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website. No evidence could be found in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible], in the Master plan for neglected tropical diseases (MTN) 2016-2020 or in the National Plan for Health Development. (4,5,6,7)

[1] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[2] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[3] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[6] Ministry of Public Health. "Master plan for neglected tropical diseases (MTN) 2016-2020 (Plan directeur de lutte contre les maladies tropicales négligées (MTN) 2016-2020)"

[http://espen.afro.who.int/system/files/content/resources/CHAD_NTD_Master_Plan_2016_2020.pdf]. Accessed July 2020.

[7] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-

2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

3.2 EXERCISING RESPONSE PLANS

3.2.1 Activating response plans

3.2.1a

Does the country meet one of the following criteria?

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak in the past year?

- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

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

Current Year Score: 1

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

Chad has published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus in 2020. (1) The latest national-level biological threat-focused exercise conducted with the WHO took place in November 2018, for Ebola Virus Disease. (2) There is no further evidence of any more recent exercise in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (3,4) . There is no further evidence in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] or in the Integrated Epidemiological Surveillance Service (SSEI). (5,6,7). Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] Ministry of Public Health. March 2020. Ç National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19) È. [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[2] World Health Organization (WHO)."Country Profile: Chad".[https://extranet.who.int/sph/country/218]. Accessed July 2020.

[3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020

[5] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[6] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf]. Accessed July 2020.

[7] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf].]. Accessed July 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 Chad has in the past year identified a list of gaps and best practices in response (either through an infectious disease response of a biological-threat focused exercise) and developed a plan to improve response capabilities. There is no further evidence of a planned exercise.

The latest after action review that Chad conducted with the support of the WHO is from July 23 to 27, 2018 to evaluate the response capacity and identify best practices in the country in case of a cholera and hepatitis E epidemic. At the end of this workshop, in which personnel from the Ministry of Public Health, Livestock, Agriculture and Environment participated, 40 activities and 36 prioritizing actions were identified. (1) There is no evidence of a published AAR report. There is no further evidence of any more recent AAR in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (2,3)

[1] World Health Organization (WHO). "Post-Action Review (AAR) against hepatitis E and cholera epidemics in Chad for a comprehensive assessment of the response capacities (Revue Après Action (RAA) contre les épidémies d'hépatite E et de choléra au Tchad pour une évaluation complète des capacités de riposte à venir)". [https://afro.who.int/node/10189]. Accessed July 2020.

[2] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

[3] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 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 publicly available evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives.

Although there is publicly available evidence that the country has activated its national emergency response plan for an infectious disease outbreak in the past year, there is no evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year.

The latest national-level biological threat-focused exercise conducted with the WHO took place in November 2018, for Ebola Virus Disease. However, there is no mention of private sector representatives. (1) There is no further evidence of any more recent exercise in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (2,3) . There is no further evidence in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible], in the Integrated Epidemiological Surveillance Service (SSEI) or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus in 2020. (4,5,6,7) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website. There is no further evidence on the WHO Simulation Exercise page. [8]

[1] World Health Organization (WHO). "Country Profile: Chad". [https://extranet.who.int/sph/country/218]. Accessed July 2020.

[2] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

[3] The National Reference General Hospital- L'hôpital general de référence nationale. [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020

[4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx].

Accessed July 2020.

[5] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[6] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>].]. Accessed July 2020.

[7] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[8] World Health Organization (WHO) Simulation Exercise [<https://extranet.who.int/sph/simulation-exercise>]. Accessed July 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 that Chad has in place an Emergency Operations Center.

Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have an Emergency Operations Center. Nevertheless, a committee is in place to help with the implementation of an Emergency Operations Center. In the meantime, two structures are in place to deal with health emergencies, the Integrated Epidemiological Surveillance Service (SSEI) in charge of the production of all relevant information on an epidemic disease and the National Committee to Fight Epidemics (CNTLE) which uses the information provided by the SSEI to implement a plan in case of a health emergency. (1) Further details about these structures, which are located under the Ministry of Public Health could not be found in the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022), the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible]. (2,3,4,5)

There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (6,7,8) Chad just published the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus in 2020. Among the activities to complete is the construction of an Emergency Operations Center, however, no financial resources are allocated to this activity and no date is provided as to when it should be completed. (9) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>].]. Accessed July 2020.

[6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[9] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 the Emergency Operations Center is required to conduct a drill at least once per year since there is no evidence that Chad has in place an Emergency Operations Center.

Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have an Emergency Operations Center. (1) No further evidence could be found in the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022), the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible]. (2,3,4,5) There is no further evidence in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (6,7,8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".

[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

- [5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".
[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.
- [6] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.
- [7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020
- [8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).
[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 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 the Emergency Operations Center can conduct, or 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, since there is no evidence that Chad has in place an Emergency Operations Center. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have an Emergency Operations Center. Moreover, this document points out the need to implement a strategy to conduct emergency response exercises. (1) No further evidence could be found in the National Development Plan for livestock (2009-2016), the National Plan for Health Development (2018-2022), the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible]. (2,3,4,5) There is no further evidence in the Ministry of Agriculture, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. (6,7,8,9)

- [1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".
[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.
- [2] Republic of Chad. "National Development Plan for livestock (2009-2016) (Plan national de développement de l'élevage (2009-2016))".
[http://www.eeas.europa.eu/archives/delegations/tchad/documents/more_info/pnde_version_20juin08_mf2_comprese_fr.pdf]. Accessed July 2020.
- [3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".
[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.
- [4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.
- [5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".
[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.
- [6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020
- [7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020
- [8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[9] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e. bioterrorism attack). Moreover, there is no publicly available evidence that Chad has standard operating procedures, guidelines, MOUs or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e. bioterrorism attack). Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, during a crisis, public health works with animal health personnel and national security authorities work in collaboration, however, there are no standard operating procedures or any formal agreement to coordinate the response during public health emergencies. Moreover, simulation exercises have not been carried out since at least 4 years. In the JEE, the need to organize once a year a simulation exercise and develop a strategy to support the organization of these simulation exercises are pointed out as main priorities. (1) In the country profile of the WHO, two simulation exercises were carried out in Chad. One was conducted in November 2018 for Ebola; the other in 2016, for coordination matters. (2) None of them have a publicly available report for additional information, and no further evidence on these exercises could be found in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (3,4) . There is no further evidence in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. (5,6,7,8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] World Health Organization (WHO). "Country Profile: Chad". [<https://extranet.who.int/sph/country/218>]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[6] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[7] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>].]. Accessed July 2020.

[8] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 evidence that Chad has a strategy (or other legislation, regulation or strategy document used to guide national public health response) that outlines how messages will reach populations and sectors with different communications needs (e.g. different languages, location within country, media reach, etc.). Nevertheless, messages seem to take into account regional particularities, since, according to the Joint External Evaluation for Chad, conducted in 2017, messages are transcribed into local languages and the transmission is facilitated with the implication of leaders and community networks. Nevertheless, according to this same document, no permanent and functional system exists to efficiently transmit messages. (1) In the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus, although there is no a risk communication plan, it is mentioned that messages to reach populations will be elaborated and diffused according to the needs of the population. However, the needs and the way the messages will be adapted are not mentioned, other than they will be elaborated in French and in other national languages; and that they will be transmitted through the radio, television and written press. (2) There is no further information in the Ministry of Public Health or in the national reference general hospital. (3,4) No further evidence could be found in the National capacity assessment report for risk reduction, emergency preparedness and response, in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] (5,6,7,8). Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a

coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Republic of Chad. April 2014. "National capacity assessment report for risk reduction, emergency preparedness and response in Chad (Rapport d'évaluation des capacités nationales pour la réduction des risques, la préparation et la réponse aux urgences au Tchad)" [<https://www.cadri.net/sites/default/files/CHAD-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf>]. Accessed July 2020.

[6] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[7] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[8] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 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: 0

There is no publicly available evidence that Chad has 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. Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, such a risk communication plan does not exist, its elaboration is pointed out as a main priority. (1) The Directorate of environmental health and health promotion, under the Ministry of Public Health is responsible for coordinating daily health communication, but also for designing national health programs and monitoring any threat to human health. (2) Nevertheless, further evidence on this unit or the existence of a risk communication plan could not be found in the Ministry of Public Health. (3) Moreover, the National Committee to Fight Epidemics (CNTLE), which is also under the Ministry of Public Health, is in charge of coordinating communication activities in case of a health emergency. Nevertheless, further details on this unit could not be found. There is no further evidence in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible]. (4,5,6). There is no further evidence in the Ministry of Public Health. (7) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website. Chad has a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus published in 2020, and, although it mentions the need to reinforce risk communication, there is no mention of a plan that is specifically intended for use during a public health emergency. (8)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

- [2] LégiTchad. Decree 06-360 2006-05-23 PR. "On the Organization Chart of the Ministry of Public Health". [https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/99030/118031/F1939539033/TCD-99030.pdf]. Accessed July 2020.
- [3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020
- [4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.
- [5] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf]. Accessed July 2020.
- [6] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]". [http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf].]. Accessed July 2020.
- [6] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020
- [7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020
- [8] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

3.5.1c

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designates a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. The National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus designates a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. Indeed, in this strategy, the Ministry of Public Health is designated as the primary spokesperson for the implementation of the strategy to fight the coronavirus disease. It is also mentioned that a National Epidemics Committee is set up to monitor and take actions in the event of an epidemic. (1) There is no further evidence on the website of the Ministry of Public Health. (2)

- [1] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.
- [2] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 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 publicly available evidence that Chad has used in the past year, media platforms (social media, website updates, etc.) to inform the public about public health emergencies. However, the public health system only shares information through media platforms during active emergencies, but does not regularly utilize online media platforms. In addition, there is no publicly available evidence that these media platforms have been used to dispel rumors, misinformation or disinformation.

In the midst of the coronavirus pandemic, the country makes de-identified health surveillance data on covid-19 publicly available via daily reports on government websites. (1) Also, in its Facebook page, Chad provides daily reports on the epidemiological situation of the coronavirus disease, sharing information on the number of cases, the measures to implement, etc. (2) Chad also has a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus published in 2020, which mentions the management of rumors as an activity to conduct. However, no further details on this activity could be found. (3)

However, the public health system only shares information through media platforms during active emergencies and does not regularly utilize online media platforms. Indeed, before the coronavirus crisis, the Facebook page of the Ministry of Public Health only made a reference to polio cases reported in 2016 in Nigeria (the Facebook post is from 2019), which could propagate in Chad.(4)

[1] Ministry of Public Health. 27 July 2020. "PRESS RELEASE: the epidemiological situation of covid-19 in Chad of July 27, 2020 (COMMUNIQUE: la situation épidémiologique du covid-19 au Tchad du 27 juillet 2020)". [<https://sante-tchad.org/communique-la-situation-epidemiologique-du-covid-19-au-tchad-du-27-juillet-2020/>]. Accessed July 2020.

[2] Facebook. "Ministry of Public Health". [https://fr-fr.facebook.com/ministeresantetchad/?ref=page_internal]. Accessed July 2020.

[3] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[4] Facebook Page. March 2019 "Ministry of Public Health".

[https://www.facebook.com/ministeresantetchad/posts/620709908376087?__xts__%5b0%5d=68.ARDUowhaXd5P6ZBUopgx6SYgdRmuYzSidKR9ncrq4WsUFefzL64l2_SJUNgdV_-dgSO8fhRlwdEdSmoEJJP9gqdO9Kmt3SzyYGa4QFbOBFAJmEeV7C4vHK1riUmtlRtjKWC35amdIlg9hgOgvEym_G1feA846l0DZW_7CfleOjsFAs62l-PXgQT3LJMjX6u_2A1QB7axWwRNO2PiQl4dwfAVFxFEgE3piW7gBm97wWW4Eb2GuDUHyvJ1qmhJ2MU8aM9gxMVSb2KI8S_zWdN0oaVhoYuW1eNyw7INsanPvM6QvVd8JypSRG0dDv0mMfycZTHwwExaAWANxQKhS8P8X0&__tn__=-R]. Accessed July 2020

3.5.2b

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

No = 1, Yes = 0

Current Year Score: 1

There is no publicly available evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases (in the past two years).

Evidence of misinformation or disinformation on infectious diseases could not be found on the website of the Ministry of Public Health, the national reference general hospital or in any of the main newspapers of the country, such as Alwihda Actualités and Tchad-Info. (1,2,3,4)

[1] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[2] The National Reference General Hospital- L'hôpital general de référence nationale. [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[3] Alwihda Actualités. [<https://www.alwihdainfo.com/>]. Accessed July 2020

[4] Tchad-Info. [<https://tchadinfos.com/page/3/?s=coronavirus>]. Accessed July 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: 6.5

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: 48.06

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: 30

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: 9.0

2019

Gallup; Economist Impact calculation

3.7 TRADE AND TRAVEL RESTRICTIONS

3.7.1 Trade restrictions

3.7.1a

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

Yes = 0, No = 1

Current Year Score: 1

There is no publicly available evidence that the country 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 a document of the World Trade Organization (WTO), such restrictions are not mentioned. It is only mentioned that Chad temporarily suppressed some import duties on certain products (rice; sorgho; oil and medical material) due to the coronavirus disease. (1,2) There is no further evidence on the website of the Ministry of Public Health, the national reference general hospital, the Ministry of Foreign Affairs, African Integration and Chadiens living abroad, the Ministry of Agriculture or in any of the main newspapers of the country, such as Alwihda Actualités and Tchad-Info. (3,4,5,6,7,8)

[1] World Trade Organization. 3 July 2020. "Annex".

[https://www.wto.org/english/tratop_e/covid19_e/covid_measures_f.pdf]. Accessed July 2020.

[2] IMPACCT. 1 July 2020. "Covid-19-Tchad". [https://wiki.unece.org/download/attachments/101548949/Tchad%20-%20COVID-19%20-%20CIQP%20Bulletin%202.pdf?version=1&modificationDate=1594976671933&api=v2]. Accessed July 2020.

[3] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital général de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Foreign Affairs, African Integration and Chadiens living abroad. [<http://diplomatie.gouv.td/>]. Accessed August 2020

[6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[7] Alwihda Actualités. [<https://www.alwihdainfo.com/>]. Accessed July 2020

[8] Tchad-Info. [<https://tchadinfos.com/page/3/?s=coronavirus>]. Accessed July 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 the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods due to an infectious disease outbreak. In a document of the World Trade Organization (WTO), such restrictions are not mentioned. It is only mentioned that Chad temporarily suppressed some import duties on certain products (rice; sorgho; oil and medical material) due to the coronavirus disease. (1,2) There is no further evidence on the website of the Ministry of Public Health, the national reference general hospital, the Ministry of Foreign Affairs, African Integration and Chadiens living abroad, the Ministry of Agriculture or in any of the main newspapers of the country, such as Alwihda Actualités and Tchad-Info. (3,4,5,6,7,8)

[1] World Trade Organization. 3 July 2020. "Annex".

[https://www.wto.org/english/tratop_e/covid19_e/covid_measures_f.pdf]. Accessed July 2020.

[2] IMPACCT. 1 July 2020. "Covid-19-Tchad". [<https://wiki.unece.org/download/attachments/101548949/Tchad%20-%20COVID-19%20-%20CIQP%20Bulletin%202.pdf?version=1&modificationDate=1594976671933&api=v2>]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Foreign Affairs, African Integration and Chadiens living abroad. [<http://diplomatie.gouv.td/>]. Accessed August 2020

[6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[7] Alwihda Actualités. [<https://www.alwihdainfo.com/>]. Accessed July 2020

[8] Tchad-Info. [<https://tchadinfos.com/page/3/?s=coronavirus>]. Accessed July 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 in the past year, the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak. On June 2020, Chad completely closed its frontiers to passengers due to the coronavirus outbreak (1). Borders are expected to open on August 1st, 2020. (2) There is no further evidence on the website of the Ministry of Public Health, the national reference general hospital, the Ministry of Foreign Affairs, African Integration and Chadians living abroad, the Ministry of Agriculture or in any of the main newspapers of the country, such as Alwihda Actualités and Tchad-Info. (3,4,5,6,7,8)

[1] IMPACCT. 1 July 2020. "Covid-19-Tchad". [<https://wiki.unece.org/download/attachments/101548949/Tchad%20-%20COVID-19%20-%20CIQP%20Bulletin%202020.pdf?version=1&modificationDate=1594976671933&api=v2>]. Accessed July 2020.

[2] Ministry of Europe and Foreign Affairs. 15 July 2020. "Chad". [https://www.diplomatie.gouv.fr/fr/conseils-aux-voyageurs/conseils-par-pays-destination/tchad/#voyageurs_affaires]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Foreign Affairs, African Integration and Chadians living abroad. [<http://diplomatie.gouv.td/>]. Accessed August 2020

[6] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

[7] Alwihda Actualités. [<https://www.alwihdainfo.com/>]. Accessed July 2020

[8] Tchad-Info. [<https://tchadinfos.com/page/3/?s=coronavirus>]. Accessed July 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: 4.34

2017

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 23.22

2017

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 that Chad has a public 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. According to the Joint External Evaluation (JEE) for Chad, conducted in 2017, the newest public workforce strategy was published in 2010 and covers the period from 2013 to 2020. The JEE recommends to review and update the public workforce strategy. (1) The strategic plan for the development of human resources for health in Chad (2011) addresses public workforce shortages as well as a financial plan to fulfil these objectives. In this strategic plan, the size of the gaps is identified: Chad has an insufficient health public workforce, with only 854 doctors and 1,228 nurses. (2) There is no further evidence on the website of the Ministry of Public Health and the Ministry of Agriculture. (3,4)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Republic of Chad. "Strategic plan for the development of human resources for health in Chad (Plan stratégique de développement des ressources humaines pour la santé au

Tchad)". [https://www.who.int/workforcealliance/countries/Chad_HRHPlan_2011_2020_draft_Fr.pdf]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 2020

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 40

2005

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 Chad has the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation facility located within the country. A report from Mérieux Foundation noted that during the Ebola outbreak of 2014 in Africa, Chad did not have the capacity to isolate patients and conduct Ebola tests within the territory. (1) There is no further evidence in the Joint External Evaluation for Chad, conducted in 2017, the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible]. (2,3,4,5) There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena. (6,7) Finally, Chad also has a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus published in 2020. Within the activities to implement, the development of an isolation unit at the Hassan Djamous Airport is considered.(8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] Mérieux Foundation. September 2017. "50 years of the Mérieux Foundation". [<https://www.fondation-merieux.org/wp-content/uploads/2017/09/50-ans-fondation-merieux-projets.pdf>]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]". [<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years. Nor 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.

There is no evidence that Chad has the capacity to isolate patients with highly communicable diseases. In this sense, there is no evidence that it has demonstrated capacity to expand isolation capacity or developed a plan in a report from Mérieux Foundation ; in the Joint External Evaluation for Chad, conducted in 2017 ; the National Plan for Health Development (2018-2022) ; in the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible]. (1,2,3,4,5)

There is no further evidence in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (6,7) Finally, Chad also has a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus published in 2020. Within the activities there is only one mention concerning the development of an isolation unit at the Hassan Djamous Airport, however, this action is still under consideration.(8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] Mérieux Foundation. September 2017. "50 years of the Mérieux Foundation". [https://www.fondation-merieux.org/wp-content/uploads/2017/09/50-ans-fondation-merieux-projets.pdf]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))". [http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf]. Accessed July 2020.

[5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]". [http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [https://sante-tchad.org/about/]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [http://hgrn.blogspot.com/p/presentation-de-lhgrn.html]. Accessed July 2020

[8] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 insufficient publicly available evidence that Chad has a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (such as equipment, reagents and media) and medical supplies (equipment, PPE) for routine needs.

Under the Ministry of Public Health, there is a Directorate of Financial Affairs and Equipment that has a procurement division (article 43, paragraph 3). This division prepares annual budgets and tenders, but there is no reference to a protocol for the acquisition of laboratory needs and medical supplies by the Ministries of Health and Agriculture. (1,2)

[1] Ministry of Public Health. Ordinance 07-100 2007-04-30 PR / PM / MSP. "Related to the Organization and Functioning of the Ministry of Public Health".

[http://www.vertic.org/media/National%20Legislation/Chad/TD_Ministere_Sante_Publique.pdf]. Accessed July 2020.

[2] Ministry of Agriculture. [<https://agriculture.gouv.td/>]. Accessed July 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: 0

There is no publicly available evidence that Chad maintains a stockpile of medical supplies (e.g. equipment, PPE) and medical countermeasures for national use during a public health emergency.

The Joint External Evaluation for Chad (JEE), conducted in 2017 mentions that Chad does not have a national plan for the acquisition and reception of medical means, however, it ensures the pre-positioning of certain kits in order to respond to epidemics. Also, the JEE indicates that Chad does not have a secure national stock available in case of an emergency (1) Additionally, the JEE states that vaccines are supplied through the UNICEF on the basis of a joint needs assessment with the Directorate of Vaccination and Epidemiological Surveillance (DVSE). Vaccines are received and stored; in this sense, the continuous availability at the central level is ensured. However, there is no mention of a stockpile for public health emergencies. Within the DVSE, there is a Supply and Logistics Section (SAL) which maintains a stockpile of MCM; there is no mention of public health emergencies. Moreover, Chad, as a member of the Economic Community of Central African States, can rely on the emergency stocks of the WHO. (2)

The Directorate of Financial Affairs and Equipment, under the Ministry of Public Health is responsible, according to the article 13, for the development of policies, standards, regulations and procedures for health equipment and maintenance.(3) Nevertheless, there is no evidence of a stockpile of PPE or medical countermeasures. There is no further evidence in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (4,5,6) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website. Finally, the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus, published in 2020, identifies the need to have stockpiles of personal protective equipment (PPE) in health facilities.(7)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Republic of Chad. "Directorate of Reproductive Health and Vaccination". [<https://sante-tchad.org/portfolio-items/direction-de-la-sante-de-reproduction-et-de-la-vaccination/>]. Accessed July 2020.

[3] LégiTchad. Decree 06-360 2006-05-23 PR. "On the Organization Chart of the Ministry of Public Health".

[<https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/99030/118031/F1939539033/TCD-99030.pdf>]. Accessed July 2020.

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[6] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[7] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 Chad maintains a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. According to the National capacity assessment report for risk reduction, emergency preparedness and response and the Joint External Evaluation for Chad, conducted in 2017, Chad does not have a secure national stock available in case of an emergency. (1,2) The Joint External Evaluation (JEE) of 2017 mentions that the country lacks a regular stock of reagents and that there is a need for a comprehensive strategy for laboratory supplies. (2) However, Chad, as a member of the Economic Community of Central African States, can rely on the emergency stocks of the WHO. (3) There is no further evidence in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (4,5,6) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website. Finally, Chad also has a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus published in 2020. It mentions the need to make available a stock of laboratory supplies as an activity to conduct. (7)

[1] Republic of Chad. April 2014. "National capacity assessment report for risk reduction, emergency preparedness and response in Chad (Rapport d'évaluation des capacités nationales pour la réduction des risques, la préparation et la réponse

aux urgences au Tchad)" [<https://www.cadri.net/sites/default/files/CHAD-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf>]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[3] Economic Community of Central African States (ECCAS). 2011. "Integrated Regional Coordination Mechanism (Mécanisme intégré de coordination régionale)". [<http://www.au-ibar.org/component/jdownloads/finish/25-ircm/756-stock-taking-reports-eccas>]. Accessed July 2020.

[4] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[5] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[6] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[7] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 no publicly available 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.

Such evidence could not be found in the National capacity assessment report for risk reduction, emergency preparedness and response report or in the Joint External Evaluation for Chad, conducted in 2017 ; in the Ministry of Public Health ; in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (1,2,3,4,5) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website. Finally, Chad also has a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus published in 2020, however, there is no evidence of such requirement or annual review. (6)

[1] Republic of Chad. April 2014. "National capacity assessment report for risk reduction, emergency preparedness and response in Chad (Rapport d'évaluation des capacités nationales pour la réduction des risques, la préparation et la réponse aux urgences au Tchad)" [<https://www.cadri.net/sites/default/files/CHAD-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf>]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN). [<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

[6] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 Chad has a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies and medical countermeasures (MCM) for national use during a public health emergency or a plan/mechanism to procure medical supplies for national use during a public health emergency.

According to the "Pharmaceutical Profile of Chad" issued by the WHO, the country does not have the in-house capacity to produce MCM. (1) Also, according to the Joint External Evaluation for Chad, conducted in 2017, Chad has not signed formal regional / international agreements for the distribution of medical means and does not have a national plan to acquire or receive MCM, but has a collaboration with international agencies such as the World Health Organization (WHO) to acquire MCM in case of an epidemic. (2)

There is no further evidence in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. (3,4,5,6) There is no further evidence in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (7,8,9) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). "Pharmaceutical Profile of Chad".

[<https://www.who.int/medicines/areas/coordination/Chad.pdf?ua=1>]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>].]. Accessed July 2020.

[6] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a

coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[7] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[8] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[9] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 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 neither publicly available evidence that Chad has a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency; nor that Chad has a plan/mechanism to procure laboratory supplies for national use during a public health emergency. In the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease of 2020, the need to constitute a stockpile of laboratory supplies is mentioned; however, there is no evidence of a plan/agreement to leverage domestic manufacturing capacity. (1) There is no further evidence in the Joint External Evaluation for Chad, conducted in 2017, in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (2,3,4,5,6,7)

[1] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[7] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 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 Chad has a plan, program, or guidelines in place for dispensing medical countermeasures for national use during a public health emergency (i.e. antibiotics, vaccines, therapeutics and diagnostics). There is no further evidence in the Joint External Evaluation for Chad, conducted in 2017, the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. (1,2,3,4,5) There is no further evidence in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (6,7,8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[3] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[4] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[5] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 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 a public plan is in place to receive health personnel from other countries to respond to a public health emergency. Indeed, according to the Joint External Evaluation (JEE) for Chad, conducted in 2017, Chad does not have any formal agreement to receive health personnel from other countries to respond to a public health emergency. The JEE recommends to create a system to receive health personnel in case of a public health emergency. (1) There is no further evidence in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. (2,3,4,5) There is no further evidence in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the Ministry of Territorial Administration, Public Safety and Local Governance. (6,7,8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[3] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[4] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[5] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] Ministry of Territorial Administration, Public Safety and Local Governance. [<https://interieur.gouv.td/>]. Accessed July 2020

4.4 HEALTHCARE ACCESS

4.4.1 Access to healthcare

4.4.1a

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

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

Current Year Score: 0

2020

World Policy Analysis Center

4.4.1b

Access to skilled birth attendants (% of population)

Input number

Current Year Score: 20.2

2015

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

4.4.1c

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

Input number

Current Year Score: 50.65

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 the government has issued legislation, a policy or a public statement committing to provide prioritized health care services to healthcare workers who become sick as a result of responding to a public health emergency. Indeed, there is no such evidence in the Labor Code, which articles 224 and 239 refer to health at work and mandatory safety conditions, but do not refer to prioritized health care services. (1) There is no further evidence in the

general collective convention, which regulates labour relations between workers and employers. In this document, the article 28 only refers to the right to financial compensation in case of an occupational disease. (2) No further evidence could be found in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible], in the Ministry of Public Health, in the reference facility, the National General Hospital of N'Djamena or in the newly published National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. (3,4,5,6,7,8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] Chad. 1996. "Labor Code (Code du Travail)".

[<https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/47297/77458/F10428800/TCD-47297.pdf>]. Accessed July 2020

[2] Chad. 2002. "General Collective Convention applicable to all workers in Chad (Convention collective générale applicable à tous les travailleurs du Tchad)". [<http://www.droit-afrique.com/upload/doc/tchad/Tchad-Convention-collective-generale-2002.pdf>]. Accessed July 2020

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[5] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>].]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 no publicly available evidence that a system is in place for public health officials and healthcare workers to communicate during a public health emergency.

Indeed, although according to the Joint External Evaluation for Chad, conducted in 2017, public health officials and healthcare workers, work in collaboration in case of an emergency, there is insufficient communication and coordination between them. Indeed, no formal coordination exist. (1) No further evidence could be found in the National Plan for Health

Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible], in the National capacity assessment report for risk reduction, emergency preparedness and response, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (2,3,4,5,6,7)

Chad recently published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. It is mentioned, as a planned activity, the development of a multisectoral communication platform that involves health, water and forest, livestock, interior, defense and security, finance, external relations, education, transport, communication, etc. (8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[3] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[4] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[5] Republic of Chad. April 2014. "National capacity assessment report for risk reduction, emergency preparedness and response in Chad (Rapport d'évaluation des capacités nationales pour la réduction des risques, la préparation et la réponse aux urgences au Tchad)" [<https://www.cadri.net/sites/default/files/CHAD-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf>]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 no publicly available evidence that the system for public health officials and healthcare workers to communicate during an emergency encompasses healthcare workers in both the public and private sector, since there is no evidence of a communication system in place.

Indeed, although according to the Joint External Evaluation for Chad, conducted in 2017, public health officials and healthcare workers, work in collaboration in case of an emergency, there is insufficient communication and coordination between them. Indeed, no formal coordination exist. (1) No further evidence could be found in the National Plan for Health

Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible], in the National capacity assessment report for risk reduction, emergency preparedness and response, in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (2,3,4,5,6,7)

Chad recently published a National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. It is mentioned, as a planned activity, the development of a multisectoral communication platform that involves health, water and forest, livestock, interior, defense and security, finance, external relations, education, transport, communication, etc. (8) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[3] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[4] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[5] Republic of Chad. April 2014. "National capacity assessment report for risk reduction, emergency preparedness and response in Chad (Rapport d'évaluation des capacités nationales pour la réduction des risques, la préparation et la réponse aux urgences au Tchad)" [<https://www.cadri.net/sites/default/files/CHAD-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf>]. Accessed July 2020.

[6] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[7] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[8] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidemie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 that the national public health system monitors for and tracks the number of health care associated infections that take place in healthcare facilities.

Indeed, according to the Joint External Evaluation for Chad, conducted in 2017, Chad does not have any program to fight health care associated infections and does not monitor and track the number of health care associated infections that occur in healthcare facilities. (1) There is no further evidence in the National Plan for Health Development (2018-2022), in the Ministry of Public Health or in the reference facility, the National General Hospital of N'Djamena . (2,3,4)

[1] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad".

[<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July 2020.

[2] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

4.7.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient publicly available evidence that Chad has a national requirement for ethical review before beginning a clinical trial. According to newspapers, Chad has, since 2010, a National Bioethics Committee affiliated to the Ministry of Public Health and the Ministry of Higher Education, Research and Innovation, that provides a regulatory framework related to human dignity for scientific research. Nevertheless, this Committee is in difficulties since it has not received any fund from the government and has no budget allocated to operate. (1) Further evidence from official sources on the creation of this committee and responsibilities, could not be found in the Ministry of Public Health; in the Ministry of Higher Education, Research and Innovation, where this committee does not even appear as an affiliated agency; in law documents or in the National Reference General Hospital. (2,3,4,5) The only documents referring to this National Bioethics Committee are a UNESCO document and a scientific paper. The UNESCO document refers to the organization of a meeting to discuss the establishment of the National Bioethics Committee. (6) Finally, the main purpose of the scientific paper is to evaluate national ethics guidance in Sub-Saharan African countries. Nevertheless, this document did not find evidence that the National Bioethics Committee of Chad covers ethical and regulatory guidance on the collection and use of human biospecimens for research. In fact, according to this paper, Chad does not have ethical guidelines in place. (7) Finally, according to a WHO document evaluating the pharmaceutical profile of Chad, this country does not conduct clinical trials. (8)

[1] Tchadinfos. June 2017. "National Bioethics Committee in Chad: an underrated but essential body (Comité National de Bioéthique au Tchad : un organe méconnu mais essentiel)". [<https://tchadinfos.com/sante/comite-national-de-bioethique->

au-tchad-un-organe-meconnu-mais-essentiel/]. Accessed July 2020

[2] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[3] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[4] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] Africa Law. "Chad". [<http://www.droit-afrique.com/pays/tchad/>]. Accessed July 2020

[6] UNESCO. 2008. "Meeting to discuss the establishment of the National Bioethics Committee".

[<https://unesdoc.unesco.org/ark:/48223/pf0000162750>]. Accessed July 2020

[7] Barchi, F, et al. 2016. "National ethics guidance in Sub-Saharan Africa on the collection and use of human biological specimens: a systematic review". [<https://bmcmethics.biomedcentral.com/track/pdf/10.1186/s12910-016-0146-9>].

Accessed July 2020.

[8] World Health Organization (WHO). "Pharmaceutical Profile of Chad".

[<https://www.who.int/medicines/areas/coordination/Chad.pdf?ua=1>]. Accessed July 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 that Chad has an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics. There is no reference to any expedited process in the Ministry of Public Health, in the Ministry of Higher Education, Research and Innovation or in the National Reference General Hospital. (1,2,3) There is no further evidence in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness, in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible] or in the National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus. (4,5,6,7) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[2] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[3] The National Reference General Hospital- L'hôpital general de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[4] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[5] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[6] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>].]. Accessed July 2020.

[7] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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 that Chad has a government agency responsible for approving new medical countermeasures for humans. According to a WHO document evaluating the pharmaceutical profile of Chad, there is a Regulatory Pharmaceutical Authority under the Ministry of Public Health, which is in charge of authorizing new medical countermeasures for humans and controlling their quality. (1) The Regulatory Pharmaceutical Authority is the National Drug Commission. It has 6 months from the date of deposit to evaluate a new request for medical countermeasure. (2)

[1] World Health Organization (WHO). "Pharmaceutical Profile of Chad".

[<https://www.who.int/medicines/areas/coordination/Chad.pdf?ua=1>]. Accessed July 2020.

[2] Africa Law. Law No. 024 / PR / 2000 of 24 November 2000. "Pharmacy Law (Loi relative à la pharmacie)".

[<http://www.droit-afrique.com/upload/doc/tchad/Tchad-Loi-2000-24-pharmacie.pdf>]. Accessed July 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 that Chad has an expedited process to approve medical countermeasures for human use during public health emergencies. Indeed, according to a WHO document evaluating the pharmaceutical profile of Chad, Chad does not have expedited process to approve medical countermeasures for human use during public health emergencies. [1] Moreover, there is no evidence of such a process in the pharmacy Law, in the Ministry of Public Health, in the Ministry of Higher Education, Research and Innovation or in the National Reference General Hospital. [2, 3, 4, 5]

[1] World Health Organization (WHO). "Pharmaceutical Profile of Chad".

[<https://www.who.int/medicines/areas/coordination/Chad.pdf?ua=1>]. Accessed July 2020.

[2] Africa Law. Law No. 024 / PR / 2000 of 24 November 2000. "Pharmacy Law (Loi relative à la pharmacie)".

[<http://www.droit-afrique.com/upload/doc/tchad/Tchad-Loi-2000-24-pharmacie.pdf>]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] Ministry of Higher Education, Research and Innovation. [<http://www.mesr.gouv.sn/tag/tchad/>]. Accessed July 2020

[5] The National Reference General Hospital- L'hôpital général de référence nationale.

[<http://hgrrn.blogspot.com/p/presentation-de-lhgrrn.html>]. Accessed July 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 no publicly available evidence that pandemics are integrated into the national risk reduction strategy or as a standalone national disaster risk reduction strategy for pandemics. Although a National capacity assessment report for risk reduction, emergency preparedness and response exists, it has not included pandemics into the national risk reduction strategy. (1) Moreover, according to the Joint External Evaluation for Chad, conducted in 2017, a multiple risk plan has not yet been created, although some contingency response plans exist such as the one for meningitis and cholera. (2) The cholera plan only outlines the emergency response strategy in case of an outbreak. (3) Nevertheless, the meningitis plan has a brief section that deals with prevention, since it focuses on improving surveillance mechanisms. In this section, actions such as the collection of surveillance data, the production of epidemiological reports and the extension of surveillance data to other regions are listed. Finally, vaccination is also mentioned. (4) There is no further information in the Ministry of Public Health or in the national reference general hospital. (5,6) No further evidence could be found in the National Plan for Health Development (2018-2022) (7). Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] Republic of Chad. April 2014. "National capacity assessment report for risk reduction, emergency preparedness and response in Chad (Rapport d'évaluation des capacités nationales pour la réduction des risques, la préparation et la réponse aux urgences au Tchad)" [<https://www.cadri.net/sites/default/files/CHAD-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf>]. Accessed July 2020.

[2] World Health Organization (WHO). August 2017. "Joint External Evaluation of Chad". [<https://apps.who.int/iris/bitstream/handle/10665/260441/WHO-WHE-CPI-REP-2018.3-fre.pdf?sequence=1>]. Accessed July

2020.

[3] Humanitarian Response. June 2014. "Cholera Contingency Plan".

[<https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/TCHAD%20plan%20de%20contingence%20chol%C3%A9ra-version%20all%C3%A9g%C3%A9e%20ACF.pdf>]. Accessed July 2020.

[4] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[7] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

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

5.2.1 Cross-border agreements

5.2.1a

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

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

Current Year Score: 2

There is publicly available evidence that Chad has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies. There is a regional initiative funded by the World Bank, which is being implemented since 2019 in five countries (Angola, Central African Republic, Chad, Republic of Congo and Democratic Republic of Congo) called the Regional Disease Surveillance Systems Enhancement (REDISSE). It aims to strengthen the regional disease surveillance systems in Central Africa and addresses the gaps and weaknesses in disease surveillance, preparedness and response systems across all participating countries and supports country-led efforts to increase the resilience of the animal and human health systems of countries in the sub-region to better prevent and control infectious disease outbreaks. (1) In 2020, a new component has been added, concerning COVID-19 prevention and response and specifically aims to strengthen Chad's capacity in prevention, epidemiological surveillance, early detection and confirmation of cases, contact tracing and patient treatment. Overall, this component will allow capacity building at the national and regional level. (2,3) There is evidence that the REDISSE program also involves cooperation in public health emergencies as the African Centers for Disease Control and Prevention (CDC), were supported by this program to rapidly mobilize their infrastructure and networks to counter the spread of the coronavirus. (4) There is also evidence that the COVID-19 component of the REDISSE program is being successfully applied as it enables scientific collaboration across borders. Indeed, several Africa Centers of Excellence are at the forefront in sequencing coronavirus and are receiving samples from member states of the African Union that lack sequencing capacities. (4)

[1] World Bank. 2019. "Africa Regional Disease Surveillance Systems Enhancement".

[<http://documents1.worldbank.org/curated/pt/607991572620659946/pdf/Africa-Regional-Disease-Surveillance-Systems-Enhancement-REDISSE-Project-Phase-IV.pdf>]. Accessed July 2020.

[2] World Bank. April 2020. "The World Bank Provides \$16.9 Million to Help Chad Respond to the Coronavirus Pandemic".

[<https://www.worldbank.org/en/news/press-release/2020/04/28/world-bank-provides-16-9-million-for-coronavirus-pandemic-response-in-chad>]. Accessed July 2020.

[3] World Bank. October 2019. "Regional Disease Surveillance Systems Enhancement Project (REDISSE) in Central Africa, Phase IV". [<https://www.gtai.de/resource/blob/163660/df6037a611bda59acde65c81dd4b7203/pro201910095001-data.pdf>]. Accessed July 2020.

[4] World Bank Blog. 2020. "Pandemics know no borders: In Africa, regional collaboration is key to fighting COVID-19". [<https://blogs.worldbank.org/african/pandemics-know-no-borders-africa-regional-collaboration-key-fighting-covid-19>]. Accessed August 2020.

5.2.1b

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

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

Current Year Score: 0

There is insufficient publicly available evidence that Chad has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal public health emergencies.

There is a regional initiative funded by the World Bank, which is being implemented since 2019 in five countries (Angola, Central African Republic, Chad, Republic of Congo and Democratic Republic of Congo) called the Regional Disease Surveillance Systems Enhancement (REDISSE). This programme has a component that aims to strengthen the planning capacity and emergency management to quickly react to outbreaks epidemic; it implies improving the emergency management systems; the medical countermeasures; non-pharmaceutical interventions and intervention of conditional urgency.(1) In addition, Chad is part of the Economic Community of Central African States (ECCAS); in this agreement, there is a veterinary governance component. One of its main projects is the construction of a regional center for animal health in N'Djamena, in Chad; with the objective of improving veterinary governance in terms of vaccination schedule, rapid alert system in order to improve epidemiological surveillance within Central African States. (2,3) The official webpage of the Economic Community of Central African States (ECCAS) was not working for the period consulted (August 2020).

[1] World Bank. 2019. "Africa Regional Disease Surveillance Systems Enhancement".

[<http://documents1.worldbank.org/curated/pt/607991572620659946/pdf/Africa-Regional-Disease-Surveillance-Systems-Enhancement-REDISSE-Project-Phase-IV.pdf>]. Accessed July 2020.

[2] World Organisation for Animal Health (OIE). January 2019. "OIE PVS Assessment".

[https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20191003_PVS-FU-Tchad_FINAL.pdf]. Accessed July 2020.

[3] Journal du Tchad. 2020."Ndjamena will house the regional animal health center of CEEAC (Ndjamena abritera le centre regional de santé animale de la CEEAC)". [<https://www.journaldutchad.com/ndjamena-abritera-le-centre-regional-de-sante-animale-de-la-ceeac/>]. Accessed August 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: 0

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: 0

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: 1

2021

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

5.4.1b

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

Yes = 1 , No = 0

Current Year Score: 0

2021

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

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

5.4.2a

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

Yes = 1 , No = 0

Current Year Score: 1

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: 1

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 the country has allocated national funds to improve capacity to address epidemic threats within the past three years.

There is no such evidence in the Ministry of Public Health, in the National Reference General Hospital, the National General Hospital of N'Djamena or in the National Plan for Health Development (2018-2022).(1,2,3)

The newly published National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus commits funding from the national budget to address the disease outbreak; however, there is no evidence of investments to expand capacity against future threats. (4) There is no further evidence in the Ministry of Agriculture, in the Ministry of Finance and Budget or in the 2020 budget statement of the government. (5,6,7) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website.

[1] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[2] The National Reference General Hospital- L'hôpital général de référence nationale.

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[3] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[4] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19)". [<https://chad.un.org/sites/default/files/2020->

04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[5] Ministry of Agriculture. [https://agriculture.gouv.td/]. Accessed July 2020.

[6] Ministry of Finance and Budget. [http://finances.gouv.td/]. Accessed July 2020

[7] Ministry of Finance and Budget. 2020. "General Budget of the state".

[http://finances.gouv.td/index.php/publications/budget-general-de-l-etat?view=simplefilemanager&id=165]. Accessed August 2020.

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

5.5.2a

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

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

Current Year Score: 0

2021

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

5.5.2b

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

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

Current Year Score: 0

2021

OIE PVS assessments

5.5.3 Financing for emergency response

5.5.3a

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that there is a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency. Indeed, an established agreement is in place with the World Bank pandemic financing facility, that enables Chad to receive IDA resources. (1,2) Moreover, according to

the National capacity assessment report for risk reduction, emergency preparedness and response and the OIE PVS Gap Analysis, Chad has a post-emergency fund to support the victims of a disaster. (3,4) There is no further evidence in the Ministry of Public Health to confirm that public health emergencies are included in this post-emergency fund. (5) Additionally, the government of Chad has created a Special fund to fight Covid-19 and support the implementation of its epidemic preparedness and response plan. This fund has received resources from France, corresponding to EUR\$ 7.5 million. (6)

[1] IDA, Borrowing Countries. [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed July 2020.

[2] Pandemic Emergency Financing Facility (PEF). 2017. [<http://pubdocs.worldbank.org/en/119961516647620597/PEF-Operational-Brief-Dec-2017.pdf>]. Accessed August 2020.

[3] Republic of Chad. April 2014. "National capacity assessment report for risk reduction, emergency preparedness and response in Chad (Rapport d'évaluation des capacités nationales pour la réduction des risques, la préparation et la réponse aux urgences au Tchad)" [<https://www.cadri.net/sites/default/files/CHAD-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf>]. Accessed July 2020.

[4] OIE. 2017. "OIE PVS Gap analysis".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/20171212_Gap_report_final.pdf]. Accessed July 2020.

[5] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[6] Ministry of Europe and Foreign Affairs. "France / Chad cooperation: a contribution of 7.5 million euros to the Fund to fight Covid-19 (Coopération France/Tchad : une contribution de 7,5 millions d'euros au Fonds de lutte contre la Covid-19)".

[<https://td.ambafrance.org/Cooperation-France-Tchad-une-contribution-de-7-5-millions-d-euros-au-Fonds-de>]. Accessed July 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 that senior leaders (president or ministers), in the past three years, have made a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or support or to improve the country's domestic capacity to address epidemic threats. However, there is evidence of funds provided for relief and response efforts. In 2020, the president of Chad announced the creation of a Special fund to fight Covid-19, which will be financed by national and international resources.(1) There is no further evidence in the Ministry of Public Health, the Ministry of Foreign Affairs, African Integration and Chadians living abroad and the WHO. (2,3,4)

[1] Tchad Infos. "Coronavirus: Message to the Nation from President Deby (Coronavirus : Message a la nation du Président Deby)". [<https://tchadinfos.com/politique/coronavirus-message-a-la-nation-du-president-deby/>]. Accessed July 2020

[2] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[3] Ministry of Foreign Affairs, African Integration and Chadians living abroad. [<http://diplomatie.gouv.td/>]. Accessed August

2020

[4] World Health Organization. "Tchad". [<https://www.who.int/countries/tcd/en/>]. Accessed August 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 evidence that Chad has invested donor funds to improve its own domestic capacity to address epidemic threats in the past three years.

There is evidence via the Global Health Security Funding Tracker that Chad has invested donor financed to improve domestic capacity to address epidemic threats. The tracker notes that Chad has received funding from multiple donors to enhance their capacity on global security preparedness, including just over US\$88,000 from the World Health Organisation to establish processes for long-term poliovirus risk management, including containment of all residual polioviruses, and the certification of polio eradication globally. (1)

Additionally, the government of Chad has created a Special fund to fight Covid-19 and support the implementation of its epidemic preparedness and response plan. This fund has received resources from France, corresponding to EUR\$ 7.5 million. (2) Finally, the World Bank has provided resources to Chad to strengthen the country's capacity in prevention, epidemiological surveillance, early detection and confirmation of cases, contact tracing and patient treatment, specifically for the Covid-19 disease. (3)

[1] Global Health Security Funding Tracker. [<https://tracking.ghscosting.org/#/data>]. Accessed July 2020.

[2] Ministry of Europe and Foreign Affairs. "France / Chad cooperation: a contribution of 7.5 million euros to the Fund to fight Covid-19 (Coopération France/Tchad : une contribution de 7,5 millions d'euros au Fonds de lutte contre la Covid-19)". [<https://td.ambafrance.org/Cooperation-France-Tchad-une-contribution-de-7-5-millions-d-euros-au-Fonds-de>]. Accessed July 2020

[3] World Bank. April 2020. "The World Bank Provides \$16.9 Million to Help Chad Respond to the Coronavirus Pandemic". [<https://www.worldbank.org/en/news/press-release/2020/04/28/world-bank-provides-16-9-million-for-coronavirus-pandemic-response-in-chad>]. Accessed July 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 that Chad has a 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. There is little evidence that Chad shares clinical and isolated specimens (such as Ebola or cholera) with the WHO regional office as part of the alert mechanism established within the Lake Chad Basin. (1,2) No further information concerning this alert mechanism can be found via the Ministry of Public Health or in the National General Hospital of N'Djamena (3,4) However, the project in the Lake Chad Basin is related to the restoration and extension of effective civilian security; improvements in the delivery of basic services and livelihoods. (5) No further evidence could be found in the National Plan for Health Development (2018-2022), in the Emergency Plan of Action for Ebola Virus Disease Preparedness or in the Chad Meningitis Response Plan (2016-2017) [link no longer accessible]. (6,7,8) The newly published National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus does no mention the sharing of clinical and isolated specimens with an international organization. (9) Chad has an Integrated Epidemiological Surveillance Service but it does not have a website. However, although there is no publicly available plan or policy for sharing genetic data, there is evidence that Chad shares epidemiological data; for instance, as part of the Regional Disease Surveillance Systems Enhancement (REDISSE). (10)

[1] Humanitarian Response. June 2014. "Cholera Contingency Plan".

[<https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/TCHAD%20plan%20de%20contingence%20chol%C3%A9ra-version%20all%C3%A9g%C3%A9e%20ACF.pdf>]. Accessed July 2020.

[2] Mériex Foundation. September 2017. "50 years of the Mériex Foundation". [<https://www.fondation-merieux.org/wp-content/uploads/2017/09/50-ans-fondation-merieux-projets.pdf>]. Accessed July 2020.

[3] Ministry of Public Health. [<https://sante-tchad.org/about/>]. Accessed July 2020

[4] The National Reference General Hospital- L'Hôpital Général de Référence Nationale (HGRN).

[<http://hgrn.blogspot.com/p/presentation-de-lhgrn.html>]. Accessed July 2020

[5] UNDP. 2019. "UNDP Launches Regional Stabilization Facility for Lake Chad".

[<https://www.africa.undp.org/content/rba/en/home/presscenter/pressreleases/2019/undp-launches-regional-stabilization-facility-for-lake-chad.html>]. Accessed August 2020.

[6] Ministry of Public Health. "National Plan for Health Development (2018-2022)(Plan national de développement sanitaire (2018-2022))".

[http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/chad/tchad_pnds_2018-2022.docx]. Accessed July 2020.

[7] International Federation of Red Cross and Red Crescent Societies. 2014. "Emergency Plan of Action for Ebola Virus Disease Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRTD013.pdf>]. Accessed July 2020.

[8] Republic of Chad. 2017 "Chad Meningitis Response Plan (2016-2017) [link no longer accessible]".

[<http://origin.who.int/hac/crises/tcd/chad-meningitis-response-plan-2016-2107.pdf>]. Accessed July 2020.

[9] Ministry of Public Health. March 2020. " National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte a l'épidémie de la maladie a coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 2020.

[10] World Bank. 2019. "Africa Regional Disease Surveillance Systems Enhancement".

[<http://documents1.worldbank.org/curated/pt/607991572620659946/pdf/Africa-Regional-Disease-Surveillance-Systems-Enhancement-REDISSE-Project-Phase-IV.pdf>]. Accessed July 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 Chad has not shared samples in accordance with the PIP framework in the past two years. Indeed, according to a WHO report issued in 2017, nineteen of the 23 Member States of the influenza laboratory network shared influenza virological data from epidemiological weeks 1 to 52 of 2016. Chad is a member state of this network and shared influenza samples. There is no further evidence in the WHO and top international and local media outlets. (1)

[1] World Health Organization (WHO). 2017. Influenza Surveillance in the WHO African Region.

[https://afro.who.int/sites/default/files/2017-06/afr-influenza-surveillance_epi-weeks-1-to-52.pdf]. Accessed July 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 publicly available evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years since Chad has explicit agreements to share pandemic samples. (1,2,3) There is no further evidence concerning the share of coronavirus samples in the WHO and top international and local media outlets. The newly published National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus does no mention that the country will not share coronavirus samples with other countries. (4)

[1] World Bank. 2015. "Regional Sahel Pastoralism Support Project".

[<http://documents.worldbank.org/curated/en/250471468000282631/pdf/PAD1091-PAD-P147674-IDA-R2015-0106-1-Box391422B-OUO-9.pdf>]. Accessed July 2020.

[2] Humanitarian Response. June 2014. "Cholera Contingency Plan".

[<https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/TCHAD%20plan%20de%20contingence%20chol%C3%A9ra-version%20all%C3%A9g%C3%A9e%20ACF.pdf>]. Accessed July 2020.

[3] Mérieux Foundation. September 2017. "50 years of the Mérieux Foundation". [<https://www.fondation-merieux.org/wp-content/uploads/2017/09/50-ans-fondation-merieux-projets.pdf>]. Accessed July 2020.

[4] Ministry of Public Health. March 2020. "National Contingency Plan for the preparation and response to the epidemic of the Covid-19 coronavirus disease (Plan National de Contingence pour la préparation et la riposte à l'épidémie de la maladie à coronavirus Covid-19)". [https://chad.un.org/sites/default/files/2020-04/COVID19_MoH_PLAN_CONTINGENC_FINAL_OK.pdf]. Accessed July 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: 1

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: 21

2020

Transparency International

6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

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: 1

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: 3

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: 1

2021

Economist Intelligence

6.1.5 Armed conflict

6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 2

2021

Economist Intelligence

6.1.6 Government territorial control

6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 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: 2

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: 22.31

2016

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: 0.3

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: 15.2

2011

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: 2

According to a report from the International Labour Office of 2018, Chad has 92% of the total employed in the informal sector. (1)

[1] International Labour Office (ILO). 2018. "Women and Men in the Informal Economy: A Statistical Picture".
[https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf]. Accessed August 2020.

6.2.3c

Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

Current Year Score: 0

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: 0.43

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: 1

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: 23.28

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: -0.92

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: 53.98

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: 626.2

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 2.49

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 11.8

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 6.1

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: 38.7

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 8.34

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: 13.43

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: 0

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: 0

2018

Wellcome Trust Global Monitor 2018