

Rwanda

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

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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 Rwanda has a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens. The Joint External Evaluation For Rwanda, conducted in May 2018, states there is no plan for antimicrobial resistance. (1) According to the 2018 report on "Global Progress on AMR" by the World Health Organization, Rwanda is currently developing a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens. (2) According to news from the FAO from July 2020, the FAO is supporting the government to develop its first AMP, which will be a four year national plan 2020-2024. (3) However, there is no evidence of a published national AMR plan which adequately integrates surveillance, detection and reporting on the websites of the Ministry of Health, Ministry of Agriculture, the national laboratory system nor in the WHO Library of National Action Plans. (4, 5, 6)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jee/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] 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 November 2020.

[3] FAO. July 2020. "Developing Rwanda's first National Action Plan to combat Antimicrobial Resistance".

[<http://www.fao.org/rwanda/news/detail-events/en/c/1300137/>]. Accessed November 2020.

[3] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] World Health Organization (WHO). "Library of National Action Plans". [<http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed November 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 Rwanda has a national laboratory/laboratory system which tests for some priority AMR pathogens. There is publicly available evidence that Rwanda can test for multi-drug resistance tuberculosis strains in it's

National Reference Laboratory (NRL). While the NRL can also test for *E. coli*, *S. pneumoniae*, *S. aureus*, *Salmonella* spp. and *Shigella*, there is no publicly available evidence that it includes testing for the drug-resistant strains of *E. coli*, *S. pneumoniae*, *S. aureus*, *Salmonella* spp. and *Shigella* (1). Moreover, according to the Joint External Evaluation for Rwanda, conducted in May 2018, there are no officially designated laboratories for detecting and reporting AMR, but "there are several laboratories that can conduct AMR detection (the referral and teaching hospitals, the National Reference Laboratory, and the Rubizi Animal Laboratory). These laboratories send their results directly to the medical professionals who request them" (2). Nevertheless, "Rwanda's laws are limited for prevention, early warning/surveillance and/or preparedness" (3).

[1] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] World Health Organization (WHO). "Rwanda in the pilot seat in the development of its National Action Plan for Human Security". [<https://afro.who.int/fr/node/10115>]. Accessed November 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 Rwandan government conducts detection or surveillance activities for antimicrobial residues or AMR organisms. According to the WHO self-assessment questionnaire: "National surveillance system for antimicrobial resistance (AMR) in animals, plants, foods and environment are in place for priority pathogenic/commensal bacterial species. Data is systematically collected and reported on levels of resistance in at least 2 of those bacterial species, involving a laboratory that follows quality management processes, e.g. proficiency testing" (1). However, there is no additional evidence available on which agency conducts the surveillance for antimicrobial residues. According to the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, Rwanda does not have an AMR strategy (2). There is no further evidence in the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for the Epidemic Infectious Diseases Division (2012-2018), the Ministry of Health, the WHO Library of National Action Plans or the JEE (3, 4, 5, 6).

[1] World Health Organization (WHO) & Food and Agriculture Organization of the United Nations (FAO). 2017. "Global Database for Antimicrobial Resistance Country Self Assessment". [<https://amrcountryprogress.org/>]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[4] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[5] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] World Health Organization (WHO). "Library of National Action Plans". [http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/] Accessed November 2020.

[7] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf]. Accessed November 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 Rwanda requires prescriptions for antibiotic use for humans. However, there is no evidence that this legislation is being enforced. According to the Joint External Evaluation for Rwanda, conducted in May 2018, prescriptions are required for antibiotic use (1). Moreover, Article 41 of the currently active law n°47/2012 of 14/10/2013 'Relating to the Regulation and Inspection of Food and Pharmaceutical Products' stipulates that "pharmaceutical products shall be dispensed on the basis of a medical prescription. An Order of the Minister shall determine the nature and use of medical prescription and the over-the-counter pharmaceutical products list" (2). This law specifies that "the controlled pharmaceutical products are narcotics, vaccines, antibiotics, antiretrovirals, tuberculosis and malaria drugs". Further, the "list of non-prescription pharmaceutical products set out by the Minister" mentioned under this law is not publicly available. Though there is only evidence of a 'National List of Essential Medicines', it is not clear for which of these antibiotics, prescriptions are required (3). However, the Ministry of Internal Security of Rwanda has noted the emergence of an illegal market of antibiotics in the country. (4)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf]. Accessed November 2020.

[2] Official Gazette n° Special of 17/01/2013. Law n°47/2012 of 14/01/2013. "Relating to the Regulation and Inspection of Food and Pharmaceutical Products". [http://extwprlegs1.fao.org/docs/pdf/RWA131821.pdf]. Accessed November 2020.

[3] Republic of Rwanda. 2010. "National List of Essentials Medicines". [http://www.moh.gov.rw/fileadmin/templates/Clinical/MEDICAMENTS-ESSENTIELS.pdf]. Accessed November 2020.

[4] International Research Institute Against Counterfeit Medicines. March 2015. "In Rwanda, a unit specializes in the fight against false medicines and counterfeit". [https://www.iracm.com/2015/03/au-rwanda-une-unite-se-specialise-dans-la-lutte-contre-les-faux-medicaments-et-la-contrefacon/]. Accessed November 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 Rwanda requires prescriptions for antibiotic use for animals. However, there is no evidence that this legislation is being enforced. Indeed, according to the Joint External Evaluation for Rwanda, conducted in May 2018, prescriptions are required for antibiotic use, although it does not specify human and/or animal (1). However,

Article 41 of the currently active law n°47/2012 of 17/10/2013, 'Relating to the Regulation and Inspection of Food and Pharmaceutical Products', stipulates that "pharmaceutical products shall be dispensed on the basis of a medical prescription. An Order of the Minister shall determine the nature and use of medical prescription and the over-the-counter pharmaceutical products list". (2) This law specifies that "the controlled pharmaceutical products are narcotics, vaccines, antibiotics, antiretrovirals, tuberculosis and malaria drugs". The law applies to both humans and animals, and states that a pharmaceutical product is classified as "any substance capable of preventing and treating human or animal diseases" and a medical prescription is defined as "a written indication by a medical practitioner, dentist or veterinary surgeon". There is no further details about prescriptions for antibiotic use for animals is available on the websites of the Ministry of Health and the Ministry of Agriculture and Animal Resources, the agencies in charge of regulating pharmaceutical products (3,4). There is no publicly available evidence of such a legislation on the website of the Veterinary Legislation Support Programme (5). However, according to the Ministry of Internal Security of Rwanda, there is an emerging illegal market of antibiotics in the country. (6)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Official Gazette n° Special of 17/01/2013. Law n°47/2012 of 14/01/2013. "Relating to the Regulation and Inspection of Food and Pharmaceutical Products". [<http://extwprlegs1.fao.org/docs/pdf/RWA131821.pdf>]. Accessed November 2020.

[3] Ministry of Health. "Home". [<http://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. "Home". [<http://www.minagri.gov.rw/>]. Accessed November 2020.

[5] World Animal Health Organization. June 2014. "The Veterinary Legislation Support Programme". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20140801_VL_Rwanda_Mission_Report.pdf]. Accessed November 2020.

[6] International Research Institute Against Counterfeit Medicines. March 2015. "In Rwanda, a unit specializes in the fight against false medicines and counterfeit". [<https://www.iracm.com/2015/03/au-rwanda-une-unite-se-specialise-dans-la-lutte-contre-les-faux-medicaments-et-la-contrefacon/>]. Accessed November 2020.

1.2 ZONOTIC DISEASE

1.2.1 National planning for zoonotic diseases/pathogens

1.2.1a

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that Rwanda has a strategy document on zoonotic disease according to the Joint External Evaluation for Rwanda, conducted in May 2018. The Rwanda One Health strategic plan (2014-2018) has a section dedicated to zoonotic diseases. It covers six zoonotic diseases: viral haemorrhagic fevers, highly pathogenic avian influenza , Rift Valley fever , brucellosis , human African trypanosomiasis (sleeping sickness) and rabies (1). The main objective of this plan is to prevent and control zoonotic diseases that pose serious risks to human health. This strategy was implemented by the One Health Steering Committee (OHSC), whose members are in the Ministry of Health, the Ministry of Agriculture and Animal Resources, the Rwanda Biomedical Centre, the Rwanda National Police and the Directorate of Immigration and Emigration. This enables a multisectoral strategy, capable of addressing health challenges at the human-animal-environment interfaces (2). Finally, in 2020, the Food and Agriculture Organization of the United Nations (FAO) has supported the government of

Rwanda to develop three strategic documents for three priority zoonotic diseases that need attention to manage health related challenges at the human-animal-environment interfaces. These are Rabies, Rift Valley Fever and Highly Pathogenic Avian Influenza (HPAI). (3)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[3] Food and Agriculture Organization of the United Nations (FAO). "Enhancing Rwanda's prevention and control for zoonotic diseases". [<http://www.fao.org/rwanda/news/detail-events/en/c/1323132/>]. Accessed November 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 there is national legislation, plans or equivalent strategy documents which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans.

The Rwanda One Health strategic plan (2014-2018) has a section dedicated to zoonotic diseases. However, it does not mention measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. It even states that "there are no guidelines in place yet for limiting disease transmission between human population, livestock and wildlife". (1) In 2020, the Food and Agriculture Organization of the United Nations (FAO) is supporting the government of Rwanda with the development of three strategic documents for three priority zoonotic diseases that need attention to manage health related challenges at the human-animal-environment interfaces. These are Rabies, Rift Valley Fever and Highly Pathogenic Avian Influenza (HPAI). (2) However, there is no evidence that these plans have already been developed. There is no further evidence of such measures for risk identification and reduction for zoonotic disease spillover events from animals to humans in the Ministry of Health or in the Ministry of Agriculture and Animal Resources (3,4)

[1] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[2] Food and Agriculture Organization of the United Nations (FAO). "Enhancing Rwanda's prevention and control for zoonotic diseases". [<http://www.fao.org/rwanda/news/detail-events/en/c/1323132/>]. Accessed November 2020.

[3] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 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 insufficient publicly available evidence that Rwanda has national plans that account for the surveillance and control of multiple zoonotic pathogens of public health concern. According to the Joint External Evaluation for Rwanda, conducted in May 2018, the Rwanda One Health strategic plan accounts for the surveillance and control of multiple zoonotic pathogens of public health concern. (1) Indeed, a zoonotic surveillance system is in place for brucellosis, Rift Valley fever and trypanosomiasis diseases. One of the main goals of Rwanda One Health strategic plan is to strengthen "surveillance, early detection, rapid response, prevention and control of zoonosis". (1) There is no further information available on what these plans include. Also, in 2020, the Food and Agriculture Organization of the United Nations (FAO) is supporting the government of Rwanda with the development of three strategic documents for three priority zoonotic diseases that need attention to manage health related challenges at the human-animal-environment interfaces. These are Rabies, Rift Valley Fever and Highly Pathogenic Avian Influenza (HPAI). (2)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Food and Agriculture Organization of the United Nations (FAO). "Enhancing Rwanda's prevention and control for zoonotic diseases". [<http://www.fao.org/rwanda/news/detail-events/en/c/1323132/>]. Accessed November 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 Rwanda has a department dedicated to zoonotic disease functioning across ministries. The Epidemic Surveillance and Response (ESR) Division is dedicated to zoonotic disease but it sits only in the Ministry of Health. Indeed, it is located in the Rwanda Biomedical Centre (RBC) which is under the Ministry of Health and has four main units, which play a specific role in disease detection and response: surveillance, avian influenza and highly pathogenic diseases, food and waterborne diseases and outbreak preparedness and response. According to the general presentation of the ESR Division, this agency has "often a role to play with other Ministries and organizations including those across the national borders" (1). No further information about the ESR could be found in the Ministry of Health, the Ministry of Environment, the Ministry of Agriculture and Animal Resources (MINAGRI) or the Joint External Evaluation for Rwanda (2,3,4,5).

[1] Rwanda Biomedical Center. "Epidemic Surveillance and Response (ESR) Division". [<https://rbc.gov.rw/index.php?id=669>]. Accessed November 2020.

[2] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[3] Ministry of Environment. [<http://www.environment.gov.rw/index.php?id=209>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[5] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 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 Rwanda has a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency. Nevertheless, one of the objectives of the One Health strategic plan (2014-2018) is to create a One Health community response where livestock owners will be able to report livestock diseases via a hub-and-spoke network that will be linked to hubs (centres of expertise) through mobile phone technology. (1) "Hub centres would be connected via the internet to district centres and eventually to a central repository and command centre. This centres will routinely collect local information on the health of humans, animals and crops and notify hub centres when there are sudden changes or concerns" (1). There is no further evidence in the 2018 Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda, the Rwanda One Health strategic plan (2014-2018), the OIE PVS Evaluation Reports, the Fourth Health Sector Strategic Plan (2018-2024) and the Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018. (1, 2, 3, 4, 5) There is no further evidence in the Ministry of Health or in the Ministry of Agriculture and Animal Resources (MINAGRI) (6,7).

[1] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] World Animal Health Organization. 2008. "OIE PVS Evaluation Reports"-Organisation Mondiale de la Santé; Animale. "Outil pour l'évaluation des performances des Services vétérinaires".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/FinalReport-Rwanda.pdf]. Accessed November 2020.

[4] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[5] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[6] Ministry of Health. [<http://www.moh.gov.rw/>]. Accessed November 2020.

[7] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/>]. Accessed November 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 Rwanda has laws or guidelines in place to protect the confidentiality of information generated through surveillance activities for animals. Although in 2016, the Ministry of Health developed the Health Sector Information and Communication Technology (ICT) Security Policy, to ensure that all information in the

Rwandan Health Sector is protected, there is no evidence that this would apply for surveillance of owned livestock. (1). No evidence of any other data protection law is publicly available in the Data Protection and Privacy laws tracker of the United Nations (2). Moreover, in 2018, the newspaper, Rwanda Today, published a note entitled Pressure is mounting on African governments to enact laws which protect data use privacy rights, where Rwanda was identified as one of the countries not having comprehensive data protection regulation(3). No further evidence could be found in the 2018 Joint External Evaluation of the Republic of Rwanda, the Rwanda One Health strategic plan (2014-2018), the OIE PVS Evaluation Reports, the Fourth Health Sector Strategic Plan (2018-2024), the Six Year Strategic Plan for the Epidemic Infectious Diseases Division 2012-2018 or in the Ministry of Agriculture and Animal Resources (MINAGRI) and Ministry of Health (4,5,6,7,8,9, 10).

- [1] Ministry of Health. 2016. "Health Sector Information and Communication Technology (ICT) Security Policy". [http://www.moh.gov.rw/fileadmin/templates/policies/Approved_ICT_Security_Policy_forMOH.pdf]. Accessed November 2020.
- [2] United Nations. "Cyberlaw Tracker: The case of Rwanda". [https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/CountryDetail.aspx?country=rw]. Accessed November 2020.
- [3] Rwanda Today. June 2018. "East Africa under pressure to enact data protection laws". [http://rwandatoday.africa/news/East-Africa-under-pressure-to-enact-data-protection-laws-4383214-4629470-n6rqupz/index.html]. Accessed November 2020.
- [4] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf]. Accessed November 2020.
- [5] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.
- [6] World Animal Health Organization. 2008. "OIE PVS Evaluation Reports"-Organisation Mondiale de la Santé; Animale. "Outil pour l'évaluation des performances des Services vétérinaires". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/FinalReport-Rwanda.pdf]. Accessed November 2020.
- [7] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.
- [8] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [9] Ministry of Agriculture and Animal Resources. [http://www.minagri.gov.rw/]. Accessed November 2020.
- [10] Ministry of Health. [http://www.moh.gov.rw/]. Accessed November 2020.

1.2.2c

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

Yes = 1, No = 0

Current Year Score: 1

There is evidence that Rwanda conducts surveillance of zoonotic disease in wildlife. According to the 2018 Joint External Evaluation of the Republic of Rwanda, conducted in May 2018, "zoonotic surveillance systems are in place for some zoonotic priority diseases in wildlife and domestic animals" (1). Surveillance is conducted for gorillas by the Rwanda Animal Resources Development Authority, but the disease for which the surveillance is being conducted is not mentioned. There is no further publicly available evidence for surveillance in other animals (2). Moreover, although Rwanda has fully equipped laboratories for surveillance and control risk of epidemics in the wildlife and the domestic animal sectors, human resource capacity is insufficient (3). There is no further evidence in the OIE PVS Evaluation Report, the Fourth Health Sector Strategic Plan (2018-

2024) or the Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018 (4,5,6). There is no further evidence in the Ministry of Health or in the Ministry of Agriculture and Animal Resources (MINAGRI) (7,8).

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] One Health Steering committee. "Rwanda One Health Zoonotic Diseases Prioritization". [http://www.rbc.gov.rw/fileadmin/user_upload/RWANDA_OH_ZOONOTIC_DISEASES_PRIORITIZATION_REPORT.pdf]. Accessed November 2020.

[3] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[4] World Animal Health Organization. 2008. "OIE PVS Evaluation Reports"-Organisation Mondiale de la Santé Animale. "Outil pour l'évaluation des performances des Services vétérinaires".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/FinalReport-Rwanda.pdf]. Accessed November 2020.

[5] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[6] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[7] Ministry of Health. [<http://www.moh.gov.rw/>]. Accessed November 2020.

[8] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/>]. Accessed November 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: 5.57

2018

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: 27.86

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 of specific mechanisms for working with the private sector in controlling or responding to zoonoses in Rwanda's strategies on zoonotic disease. Nevertheless, there is evidence of private sector intervention for specific diseases such as malaria, particularly for the local production of "vector control commodities/materials (bed net, insecticides for IRS)". (1) According to the Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda, completed in May 2018, while MOUs exist between the National Reference Laboratory (NRL) and regional and international laboratories for specimen referral and transport services, there is no evidence they exist for disease control and response. (2) There is no further evidence in the Fourth Health Sector Strategic Plan, or from the websites of the Ministry of Health or the Ministry of Agriculture and Animal Resources (MINAGRI). (3,4,5)

[1] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[4] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[5] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 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 evidence of a record of facilities in which especially dangerous pathogens and toxins are stored or processed. According to the Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda, conducted in May 2018, "the country has initiated a plan to consolidate the location of dangerous pathogens and toxins into a minimal number of facilities." However, no mention is made of inventories in the report. (1) Additionally, no specific reference of a record of facilities for the storage of dangerous pathogens or a requirement for such a record was found in the National Biosafety Framework (NBF) or in the National Biosafety Bill (2, 3). Moreover, the National Biosafety Policy (2015) could not be found online. There is no further evidence in the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory, in academic papers or in the VERTIC database (4,5,6,7,8,9). Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (10)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Lands, Environment, Forestry Water And Mines. 2005. "The National Biosafety Framework For Rwanda". [https://unep.ch/biosafety/old_site/development/countryreports/rwnbfpref.pdf]. Accessed November 2020.

[3] Ministry Of Lands, Environment, Forestry Water And Mines. 2004. "Draft BIOTECHNOLOGY & Biosafety Bill 2005". [[http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/biosafety_law_\(english\).doc](http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/biosafety_law_(english).doc)]. Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[6] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/>]. Accessed November 2020.

[7] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[8] Vincent Rusanganwa et al. 2018. "Clinical Referral Laboratories in Rwanda: The Status of Quality Improvement After 7 Years of the SLMTA Program". [<https://academic.oup.com/ajcp/article/150/3/240/5040302>]. Accessed in November 2020.

[9] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[10] Confidence Building Measures. Rwanda. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 information that Rwanda 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. According to the Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda, conducted in May 2018, "a biosafety and biosecurity system is in place where a National Biosafety Policy (2015) and other guidelines address most relevant biosafety and biosecurity issues" (1). Nevertheless, in the National Biosafety Framework (NBF) and in the National Biosafety Bill, there is no evidence of a comprehensive legislative framework to address biosecurity 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. (2,3) They only refer to biosafety measures, specifically related to genetically modified organisms (GMOs). The National Biosafety Policy (2015) could not be found online. There is no further evidence about biosecurity standards in the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory or the VERTIC BWC Legislation Database. (4, 5, 6, 7, 8) Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (9)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Lands, Environment, Forestry Water And Mines. 2005. "The National Biosafety Framework For Rwanda". [https://unep.ch/biosafety/old_site/development/Countryreports/RWNBFrep.pdf]. Accessed November 2020.

[3] Ministry Of Lands, Environment, Forestry Water And Mines. 2004. "Draft BIOTECHNOLOGY ñ Biosafety Bill 2005". [[http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/Biosafety_Law_\(english\).doc](http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/Biosafety_Law_(english).doc)]. Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Ministry of Defence. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020. Accessed November 2020.

[6] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[7] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[8] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[9] Confidence Building Measures. ´ Rwanda ñ. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 of an agency responsible for enforcing biosecurity legislation and regulations since there is also no evidence of biosecurity legislations and regulations in place to be enforced. There is no further evidence in the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda, conducted in May 2018, the National Reference Laboratory or the VERTIC database. (1, 2, 3, 4, 5, 6) Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (7)

[1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[2] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[3] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[4] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[7] Confidence Building Measures. ´ Rwanda ñ. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 evidence to confirm that Rwanda has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. According to the Joint External Evaluation for Rwanda, completed in May 2018, the country has initiated a plan to consolidate the location of dangerous pathogens and toxins into a minimal number of facilities. (1) Nevertheless, the JEE only mentions initiating a plan, and not implementing one. No further details on this plan could be located from the Ministry of Health, Ministry of Defence, Ministry of Agriculture and Animal Resources, the National Reference Laboratory or the VERTIC BWC Legislation Database. (2, 3, 4, 5,6) Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (7)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[7] Confidence Building Measures. ' Rwanda'. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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: 1

There is public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for Ebola but not for anthrax. The National Reference Laboratory (NRL), located in Kigali, has the capacities, since 2004, for polymerase reaction (PCR), CD4 and viral load measurements, which was confirmed by the Joint External Evaluation for Rwanda, conducted in May 2018. (1, 2) Evidence that PCR may be used for Ebola is found in the weekly epidemiological updates (2014), where the Ministry of Health states that "Ebola virus infections can be diagnosed definitively in a laboratory through several types of tests: antibody-capture enzyme-linked immunosorbent assay (ELISA), antigen detection tests serum neutralization test and reverse transcriptase polymerase chain reaction (RT-PCR)". (3) No evidence on PCR for anthrax could be found from the Ministry of Health, Ministry of Defence, Ministry of Agriculture and Animal Resources, the National Reference Laboratory, or in the Fourth Health Sector Strategic Plan, Rwanda One Health strategic plan (2014-2018) or the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018. (4, 5, 6, 7, 8, 9, 10)

[1] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] Ministry of Health. 2014. "Weekly Epidemiological Updates".

[http://rbc.gov.rw/IMG/pdf/weekly_epidemiological_updates_week_14-2.pdf]. Accessed November 2020

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Ministry of Defence. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[6] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[7] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020

[8] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[9] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[10] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 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 Rwanda 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. According to the Joint External Evaluation (JEE) for Rwanda, completed in May 2018, biosecurity training is provided by each institution, but there is no common curriculum. Nevertheless, the JEE notes a train-the-trainers program is under development, although it is unclear if it includes both biosecurity and biosafety. (1) No further evidence of a common curriculum or a train-the-trainer program could be found from the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory or the VERTIC BWC Legislation Database. (2, 3, 4, 5,6) Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (7)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[7] Confidence Building Measures. ' Rwanda ^a. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 Rwanda has any regulation 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 drug testing, background checks, and psychological or mental fitness checks. According to the Joint External Evaluation for Rwanda, conducted in May 2018, laboratories need to enhance biosecurity capacity (infrastructure, equipment, and human resources). (1) There is no further evidence of relevant regulations or licensing conditions from the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory or in the VERTIC database. (2,3,4,5,6) Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (7)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]

[3] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[7] Confidence Building Measures. ' Rwanda ^a. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 Rwanda has any regulation in place for the safe and secure transport of infectious substances. Some guidelines seem to have been implemented by the Ministry of Health (MOH), but are not publicly available. (1,2) Moreover, in the Joint External Evaluation (JEE), conducted in May 2018, no reference is made to any regulation on the

safe and secure transport of infectious substances (Categories A and B), although the JEE notes there are standard operating procedures in place for specimen packaging and transportation. (3) Finally, a pilot plan for the transport of epidemic samples was found. (1) One of the objectives is to align with international regulations for the transport of infectious materials (Category A and B), however, there is no evidence that this plan is currently implemented. (1) There is no further relevant information shared by the Transport Department, the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory, the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018 or in the VERTIC database (5,6,7,8,9,10,11, 12) Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (13)

[1] Ministry Of Health. 2012. "Rwanda Biomedical Center, National Reference Laboratory, Biological Sample Transportation Within The National Laboratory Network".

[<http://www.stoptb.org/WG/gli/assets/documents/srt/Rwanda%20National%20Reference%20Laboratory-RBC%20-%20Biological%20Sample%20Transportation%20within%20the%20National%20Laboratory%20Network.pdf>]. Accessed November 2020.

[2] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020

[3] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[4] Ministry of Transport. [<http://www.mininfra.gov.rw/index.php?id=4>]. Accessed November 2020.

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[6] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[7] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[8] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>] Accessed in October 2018.

[9] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[10] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[11] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[12] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[13] Confidence Building Measures. ' Rwanda ³. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 Rwanda has 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. A pilot plan for the transport of epidemic samples was found (1). One of the objectives is to negotiate contracts with an international air carrier A which meets the packaging instruction (PI) 650 for transportation by air/or international transport of strains or specimens". (2) However, there is no evidence that this plan is currently implemented. There is no further relevant information shared by the Transport Department, the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory, the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018 or in the VERTIC database (3,4,5,6,7,8,9,10,11). Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (12)

[1] Ministry Of Health. 2012. "Rwanda Biomedical Center, National Reference Laboratory, Biological Sample Transportation Within The National Laboratory Network".

[<http://www.stoptb.org/WG/gli/assets/documents/srt/Rwanda%20National%20Reference%20Laboratory-RBC%20-%20Biological%20Sample%20Transportation%20within%20the%20National%20Laboratory%20Network.pdf>]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] Ministry of Transport. [<http://www.mininfra.gov.rw/>]. Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[6] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/>]. Accessed November 2020.

[7] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>] Accessed November 2020.

[8] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[9] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[10] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[11] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[12] Confidence Building Measures. Rwanda; [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 Rwanda has in place national biosafety legislation and/or regulations. According to the Joint External Evaluation of Rwanda, conducted in May 2018, there is "a biosafety system is in place where a National Biosafety Policy (2015) addresses most relevant biosafety issues" (1). The policy contains a national biosafety policy; national biosafety regulatory guidelines and a National Biosafety Bill, that has not yet become a law. Nevertheless, this biosafety framework does not refer to infectious agents but only to genetically modified organisms (GMOs) (2). Within this framework, laboratory safety components are mentioned, since one of the expected results is to establish two National Biotechnology Laboratories, fully equipped for advanced research, testing and certification services. However, these laboratory safety components only seem to apply to GMOs. In the same way, the National Biosafety Bill only refers to GMO crops and no laboratory safety components are included (3,4). Finally, the National Biosafety Policy (2015) could not be found online. There is no further evidence on biosafety legislation and/or regulations in the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory or the VERTIC BWC Legislation Database (5,6,7,8,9). Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (10)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Lands, Environment, Forestry Water And Mines. 2005. "The National Biosafety Framework For Rwanda". [https://unep.ch/biosafety/old_site/development/Countryreports/RWNBFrep.pdf]. Accessed November 2020.

[3] Rwanda Environment Management Authority (REMA). "Recruitment of an international individual consultant". [http://www.rema.gov.rw/uploads/media/Preparation_of_the_biosafety_risk_assessment_risk_management_and_training.pdf]. Accessed November 2020.

[4] Ministry Of Lands, Environment, Forestry Water And Mines. 2004. "Draft BIOTECHNOLOGY Biosafety Bill 2005". [[http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/Biosafety_Law_\(english\).doc](http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/Biosafety_Law_(english).doc)]. Accessed November 2020.

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[6] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[7] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[8] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[9] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[10] Confidence Building Measures. Rwanda. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 an established agency is responsible for the enforcement of biosafety legislation and regulations. According to the Joint External Evaluation of Rwanda, conducted in May 2018, there is "a biosafety system is in place where a National Biosafety Policy (2015) and other guidelines address most relevant biosafety issues" (1). The policy contains a national biosafety policy; national biosafety regulatory guidelines and a National Biosafety Bill, that has not yet become a law. The National Biosafety Framework (NBF) presents "as a set of mechanisms to facilitate safe development and application of biotechnology but also to guide the integration of biotechnology into the development strategy that focuses on human development and intensive application of scientific technology". The NBF does not refer to infectious agents but only to genetically modified organisms (GMOs) (2). In this document, laboratory safety components are mentioned, since one of the expected results of the NBF is to establish two National Biotechnology Laboratories, fully equipped for advanced

research, testing and certification services. One of the main activities of these laboratories would be to meet the needs for biosafety training. In addition, Biosafety Risk Assessment manuals are also expected. However, these laboratory safety components only seem to apply to GMOs and there is no evidence that these manuals have been published. In the same way, the National Biosafety Bill only refers to GMO crops and no laboratory safety components are included (3,4). Finally, the National Biosafety Policy (2015) could not be found online. There is no further evidence on biosafety legislation and/or regulations in the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory or the VERTIC BWC Legislation Database (5,6,7,8,9). Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (10)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Lands, Environment, Forestry Water And Mines. 2005. "The National Biosafety Framework For Rwanda". [https://unep.ch/biosafety/old_site/development/Countryreports/RWNBfrep.pdf]. Accessed November 2020.

[3] Rwanda Environment Management Authority (REMA). "Recruitment of an international individual consultant". [http://www.rema.gov.rw/uploads/media/Preparation_of_the_biosafety_risk_assessment_risk_management_and_training.pdf]. Accessed November 2020.

[4] Ministry Of Lands, Environment, Forestry Water And Mines. 2004. "Draft BIOTECHNOLOGY ñ Biosafety Bill 2005". [[http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/Biosafety_Law_\(english\).doc](http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/Biosafety_Law_(english).doc)]. Accessed November 2020.

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[6] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[7] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[8] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[9] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[10] Confidence Building Measures. Rwanda. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 Rwanda 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. According to the Joint External Evaluation (JEE) for Rwanda, completed in May 2018, biosafety training is provided by each institution, but there is no common curriculum. Nevertheless, the JEE notes a train-the-trainers program is under development. (1) No further evidence of a common curriculum or a train-the-trainer program for biosafety could be found from the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory or the VERTIC BWC Legislation Database. (2, 3, 4, 5,6) Rwanda has not submitted Confidence Building Measures under the Biological Weapons

Convention, and therefore does not make information available through this source. (7)

- [1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.
- [2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [3] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.
- [4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.
- [5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [6] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.
- [7] Confidence Building Measures. ' Rwanda ³. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 public 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. No further evidence was found from the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory or the VERTIC BWC Legislation Database. (1, 2, 3, 4,5) Rwanda does not have a Ministry of Research. Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (6)

- [1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [2] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.
- [3] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.
- [4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [5] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.
- [6] Confidence Building Measures. ' Rwanda ³. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 public evidence of a national policy requiring oversight of dual-use research. There is no mention of such a legislation on website of the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources or the National Reference Laboratory. (1, 2, 3, 4) There is no reference to such a policy in the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018, the Guidelines for Researchers Intending to Do Health Research in Rwanda or the VERTIC BWC Legislation Database. (5, 6, 7, 8, 9) Rwanda does not have a Ministry of Research. Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (10)

- [1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [2] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.
- [3] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.
- [4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [5] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.
- [6] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.
- [7] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [8] Ministry of Health. 2012. "Guidelines for Researchers Intending to Do Health Research in Rwanda". [<http://moh.gov.rw/fileadmin/templates/PHIS/Researchers-Guidelines.pdf>]. Accessed November 2020.
- [9] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.
- [10] Confidence Building Measures. ' Rwanda ^a. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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 evidence of an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual use research. TRAC Plus (Centre for Treatment and Research on AIDS, Malaria, Tuberculosis and other Epidemics) under the Ministry of Health, serves as a national centre for infectious diseases control and prevention in Rwanda. Nevertheless, there is no evidence of dual research, the agency focus mainly on HIV/AIDS counselling and testing (1). There is no mention of such an agency on the websites of the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources or the National Reference Laboratory (2, 3, 4, 5). There is no reference to such policy in the Fourth Health Sector Strategic Plan, the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018 or the VERTIC BWC Legislation Database (6, 7,8). Rwanda does not have a Ministry of Research. Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (9)

- [1] TRAC Plus. 2010. "HIV/AIDS and STIs Unit Annual Report". [http://www.rbc.gov.rw/library/sites/default/files/hiv_aids_and_stis_annual_report_2009_2010.pdf]. Accessed November 2020.

- [2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [3] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.
- [4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.
- [5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [6] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.
- [7] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [8] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.
- [9] Confidence Building Measures. Rwanda. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 2020.

1.5.2 Screening guidance for providers of genetic material

1.5.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence of a national legislation, regulation, policy, or other guidance, requiring the screening of synthesized DNA before it is sold. There is no mention of such a legislation or guidance in the National Biosafety Framework (NBF) or the National Biosafety Bill (1, 2). There is no mention of such a legislation on the websites of the Ministry of Health, the Ministry of Defence, the Ministry of Agriculture and Animal Resources, the Department of Transport or the National Reference Laboratory (3, 4, 5, 6, 7). There is no reference to such policy in the Fourth Health Sector Strategic Plan, the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018 or the VERTIC BWC Legislation Database (8, 9,10). Rwanda does not have a Ministry of Research. Rwanda has not submitted Confidence Building Measures under the Biological Weapons Convention, and therefore does not make information available through this source. (11)

- [1] Ministry Of Lands, Environment, Forestry Water And Mines. 2005. "The National Biosafety Framework For Rwanda". [https://unep.ch/biosafety/old_site/development/countryreports/rwnbfp.pdf]. Accessed November 2020
- [2] Ministry Of Lands, Environment, Forestry Water And Mines. 2004. "Draft BIOTECHNOLOGY ñ Biosafety Bill 2005". [[http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/biosafety_law_\(english\).doc](http://www.lexadin.nl/wlg/legis/nofr/oeur/arch/rwa/biosafety_law_(english).doc)]. Accessed November 2020.
- [3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [4] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.
- [5] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.
- [6] Department of Transport. [<http://www.mininfra.gov.rw/index.php?id=4>]. Accessed November 2020.
- [7] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [8] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.
- [9] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [10] VERTIC BWC. "Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/r/>]. Accessed November 2020.

[11] Confidence Building Measures. Rwanda^a. [<https://bwc-ecbm.unog.ch/state/rwanda>]. Accessed November 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: 1

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: 2

There is publicly available evidence that the national laboratory system in Rwanda has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests. According to the Joint External Evaluation for Rwanda, conducted in

May 2018, "Rwanda has a network of laboratories carrying out core tests for disease pathogens under the IHR(2005)"; indeed the national laboratory system can perform the following tests: PCR for Influenza virus; Virus culture for Poliovirus; Serology for HIV; Microscopy for Mycobacterium tuberculosis; Rapid diagnostic test for Plasmodium spp and Bacterial culture for Salmonella enteritidis serotype Typhi (1, 2). There is no publicly available evidence that the country has defined the four country-specific tests. There is no further evidence in the Joint External Evaluation, the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018, academic papers or the WHO Country Cooperation Strategy (2, 3, 4, 5, 6, 7).

[1] Ijaz, Kashef et al. 2012. "International Health Regulations--what gets measured gets done".

[<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3376826/>]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[4] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf].

Accessed November 2020.

[5] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[6] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020

[7] World Health Organization (WHO). 2014. "Who country cooperation strategy".

[http://apps.who.int/iris/bitstream/handle/10665/205893/CCS_Rwa_2014_18.pdf;jsessionid=117734386817FCA79D5FB4E1403C14C8?sequence=1]. Accessed November 2020

2.1.1b

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

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

Current Year Score: 0

There is no publicly available evidence of 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. There is no such evidence in the Joint External Evaluation for Rwanda conducted in May 2018, the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018, academic papers or the WHO Country Cooperation Strategy. Rwanda has a Coronavirus Disease 2019, National Preparedness and Response Plan, however there is not a COVID-19 specific testing strategy. (1,2,3,4,5,6,7). There is no further evidence in the Ministry of Public Health or the Ministry of Agriculture. (8,9)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November

2020.

[2] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf].

Accessed November 2020.

[3] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf].

Accessed November 2020.

[4] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[5] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020

[6] World Health Organization (WHO). 2014. "Who country cooperation strategy".

[http://apps.who.int/iris/bitstream/handle/10665/205893/CCS_Rwa_2014_18.pdf;jsessionid=117734386817FCA79D5FB4E1403C14C8?sequence=1]. Accessed November 2020

[7] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[8] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[9] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 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: 1

There is publicly available evidence to confirm that the National Reference Laboratory (NRL) in Rwanda is accredited (1). On April 4th, 2020, the NRL received the accreditation from the International Organization for Standardization [ISO] 15189:2003. (1)

[1] Ministry of Health. April 2020. "National Reference Laboratory earns high standard ISO115189 accreditation".

[<https://www.moh.gov.rw/news-detail/national-reference-laboratory-earns-high-standard-iso115189-accreditation>]. Accessed November 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 Reference Laboratory (NRL) is subjected to external quality assurance review. Within the laboratory, there is an External Quality Assurance and Quality Control (EQA/QC) unit. The EQA program for laboratories ensures that the needs of all laboratory clients/patients are met. It serves as an evaluation method for

laboratory performance and has a marketing advantage in the region. (1) Also, on April 4th, 2020, the NRL received the accreditation from the International Organization for Standardization [ISO] 15189:2003. This procedure of accreditation involved an independent assessment of the medical laboratory that includes an examination of personnel qualifications and competence, equipment, reagents and supplies. Quality assurance was also one of the criteria examined. (2)

[1] Rwanda Biomedical Centre. "Who we are". [<https://rbc.gov.rw/index.php?id=675>]. Accessed November 2020.

[2] Ministry of Health. April 2020. "National Reference Laboratory earns high standard ISO115189 accreditation". [<https://www.moh.gov.rw/news-detail/national-reference-laboratory-earns-high-standard-iso115189-accreditation>]. Accessed November 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 publicly available evidence of a specimen transport system in Rwanda that can reach all parts of the country. Although there is evidence of a system, there is insufficient evidence that it has nationwide reach. According to the Joint External Evaluation for Rwanda, conducted in May 2018, specimen transport networks are in place, that goes from the peripheral level to the centre (1). Transportation is ensured from health centres to District Hospitals almost all over the country and specimens are transported by motorbike. It is a transport system run by the National Reference Laboratory (NRL); there is no evidence of private sector involvement (1, 2). However, the JEE scores Rwanda as a 3 on the JEE for D.1.2, indicating that a "system is in place to transport specimens to national laboratories from 50- 80% of intermediate level/districts within the country for advanced diagnostics," indicating that this system is not nationwide. (3) The NRL, does, however, also processes and tests specimens and then ships them to regional or international laboratories for further characterization as required by disease-specific guidelines (4). There is no further evidence in the Ministry of Public Health or the Ministry of Agriculture. (5,6)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed October 2018.

[2] Ministry Of Health. 2012. "Rwanda Biomedical Center, National Reference Laboratory, Biological Sample Transportation Within The National Laboratory Network". [<http://www.stoptb.org/WG/gli/assets/documents/srt/Rwanda%20National%20Reference%20Laboratory-RBC%20-%20Biological%20Sample%20Transportation%20within%20the%20National%20Laboratory%20Network.pdf>]. Accessed December 2018.

[3] World Health Organisation (WHO). 2016. "Joint External Evaluation Tool". [https://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1]. Accessed 10 May 2019.

[4] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed October 2018.

[5] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

2.2.2 Laboratory cooperation and coordination

2.2.2a

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

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

Current Year Score: 0

There is no publicly available evidence that there is a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak. There is no such evidence in the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018. The JEE only states that there is a need to increase human resources and logistics capacities to respond to public health threats. According to the JEE, Rwanda has an Emergency, Preparedness and Response Plan in place, which outlines the structures and processes required to maintain a high level of preparedness for public health events, including disease outbreaks.(1) However, this document could not be found in the Ministry of Public Health. (2) There is no further evidence in the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018, the Emergency Medical Services Strategic Plan (2018-2024) or the Coronavirus Disease 2019, National Preparedness and Response Plan (3,4,5,6,7). There is no further evidence in the Ministry of of Agriculture. (8)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[3] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[4] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[5] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[6] Ministry of Health. 2018. "Emergency Medical Services Strategic Plan (2018-2024)". [https://moh.gov.rw/fileadmin/Publications/Strategic_Plan/EMS_Strategic_Plan_2018-min.pdf]. Accessed November 2020

[7] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[8] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

2.3 REAL-TIME SURVEILLANCE AND REPORTING

2.3.1 Indicator and event-based surveillance and reporting systems

2.3.1a

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

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

Current Year Score: 1

There is publicly available evidence that Rwanda is conducting ongoing event-based surveillance and analysis for infectious disease but no evidence that the data is being analysed on a daily basis. According to the Joint External Evaluation for Rwanda, conducted in May 2018, the country does not have a "physical facility serving as a public health emergency operations centre"; day-to-day functions are assumed by Rwanda's Epidemic Surveillance and Response Division (ESR). (1) The ESR does gather real-time information on public health events using event based surveillance, among other real-time information, however (1). Moreover, according to the 2012 Integrated Disease Surveillance and Response (IDSR) Technical Guidelines, Rwanda has records of suspected outbreaks and rumours, in health facilities and at the district, provincial and national levels. (2) However, there is no further evidence that the data is being analysed on a daily basis in the Ministry of Health, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory, the Ebola Virus Disease (EVD) Contingency Plan, the Rwanda One Health strategic plan (2014-2018), the OIE PVS Evaluation Reports, the Fourth Health Sector Strategic Plan (2018-2024) or the Six Year Strategic Plan for the Epidemic Infectious Diseases Division 2012-2018 (3,4,5,6,7,8,9,10).

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Rwanda Biomedical Center. 2012. "IDSR Technical Guidelines".

[http://www.rbc.gov.rw/IMG/pdf/idsr_technical_guideline_final_06_may_2012.pdf]. Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] Rwanda Republic. 2018. "Ebola Virus Disease (EVD) Contingency Plan".

[http://www.rbc.gov.rw/fileadmin/user_upload/Rwanda_Ebola_Virus_Disease__EVD__Contingency_Plan.pdf]. Accessed November 2020.

[7] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[8] World Animal Health Organization. 2008. "OIE PVS Evaluation Reports"-Organisation Mondiale de la Santé & Animaux. "Outil pour l'évaluation des performances des Services vétérinaires".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/FinalReport-Rwanda.pdf]. Accessed November 2020.

[9] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[10] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

2.3.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that the country reported a potential PHEIC to the World Health Organization (WHO) within the last two years. According to the Joint External Evaluation for Rwanda, conducted in May 2018, the country reported public health emergencies of international concern (PHEICs) within the last three years, most recently being an outbreak of Ebola in 2015. (1, 2) Nevertheless, there is no public evidence of a PHEIC being reported to the WHO within the last two years in the Rwanda Biomedical Center, and in the Emergencies preparedness, response website of the WHO. (3, 4) There is no further evidence in the WHO Disease Outbreak News Page or in the Ministry of Health in Rwanda. There is also no evidence that Rwanda reported covid-19 as an epidemic to the WHO. (5,6)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[3] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>], Accessed November 2020.

[4] World Health Organization (WHO). "Emergencies preparedness, response". [<http://www.who.int/csr/don/archive/country/rwa/en/>] Accessed November 2020.

[5] World Health Organization (WHO). "Disease Outbreak News (DONs)". [<http://www.who.int/csr/don/en/>]. Accessed November 2020.

[6] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

2.3.2 Interoperable, interconnected, electronic real-time reporting systems

2.3.2a

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

Yes = 1 , No = 0

Current Year Score: 1

The government operates an electronic reporting surveillance system at both the national and sub-national levels. According to the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, the country has electronic surveillance systems in place for human health, through Integrated Diseases Surveillance and Response system (eIDSR), and for selected wildlife. (1) The eIDSR system currently functioning in all public and accredited private health facilities. The JEE notes that "electronic surveillance is required for domestic animal health" as it is currently lacking. (1)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

2.3.2b

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that Rwanda's electronic surveillance system collects ongoing/real time laboratory data. According to the Joint External Evaluation for Rwanda, conducted in May 2018, the country's human health electronic surveillance system, eIDSR, monitors epidemic-prone diseases and can emit alerts to users and inform them about possible outbreaks in real time. (1) The JEE notes that "electronic surveillance is required for domestic animal health" as it is currently lacking. (1)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 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: 1

There is publicly available evidence that electronic health records are in use. Indeed, although the Ministry of Health implemented in 2004 an electronic medical record (EMR) system with patient level information (mostly data on HIV), in 2018, its use is limited to 340 health facilities, a quarter of all registered health facilities (numbered at 1,285 in 2016; most recent data available). (1,2,3) There is no additional evidence available from the Ministry of Health. (4)

[1] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020.

[2] UNICEF. "International Consultancy - Expanding existing Medical Record Platform (EMR) to include MNCH and nutrition in Kigali-Rwanda". [https://www.unicef.org/rwanda/about_21582.html]. Accessed November 2020.

[3] Ministry of Health. "Annual Health Statistics Booklet 2016".

[http://www.moh.gov.rw/fileadmin/user_upload/HMIS/2016_Annual_Statistical_booklets_V9_08_03_2018.pdf]. Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 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 insufficient evidence that the Rwandan national public health system has access to electronic health records of individuals. Although there is evidence that electronic health records are used in country, there is insufficient evidence on if the Ministry of Health is able to access these records. Rwanda's national public health system is provided by the Ministry of Health. It consists of a referral system encompassing three levels of public health care: referral, district and health centre

levels (1). In 2004, the Ministry of Health implemented an electronic medical record (EMR) system with patient level information. However, the EMR system has only been implemented in 340 facilities, out of a registered 1,285 public health facilities as of 2016. (2)The EMR system collects information about HIV and primary care in 340 hospitals; 37 hospitals also have access to EMR containing additional patient information, such as billing and registration. (3).There is no further information on the EMR system available from the Ministry of Health, the National Reference Laboratory, the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018) or the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018 (4,5,6,7,8)

[1] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda".

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020.

[2] Ministry of Health. "Annual Health Statistics Booklet 2016".

[http://www.moh.gov.rw/fileadmin/user_upload/HMIS/2016_Annual_Statistical_booklets_V9_08_03_2018.pdf]. Accessed November 2020.

[3] Ministry of Health. "Rwanda Medical Procedure Coding (RMPC) system". [<http://www.moh.gov.rw/index.php?id=523>]. Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[7] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[8] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

2.4.1c

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that there are data standards to ensure data is comparable. Indeed, the Ministry of Health developed the Rwanda Medical Procedure Coding (RMPC) system to harmonize procedure coding with international standards (1). In this sense, the Ministry of Health has proposed a sub-set of ICD-10 codes for disease coding (2) as the national diagnosis coding standard, to be used by the entire healthcare system. According to the Ministry of Health, the RMPC is currently active, however, there is no additional information on whether its use is widespread in health facilities (1). However, there is evidence of a three-years experiment, using international classification ICD-10, in the Kigali University Teaching Hospital (3). It is also expected that the RMPC will be incorporated into the Electronic Medical Record system (1). There is no further information in the Ministry of Health, in the National Reference Laboratory, the Fourth Health Sector Strategic Plan or the Rwanda One Health strategic plan (2014-2018). (4,5,6,7)

[1] Ministry of Health. "Rwanda Medical Procedure Coding (RMPC) system". [<http://www.moh.gov.rw/index.php?id=523>]. Accessed November 2020.

[2] Ministry of Health. "Rwanda ICD-10 Diagnostic Code Subset".

[http://moh.gov.rw/fileadmin/user_upload/RMPC/Rwandaicd10listing.pdf]. Accessed November 2020.

[3] Denis Porignon, et al. August 2009. Monitoring of clinical activities and performances by using international classifications ICD-10 and ICPC-2. Three years experience of the Kigali University Teaching Hospital, Rwanda.

[[https://www.researchgate.net/publication/51016165_Monitoring_of_clinical_activities_and_performances_by_using_international_classifications_ICD-10_and_ICPC-](https://www.researchgate.net/publication/51016165_Monitoring_of_clinical_activities_and_performances_by_using_international_classifications_ICD-10_and_ICPC-2_Three_years_experience_of_the_Kigali_University_Teaching_Hospital_Rwanda)

[2_Three_years_experience_of_the_Kigali_University_Teaching_Hospital_Rwanda](#)]. Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[6] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[7] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

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

2.4.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of established mechanisms at the relevant ministries responsible for animal, human and wildlife surveillance to share data. According to the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, while there is a standing committee, the Rwanda's One Health Steering Committee (OHSC), that leads the government's multisectoral, multidisciplinary approach to health challenges at the human-animal-environment interfaces, including emerging diseases, there is no evidence that this committee has established a functional mechanism to share surveillance data between ministries responsible for animals, humans and wildlife. (1) Indeed, although this goal was identified and listed as a main priority in the One Health Strategic Plan, there is no evidence that it has been in place yet. The Plan indicated a lack of collaboration within and between institutions on zoonotic disease surveillance, outbreak investigation and response. (2) The plan also noted a lack of a joint surveillance system between human and animal health electronic surveillance. (2) A lack of progress was confirmed by the JEE in May 2018, as the report noted that while "well-functioning electronic surveillance systems exist for human health (eIDSR) and for selected wildlife species (Impact)", they were not yet interoperable or interconnected (1). Moreover, the JEE lists as priority action the need to "establish a joint operational surveillance system (including public health, animal health and the environment) for brucellosis, Rift Valley fever and trypanosomiasis (1). There is no further evidence from the Ministry of Health, the Ministry of Agriculture and Animal Resources, the Ministry of Environment or in the National Reference Laboratory of established mechanisms at the relevant ministries to share data. (3, 4, 5, 6)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[5] Ministry of Environment. [<http://www.environment.gov.rw/index.php?id=209>]. Accessed November 2020.

[6] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 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 insufficient public available evidence that the country makes de-identified health surveillance data on disease outbreaks publicly available via reports on government websites. According to the Joint External Evaluation for Rwanda, conducted in May 2018, the country ensures surveillance feedback to all public health staff and national stakeholders that receive by mail, weekly epidemiological reports. (1) Surveillance bulletins can also be consulted in the Rwanda Biomedical Centre website, however, these disease statistics are not shared on a weekly basis and there can be more than one month in terms of publication delays. (2) These Public Health Bulletin were launched in March 2019. They are supposed to be published in a quarterly basis, and the topics that are shared are disease surveillance summaries, evaluation of public health interventions, public health notices, outbreak reports, among others. (3) However, no evidence of de-identified health surveillance data on disease outbreaks publicly available via reports could be find in this website, other that information on the coronavirus disease. There is no further evidence from the Ministry of Health or in the National Reference Laboratory. (4, 2)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>] Accessed November 2020.

[3] Rwanda Public Health Bulletin. [<https://rbc.gov.rw/publichealthbulletin/about/generalinfo>] Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 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 COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar). The Rwanda Biomedical Centre is in charge on making this information available in a daily basis. These outbreaks reports present the total number of cases; the number of tests conducted; the deaths, active cases and recoveries. (1)

[1] Rwanda Biomedical Centre. "Public Notice on Novel Coronavirus". [<https://www.rbc.gov.rw/index.php?id=717>]. Accessed November 2020.

2.4.4 Ethical considerations during surveillance

2.4.4a

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

Yes = 1 , No = 0

Current Year Score: 1

There is publicly available evidence that in Rwanda, a policy, currently active, safeguards the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. The Ministry of Health elaborated a "Health Sector Information and Communication Technology (ICT) Security Policy" in 2016 to ensure that health information of patients from the Rwandan Health Sector is protected "from unauthorized disclosure, use, modification or destruction" through, "standards of confidentiality, integrity and non-repudiation of data". In this sense, the policy protects all the information asset that can be found in the Ministry of Health. Nevertheless, there are no specific mentions about confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities specifically (1). There is no further evidence in the outbreaks reports presented by the Rwanda Biomedical Centre or the "Coronavirus Disease 2019, National Preparedness and Response Plan". (2,3)

[1] Ministry of Health. 2016. "Health Sector Information and Communication Technology (ICT) Security Policy".

[http://www.moh.gov.rw/fileadmin/templates/policies/Approved_ICT_Security_Policy_forMOH.pdf]. Accessed November 2020.

[2] Rwanda Biomedical Centre. "Public Notice on Novel Coronavirus". [<https://www.rbc.gov.rw/index.php?id=717>]. Accessed November 2020.

[3] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 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 insufficient publicly available evidence that in Rwanda, laws, regulations, or guidelines safeguard the confidentiality of identifiable health information for individuals, from cyber-attacks (e.g., ransomware). Indeed, in the "Health Sector Information and Communication Technology (ICT) Security Policy", the protection against software virus is mentioned and several control measures and guidelines are mentioned (1). Nevertheless, according to Article 19 (a non-profit organization): "No international standard on cybercrime exists in Rwanda" (2). No further information about this software virus could be found in the National Reference Laboratory, in the Ministry of Health, in Rwanda Legislation or in the Data Protection and Privacy laws tracker of the United Nations (3,4,5,6). There is no further evidence in the outbreaks reports presented by the Rwanda Biomedical Centre or the "Coronavirus Disease 2019, National Preparedness and Response Plan". (7,8)

[1] Ministry of Health. 2016. "Health Sector Information and Communication Technology (ICT) Security Policy".

[http://www.moh.gov.rw/fileadmin/templates/policies/Approved_ICT_Security_Policy_forMOH.pdf]. Accessed November 2020.

- [2] Article 19. 2018. "Rwanda: 2016 Law Governing Information and Communication Technologies". [<https://www.article19.org/wp-content/uploads/2018/05/Analysis-Rwanda-ICT-Law-April-2018.pdf>]. Accessed November 2020.
- [3] Rwanda Biomedical Center. [<http://www.rbc.gov.rw/index.php?id=354>]. Accessed November 2020.
- [4] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.
- [5] Rwanda Legislation. [<https://www.lexadin.nl/wlg/legis/nofr/oeur/lxwerwa.htm>]. Accessed November 2020.
- [6] United Nations. "Cyberlaw Tracker: The case of Rwanda". [https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/CountryDetail.aspx?country=rw]. Accessed November 2020.
- [7] Rwanda Biomedical Centre. "Public Notice on Novel Coronavirus". [<https://www.rbc.gov.rw/index.php?id=717>]. Accessed November 2020.
- [8] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

2.4.5 International data sharing

2.4.5a

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

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

Current Year Score: 0

There is insufficient publicly available evidence that the government has committed to sharing surveillance data during a public health emergency with other countries in the region for more than one disease. Indeed, Rwanda, as a member state of the East African Community (EAC), participates in projects where "an efficient and quick flow of information across the borders" is required to avoid epidemics spread. These projects imply "the response to a regional epidemiological emergency and involves national, regional and international agencies. An efficient and quick flow of information across the borders is therefore, crucial for averting such incidents of cross border spread" (1). To fulfil this objective, the EAC launched a regional collaborative initiative, the East African Integrated Disease Surveillance Network (EAIDSNet) that promotes "a regional information exchange system and a cross-institutional collaboration for the prevention and control of both human and animal (zoonotic) diseases under the One Health Initiative"(2). Moreover, "since 2006, EAIDSNet has focused most of its efforts on strengthening EAC preparedness to respond to regional and global infectious disease threats" and it includes "informal sharing of disease outbreak alerts; and discussed preparation for joint out- break investigations and responses to diseases or threats occurring in cross-border districts". (3)

- [1] East African Community. "Health". [<https://www.eac.int/health>]. Accessed November 2020.
- [2] East African Community. "Disease Prevention and Control Unit". [<https://www.eac.int/health/disease-prevention>]. Accessed November 2020.
- [3] Emerging Health Threats Journal. 2013. "Regional Initiatives in Support of Surveillance in East Africa: The East Africa Integrated Disease Surveillance Network (EAIDSNet) Experience". [https://www.researchgate.net/publication/235383682_Regional_Initiatives_in_Support_of_Surveillance_in_East_Africa_The_East_Africa_Integrated_Disease_Surveillance_Network_EAIDSNet_Experience].
- [4] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness]

%20and%20Response%20Plan.pdf]. Accessed November 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 insufficient evidence that Rwanda 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. While there is evidence of financial resources being allocated to contact tracing in the specific case of COVID-19, it is not clear if the funding is to support sub-national systems to conduct it. Indeed, the "Coronavirus Disease 2019, National Preparedness and Response Plan", mentions, among the activities to implement, the conduction of training on contact tracers and the recruitment of additional staff to conduct this activity. It is stated that USD \$46,885 will be allocated to conduct trainings on covid-19 surveillance in health facility settings. Among the activities of interest can be found contact tracing. Additional resources (USD\$ 37,868 and USD 8,760) will respectively be allocated to conduct follow up of high-risk contacts and conduct training of contact tracers on COVID-19 contact tracing. (1) There is no further evidence in the Ministry of Health or in the Rwanda Biomedical Centre concerning the allocation of financial resources for contact tracing or a general/broader plan that covers contact tracing support for health emergencies in general. (2,3)

[1] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[2] Ministry of Health. [<http://www.moh.gov.rw/index.php?id=188>]. Accessed November 2020.

[3] Rwanda Biomedical Centre. "Who we are". [<https://rbc.gov.rw/index.php?id=675>]. Accessed November 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 the country 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. In the Rwanda Biomedical Centre, some guidance is provided for self-isolation at home, however, there is no mention on wraparound services. (1) In addition, the government offers COVID-19 tests to its citizens, however, these tests cost USD\$ 50. (2) Finally, the "Coronavirus Disease 2019, National Preparedness and Response Plan", does not mention any

wraparound services. (3) There is no further evidence in the Ministry of Health or in the Rwanda Biomedical Centre. (4,5)

[1] Rwanda Biomedical Centre. "Guidance for Self-Isolation at Home". [<https://www.rbc.gov.rw/index.php?id=736>]. Accessed November 2020.

[2] Rwanda government. "COVID-19 Test". [https://irembo.gov.rw/home/citizen/all_services]. Accessed November 2020.

[3] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 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. There is no such evidence in the Ministry of Health, in the Rwanda Biomedical Centre or in the Rwanda Public Health Bulletin. (1,2,3)

[1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[2] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[3] Rwanda Public Health Bulletin. [<https://rbc.gov.rw/publichealthbulletin/about/generalinfo>] Accessed November 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 of a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active or future public health emergency. There is no such evidence in the Coronavirus Disease 2019, National Preparedness and Response Plan, in the Ministry of Health or in the Rwanda Biomedical Centre. (1,2,3) The Joint External Evaluation for Rwanda, conducted in May 2018, indicates a high level of collaboration between public health and security authorities in responding to emergencies, however, there is no mention of contact tracing and following up the quarantine process. (4)

- [1] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020
- [2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [3] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [4] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

2.6 EPIDEMIOLOGY WORKFORCE

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

2.6.1a

Does the country meet one of the following criteria?

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

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

Current Year Score: 1

There is publicly available evidence that Rwanda has an applied epidemiology training programme available in the country (1). Indeed, according to the Joint External Evaluation for Rwanda, conducted in May 2018, the national advanced field epidemiology laboratory training programme (FELTP) has been taught since 2010 at the University of Rwanda School of Public Health and leads to a master's degree in field epidemiology (2). This programme accepts both epidemiologists and laboratory personnel. Since 2010, 33 field epidemiologists have graduated, including four veterinarians. (2) There is no evidence that resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs in the Rwanda One Health strategic plan (2014-2018), the OIE PVS Evaluation Reports, the Fourth Health Sector Strategic Plan (2018-2024) or the Six Year Strategic Plan for the Epidemic Infectious Diseases Division 2012-2018 (3,4,5,6). There is no further evidence in the Ministry of Health or in the Rwanda Biomedical Center. (7,8)

- [1] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). " Rwanda Field Epidemiology and Laboratory Training Program"; [<https://www.tephinet.org/training-programs/rwanda-field-epidemiology-and-laboratory-training-program>]. Accessed November 2020.
- [2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.
- [3] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.
- [4] World Animal Health Organization. 2008. "OIE PVS Evaluation Reports"-Organisation Mondiale de la Santé; Animale. "Outil pour l'évaluation des performances des Services vétérinaires". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/FinalReport-Rwanda.pdf]. Accessed November 2020.

- [5] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".
[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf].
Accessed November 2020.
- [6] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".
[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [7] Ministry of Health. [<http://www.moh.gov.rw/>]. Accessed November 2020.
- [8] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>] Accessed November 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

Rwanda's field epidemiology and laboratory training program (FELTP) is also made available to animal health professionals. According to the Joint External Evaluation for Rwanda, conducted in May 2018, this program accepts both epidemiologists and laboratory personnel, and 34 field epidemiologists have graduated, included four veterinarians, since 2010. (1, 2) According to the University of Rwanda School of Public Health, upon completion of the FELPT, graduates can be placed in the Ministry of Agriculture and Animals. (3) There is no publicly available evidence of a specific animal health field epidemiology training program offered (such as FETPV). (1, 2, 3)

- [1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.
- [2] TEPHINET. "Rwanda Field Epidemiology and Laboratory Training Program". [<https://www.tephinet.org/training-programs/rwanda-field-epidemiology-and-laboratory-training-program>]. Accessed November 2020.
- [3] School of Public Health, University of Rwanda. "FELTP". [<http://www.sph.nur.ac.rw/spip.php?article136>]. Accessed November 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 publicly available evidence that Rwanda has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with pandemic potential. However, it is not publicly available. According to the Joint External Evaluation for Rwanda, conducted in May 2018, the country has an Emergency, Preparedness and Response (EPR) (2014) that "outlines the structures and processes required to maintain a high level of preparedness for public health events, including disease outbreaks, as well as the coordination mechanisms for public health emergencies of international (PHEIC) containment at various levels of health care and governance". (1) However, the EPR is not publicly accessible. Rwanda also has an overall emergency preparedness plan, the National Contingency Matrix Plan (2016), which gives general guidance on response mechanisms and operations during emergencies and includes a small section related to human epidemics. However, specific mechanisms are not detailed, it is rather a general description of the main risks that threaten Rwanda. (2) The National Contingency Matrix Plan notes that specific response mechanisms can be found in contingency plans (for earthquake, fire incidents, floods and landslides, human epidemics, mass movement and population influx and droughts contingency plans, however the plan for epidemics could not be found online). (2,3) Finally, Rwanda also has Emergency Plans of action, which are specific to a particular hazard and are deployed following a specific outbreak. For instance, in 2018, an Emergency Plan was deployed for Ebola following the Ebola disease outbreak on 8th May 2018. There is also a Coronavirus Disease 2019, National Preparedness and Response Plan (4,5) Finally, Rwanda has an Emergency Medical Services Strategic Plan (2018-2024), published in 2018. However, it does not mention specific communicable diseases with epidemic or pandemic potential. (6)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan". [http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 2020.

[3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.

[4] Red Cross Red Crescent Movement. 2018. "Emergency Plan of Action (EPoA) Rwanda: Ebola Preparedness". [<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRRW017do.pdf>]. Accessed November 2020.

[5] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness

%20and%20Response%20Plan.pdf]. Accessed November 2020

[6] Ministry of Health. 2018. "Emergency Medical Services Strategic Plan (2018-2024)".

[https://moh.gov.rw/fileadmin/Publications/Strategic_Plan/EMS_Strategic_Plan_2018-min.pdf]. Accessed November 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 Rwanda's Emergency Preparedness and Response (EPR) Plan has been updated in the last 3 years. According to the Joint External Evaluation (JEE) for Rwanda, completed in May 2018, the EPR plan was presented in 2014. The JEE states that "the EPR Plan outlines the structures and processes required to maintain a high level of preparedness for public health events, including disease outbreaks, as well as the coordination mechanisms for PHEIC containment at various levels of health care and governance." (1) However, there is no evidence that it has not been updated since 2014. There is no evidence from the Ministry of Health or in the Ministry of Disaster Management And Refugee Affairs (MIDIMAR) of an update. (2,3) Rwanda has an Emergency Medical Services Strategic Plan (2018-2024), published in 2018. However, it does not mention specific communicable diseases with epidemic or pandemic potential. (4)

[1] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan".

[http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 2020.

[2] Ministry of Health. [https://www.moh.gov.rw/]. Accessed November 2020.

[3] Ministry of Disaster Management And Refugee Affairs (MIDIMAR). [http://www.midimar.gov.rw/index.php?id=2]. Accessed November 2020.

[4] Ministry of Health. 2018. "Emergency Medical Services Strategic Plan (2018-2024)".

[https://moh.gov.rw/fileadmin/Publications/Strategic_Plan/EMS_Strategic_Plan_2018-min.pdf]. Accessed November 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 Rwanda's Emergency Preparedness and Response (EPR) Plan includes considerations for paediatric and vulnerable populations. According to the Joint External Evaluation (JEE) for Rwanda, completed in May 2018, the EPR plan was presented in 2014. The JEE states that "the EPR Plan outlines the structures and processes required to maintain a high level of preparedness for public health events, including disease outbreaks, as well as the coordination mechanisms for PHEIC containment at various levels of health care and governance." (1) Nevertheless, the EPR plan is not publicly available, therefore, evidence could not be provided on whether paediatric and other vulnerable populations are considered. There is no further evidence in the National Contingency Matrix Plan, which provides general guidance on response mechanisms and operations during emergencies, in the Ministry of Health, or in the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). (2,3,4).

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf]. Accessed November

2020.

[2] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan". [http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 Rwanda has specific mechanisms for engaging with the private sector to assist with outbreak emergency preparedness and response. Indeed, in the National Contingency Matrix Plan, the "absence of clear partnership mechanisms between government institutions for joint interventions (MoUs) and the absence of private sectors and civil societies in response activities and operations" are identified as gaps in the National Disaster Response Framework. (1) According to the Joint External Evaluation for Rwanda, conducted in May 2018, the Emergency Preparedness and Response (EPR) (2014) is the plan containing specific mechanisms to deal with health emergencies. Nevertheless, the EPR plan is not publicly available, therefore, a mechanism to work with the private sector could not be confirmed. (2) There is no further evidence available from the Ministry of Health or the Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). (3,4) Finally, Rwanda has an Emergency Medical Services (EMS) Strategic Plan (2018-2024), published in 2018. It only states the need to encourage private sector participation in EMS through partnerships but does not present any specific mechanism. (5) Finally, in the Coronavirus Disease 2019, National Preparedness and Response Plan, specific mechanisms for engaging with the private sector to assist with outbreak emergency preparedness and response are not mentioned, other than map out infectious disease specialists and pulmonologists in the private sector and other partners. (6)

[1] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan". [http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".

[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.

[5] Ministry of Health. 2018. "Emergency Medical Services Strategic Plan (2018-2024)".

[https://moh.gov.rw/fileadmin/Publications/Strategic_Plan/EMS_Strategic_Plan_2018-min.pdf]. Accessed November 2020

[6] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

3.1.3 Non-pharmaceutical interventions planning

3.1.3a

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

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

Current Year Score: 2

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

Rwanda has a Coronavirus Disease 2019, National Preparedness and Response Plan which includes language referring to NPIs such as social distancing, hygiene practices and isolation. However, it is specific to COVID-19 and can't be used for other diseases. (1) Rwanda also has some language referring to NPIs in its Ebola Virus Disease (EVD) Contingency Plan such as hygiene, sanitation and disinfection services, however, it is also specific to this disease. (2) There is no further evidence in the Ministry of Health, the National Reference Laboratory, the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018) or the Six Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018 (3,4,5,6,7)

[1] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[2] The Republic Of Rwanda. May 2018. "Ebola Virus Disease (EVD) Contingency

Plan". [http://www.rbc.gov.rw/fileadmin/user_upload/Rwanda_Ebola_Virus_Disease__EVD__Contingency_Plan.pdf].

Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[5] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[http://moh.gov.rw/fileadmin/templates/Docs/FINALH_2-1.pdf]. Accessed November 2020.

[6] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf].

Accessed November 2020.

[7] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 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 its national emergency response plan for an infectious disease outbreak in the past year. There is also evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year. Rwanda has published its Coronavirus Disease 2019, National Preparedness and Response Plan. It represents the activation of the emergency response as it aims to ensure effective national capabilities for the prevention, timely detection , response and immediate containment of COVID-19 cases in Rwanda. Within this plan, it is stated that it aims to operational readiness and effective interventions against COVID-19. No further information concerning the activation of this plan could be found in this plan, in a document from the World Bank or in an academic paper. (1,2,3) In Rwanda, the World Health Organization (WHO) also conducted, from January 8th to 11, 2019 a full-scale exercise for Ebola Virus Disease Preparedness. (4)Rwanda also conducted a biological threat-focused IHR exercise that took place in May 22 to 27, 2018, when the World Health Organization (WHO) assisted Rwanda with an Ebola Virus Disease (EVD) Simulation Exercise. The team conducted scoping activities, stakeholder meetings, site visits and a table-top simulation exercise to determine what systems were in place and what aspects of preparedness could be strengthened. The main objective was to strengthen its response in case of an Ebola outbreak case (5,6).

[1] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://www.rbc.gov.rw/fileadmin/user_upload/announcement/Coronavirus%20Disease%202019,%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[2] The World Bank. April 2020. "Project Information Document (PID)".

[https://ewdata.rightsindevelopment.org/files/documents/55/WB-P173855_PcKRND0.pdf]. Accessed November 2020.

[3] Public Health Bulletin. April 2020. "COVID-19 preparedness activities in Rwanda".

[<http://www.bioline.org.br/pdf?rp20003>]. Accessed November 2020.

[4] World Health Organization (WHO). "Rwanda FSX JAN2019". [<https://extranet.who.int/sph/rwanda-fsx-jan2019>]. Accessed November 2020.

[5] The Republic Of Rwanda. May 2018. "Ebola Virus Disease (EVD) Contingency

Plan". [http://www.rbc.gov.rw/fileadmin/user_upload/Rwanda_Ebola_Virus_Disease__EVD__Contingency_Plan.pdf].

Accessed November 2020.

[6] World Health Organization (WHO). "Simulation Exercise". [https://extranet.who.int/sph/simulation-exercise?field_region_tid=All&tid=All&field_simulation_status_tid=1791&field_simulation_type_tid=All&title=&order=field_mission_date&sort=desc&qt-se_video=1&qt-view__simulation_exercise_toolbox__block_5=5&qt-view__simulation_exercise_toolbox__block_3=0].

Accessed November 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 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. Although the World Health Organization (WHO) conducted, from January 8th to 11, 2019 a full-scale exercise for Ebola Virus Disease Preparedness, no plan was developed following this exercise. (1) There is no evidence that this was used to develop a plan to improve response capabilities in the WHO IHR Portal, in the Ministry of Health or in the National Reference Laboratory. (2,3,4)

[1] World Health Organization (WHO). "Rwanda FSX JAN2019". [<https://extranet.who.int/sph/rwanda-fsx-jan2019>]. Accessed November 2020.

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

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 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 has undergone a national-level biological threat-focused exercise that has included private sector representatives.

The World Health Organization (WHO) conducted, from January 8th to 11, 2019 a full-scale exercise for Ebola Virus Disease Preparedness. It was attended by 20 people from the Epidemic Surveillance and Response Division, National Referral Laboratory, Rwanda Health Communication Centre, University Teaching Hospitals, Gisenyi District Hospital, Partners (CDC Country Office, Rwanda Red Cross) and WHO(country and AFRO staff). There is no mention of private sector representatives. (1) There is no evidence in the WHO IHR Portal, in the Ministry of Health, in the National Reference Laboratory or the Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). (2,3,4,5)

[1] World Health Organization (WHO). "Rwanda May.2018". [<https://extranet.who.int/sph/rwanda-may2018>]. Accessed November 2020.

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

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[5] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 insufficient publicly available evidence that Rwanda has all health related EOC. There is evidence that it has a physical facility serving as a public health emergency operations centre (PHEOC) or emergency operation centre (EOC) but it is one disease specific. A report from the World Health Organization from 2019 concerning "Regional Ebola Preparedness Overview of needs and requirements", confirms that the PHEOC, which was announced since 2018 was finally operationalized, and a full-scale simulation exercise was conducted to test readiness capacities. No further details concerning the PHEOC were provided other than the existence of the PHEOC. (1) The Coronavirus Disease 2019, National Preparedness and Response Plan also mentions in the leadership and coordination section, the need to activate the National Public Health Emergency Operations Center and functional pillars. (2) There is no further details on the PHEOC in the Ministry of Health or in the Ministry Of Disaster Management And Refugee Affairs. (3,4)

[1] World Health Organization (WHO). 2019. "REGIONAL EBOLA PREPAREDNESS OVERVIEW OF NEEDS AND REQUIREMENTS". [https://www.who.int/ebola/preparedness/regional-ebola-preparedness-overview-june-dec2019.pdf]. Accessed November 2020.

[2] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[3] Ministry of Health. [https://www.moh.gov.rw/]. Accessed November 2020.

[4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 (EOC) is required to conduct a drill for a public health emergency scenario at least once per year or that they conduct a drill at least once per year. Although a report from the World Health Organization from 2019 concerning "Regional Ebola Preparedness Overview of needs and requirements", confirms that the PHEOC, which was announced since 2018 was finally operationalized, and a full-scale simulation exercise was conducted to test readiness capacities, there is no evidence of a drill conducted once per year. (1) No information could

be found in the Joint External Evaluation for Rwanda, conducted in May 2018, the 2018 Ebola Virus Disease (EVD) Contingency Plan or in the Ministry of Health or in the Ministry Of Disaster Management And Refugee Affairs. (2,3,4,5)

[1] World Health Organization (WHO). 2019. "REGIONAL EBOLA PREPAREDNESS OVERVIEW OF NEEDS AND REQUIREMENTS". [<https://www.who.int/ebola/preparedness/regional-ebola-preparedness-overview-june-dec2019.pdf>]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] Rwanda Republic. 2018. "Ebola Virus Disease (EVD) Contingency Plan". [http://www.rbc.gov.rw/fileadmin/user_upload/Rwanda_Ebola_Virus_Disease__EVD__Contingency_Plan.pdf]. Accessed November 2020.

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[5] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 (EOC) 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. Although a report from the World Health Organization from 2019 concerning "Regional Ebola Preparedness Overview of needs and requirements", confirms that the PHEOC, which was announced since 2018 was finally operationalized, and a full-scale simulation exercise was conducted to test readiness capacities, there is no evidence that this took place in 120 minutes . (1) No further details could be found on this exercise in the Ministry of Health, in the Ministry Of Disaster Management And Refugee Affairs or in WHO pages. (2,3,4)

[1] World Health Organization (WHO). 2019. "REGIONAL EBOLA PREPAREDNESS OVERVIEW OF NEEDS AND REQUIREMENTS". [<https://www.who.int/ebola/preparedness/regional-ebola-preparedness-overview-june-dec2019.pdf>]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.

[4] World Health Organization (WHO). "Rwanda FSX JAN2019". [<https://extranet.who.int/sph/rwanda-fsx-jan2019>]. Accessed November 2020.

[5] World Health Organization (WHO). "After Action Review". [<https://extranet.who.int/sph/after-action-review>]. Accessed November 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 public evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event. Moreover, no publicly available standard operating procedures, guidelines, MOUs or other agreements between the public health and security authorities to respond to a potential deliberate biological event could be found. Indeed, according to the Joint External Evaluation (JEE) for Rwanda, completed in May 2018, "there are few existing MOUs" public health and security agencies, but there is a need to formalize these collaborations (1). Nevertheless, further evidence about the existing MOUs could not be found in WHO reports, in the National Contingency Matrix Plan, the National Contingency Plan or the Rwanda One Health strategic plan (2014-2018) (2,3,4,5). On the other hand, there is evidence that Rwanda has conducted a full scale Ebola simulation exercise with participation from health and security personnel (1). This simulation exercise, conducted in October 2018, to ensure Ebola Preparedness, was carried out with the participation of the Ministry of Health and the Rwanda Military Hospital, with the support of the Rwanda Defence Force (RDF). It tested the efficiency of the RDF medical service personnel and involved personnel from the Rwanda Military Hospital, the RDF Medical Regiment, the Ministry of Health and Rwanda Biomedical Centre representatives (6). Nevertheless, this Ebola simulation exercise isn't specific to a deliberate biological event, but rather to a naturally occurring event. There is no further evidence in the Ministry of Health, or in the Ministry of Disaster Management and Refugee Affairs (MIDIMAR)." (7,8).

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] World Health Organization (WHO). "WHO Country Cooperation Strategy (2014-2018)". [http://apps.who.int/iris/bitstream/handle/10665/205893/CCS_Rwa_2014_18.pdf?sequence=1&isAllowed=y]. Accessed November 2020.

[3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan". [http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 2020.

[4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.

[5] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[6] Rwanda Biomedical Centre. October 2018. "Rwanda Conducts Simulation Exercise to ensure Ebola Preparedness".

[http://www.rbc.gov.rw/index.php?id=19&tx_ttnews%5Btt_news%5D=456&cHash=f87c661646264bde22218c98d31f57d9]. Accessed November 2020.

[7] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[8] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".

[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 Rwanda considers how messages will reach populations and sectors with different communications needs since there is no evidence of a national public health emergency response plan or generic risk communication plan. Nevertheless, there is publicly available evidence that this goal has been identified and is being addressed since, according to the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, multiple media channels are used to communicate public health emergencies in all relevant languages and by different media channels, to reach a complete geographic coverage and address different audiences. One of the strategies implemented involves the collaboration of religious and community leaders with the Rwanda Health Communication Centre (RHCC) team to disseminate information. Moreover, the National Epidemic Prevention and Control Coordination Committee (NEPCCC) is composed of communication members who meet regularly and come from different sectors (1). No further evidence of a written plan or strategy could be found in the Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018, in the One Health Strategic Plan (2014-2018), in the Fourth Health Sector Strategic Plan, in the Ebola Virus Disease (EVD) Contingency Plan, in the Coronavirus Disease 2019, National Preparedness and Response Plan, in the Ministry of Health or in the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). (2,3,4,5,6,7,8)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018".

[http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[3] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[4] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".

[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[5] Rwanda Republic. 2018. "Ebola Virus Disease (EVD) Contingency Plan".

[http://www.rbc.gov.rw/fileadmin/user_upload/Rwanda_Ebola_Virus_Disease__EVD__Contingency_Plan.pdf]. Accessed November 2020.

[6] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[7] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[8] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".

[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 Rwanda has a national public health emergency response plan or generic risk communication plan. According to the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, the Rwanda Health Communication Centre (RHCC) is in charge of communicating with the public around health issues, both routinely and during an emergency. They are responsible for the coordination of health promotion interventions both for routine and risk communication (1). Nevertheless, apart from a brief description of activities in the Rwanda Biomedical Centre, there is no further information about the RHCC, which does not have its own website. (2) Moreover, no strategic communication plans were found. (2) While the JEE notes that "Rwanda has several communication strategic plans for public health emergencies", the communication strategic documents noted in the JEE, "Communication strategic plan for Ebola" and the "Health Promotion Policy", could not be found online. (1) On the other hand, the 2013 National Disaster Risk Management Plan, implemented by the Ministry of Disaster Management and Refugee Affairs (MIDIMAR), is intended as a risk management plan for 12 main hazards, including human epidemics. It has a section dedicated to early warning and communication. Nevertheless, a detailed communication strategy is not developed to be used during a public health emergency. In this sense, it is rather a descriptive plan with general definitions of concepts that could be applied to any hazard (3). There is no further evidence of a generic risk communication plan in the Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018, in the One Health Strategic Plan (2014-2018), in the Fourth Health Sector Strategic Plan, in the Ebola Virus Disease (EVD) Contingency Plan, in the Coronavirus Disease 2019, National Preparedness and Response Plan, in the Ministry of Health or in the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). (4,5,6,7,8,9,10)

[1] World Health Organization (WHO). May 2018. ""Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda"". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Rwanda Biomedical Center. "Rwanda Health Communication Centre". [<https://rbc.gov.rw/index.php?id=679>]. Accessed November 2020.

[3] Ministry of Disaster Management and Refugee Affairs. 2013. "National Disaster Risk Management Plan". [http://midimar.gov.rw/uploads/tx_download/National_Disaster_Risk_Management_Plan_01.pdf]. Accessed November 2020.

[4] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[5] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

- [6] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)".
[https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.
- [7] Rwanda Republic. 2018. "Ebola Virus Disease (EVD) Contingency Plan".
[http://www.rbc.gov.rw/fileadmin/user_upload/Rwanda_Ebola_Virus_Disease__EVD__Contingency_Plan.pdf]. Accessed November 2020.
- [8] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".
[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020
- [9] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [10] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".
[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 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 Coronavirus Disease 2019, National Preparedness and Response Plan coronavirus designates the Office of the Prime Minister under the National Epidemic Preparedness & Response Committee (NEPRCC) along with the Ministry of Health, Ministry of Local Government and Security organs as the primary spokespersons for the implementation of the strategy to fight the coronavirus disease. (1) There is no further evidence in the Ministry of Health or in the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). (2,3)

- [1] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".
[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020
- [2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".
[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 in the past year 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. However, the public health system only shares information through media platforms during active emergencies, but does not regularly utilize online media platforms.

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, with its Facebook and Twitter accounts, the Ministry of Health of Rwanda provides daily reports on the epidemiological situation of the coronavirus disease, sharing information on the number of cases, the measures to implement, etc. (2,3) There is also evidence that they dispel rumors, misinformation or disinformation. (4)

However, the public health system only shares information through media platforms during active emergencies and does not regularly utilize online media platforms. Social medias from the Ministry of Health began activities in December 9, 2019 (although they were created in 2011).

There is no further evidence in the Ministry of Health or in the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). (5,6)

[1] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[2] Twitter. "Ministry of Health". [<https://twitter.com/RwandaHealth>]. Accessed November 2020.

[3] Facebook. "Ministry of Health". [<https://www.facebook.com/rwandahealth>]. Accessed November 2020.

[4] Twitter. "Notice". [<https://twitter.com/RwandaHealth/status/1240527147787313157>]. Accessed November 2020.

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[6] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR), "National Contingency Plan".

[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 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 one of the main newspapers of the country, the Rwanda News Agency . (1,2,3)

[1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[2] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[3] Rwanda News Agency. [<http://www.rnanews.com/>]. Accessed November 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: 21.77

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: 76.49

2019

International Telecommunication Union (ITU)

3.6.3 Female access to a mobile phone

3.6.3a

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

Input number

Current Year Score: 17

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: 7.0

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. There is no such evidence on the website of the Ministry of Health, the Rwanda Biomedical Center, the Ministry of Foreign Affairs, the Ministry of Agriculture or in one of the main newspapers of the country, the Rwanda News Agency . (1,2,3,4,5)

[1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[2] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[3] Ministry of Foreign Affairs. [<https://www.minaffet.gov.rw/updates/news/page-6>]. Accessed November 2020.

[4] Ministry of Agriculture. [<https://www.minagri.gov.rw/updates/news/page-5>]. Accessed November 2020.

[5] Rwanda News Agency. [<http://www.rnanews.com/>]. Accessed November 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 in the past year, the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods due to an infectious disease outbreak. There is no such evidence on the website of the Ministry of Health, the Rwanda Biomedical Center, the Ministry of Foreign Affairs, the Ministry of Agriculture or in one of the main newspapers of the country, the Rwanda News Agency . (1,2,3,4,5)

[1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[2] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[3] Ministry of Foreign Affairs. [<https://www.minaffet.gov.rw/updates/news/page-6>]. Accessed November 2020.

[4] Ministry of Agriculture. [<https://www.minagri.gov.rw/updates/news/page-5>]. Accessed November 2020.

[5] Rwanda News Agency. [<http://www.rnanews.com/>]. Accessed November 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 March 2020, Rwanda completely closed its aerial frontiers to passengers due to the coronavirus outbreak, excepting cargo and emergency flights, for an initial period of 30 days (1). There is no evidence that the ban was conducted with international support in the WHO Disease Outbreak News, the Ministry of Public Health and the Ministry of Foreign Affairs. (2,3,4)

[1] Ministry of Health. "Update on COVID-19 Coronavirus".

[<https://twitter.com/RwandaHealth/status/1240349249914757121/photo/2>]. Accessed November 2020.

[2] Ministry of Foreign Affairs. [<http://minaffet.gov.rw/home/>]. Accessed November 2020.

[2] World Health Organization (WHO). 2020. "Emergencies preparedness, response".

[<https://www.who.int/csr/don/archive/year/2020/en/>]. Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry of Foreign Affairs. [<https://www.minaffet.gov.rw/updates/news/page-6>]. Accessed November 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: 13.4

2018

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 120.44

2018

WHO; national sources

4.1.1c

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Rwanda has 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. The latest available strategy was published in 2011, Rwanda's Human Resources for Health (HRH) Strategy (2011-2016) and Policy (October 2014). It identifies fields with insufficient workforce and strategies to address these shortcomings (1). According to the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, Rwanda counts 1,089 registered medical doctors; 9,448 registered nurses; 1,352 laboratory technicians; 206 environmental health officers; 369 pharmacists; 98 physiotherapists; and 230 anaesthesiologists. In the animal health sector, there are 488 veterinary doctors and technicians and 1,506 community animal health workers. The Rwanda's Health System Strategic Plan IV (HSSP4) (2018-2024) has within its main priorities to "strengthen national workforce capacity to detect and respond to national public health threats". Nevertheless, a workforce strategy is absent in the HSSP4, which threatens the possibility to address workforce shortcomings (2). There is no further evidence of an updated Human Resources for Health strategy in the Ministry of Health, in the Ministry of Education or in the Ministry of Public Service and Labour (3,4,5).

[1] Ministry of Health. 2011. "Rwanda Human Resources for Health Strategic Plan (2011-2016)". [https://medicine.yale.edu/intmed/globalhealthscholars/sites/HRH%20Strategic%20Plan%20March%202011_158432_284_5061_v1.pdf]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry of Education. [<http://mineduc.gov.rw/home/>]. Accessed November 2020.

[5] Ministry of Public Service and Labour. [<http://www.mifotra.gov.rw/index.php?id=15>]. Accessed November 2020.

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 160

2007

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 insufficient public evidence to confirm that Rwanda 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. According to the Joint External Evaluation for Rwanda, conducted in May 2018, the country has isolation units in district and referral hospitals and an isolation centre is available at the Rwanda Military Hospital. (1) This isolation centre at the Rwanda Military Hospital is identified in a governmental Q&A document on Ebola Preparedness, as "the fully equipped isolation facility at the national level which has been constructed and installed at the Rwanda Military Hospital" as part of the Ebola Strategy for prevention, treatment and isolation for the health sector. (2) Nevertheless, elements such as positive/negative ventilation/air conditioning units, a separate entrance for decontamination and storage of PPE, etc could not be found. These elements could not be found in the Ministry of Health, in the National Reference Laboratory or in the Rwanda Military Hospital. (3,4,5). The Coronavirus Disease 2019, National Preparedness and Response Plan states th need to set up isolation/holding areas in all health facilities and identify and refurbish COVID-19 isolation units. (6)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Rwanda Biomedical Center. "EBOLA PREPAREDNESS". [http://rbc.gov.rw/IMG/pdf/ebola_preparedness_q_a.pdf]. Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[5] Rwanda Military Hospital. [<http://rwandamilitaryhospital.rw/index.php?id=23>]. Accessed November 2020.

[6] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 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 or 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.

Such evidence could not be found in the Ministry of Health, the National Reference Laboratory or the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). (1,2,3) No further evidence was found in the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for Epidemic Infectious Diseases Division

2012-2018 or the Joint External Evaluation for Rwanda published in 2018. (4,5,6,7)

- [1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [2] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.
- [4] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [http://moh.gov.rw/fileadmin/templates/Docs/FINALH_2-1.pdf]. Accessed November 2020.
- [5] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.
- [6] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [7] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 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: 1

There is publicly available evidence suggesting that Rwanda has a national procurement protocol in place which can be utilized by the Ministry of Health but not the Ministry of Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs.

Although the n°62/2018 of 25/08/2018 that governs public procurement does not specifically mentions the acquisition of laboratory and medical supplies, this law mentions in its article 2 that it applies to all procurement of works, goods or supplies. (1) The Medical Production and Procurement Division (MPPD) is the only public central medical store with mission is to ensure the availability of health commodities for public health sector in Rwanda. (2) In the Ministry of Health was found a template that can be used to authorize and approve expenditures. (3) A tender notice confirms the availability to go through the MPPD for the acquisition of laboratory supplies and medical supplies for routine needs. (4) Within the Ministry of Agriculture, the Corporate Services is in charge of "supervising the efficiency of procurement of goods, services and works for the ministry while ensuring compliance with the national procurement guidelines and procedures".(5) However, no specific information could actually be found that the corporate services from the Ministry of Agriculture have issued a specific tender notice for laboratory or medical supplies. (6)

- [1] Republic of Rwanda. 2018. Law N°62/2018 of 25/08/2018 governing public procurement. [<http://www.droit-afrique.com/uploads/Rwanda-Code-2018-marches-publics.pdf>]. Accessed November 2020.

- [2] University of Rwanda. 2016. "Availability of health commodities for public sector in Rwanda: case study of Medical Production and Procurement Division, MPPD". [<http://dr.ur.ac.rw/handle/123456789/222>]. Accessed November 2020.
- [3] Ministry of Health. "Policy/Procedure Title: Authorization and Approval of Expenditures ". [https://www.moh.gov.rw/fileadmin/user_upload/Moh/Publications/Hospital_Policies_Procedures/Hospital_Policies_Procedures_LM/LM1-06_Authorization_and_Approval_of_Expenditures.docx]. Accessed November 2020.
- [4] Rwanda Biomedical Center. 2013. "Tender Notice". [https://rbc.gov.rw/IMG/pdf/tender_notice0001.pdf]. Accessed November 2020.
- [5] Ministry of Agriculture. "Corporate Services". [<https://www.minagri.gov.rw/corporate-services>]. Accessed November 2020.
- [6] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/>]. Accessed November 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: 1

There is limited publicly available evidence that the country has a stockpile of medical countermeasures, but no evidence of medical supplies such as equipment and PPE for national use during a public health emergency. It is not known what the MCM stockpiles include. According to an old survey from 2007, the country does not have a stockpile of medical supplies. (1) On the other hand, according to the Joint External Evaluation for Rwanda, conducted in May 2018, although Rwanda's medical countermeasures capacities are limited, there are national stockpiles of medical countermeasures and contracts with both local and international suppliers for medical countermeasures, among them the UNICEF, that function in case of a public health emergency. (2) The Medical Production and Procurement Division (MPPD) is the only public central medical store with a mission to ensure the availability of health commodities for public health sector in Rwanda (pharmaceutical commodities, including generic essential medicines, medical supplies, and laboratory reagents). According to an academic paper from 2016, the "shortage of medical supplies at national central medical store is a challenge" and the procurement of essential medicines is deficient. (3) The Coronavirus Disease 2019, National Preparedness and Response Plan also mentions the need to develop a National plan to manage PPE supply (stockpile, distribution) and organize timely procurement of medical supplies for emergency stocks. (4) There is no further evidence of a stockpile of medical supplies (e.g. equipment, PPE) for national use during a public health emergency in the Ministry of Health, the National Reference Laboratory, the Ministry of Disaster Management and Refugee Affairs (MIDIMAR) and the Ministry of Defence. (5,6,7,8) The Medical Production and Procurement Division (MPPD) does not have its own website.

[1] Ministry of Health. 2008. "Survey on the Delivery of Health care services Rwanda". [<https://dhsprogram.com/pubs/pdf/SPA14/SPA14.pdf>]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[3] University of Rwanda. 2016. "Availability of health commodities for public sector in Rwanda: case study of Medical Production and Procurement Division, MPPD". [<http://dr.ur.ac.rw/handle/123456789/222>]. Accessed November 2020.

[4] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[6] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[7] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".

[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.

[8] Ministry of Defence. [<https://www.mod.gov.rw/home/#.X76lrBNKiAw>]. Accessed November 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 the country has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. The Medical Production and Procurement Division (MPPD) is the only public central medical store with mission is to ensure the availability of health commodities for public health sector in Rwanda (pharmaceutical commodities, including generic essential medicines, medical supplies, and laboratory reagents). There is no such evidence of a stockpile of laboratory supplies (e.g. reagents, media) in an academic paper from 2016. (1) The Coronavirus Disease 2019, National Preparedness and Response Plan also mentions the need to organize timely procurement of laboratory supplies for emergency stocks. (2) There is no further evidence in the Ministry of Health, the National Reference Laboratory, the Ministry of Disaster Management and Refugee Affairs (MIDIMAR) and the Ministry of Defence. (3,4,5,6) The Medical Production and Procurement Division (MPPD) does not have its own website.

[1] University of Rwanda. 2016. "Availability of health commodities for public sector in Rwanda: case study of Medical Production and Procurement Division, MPPD". [<http://dr.ur.ac.rw/handle/123456789/222>]. Accessed November 2020.

[2] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[5] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".

[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.

[6] Ministry of Defence. [<https://www.mod.gov.rw/home/#.X76lrBNKiAw>]. Accessed November 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 Ministry of Health, the National Reference Laboratory or the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). (1,2,3) No further evidence was found in the Fourth Health Sector Strategic Plan, the Rwanda One Health strategic plan (2014-2018), the Six

Year Strategic Plan for Epidemic Infectious Diseases Division 2012-2018 or the Joint External Evaluation for Rwanda published in 2018 (4,5,6,7)

- [1] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [2] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.
- [4] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [http://moh.gov.rw/fileadmin/templates/Docs/FINALH_2-1.pdf]. Accessed November 2020.
- [5] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.
- [6] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [7] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 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 insufficient evidence that Rwanda has published a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency or a plan/mechanism to procure medical supplies.

According to the Joint External Evaluation for Rwanda, conducted in May 2018, formal plans and regional agreements are absent to receive equipment and PPE. Formal plans and procedures for sending and receiving specifically medical countermeasures during a public health emergency are also absent. However, Rwanda has experience of receiving medical countermeasures « such as vaccines and personal protective equipments » during emergencies. Within the country, there is no capacity to produce antibiotics, vaccines, and other countermeasures, but there are existing contracts with local and international suppliers, including UNICEF (the UN Children’s Fund), that can be used for procurement of countermeasures during emergencies. Domestically, there are dedicated facilities and staff for tracking and distribution of both human and animal countermeasures. In addition, there are no regional agreements for procuring, sharing and distributing countermeasures during public health emergencies. (1) The Medical Production and Procurement Division (MPPD) is the only public central medical store which mission is to ensure the availability of health commodities for public health sector in Rwanda (pharmaceutical commodities, including generic essential medicines, medical supplies, and laboratory reagents). (2) There is no further evidence in the Ministry of Health, the National Reference Laboratory, the Ministry of Disaster Management and Refugee Affairs (MIDIMAR) and the Ministry of Defence. (3,4,5,6) The Medical Production and

Procurement Division (MPPD) does not have its own website.

- [1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.
- [2] University of Rwanda. 2016. "Availability of health commodities for public sector in Rwanda: case study of Medical Production and Procurement Division, MPPD". [<http://dr.ur.ac.rw/handle/123456789/222>]. Accessed November 2020.
- [3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [4] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [5] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.
- [6] Ministry of Defence. [<https://www.mod.gov.rw/home/#.X76lrBNKiAw>]. Accessed November 2020.

4.2.3b

Does the country meet one of the following criteria?

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

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

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

Current Year Score: 0

There is no public evidence that the country 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 or a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency.

There is no such evidence in the Joint External Evaluation for Rwanda, conducted in May 2018, in the Ministry of Health, the National Reference Laboratory, the Ministry of Disaster Management and Refugee Affairs (MIDIMAR) and the Ministry of Defence. (1,2,3,4,5) The Medical Production and Procurement Division (MPPD) does not have its own website.

- [1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.
- [2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [3] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.
- [4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan". [http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.
- [5] Ministry of Defence. [<https://www.mod.gov.rw/home/#.X76lrBNKiAw>]. Accessed November 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 public evidence that the country 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). According to the Joint External Evaluation for Rwanda, conducted in May 2018, "formal plans are absent, as well as regional agreements for procuring, sharing and distributing countermeasures". There is no information available regarding "dispensing". (1) Further evidence could not be found in the Ministry of Health, the National Reference Laboratory, the Ministry of Disaster Management and Refugee Affairs (MIDIMAR) and the Ministry of Defence. (2,3,4,5) The Medical Production and Procurement Division (MPPD) does not have its own website.

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). "National Contingency Plan".

[http://midimar.gov.rw/index.php?id=108&tx_pagebrowse_pi1%5Bpage%5D=1&cHash=01ce58d849027843346f221cda9f4916]. Accessed November 2020.

[5] Ministry of Defence. [<https://www.mod.gov.rw/home/#.X76lrBNKiAw>]. Accessed November 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 public evidence that the country has a formal plan for receiving health personnel during a public health emergency. According to the Joint External Evaluation for Rwanda, conducted in May 2018, although Rwanda has received international medical personnel in the past, "there are no formal procedures in place for acceptance and orientation of these staff". (1) Moreover, there is no evidence that the country has not signed any regional/international personnel deployment agreement such as the Global Outbreak and Alert Response Network (GOARN). (1) No further evidence could not be found from the websites of the Ministry of Health or Ministry of Defence, nor in the National Contingency Matrix Plan. (2,3,4)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November

2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020

[3] Ministry of Defense. [<https://mod.gov.rw/home/#.W9QnnRMzau4>]. Accessed November 2020.

[4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan".

[http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 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: 90.7

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: 8.4

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 public evidence that Rwanda 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. Rwanda's Human Resources for Health (HRH) Strategy (2011-2016) and Policy (October 2014) only mentions that the "Ministry Of Health, together with districts shall strengthen the workplace occupational safety and health systems programs through financial support, capacity building for staff, ensuring and upholding protection and safety standards (including regulations on protective clothing and devices) at all levels". (1) There is no mention of prioritized health care services to healthcare workers who become sick as a result of responding to a public health emergency in the Coronavirus Disease 2019, National Preparedness and Response Plan. (2) There is no further evidence in the National Contingency Matrix Plan (2016), in the latest Emergency Plan of action implemented in 2018 for Ebola, or on the website of the Ministry of Health. (3,4,5)

[1] Ministry of Health. 2011. "Rwanda Human Resources for Health Strategic Plan (2011-2016)"

[https://medicine.yale.edu/intmed/globalhealthscholars/sites/HRH%20Strategic%20Plan%20March%202011_158432_284_5061_v1.pdf]. Accessed November 2020.

[2] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan".

[http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 2020.

[4] Red Cross Red Crescent Movement. 2018. "Emergency Plan of Action (EPoA) Rwanda: Ebola Preparedness".

[<https://reliefweb.int/sites/reliefweb.int/files/resources/MDRRW017do.pdf>]. Accessed November 2020.

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 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 public evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency. According to the Joint External Evaluation for Rwanda, conducted in May 2018, public health officials and healthcare workers communicate during outbreaks and other public health emergencies, coordinated by the National Epidemic Prevention and Control Coordination Committee (NEPCCC). (1) However, no specific details were available about the communication channels used. (1) Moreover, although risk communication is mentioned in the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for the Epidemic Infectious Diseases Division (2012-2018), and the Fourth Health Sector Strategic Plan (2018-2024), no further details could be found about the specific means of communication between public health officials and healthcare workers during public health emergencies. (2,3,4) The country does not have a physical facility serving as a public health emergency operations centre (PHEOC). (1) Neither the Ministry of Health nor the Ministry Of Disaster Management And Refugee Affairs share relevant information via public websites. (5,6) There is no further evidence in the Coronavirus Disease 2019, National Preparedness and Response Plan. (7)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[3] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[4] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[6] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). [<http://www.midimar.gov.rw/index.php?id=2>]. Accessed November 2020.

[7] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 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 public evidence of a system in place for public health officials and healthcare workers, including those in the private sector, to communicate during a public health emergency. According to the Joint External Evaluation for Rwanda, conducted in May 2018, public health officials and healthcare workers communicate during outbreaks and other public health emergencies, coordinated by the National Epidemic Prevention and Control Coordination Committee (NEPCCC). (1) However, no specific details were available about the communication channels used. (1) Moreover, although risk communication is mentioned in the Rwanda One Health strategic plan (2014-2018), the Six Year Strategic Plan for the Epidemic Infectious Diseases Division (2012-2018), and the Fourth Health Sector Strategic Plan (2018-2024), no further details could be found about the specific means of communication between public health officials and healthcare workers during public health emergencies. (2,3,4) The country does not have a physical facility serving as a public health emergency operations centre (PHEOC). (1) Neither the Ministry of Health nor the Ministry Of Disaster Management And Refugee Affairs share relevant information via public websites. (5,6) There is no further evidence in the Coronavirus Disease 2019, National Preparedness and Response Plan. (7)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.

[3] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.

[4] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.

[5] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[6] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). [<http://www.midimar.gov.rw/index.php?id=2>]. Accessed November 2020.

[7] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 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 is monitoring for and tracking the number of health care associated infections that take place in healthcare facilities. According to the Joint External Evaluation for Rwanda, conducted in May 2018, "there is no national plan for HCAI prevention and control and there are no designated

facilities conducting HCAI programs". (1) There is no public evidence on the websites of the Ministry of Health or the National Reference Laboratory. (2,3)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Rwanda Biomedical Center. [<http://www.rbc.gov.rw/index.php?id=354>]. Accessed November 2020.

4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

4.7.1a

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

Yes = 1 , No = 0

Current Year Score: 1

There is public evidence of a national requirement for ethical review (e.g. from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial. The Rwanda National Ethics Committee is responsible for reviewing all health research proposals before any health research begins (1). Moreover, in the Standard Operating Procedures document, there is evidence that the Rwanda National Ethics Committee also deals with clinical trials since: "No subject shall be included in a clinical trial before the ethics committee has given its written consent". Moreover, the definition given to health research also implies clinical research (2).

[1] Ministry of Health. 2012. "Health Sector Research Policy".

[http://moh.gov.rw/fileadmin/templates/policies/Health_Sector_Research_Policy.pdf]. Accessed November 2020.

[2] National Ethics Committee. 2009. "Standard Operating Procedures".

[https://www.healthresearchweb.org/files/SOP_'S.doc]. Accessed November 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 the Rwanda National Ethics Committee provides expedited process for unregistered medical countermeasures to treat ongoing pandemics. The Rwanda National Ethics Committee is responsible for reviewing all health research proposals before any clinical trial begins. (1) Although the Standard Operating Procedures (SOP) of the National Ethics Committee indicates an expedited process exists, there is no evidence that this applies for ongoing pandemics since it only concerns "research involving only a minimum risk for the subjects and if the situation involves review and approval of minor modifications to research that had already been approved in the previous year". (1)

Moreover, the SOP states "research projects likely to cause psychological or physical damage are not eligible for this procedure. This includes drug trials, research involving invasive procedures and sensitive cultural or personal subjects". (1) Further details on what kind of research is eligible for an expedited process could not be found. The SOP notes that the Committee will post an official statement within its offices "listing the categories of research, which are eligible for the expedited processing". (1) There is no further evidence on the website of the Ministry of Health or in the Health Sector Research Policy. (2,3)

[1] National Ethics Committee. 2009. "Standard Operating Procedures".

[https://www.healthresearchweb.org/files/SOP_'S.doc]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Ministry of Health. 2012. "Health Sector Research Policy".

[http://moh.gov.rw/fileadmin/templates/policies/Health_Sector_Research_Policy.pdf]. Accessed November 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 in Rwanda, there is a government agency responsible for approving new medical countermeasures for humans. Indeed, the Rwanda Food and Drugs Authority, established by the law n° 003/2018 of 09/02/2018, is responsible for regulating human and animal drugs; human and animal vaccines and other biological products used in the clinic as drugs. (1) However, the Joint External Evaluation for Rwanda, conducted in May 2018, notes that Rwanda does not have the capacity to produce antibiotics, vaccines, and other countermeasures, although contracts with local and international suppliers exist. (2)

[1] Official Gazette n° Special of 27/02/2018. Law N° 003/2018 Of 09/02/2018. "Establishing Rwanda Food And Drugs Authority And Determining Its Mission, Organization And Functioning".

[http://www.moh.gov.rw/fileadmin/user_upload/Law_Rwanda_FDA.1__1_.pdf]. Accessed November 2020.

[2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 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 the Rwanda Food and Drugs Authority has an expedited process for approving medical countermeasures for human use during public health emergencies. Information on the Rwanda Food and Drugs Authority (Rwanda FDA) is limited, indeed, it does not have its own website, and the only publicly available information is found in the Ministry of Health. It stipulates that the Rwanda FDA mission is to "regulate and inspect clinical trials", however, there is no reference to an expedited process or further details on how regulation is conducted. (1) No further evidence was

available in the law n° 003/2018 of 09/02/2018, which establishes the mission of the Rwanda Food and Drugs Authority. (2) There is no further evidence in the Ministry of Health, in the Health Sector Research Policy or in the National Reference Laboratory. (3,4,5) Rwanda does not have a Ministry of Research.

[1] Ministry of Health. "Mission of Rwanda FDA under LAW N° 003/2018 OF 09/02/2018". [<http://www.moh.gov.rw/index.php?id=555>]. Accessed November 2020.

[2] Official Gazette n° Special of 27/02/2018. Law N° 003/2018 Of 09/02/2018. "Establishing Rwanda Food And Drugs Authority And Determining Its Mission, Organization And Functioning".

[http://www.moh.gov.rw/fileadmin/user_upload/Law_Rwanda_FDA.1__1_.pdf]. Accessed November 2020.

[3] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[4] Ministry of Health. 2012. "Health Sector Research Policy".

[http://moh.gov.rw/fileadmin/templates/policies/Health_Sector_Research_Policy.pdf]. Accessed November 2020.

[5] Rwanda Biomedical Center. [<http://www.rbc.gov.rw/index.php?id=354>]. Accessed November 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 of a national risk reduction plan with a specific risk reduction strategy for pandemics. The 2013 National Disaster Risk Management Plan, implemented by the Ministry of Disaster Management and Refugee Affairs (MIDIMAR), is intended as a risk management plan for 12 main hazards, including human epidemics. It has a section dedicated to Disaster Risk Reduction, that presents the three main steps of the strategy: risk assessment and analysis; risk monitoring data and mitigation actions, and early warning communication. Nevertheless, rather than a detailed strategy, it is a general description of the different steps that any disaster risk reduction strategy should follow. In this sense, it is not a specific risk reduction strategy for pandemics or any other hazard, but rather a descriptive plan with general definitions of concepts that could be applied to any hazard (1). Further evidence, specifically related to pandemics, could not be found in the Ministry of Health, the Ministry of Disaster Management and Refugee Affairs (MIDIMAR) or the National Contingency Matrix Plan (2,3,4).

[1] Ministry of Disaster Management and Refugee Affairs. 2013. "National Disaster Risk Management Plan".

[http://midimar.gov.rw/uploads/tx_download/National_Disaster_Risk_Management_Plan_01.pdf]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). [<http://www.midimar.gov.rw/index.php?id=2>]. Accessed November 2020.

[4] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). 2016. "National Contingency Matrix Plan".

[http://midimar.gov.rw/uploads/tx_download/NATIONAL_DISASTER_CONTINGENCY_MATRIX_.pdf]. Accessed November 2020.

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

5.2.1 Cross-border agreements

5.2.1a

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

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

Current Year Score: 0

There is no evidence that Rwanda has cross-border agreements as part of a regional group, with regards to public health emergencies. Rwanda is a member of the East African Community (EAC), which has a mandate to "undertake joint action towards the prevention and control of communicable and non-communicable diseases and to control pandemics and epidemics of communicable and vector-borne diseases that might endanger the health and welfare of the residents of the Community". Nevertheless, the two projects currently implemented in the EAC, as part of the Disease Prevention and Control unit, are specifically related to disease surveillance, prevention and emergency preparedness, rather than dealing with public health emergencies. (1) The EAC website does not share further information that reveals the depth of commitment to cross-border activities that membership entails. While the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, notes that Rwanda is a signatory to a number of cross-border agreements such as the East African Community (EAC) Protocol on Health and the EAC Act of One Border Post", the Protocol on the Establishment of the East African Health Research Commission (the only EAC protocol related to health issues), and the EAC Act of One Stop Boarder Post, do not make any reference to public health emergencies. (2,3,4) Finally, the JEE report states that Rwanda is not part of the Global Outbreak and Alert Response Network (GOARN). (2) No further evidence was found in the One Health strategic plan, the Fourth Health Sector Strategic Plan (2018-2024), the Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018, the

Ministry of Health or the Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). (5,6,7,8,9) There is no further evidence in the Coronavirus Disease 2019, National Preparedness and Response Plan. (10)

- [1] East African Community. "Health". [<https://www.eac.int/health>]. Accessed December 2018
- [2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.
- [3] The East African Community. "Protocol on the Establishment of the East African Health Research Commission". [https://www.eac.int/index.php?option=com_documentmanager&task=download.document&file=bWFpbl9kb2N1bWVudH NfcGRmX1FkRGhmVU1uUVISaVhxWW5ERWpYVkrNRUFDIENvc3RvbXMgVW5pb24gUHJvdG9jb2w=&counter=126]. Accessed December 2018
- [4] The East African Community. 2016 "The East African Community One Stop Border Posts Act". [http://www.eala.org/uploads/EAC_One_Stop_Border_Post_Act_2016_1.pdf]. Accessed December 2018
- [5] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.
- [6] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.
- [7] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [8] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [9] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). [<http://www.midimar.gov.rw/index.php?id=2>]. Accessed November 2020.
- [10] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%20C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

5.2.1b

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

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

Current Year Score: 0

There is no evidence that Rwanda has cross-border agreements as part of a regional group, with regards to animal health emergencies. Rwanda is a member of the East African Community (EAC), which has a mandate to "undertake joint action towards the prevention and control of communicable and non-communicable diseases and to control pandemics and epidemics of communicable and vector-borne diseases that might endanger the health and welfare of the residents of the Community". Nevertheless, the two projects currently implemented in the EAC, as part of the Disease Prevention and Control unit, are specifically related to disease surveillance, prevention and emergency preparedness, rather than dealing with animal health emergencies (1). The EAC website does not share further information that reveals the depth of commitment to cross-border activities that membership entails. While the Joint External Evaluation (JEE) for Rwanda, conducted in May 2018, notes that Rwanda is a signatory to a number of cross-border agreements such as the East African Community (EAC) Protocol on Health and the EAC Act of One Border Post", the Protocol on the Establishment of the East African Health Research Commission (the only EAC protocol related to health issues), and the EAC Act of One Stop Boarder Post, do not make any reference to public health emergencies. (2,3,4) Finally, the JEE report states that Rwanda is not part of the Global Outbreak and Alert Response Network (GOARN). (2)†No further evidence was found in the One Health strategic

plan, the Fourth Health Sector Strategic Plan (2018-2024), the Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018, the Ministry of Health, the Ministry Of Disaster Management And Refugee Affairs (MIDIMAR), the Ministry of Agriculture and Animal Resources or the Rwanda Agriculture and Animal Resources Development Board. (5,6,7,8,9,10,11) There is no further evidence in the Coronavirus Disease 2019, National Preparedness and Response Plan. (12)

- [1] East African Community. "Health". [<https://www.eac.int/health>]. Accessed December 2018
- [2] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.
- [3] The East African Community. "Protocol on the Establishment of the East African Health Research Commission". [https://www.eac.int/index.php?option=com_documentmanager&task=download.document&file=bWFpbl9kb2N1bWVudHNfcGRmX1FkrGhmVU1uUVlSaVhxWW5ERWpYVkrNRUFDIENVC3RvbXMgVW5pb24gUHJvdG9jb2w=&counter=126]. Accessed December 2018
- [4] The East African Community. 2016 "The East African Community One Stop Border Posts Act". [http://www.eala.org/uploads/EAC_One_Stop_Border_Post_Act_2016_1.pdf]. Accessed December 2018
- [5] Ministry Of Health. 2013. "One Health Strategic Plan (2014-2018)". [http://www.rbc.gov.rw/IMG/pdf/one_health.pdf]. Accessed November 2020.
- [6] Ministry Of Health. "Fourth Health Sector Strategic Plan (2018-2024)". [https://www.childrenandaids.org/sites/default/files/2018-05/Rwanda_Nat%20Health%20Sector%20Plan_2018-2024.pdf]. Accessed November 2020.
- [7] Ministry of Health. 2012. "Six Year Strategic Plan for The Epidemic Infectious Diseases Division 2012-2018". [http://www.rbc.gov.rw/fileadmin/user_upload/eid_strategic_plan_2012-2018-2.pdf]. Accessed November 2020.
- [8] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [9] Ministry Of Disaster Management And Refugee Affairs (MIDIMAR). [<http://www.midimar.gov.rw/index.php?id=2>]. Accessed November 2020.
- [10] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.
- [11] Rwanda Agriculture and Animal Resources Development Board. "Laws and Regulations". [<http://rab.gov.rw/publications/laws-regulations/>]. Accessed November 2020.
- [12] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan". [https://moh.gov.rw/fileadmin/user_upload/Publication/Coronavirus%20Disease%202019%2C%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 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: 2

2021

Biological Weapons Convention

5.3.1b

Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?

Yes = 1 , No = 0

Current Year Score: 0

2021

Biological Weapons Convention

5.3.1c

Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?

Yes = 1 , No = 0

Current Year Score: 1

2021

Biological Weapons Convention

5.3.1d

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

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

Current Year Score: 1

2021

Biological Weapons Convention

5.3.2 Voluntary memberships

5.3.2a

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

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

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

Current Year Score: 0

2021

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

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

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

5.4.1a

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

Yes = 1 , No = 0

Current Year Score: 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: 0

2021

OIE PVS assessments

5.5 FINANCING

5.5.1 National financing for epidemic preparedness

5.5.1a

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Rwanda invested national funds to improve its own domestic capacity to address epidemic threats in the past three years. Rwanda has a Coronavirus Disease 2019, National Preparedness and Response Plan which presents an estimated budget costs for the immediate scale up operations for COVID-19 preparedness. This includes future response activities estimated at approximately US\$73 million. However, there is no evidence that this sum will be invested by Rwanda to improve its capacity to address epidemic threats in the future. This sum is dedicated to covid, there is no reference to any other public emergency. (1) There is no further evidence in the Ministry of Health, the National Reference Laboratory, the Ministry of Agriculture or in several budget reports (2,3,4,5,6,7)

[1] Ministry of Health. "Coronavirus Disease 2019, National Preparedness and Response Plan".

[https://www.rbc.gov.rw/fileadmin/user_upload/announcement/Coronavirus%20Disease%202019,%20National%20Preparedness%20and%20Response%20Plan.pdf]. Accessed November 2020

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

[4] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/>]. Accessed November 2020.

[5] Ministry of Finance and Economic Planning. 2020. "Budget Execution Report July-December 2019".

[http://www.minecofin.gov.rw/fileadmin/templates/documents/Budget_Management_and_Reporting_Unit/Budget_Execution_Reports/2019-2020_Budget_Execution_Report_GFSM2014/Budget_execution_report_July-December_2019_GFSM2014.pdf]. Accessed November 2020.

[6] Ministry of Finance and Economic Planning. 2019. "Budget Execution Report July 2018-June 2019".

[http://www.minecofin.gov.rw/fileadmin/templates/documents/Budget_Management_and_Reporting_Unit/Budget_Execution_Reports/2018-2019_Budget_Execution_Reports/2018_2019_Annual_Budget_Execution_Report/Budget_execution_report_July_2018-June_2019.pdf]. Accessed November 2020.

[7] Ministry of Finance and Economic Planning. 2018. "Budget Execution Report July 2017-June 2018".

[http://www.minecofin.gov.rw/fileadmin/templates/documents/Budget_Management_and_Reporting_Unit/Budget_Execution_Reports/2017-2018_Budget_Execution_Reports/2017-2018_Annual_Budget_Execution_Report/2017-

2018_ANNUAL_BUDGET_EXECUTION_REPORT.pdf]. Accessed November 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 evidence of a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency. Rwanda is an IDA-eligible borrowing country and thus eligible for the World Bank pandemic financing facility. (1,2)

In April 2020, the World Bank Group approved a USD \$14.25 million International Development Association (IDA) credit in immediate funding to support Rwanda's response to the global COVID-19 (coronavirus) pandemic under a new operation, the Rwanda COVID-19 Emergency Response project. (3)

- [1] IDA. "Borrowing Countries". [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed in November 2020.
- [2] Pandemic Emergency Financing Facility. December 2017. "Pandemic Emergency Financing Facility (PEF)". [<http://pubdocs.worldbank.org/en/119961516647620597/PEF-Operational-Brief-Dec-2017.pdf>]. Accessed in November 2020
- [3] The World Bank. April 7, 2020. "World Bank Supports Rwanda's COVID-19 Response". [<https://www.worldbank.org/en/news/press-release/2020/04/07/world-bank-group-supports-rwanda-covid-19-response>]. Accessed in November 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) have made a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or support, nor have they made a commitment to improve their own domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity in the past three years. Although the Global Health Security Tracking Dashboard reports that from 2014 to 2020 funds worth USD \$169.15 M were committed specifically toward improving Rwanda's capacity to address epidemic threats by investing in Emergency Response Operations, there is no evidence of any public commitment by senior leaders (president or ministers) . (1) No evidence could be found in the policy paper "Vision 2020", the framework for Rwanda's national development. (2) This document stipulates that reducing aid dependency substantially is a key component of Vision 2020, nevertheless it is clear that donor support will remain necessary to successfully attain the goals outlined in this document. (2) Moreover, in the press release "Rwanda's commitment to end mother-to-child HIV transmission by 2030", no request for support to improve capacity was found. (3). There is no further evidence in the sections press releases and statements in the Ministry of Health website, the Rwanda Biomedical Centre, the Ministry of Foreign Affairs, the United Nations or the WHO. (4,5,6,7,8) Finally, in the midst of the coronavirus crisis, although there is evidence that the African Development Bank, the US Embassy and the World Bank have provided funds to Rwanda to support the fight against coronavirus, there is no evidence that the country has requested this support. (9,10,11)

- [1] Global Health Security Tracking Dashboard. "Rwanda". [<https://tracking.ghscosting.org/#analysis/RW/r/table>]. Accessed November 2020.
- [2] Ministry of Finance and Economic Planning. 2000. "Rwanda Vision 2020". [<https://www.sida.se/globalassets/global/countries-and-regions/africa/rwanda/d402331a.pdf>]. Accessed November 2020.
- [3] Rwanda Biomedical Center. 2018. "Rwanda launches the iFree to Shine Campaign seeking to end paediatric AIDS by 2030". [http://www.rbc.gov.rw/index.php?id=19&tx_ttnews%5Btt_news%5D=453&cHash=820166eae916d6487d339b14e217010d]. Accessed November 2020.
- [4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.
- [5] Rwanda Biomedical Center. [<http://www.rbc.gov.rw/index.php?id=354>]. Accessed November 2020.
- [6] Ministry of Foreign Affairs. [<http://minaffet.gov.rw/home/>]. Accessed November 2020.

[7] The United Nations in Rwanda. [<http://www.rw.one.un.org/who-we-are/united-nations-rwanda>]. Accessed November 2020.

[8] World Health Organization (WHO). "Rwanda". [<http://www.who.int/countries/rwa/en/>]. Accessed November 2020.

[9] African Development Bank. July 2020. "Rwanda: African Development Bank commits \$98 million for multisector COVID-19 response". [<https://www.afdb.org/en/news-and-events/press-releases/rwanda-african-development-bank-commits-98-million-multisector-covid-19-response-37032>]. Accessed November 2020.

[10] US Embassy in Rwanda. April 2020. "New COVID-19 Funding Continues Strong U.S. Government Support". [<https://rw.usembassy.gov/new-covid-19-funding/>]. Accessed November 2020.

[11] World Bank. April 2020. "World Bank Supports Rwanda's COVID-19 Response". [<https://www.worldbank.org/en/news/press-release/2020/04/07/world-bank-group-supports-rwanda-covid-19-response>]. Accessed November 2020.

5.5.4b

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

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

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

Current Year Score: 1

There is publicly available evidence that Rwanda has, in the past three years, requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats. There is evidence via the Global Health Security Funding Tracker that Rwanda has invested donor finances to improve domestic capacity to address epidemic threats. The tracker notes that Rwanda has received funding from multiple donors to enhance their capacity on global security preparedness, up to US\$11.43 M from Canada and the United Kingdom. [1] However, there is no evidence that the country has provided other countries with financing or technical support to improve capacity to address epidemic threats. There is no further evidence in the sections press releases and statements in the Ministry of Health website, the Rwanda Biomedical Centre, the Ministry of Foreign Affairs, the United Nations or the WHO. [2,3,4,5,6]

[1] Global Health Security Funding Tracker. "Rwanda" [<https://tracking.ghscosting.org/details/193/recipient>]. Accessed November 2020.

[2] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020.

[3] Rwanda Biomedical Center. [<http://www.rbc.gov.rw/index.php?id=354>]. Accessed November 2020.

[4] Ministry of Foreign Affairs. [<http://minaffet.gov.rw/home/>]. Accessed November 2020.

[5] The United Nations in Rwanda. [<http://www.rw.one.un.org/who-we-are/united-nations-rwanda>]. Accessed November 2020.

[6] World Health Organization (WHO). "Rwanda". [<http://www.who.int/countries/rwa/en/>]. Accessed November 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: 1

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

5.6.1a

Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?

Yes = 1, No = 0

Current Year Score: 0

There is no a publicly available plan or policy for sharing genetic data, epidemiological data, clinical specimens, or isolated specimens (biological materials) with international organizations and/or other countries that goes beyond influenza in Rwanda. There is evidence that Rwanda shares data and biological materials with other countries and international organizations, however a publicly available plan or policy could not be found. Rwanda is a member of the East African Community (EAC), which is currently implementing the East African Public Health Laboratory Networking Project (EAPHLNP), a World Bank-funded project (active from 2010-2020) which main objective is: to establish a network of efficient, high quality, accessible public health laboratories for the diagnosis and surveillance of Tuberculosis and other communicable diseases. (1,2) There are other examples of international and regional collaboration such as the Expanded Program on Immunization (WHO-EPI), for polio, measles, and multi-disease resistant tuberculosis (TB) activities. Strong collaboration was also detected with the Ugandan Virus Research Institute in Entebbe, the Institute of Tropical Medicine (IMTA) in Antwerp, Belgium, the National Institute of Public Health (NIPH) in South Africa and the CDC in Atlanta, USA. (3) Nevertheless, a publicly available plan or policy could not be found. There is no further evidence of such a plan in the Ministry of Health, the Ministry of Agriculture and Animal Resources, the National Reference Laboratory. (4,5,6) Rwanda does not have a Ministry of Research.

[1] East African Community. "Disease Prevention and Control Unit". [<https://www.eac.int/health/disease-prevention>]. Accessed November 2020

[2] The World Bank. "AFCC2/RI-East Africa Public Health Laboratory Networking Project". [<http://projects.worldbank.org/P1111556/east-africa-public-health-laboratory-networking-project?lang=en&tab=details>]. Accessed November 2020

[3] Kebede, Senait et al. 2011. "Strengthening systems for communicable disease surveillance: Creating a laboratory network in Rwanda". Accessed November 2020

[https://www.researchgate.net/publication/51247666_Strengthening_systems_for_communicable_disease_surveillance_Creating_a_laboratory_network_in_Rwanda/citations]. Accessed November 2020

[4] Ministry of Health. [<https://www.moh.gov.rw/>]. Accessed November 2020

[5] Ministry of Agriculture and Animal Resources. [<http://www.minagri.gov.rw/index.php?id=16>]. Accessed November 2020.

[6] Rwanda Biomedical Center. [<https://www.rbc.gov.rw/index.php?id=188>]. Accessed November 2020.

5.6.1b

Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?

Yes = 0, No = 1

Current Year Score: 1

There is no public evidence that the country has not shared samples in accordance with the PIP framework in the past two years. Indeed, according to a WHO report issued in 2017, 19 of the 23 Member States of the influenza laboratory network shared influenza virological data in 2016. Rwanda is one of the member states that shared influenza samples. (1) Also, in 2020, there is evidence that Rwanda received funds as part of the PIP framework. (2) There is no further evidence as per top international and local media outlets.

[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 November 2020.

[2] Pandemic Influenza Preparedness Framework. 2020. "Biennial Progress Report". [https://www.who.int/influenza/pip/PIP_Biennial_2018-2019.pdf?ua=1]. Accessed November 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 Rwanda has not shared pandemic pathogen samples, including COVID-19 samples, during an outbreak in the past two years. There is no such evidence in the World Health Organization Disease Outbreak News site or in the Joint External Evaluation for Rwanda, conducted in May 2018. (1, 2) Finally, there is no further evidence in top international and local media outlets. There is no further evidence in the World Health Organization (WHO) and top international and local media outlets. (3)

[1] World Health Organization (WHO). May 2018. "Joint External Evaluation of IHR Core Capacities of the Republic of Rwanda". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.22-eng.pdf>]. Accessed November 2020.

[2] World Health Organization (WHO). "Disease Outbreak News: Rwanda". [<https://www.who.int/csr/don/archive/country/rwa/en/>]. Accessed November 2020.

[3] World Health Organization (WHO). "Rwanda". [https://www.who.int/hac/network/who/co_rwanda/en/]. Accessed November 2020.

Category 6: Overall risk environment and vulnerability to biological threats

6.1 POLITICAL AND SECURITY RISK

6.1.1 Government effectiveness

6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 2

2020

Economist Intelligence

6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1d

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 1

2020

Economist Intelligence

6.1.1e

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 54

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: 3

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: 2

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: 3

2021

Economist Intelligence

6.1.5 Armed conflict

6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incursional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 3

2021

Economist Intelligence

6.1.6 Government territorial control

6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

6.1.7 International tensions

6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 1

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: 73.22

2018

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);
The Economist Intelligence Unit

6.2.2 Gender equality

6.2.2a

United Nations Development Programme (UNDP) Gender Inequality Index score

Input number

Current Year Score: 0.59

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: 20.9

2016

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, Rwanda has 91% 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: 1

2016, or latest available

World Bank; Economist Impact calculations

6.2.4 Public confidence in government

6.2.4a

Level of confidence in public institutions

Input number

Current Year Score: 1

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: 0.44

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: 1

2021

Economist Intelligence

6.4 ENVIRONMENTAL RISKS

6.4.1 Urbanization

6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 17.31

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: 0.19

2008-2018

World Bank; Economist Impact

6.4.3 Natural disaster risk

6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 2

2021

Economist Intelligence

6.5 PUBLIC HEALTH VULNERABILITIES

6.5.1 Access to quality healthcare

6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 68.7

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: 579

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 3.03

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 13.3

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 5.8

2016

WHO

6.5.2 Access to potable water and sanitation

6.5.2a

Percentage of homes with access to at least basic water infrastructure

Input number

Current Year Score: 57.71

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 66.57

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: 53.46

2018

WHO Global Health Expenditure database

6.5.4 Trust in medical and health advice

6.5.4a

Trust medical and health advice from the government

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 2

2018

Wellcome Trust Global Monitor 2018

6.5.4b

Trust medical and health advice from medical workers

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 2

2018

Wellcome Trust Global Monitor 2018