

Vanuatu

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

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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 Vanuatu has a national Antimicrobial Resistance (AMR) plan for the surveillance, detection and reporting of priority AMR pathogens. Some news releases point to the existence of AMR-related initiatives, but nothing specific in the form of a plan exists. Some initiatives include celebrating World Antibiotic Awareness Week in 2016, with the Director General of Health calling on all health professionals to prescribe antibiotics rationally, only when required for serious bacterial infections. There was also a workshop, hosted by the Pharmacy Department to share updates and information with medical staff at the central hospital. [1, 2] There is no information related to AMR activities in the National Medicines Policy published in 2015. [3] The World Health Organisation (WHO)'s library of national action plans does not contain a plan for Vanuatu. [4] There is a report stating that Vanuatu is working with the WHO to develop an AMR action plan. [5] There is no evidence of a national laboratory or public health institute in Vanuatu. There is no relevant information shared via the public websites by the Ministry of Health and the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity [6,7]

[1] The Loop. November 2016. "Ministry of Health hosts Vanuatu's first Antibiotic Awareness Week". [http://www.loopvanuatu.com/content/ministry-health-hosts-vanuatu%E2%80%99s-first-antibiotic-awareness-week]. Accessed 7th September 2020.

[2] Cullwick, Jonas. November 15 2016. "Vanuatu marks World Antibiotic Awareness Week". [http://dailypost.vu/news/vanuatu-marks-world-antibiotic-awareness-week/article_f9fd29f1-3c9d-56cc-817c-750da7e80f78.html]. Accessed 7th September 2020.

[3] Ministry of Health. September 2015. "National Medicine Policy". [http://www.wpro.who.int/southpacific/publications/vanuatu_national_medicines_policy_2015_2020.pdf]. Accessed 7th September 2020.

[4] World Health Organisation (WHO). 2020. "Library of national action plans." [http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/]. Accessed 7th September 2020.

[5] Foxlee, Nicola D et al. 31 March 2020. "Bacteriology and Antimicrobial Resistance in Vanuatu: January 2017 to December 2019". [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7235848/]. Accessed 7th September 2020.

[6] Ministry of Health. [https://moh.gov.vu/]. Accessed 7th September 2020.

[7] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [https://malffb.gov.vu]. Accessed 7th September 2020.

1.1.1b

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

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

Current Year Score: 0

There is no public evidence that Vanuatu has a national laboratory or a functioning system of Antimicrobial Resistance (AMR) testing. The two national level hospitals and laboratory in the country have no online presence nor can media reports be found relating to the work they may be doing on AMR. [1, 2, 3] There is no information related to progress on AMR activities on the web page of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [5] The National Health strategy 2017-2020 contains no information about AMR activities. [4] The World Health Organisation (WHO) Library of national action plans does not contain a plan for Vanuatu. [6] There is no relevant information shared via a public website by the Ministry of Health. [7]

[1] Willie, Glenda. September 8th 2018. "High Levels of bacteria in Port Vila Harbour". [https://dailypost.vu/news/port-vila-harbour-contaminated/article_6cf3bc23-70f8-5672-892b-672a4ea853ac.html]. Accessed 7th September 2020.

[2] Tagaro M, Harries AD, Kool B, et al. 2014. "Tuberculosis case burden and treatment outcomes in children, adults and older adults, Vanuatu, 2007-2011". Public Health Action. 4:S14-S18. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4547594/>] Accessed 7th September 2020.

[3] Germani Y, Montaville B, Fauran C, Brethes B. 1985. "Survey in Vanuatu on enterotoxigenic Escherichia coli in children and infants with and without acute diarrhea.". Journal of Clinical Microbiology. 21

[4] : 630-633. <https://www.ncbi.nlm.nih.gov/pubmed/3886696> Accessed 7th September 2020.

[4] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 7th September 2020.

[5] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Livestock". [<https://www.malffb.gov.vu/index.php?id=2>]. Accessed 7th September 2020.

[6] World Health Organisation (WHO). 2020. "Library of national action plans." [<http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 7th September 2020.

[7] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 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 public evidence that there is a Vanuatuan government agency conducts environmental antimicrobial resistant (AMR) organism detection or surveillance activities. There is no information related to progress on AMR activities on the web pages of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity as well as the Ministry of Lands and Natural Resources. [1, 2] The World Health Organisation (WHO) Library of National Action Plans does not contain a plan for Vanuatu regarding AMR. [3] Policy documents including the "Health Sector Strategy" and the "National Medicine Policy" do not have any information on environmental AMR detection and surveillance. [4, 5] The Government of Vanuatu's Act No. 12 of 2002, titled "Environment Management and Conservation", does not refer to AMR-related activities. [6] Nor is there any mention of AMR detection and surveillance in the Vanuatu National Environment Policy and Implementation Plan 2016-2030 or on the website of the Vanuatu Department of Environmental Protection and Conservation. [7,8] There is no relevant

information shared via a public website by the Ministry of Health. [9]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://biosecurity.gov.vu/>]. Accessed 7th September 2020.

[2] Ministry of Lands and Natural Resources. [<http://www.mol.gov.vu/index.php/en/>] Accessed 7th September 2020.

[3] World Health Organisation (WHO). 2020. "Library of national action plans." [<http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 7th September 2020.

[4] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 7th September 2020.

[5] Ministry of Health. September 2015. "National Medicine Policy".

[http://www.wpro.who.int/southpacific/publications/vanuatu_national_medicines_policy_2015_2020.pdf]. Accessed 7th September 2020.

[6] Government of Vanuatu. Act No. 12 of 2002. "Environment Management and Conservation". [<https://mol.gov.vu/>]. Accessed 7th September 2020.

[7] SPREP. "Vanuatu National Environment Policy and Implementation Plan 2016-2030".

[<https://environment.gov.vu/images/Reports/VANUATU%20NEPIP-Final.pdf>]. Accessed 7th September 2020.

[8] Government of Vanuatu. Department of Environmental Protection and Conservation. [<https://environment.gov.vu/>]. Accessed 7th September 2020.

[9] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 2020.

1.1.2 Antimicrobial control

1.1.2a

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

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

Current Year Score: 2

There is public evidence that there is a legislation in place in Vanuatu requiring prescriptions for antibiotic use for humans. According to the "Sale of Medicines (Control)" published in 1996, "No person shall sell the medicines specified in Schedule 3, except upon the prescription of a medical practitioner, dental practitioner or a veterinary surgeon". [1] Schedule 3 contains antibiotics, such as Amoxicillin. [2] No evidence of gaps in enforcement was found.

[1] Government of Vanuatu. 27 August 1966. "Sale of Medicines (Control)".

[http://www.paclii.org/vu/legis/conso/_act/soma235/]. Accessed 7th September 2020.

[2] Vanuatu Government Gazettes. 8 August 2005. "Vanuatu Official Gazette, No. 25". [<http://www.paclii.org/cgi-bin/sinodisp/vu/other/VUGovGaz/2005/25.html?stem=&synonyms=&query=essential%20drugs>]. Accessed 7th September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 2020.

1.1.2b

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

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

Current Year Score: 2

There is public evidence that there is a legislation in place in Vanuatu requiring prescriptions for antibiotic use for animals. According to the "Sale of Medicines (Control)" published in 1996, "No person shall sell the medicines specified in Schedule 3, except upon the prescription of a medical practitioner, dental practitioner or a veterinary surgeon". [1] Schedule 3 contains antibiotics, such as Amoxicillin. [2] No evidence of gaps in enforcement was found.

[1] Government of Vanuatu. 27 August 1966. "Sale of Medicines (Control)".

[http://www.paclii.org/vu/legis/consol_act/soma235/]. Accessed 7th September 2020.

[2] Vanuatu Government Gazettes. 8 August 2005. "Vanuatu Official Gazette, No. 25". [<http://www.paclii.org/cgi-bin/sinodisp/vu/other/VUGovGaz/2005/25.html?stem=&synonyms=&query=essential%20drugs>]. Accessed 7th September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 2020.

1.2 ZOO NOTIC DISEASE

1.2.1 National planning for zoonotic diseases/pathogens

1.2.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Vanuatu has a national law or plan document on zoonotic diseases. There is no information on the web page of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity regarding a strategy for zoonoses. [1] The current health strategy (2017-2020), does not mention a national strategy on zoonoses. [2] The National Biosecurity Policy (2016-2030) makes no mention of such a law, plan or strategy. [3] The World Health Organisation for Animal Health's OIE PVS Gap Analysis report, completed in 2017, does not contain any information about a national law, plan, or equivalent strategy document on zoonotic disease, but does state that the country is relatively free from zoonotic diseases and has low levels of usage of veterinary medicines. [4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>] Accessed 7th September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 7th September 2020.

[3] Government of Vanuatu. 2016. "National Biosecurity Policy".

[<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 7th September 2020.

[4] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 7th September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 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 evidence of 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 in Vanuatu. The Animal Disease (Control) Act authorises the Minister responsible for animal production to "provide for the control of the spread to humans of diseases transmissible to humans, including inspection and health testing of animals and their products"; however, there is no evidence that a risk identification/reduction plan exists. [1] There is no information on the web page of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity regarding zoonotic disease spillover risks. [2] The current health strategy (2017-2020), does not mention a risk identification/ reduction plan for zoonotic disease spillovers. [3] The National Biosecurity Policy (2016-2030) makes no mention of such a law, plan or strategy. [4] The World Health Organisation for Animal Health's OIE PVS Gap Analysis report, completed in 2017, does not contain any information about a national law, plan, or equivalent strategy document which identifies pathways for transmission of zoonotic diseases from animals to humans, but does state that the country is relatively free from zoonotic diseases and has low levels of usage of veterinary medicines. [5] There is no relevant information shared via a public website by the Ministry of Health. [6]

[1] Republic of Vanuatu. 10 May 1993. "Animal Disease (Control) Act". [http://www.pacii.org/vu/legis/consol_act/ada210/]. Accessed 7th September 2020.

[2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>] Accessed 7th September 2020.

[3] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 7th September 2020.

[4] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 7th September 2020.

[5] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 7th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 2020.

1.2.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Vanuatu has national plans, guidelines or laws that account for the surveillance and control of multiple zoonotic pathogens. The Animal Disease (Control) Act authorises the Minister responsible for animal production to "provide for the control of the spread to humans of diseases transmissible to humans, including inspection and health testing of animals and their products"; however, there is no evidence that such a control plan exists. [1] There is no information on the webpage of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity regarding a plan for the surveillance and control of zoonotic pathogens. [2] The current health strategy (2017-2020) does not address this topic. [3] The website of the Biosecurity Department and the National Biosecurity Policy (2016-2030) make no mention of such a law, plan or strategy. [4,5] The World Health Organisation for Animal Health's OIE PVS Gap Analysis report, published in 2017, does not mention any plans or guidelines for the surveillance and control of multiple zoonotic pathogens of public health

concern in Vanuatu. [6] There is no relevant information shared via a public website by the Ministry of Health. [7]

[1] Republic of Vanuatu. 10 May 1993. "Animal Disease (Control) Act". [http://www.paclii.org/vu/legis/consol_act/ada210/]. Accessed 7th September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>] Accessed 7th September 2020.

[3] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 7th September 2020.

[4] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 7th September 2020.

[5] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 7th September 2020.

[6] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 7th September 2020.

[7] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 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 public evidence that Vanuatu has a cross-ministerial agency dedicated to zoonotic diseases. The web page of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity does not mention oversight of zoonoses. [1] The Biosecurity department of the ministry deals only with animal specific health. [2] There is no evidence from wider government press releases or media reporting that an alternative government entity for zoonoses exists. According to the World Health Organisation for Animal health's PVS evaluation, published in 2017, an external coordination mechanism should be developed for zoonotic diseases as there is currently none in place and the government lacks resources (financial and human) to implement such a plan. [3] There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>] Accessed 7th September 2020.

[2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 7th September 2020.

[3] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 7th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 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 evidence that Vanuatu has a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency. Although there is legislation that requires reporting of diseases, there is no mention of how this is to be done. Section 13 of the Animal Disease (Control) Act mandates that "any person, including a veterinary officer, shall notify the principal veterinary officer of any suspected or diagnosed occurrence of any notifiable disease by the most immediate means available". [1] However, there is no mention of the mechanism for reporting. The World Organisation for Animal Health (OIE) Performance of Veterinary Services (PVS) Gap Analysis report for Vanuatu, published in 2017, states there is a need to develop standard operating procedures (SOPs) for reporting of diseases at all levels in Vanuatu, as there is currently a lack of any SOPs in most places, or a disparity between public and private regulations. [2] The website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity does not include information on a surveillance system involving livestock owners. [3, 4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] Republic of Vanuatu. 10 May 1993. "Animal Disease (Control) Act". [http://www.paclii.org/vu/legis/consol_act/ada210/]. Accessed 7th September 2020.

[2] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 7th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 7th September 2020.

[4] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Livestock". [<https://malffb.gov.vu/index.php?id=2>]. Accessed 7th September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 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 Vanuatu has laws or guidelines safeguarding the confidentiality of information generated through animal health surveillance activities. According to the World Health Organisation for Animal Health's OIE PVS Gap Analysis report completed in 2017, there are no active surveillance programs in Vanuatu. [2] No mention of any laws or guidelines that safeguard the confidentiality of information generated through surveillance activities for animals (for owners) was found on the website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [2] There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf].

Accessed 7th September 2020.

[2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 7th September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 2020.

1.2.2c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Vanuatu conducts surveillance of zoonotic disease in wildlife. There is, however, a mandate outlined in the 2016 National Biosecurity Policy, that surveillance should take place and plans for resourcing the said surveillance should be developed. [1] No specifics are mentioned of what zoonotic diseases are to be targeted. There does exist limited livestock surveillance. According to the 2017 OIE PVS Gap Analysis Mission Report for Vanuatu, "in rural areas, diseases surveillance and slaughter inspection are implemented by Livestock officers under the Department of Livestock, without direct chain of command and reporting". [2] Additionally, "the main surveillance for animal disease is via ante and post-mortem findings of animals presented to the slaughterhouses." [2] Finally, the PVS Gap Analysis Mission Report indicates that there is a "planned surveillance plan involving 25 sentinel commercial and smallholder farms in 14 islands but this has not been implemented....Routine disease surveillance occurs only at abattoirs. There are no active surveillance programs in Vanuatu." [2] No evidence is found on the website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [3] Existing arrangements pertain to livestock, and do not include wildlife. There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] Government of Vanuatu. 2016. "National Biosecurity Policy".

[<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 7th September 2020.

[2] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 7th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://biosecurity.gov.vu/>]. Accessed 7th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 2020.

1.2.3 International reporting of animal disease outbreaks

1.2.3a

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

Yes = 1 , No = 0

Current Year Score: 0

2019

OIE WAHIS database

1.2.4 Animal health workforce

1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: -

No data available

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: -

No data available

OIE WAHIS database

1.2.5 Private sector and zoonotic

1.2.5a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of a national plan on zoonotic disease or other legislation, regulation or plan that include mechanisms for working with the private sector in controlling or responding to zoonoses. According to the country's 2016 National Biosecurity Policy, there are plans in place to incorporate private institutions in the oversight of the Biosecurity Department of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [1] However, while the National Biosecurity Policy mentions zoonotic disease, this does not amount to a mechanism for working with the private sector in controlling or responding to zoonoses. There is no evidence of a national laboratory or public health institute in Vanuatu. There is no relevant information shared via the public websites of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity and the Ministry of Health. [2,3]

[1] Government of Vanuatu. 2016. "National Biosecurity Policy".

[<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 7th September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 7th September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 7th September 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 public evidence that Vanuatu has a record of facilities in which especially dangerous pathogens and toxins are stored or processed. The websites of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity and the Vanuatu Police do not have any information about facilities storing or processing dangerous pathogens. [1, 2] While there does not exist a Ministry of Research, the country does have a central research agency called the Vanuatu Agricultural Research and Technical Centre. This agency does not have a record of facilities in which especially dangerous pathogens and toxins are stored or processed. [3] Vanuatu does have a Biosecurity Department as part of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, but it does not cover laboratory security. It instead covers animal and plant health. [4] The central government laboratory, Port Villa Central Hospital, does not have an online presence. The Ministry of Internal Affairs also does not have an online presence. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 8th September 2020.

[2] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[3] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[4] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[5] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 2020.

1.3.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Vanuatu 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. Vanuatu does have a Biosecurity Department as part of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, but it does not cover laboratory security. Instead, it covers plant and animal health. [1] (The Biosecurity Department has been in place since 1997, changing its name from the Department of Vanuatu Quarantine and Inspection Services in 2013.) Similarly, the country's National Biosecurity Policy (2016-2030) does not address biological agents and toxins, but relates to biodiversity. [2] No mention is made in the Health Sector Strategy 2017-2020 of specifics of legislation and/or regulations related to biosecurity. [3] The main government laboratory, Port Villa Central hospital, also does not have any online presence. There is no information on the website of Vanuatu Police. [4] Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

[1] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[2] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.

[3] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 8th September 2020.

[4] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[5] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 2020.

1.3.1c

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Vanuatu has an agency responsible for the enforcement of biosecurity legislation and regulations. Vanuatu does have a Biosecurity Department as part of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, but it does not cover laboratory security. Instead, it covers plant and animal health. [1] (The Biosecurity Department has been in place since 1997, changing its name from the Department of Vanuatu Quarantine and Inspection Services in 2013.) The National Biosecurity Policy was published in 2016 and helped formalise the work of the Biosecurity Department, but the policy also does not address biological agents and toxins, and critical relevant biological materials and information. It instead covers regulation around biodiversity. [2] The Port Villa Central Hospital (which is the main government laboratory) does not have an online presence. The Vanuatu Police website contains no references to any other organisation dealing with biosecurity in Vanuatu. [3] The Ministry of Internal Affairs also does not have an online presence. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [4] There is no relevant information shared via a public website by the Ministry of Health. [5] No information was found on the VERTIC database. [6]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[2] Government of Vanuatu. 2016. "National Biosecurity Policy".

[<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.

[3] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[4] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[6] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 evidence to show that Vanuatu has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. Although Vanuatu has a Biosecurity Department as part of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, but this department does not address pathogens or research involving them. Rather, the Biosecurity Department focuses on the prevention of animal and plant diseases through border control. [1] The National Biosecurity Policy was published in 2016 and helped formalise the work of the Biosecurity Department, but the policy also does not address biological agents and toxins. Instead, it covers plant and animal health. [2] The web pages of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity; the Ministry of Health; the Vanuatu Agricultural Research and Technical Centre; and the Vanuatu Police do not contain information about biosecurity or mentions of especially dangerous pathogens and toxins. [3, 4, 5, 6] The main government laboratory, Port Villa Hospital laboratory, does not have an online presence. The Ministry of Internal Affairs also does not have a website. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [7] No information was found on the VERTIC database. [8]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[2] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[5] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[6] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[7] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[8] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 2020.

1.3.1e

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that Vanuatu has in-country capacity to conduct PCR-based diagnostic testing for either anthrax or Ebola. According to a 2015 study titled "Risk posed by the Ebola epidemic to the Pacific islands: findings of a recent World Health Organization assessment", there was no ability to test for Ebola in Vanuatu. [1] No papers were found related to anthrax testing in Vanuatu and no mention of anthrax testing were found on the websites of the Vanuatu Agricultural Research and Technical Centre, the Vanuatu Police and the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [2, 3, 4] Vanuatu does have a Biosecurity Department. However, it is focused on prevention of animal and plant diseases through border control, not on research on pathogens. [5] It does not mention provisions for PCR-based diagnostic testing for either anthrax or Ebola. The Port Villa Hospital laboratory (the main government laboratory) does not have an online presence. The Ministry of Internal Affairs also does not have a website. There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

[1] Adam T Craig, Axelle Ronsse, Kate Hardie, Boris I Pavlin, Viema Biaukula and Eric J Nilles. 2015. "Risk posed by the Ebola epidemic to the Pacific islands: findings of a recent World Health Organization assessment".

[<https://ojs.wpro.who.int/ojs/index.php/wpsar/article/view/305/463>]. Accessed 8th September 2020.

[2] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[3] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[4] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.

[5] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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

Vanuatu does not appear to require standardised biosecurity training for personnel working with dangerous biological materials. Vanuatu does have a Biosecurity Department as part of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. However, the Biosecurity department is not focused on research on pathogens, but prevention of animal and plant diseases through border control. [1] The National Biosecurity Policy was published in 2016 and helped formalise the work of the Biosecurity Department, but the policy also does not address biological agents and toxins (covers plant and animal health) and therefore has no provision for biosecurity training. [2] The webpages of the Ministry of Agriculture,

Livestock, Forestry, Fisheries and Biosecurity, the Vanuatu Agricultural Research and Technical Centre and the Vanuatu Police do not contain information about biosecurity training [3, 4, 5] There is no relevant information shared via a public website by the Ministry of Health. [6] The Ministry of Internal Affairs also does not have a website. Training to enhance laboratory-based surveillance and laboratory quality management systems was carried out in 2018 in Vanuatu with support from the Pacific Community, but specifics of what was involved, especially related to dangerous biological materials was not mentioned. [7] The main government laboratory, Port Villa Hospital, does not have a website, and there is also no evidence of an institute of public health. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [8] No information was found on the VERTIC database. [9]

- [1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.
- [2] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.
- [3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.
- [4] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.
- [5] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.
- [6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.
- [7] The Pacific Community. 14 June 2018. "Improved Laboratory-based surveillance and quality management systems in Vanuatu". [<https://www.spc.int/updates/blog/2018/06/improved-laboratory-based-surveillance-and-quality-management-systems-in>]. Accessed 8th September 2020.
- [8] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.
- [9] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 Vanuatu has regulations or licensing conditions which specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential undergo checks. The country has a Biosecurity Department as part of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. However, the Biosecurity department is not focused on research on pathogens, but prevention of animal and plant diseases through border control. [1] The National Biosecurity Policy was published in 2016 and helped formalise the work of the Biosecurity Department, but the policy also does not address biological agents and toxins (covers plant and animal health) and therefore does not contain any reference to background checks. [2] The webpages of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, the Vanuatu Agricultural Research and Technical Centre

and the Vanuatu Police do not contain information pertaining to this [3, 4, 5] The Ministry of Internal Affairs also does not have a website. There is no relevant information shared via a public website by the Ministry of Health. [6] The main government laboratory, Port Villa Hospital, does not have a website, and there is also no evidence of an institute of public health. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [7] No information was found on the VERTIC database. [8]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[2] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%20202030.pdf>]. Accessed 8th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.

[4] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[5] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[8] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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

Vanuatu does not have publicly-available information on national regulations on the safe and secure transport of infectious substances. The web pages of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, the Biosecurity department, the national airline (Air Vanuatu), and the Vanuatu police do not have information about the secure transport of infectious substances in Categories A and B. [1, 2, 3,4] Vanuatu's civil aviation regulation, the Civil Aviation Act, contains reference to the ability of the responsible minister to make rules related to "the safe carriage of firearms and other dangerous or hazardous goods or substances by air". However, there is no further elaboration on whether these "dangerous or hazardous goods or substances" cover infectious substances in Categories A and B. [5] The Ministry of Tourism, Trade, Industry, Commerce and Ni-Vanuatu Business does not have a website. The Vanuatu Agricultural Research and Technical Centre does not have any information on the national regulations on the safe and secure transport of infectious substances including any mention of Categories A or B substances. [6] Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [7] There is no relevant information shared via a public website by the Ministry of Health. [8] No information was found on the VERTIC database. [9]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.

[2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>].

Accessed 8th September 2020.

[3] Air Vanuatu. "Dangerous Goods". [<https://www.airvanuatu.com/home/passenger-information/dangerous-goods>].

Accessed 8th September 2020.

[4] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[5] Government of Vanuatu. 2005. "Laws of the republic of Vanuatu: Civil Aviation".

[http://www.pacii.org/vu/legis/consol_act/caa154/]. Accessed 8th September 2020.

[6] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[7] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[8] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[9] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 evidence that Vanuatu has legislation or other guidance to oversee the cross-border transfer and end-user screening of especially dangerous materials with pandemic potential. There is no evidence of this in the 2005 Civil Aviation Act. [1] The web pages of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, the Vanuatu Police and the Vanuatu Agricultural Research and Technical Centre do not have information about cross-border transfer and end-user screening of infectious substances. [2, 3, 4] The Ministry of Tourism, Trade, Industry, Commerce and Ni-Vanuatu Business does not have a website. No rules on oversight of the cross-border transfer and end-user screening of dangerous biological substances are provided in the National Biosecurity Policy, which covers plant and animal health. [5] The Ministry of Internal Affairs also does not have a website. The main government laboratory, Port Villa Hospital, does not have a website, and there is also no evidence of an institute of public health. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [6] There is no relevant information shared via a public website by the Ministry of Health. [7] No information was found on the VERTIC database. [8]

[1] Government of Vanuatu. 2005. "Laws of the republic of Vanuatu- Civil Aviation".

[http://www.pacii.org/vu/legis/consol_act/caa154/]. Accessed 8th September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.

[3] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[4] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[5] Government of Vanuatu. 2016. "National Biosecurity Policy".

[<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.

[6] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[7] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[8] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 Vanuatu has biosafety legislation or regulations in place. The National Biosecurity Policy was written in 2016 and enforced by the Biosecurity Department. [1,2] However, it does not address safety considerations involved in dealing with infectious biological substances. The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity houses the Biosecurity department, but there is no mention of biosafety legislation or regulations. [3] There is a National Biosafety Framework, but it does not appear to address the prevention of accidents that involve the release of harmful biological substances; rather it is focused on rules around imports of living organisms/GMOs. [4] The central national laboratory and Port Villa Hospital Laboratory do not have an online presence. There is no evidence of a national public health institute in Vanuatu or a Ministry of Research. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

[1] Government of Vanuatu. 2016. "National Biosecurity Policy".

[<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.

[2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.

[4] Department of Vanuatu Quarantine and Inspection Services. December 2005. "National Biosafety Framework". [<https://www.sprep.org/att/IRC/eCOPIES/Countries/Vanuatu/4.pdf>]. Accessed 8th September 2020.

[5] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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

Vanuatu does not have an established agency responsible for the enforcement of biosafety legislation and regulations. The Biosecurity Department was originally founded in 1997 as the Vanuatu Quarantine and Inspection Services and changed its name to the Biosecurity Department in 2013. [1] It is housed within the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity and operates under the National Biosecurity Policy, written in 2016. Its mission is "to protect Vanuatu's borders against the introduction and spread of foreign pests and diseases that could affect crops, animals, humans and the environment and, to enhance trade of Vanuatu's products". [2] It does not, however, deal with the enforcement of biosafety legislation and regulations related to the prevention of accidents that involve the release of harmful biological substances at this time. There is no mention of such an agency on the website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [3] There is no online presence for the national laboratory or the Port Villa Hospital Laboratory. There is no evidence of a public health institute or a Ministry of Research in Vanuatu. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [4] There is no relevant information shared via a public website by the Ministry of Health. [5] No information was found on the VERTIC database. [6]

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.

[2] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 8th September 2020.

[4] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[6] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 Vanuatu has requirements for standardised biosafety training for personnel working with dangerous biological materials. There is no mention of specific training requirements in the National Biosecurity Policy, and no details were found on the website for the Biosecurity Department or the website for the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [1,2,3] The Biosecurity Department is housed within the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity and operates under the National Biosecurity Policy, written in 2016. It does not, however, deal with the enforcement of biosafety legislation and regulations related to the prevention of accidents that involve the release of harmful biological substances at this time; rather, it deals with plant and animal health. [2] The Villa Central Hospital, the country's largest public hospital and central laboratory, does not have an online web presence. The Vanuatu Agricultural Research and Technical Centre does not mention any training requirements. [4] Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building

Measures reports. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

- [1] Government of Vanuatu. 2016. "National Biosecurity Policy". [<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.
- [2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 8th September 2020.
- [3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.
- [4] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.
- [5] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.
- [6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.
- [7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 evidence that Vanuatu has conducted an assessment to determine whether on-going dual use research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential, or other dual use research. The Vanuatu Agricultural Research and Technical Centre, which is the main government-established research institute, does not mention any dual-use research. [1] The Ministry of Internal Affairs does not have an online presence. The University of the South Pacific, Emalus campus, which is the largest university in Vanuatu, does not share via a public website information relevant to dual-use research. [2] The websites of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity and the Vanuatu Police also do not mention any dual-use research on their publicly available websites. [3, 4] No social media or news reports were found related to dual-use research in Vanuatu. There is no publicly available evidence that Vanuatu has a national public health institute. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

- [1] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.
- [2] University of the South Pacific. "Emalus Campus". [<https://www.usp.ac.fj/?id=7158>]. Accessed 8th September 2020.
- [3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 8th September 2020.

[4] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[5] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 evidence that Vanuatu has a national policy requiring oversight of dual use research, such as research with especially dangerous pathogens, toxins, and/or pathogens with pandemic potential. The Vanuatu Agricultural Research and Technical Centre, which is the main government-established research institute, does not mention any dual-use research. [1] The Ministry of Internal Affairs does not have an online presence. The University of the South Pacific, Emalus campus, which is the largest university in Vanuatu, does not contain information relevant to dual-use research. [2] The websites of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity and the Vanuatu Police also do not mention any dual-use research. [3, 4] No social media or news reports were found related to dual-use research in Vanuatu. There is no publicly available evidence that Vanuatu has a national public health institute. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

[1] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[2] University of the South Pacific. "Emalus Campus". [<https://www.usp.ac.fj/?id=7158>]. Accessed 8th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 8th September 2020.

[4] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[5] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 that Vanuatu has an agency responsible for oversight of dual-use research. The Vanuatu Agricultural Research and Technical Centre, which is the main government established research institute, does not mention any dual-use research. [1] The Ministry of Internal Affairs does not have an online presence. The University of the South Pacific, Emalus

campus, which is the largest university in Vanuatu, does not contain information relevant to dual-use research. [2] The websites of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity and the Vanuatu Police also do not mention any dual-use research. [3, 4] No social media or news reports were found related to dual-use research in Vanuatu. There is no publicly available evidence that Vanuatu has a national public health institute. Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] No information was found on the VERTIC database. [7]

[1] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed 8th September 2020.

[2] University of the South Pacific. "Emalus Campus". [<https://www.usp.ac.fj/?id=7158>]. Accessed 8th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 8th September 2020.

[4] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[5] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[7] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 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 available evidence of national legislation, regulation, policy, or other guidance, requiring the screening of synthesised DNA before it is sold. Vanuatu published a national Biosecurity Policy in 2016, but it is focused on invading pests and diseases in agriculture. It does not mention genetically modified organisms or synthetic DNA. [1] There is a National Biosafety Framework, but it does not address the screening of synthesised DNA before it is sold. [2] The websites of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity, the Vanuatu Police, and the Vanuatu Agricultural Research and Technical Centre do not provide evidence for national legislation, regulation, policy, or other guidance, requiring the screening of synthesised DNA before it is sold. [3, 4, 5] Although Vanuatu is party to the Biological Weapons Convention, there is no public evidence that it has submitted Confidence-Building Measures reports. [6] There is no relevant information shared via a public website by the Ministry of Health. [7] No information was found on the VERTIC database. [8]

[1] Government of Vanuatu. 2016. "National Biosecurity Policy".

[<https://pafpnet.spc.int/attachments/article/820/VUBiosecurity%20Policy%202016%20-%202030.pdf>]. Accessed 8th September 2020.

[2] Department of Vanuatu Quarantine and Inspection Services. December 2005. "National Biosafety Framework".

[<https://www.sprep.org/att/IRC/eCOPIES/Countries/Vanuatu/4.pdf>]. Accessed 8th September 2020.

[3] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 8th September 2020.

[4] Vanuatu Agricultural Research and Technical Centre. "Livestock". [<http://vartc.vu/research-programs/livestock/>]. Accessed

8th September 2020.

[5] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 8th September 2020.

[6] United Nations. "Confidence Building Measures: Vanuatu". [<https://bwc-ecbm.unog.ch/state/vanuatu>]. Accessed 8th September 2020.

[7] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 8th September 2020.

[8] Vertic. "BWC Legislation Database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/v/>]. Accessed 8th September 2020.

1.6 IMMUNIZATION

1.6.1 Vaccination rates

1.6.1a

Immunization rate (measles/MCV2)

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

Current Year Score: 0

2019

World Health Organization

1.6.1b

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

Yes = 1 , No = 0

Current Year Score: 0

2020

OIE WAHIS database

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

2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

2.1.1 Laboratory testing for detection of priority diseases

2.1.1a

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

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

Current Year Score: 0

There does not exist evidence that Vanuatu's national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 World Health Organisation (WHO)-defined core tests. Vanuatu does have the capacity to conduct serological testing for HIV/AIDS and rapid diagnostic testing for Malaria. [1, 2] The country also has the capacity to conduct microscopy for mycobacterium tuberculosis (tuberculosis/TB). [3] The national public health laboratory (Port Villa Central Hospital) does not have an online presence. There does not seem to exist evidence of a national public health institute. Additionally, Vanuatu does not appear to have publicly defined the four country-specific tests. No social media or news articles were found to give further evidence. There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] Ministry of Health. 2014. "Global AIDS Response Progress Report".

[http://www.unaids.org/sites/default/files/country/documents/VUT_narrative_report_2014.pdf]. Accessed 16th September 2020.

[2] World Health Organisation. "Vanuatu". [http://www.who.int/malaria/publications/country-profiles/profile_vut_en.pdf]. Accessed 16th September 2020.

[3] United Nations Development Programme. 2017. "Multi-Country TB Supervisory Evaluation Visit Report".

[<http://www.pacific.undp.org/content/dam/fiji/docs/Multi-Country%20TB%20Supervisory%20Evaluation%20Visit%20Report%202017.pdf>] Accessed 16th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 16th September 2020.

2.1.1b

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

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

Current Year Score: 1

Although there is no evidence of a generalized national plan, strategy or similar document for conducting testing during a public health emergency, Vanuatu does have a national strategy for conducting testing for COVID-19 which includes testing criteria and goals. A COVID-19 Preparedness and Response Plan was issued by the government and local testing capacity has been established for the same. As part of this plan, Vanuatu outlined criteria for how to conduct testing to prevent cases from spreading within the country. This plan includes testing for all arrivals to Vanuatu (regardless of if symptomatic or not), any person who meets the case definition for COVID-19 regardless of if they have recently traveled and any person who requires a test to exit the country. [1,2,3] There is however, no evidence of a generalized plan for emergencies other than COVID-19. Vanuatu is party to the Pacific Syndromic Surveillance System which acts as an early warning tool and monitors outbreaks of diarrhoea, acute fever and rash, prolonged fever and influenza-like illness. [4] Neither the Pacific Syndromic Surveillance System nor the current Health Sector Strategy 2017-2020 make mention of a more generalized testing strategy. [5] The national public health laboratory (Port Villa Central Hospital) does not have an online presence. There does not seem to exist evidence of a national public health institute. No social media or news articles were found to give further evidence. There is no relevant information shared via the public websites of the Ministry of Health and the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [6,7]

- [1] Ministry of Health. 12 March 2020. "Summary of COVID-19 Preparedness and Response Plan". [https://covid19.gov.vu/images/To_Know/Summary_of_COVID-19_Preparedness_and_Response_Plan.pdf]. Accessed 16th September 2020.
- [2] Ministry of Health. "Surveillance and Testing". [<https://covid19.gov.vu/index.php/general-info/surveillance-and-testing>]. Accessed 6th May 2021.
- [3] Ministry of Health. 4 January 2021. "COVID-19 Public Health Information Sheet Testing for COVID-19 in Vanuatu". [https://covid19.gov.vu/images/Information-Sheets/Public_Health_Information_Sheet_Testing_v4_English.pdf]. Accessed 6th May 2021.
- [4] World Health Organisation (WHO). "Pacific Islands Surveillance". [<https://www.who.int/westernpacific/emergencies/surveillance/pacific-islands-surveillance>]. Accessed 16th September 2020.
- [5] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 16th September 2020.
- [6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 16th September 2020.
- [7] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 16th September 2020.

2.1.2 Laboratory quality systems

2.1.2a

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

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that Vanuatu has a national laboratory that serves as a reference facility and is accredited. The Ministry of Health indicates that Vila Central Hospital in Port Vila and Northern Provincial Hospital in Luganville are the two referral hospitals in the country and that laboratory services are included in the list of services provided by these hospitals. [1] Neither of these hospitals has an online presence, and it is not possible to assess whether they are accredited. Neither the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity nor the Ministry of Health shares any information via a publicly available website about laboratory accreditation. [2,3] There is no evidence that Vanuatu has a public health institute.

[1] Ministry of Health. "List of Hospital Services". [<https://moh.gov.vu/index.php/curative-services/hospital-services>]. Accessed 16th September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 16th September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 16th September 2020.

2.1.2b

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

Yes = 1, No = 0

Current Year Score: 0

There is no evidence that Vanuatu has a national laboratory that serves as a reference facility that is subject to external quality assurance (EQA) review. The Ministry of Health indicates that Vila Central Hospital in Port Vila and Northern Provincial

Hospital in Luganville are the two referral hospitals in the country and that laboratory services are included in the list of services provided by these hospitals. [1] Neither of these hospitals has an online presence. The Pacific Pathology Training Centre supported by the New Zealand government, provides external quality assurance (EQA) to laboratories in the Asia Pacific region. However, there is insufficient evidence if it covers a national reference laboratory in Vanuatu. [2,3] Neither the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity nor the Ministry of Health shares any information about a national reference laboratory which is subject to EQA from an external laboratory. [4,5] There is no evidence that Vanuatu has a public health institute.

[1] Ministry of Health. "List of Hospital Services". [<https://moh.gov.vu/index.php/curative-services/hospital-services>]. Accessed 16th September 2020.

[2] Pacific Pathology Training Centre. "PPTC Activities". [<https://pptc.org.nz/regional-external-quality-assurance-programme/>]. Accessed 16th September 2020.

[3] World Health Organisation (WHO). 5 September 2016. "Strengthening laboratory services in the Pacific". [<https://www.who.int/westernpacific/news/feature-stories/detail/strengthening-laboratory-services-in-the-pacific>]. Accessed 16th September 2020.

[4] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 16th September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 16th September 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 public evidence to confirm the existence of a comprehensive, harmonised, nationwide specimen transport system in Vanuatu. A report by the Pacific Community on Vanuatu's laboratory-based surveillance indicates that the country has improved its capacity to transport specimens to reference laboratories abroad. In 2017, the Pacific Community organised International Air Transport Association-certified training on shipping infectious substances for 10 Vanuatu laboratory workers. [1] But this evidence does not indicate that a system for transporting specimens is already in place. However, there is evidence that transport support is available for internal laboratory referrals through the LabNet system of the Pacific Public Health Surveillance Network (PPHSN). The PPHSN is a joint initiative of the South Pacific Community and the World Health Organisation (WHO). The LabNet site indicates that it "gives recommendations and support for shipping and testing of specimens and has a dedicated email communication list (PacNet-Lab)." [2] But no specific details on a system for Vanuatu are available. Neither the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity nor the Ministry of Health shares via a publicly available website any information about a specimen transport system. [3,4] The central laboratory (Port Vila Central Hospital) does not have an online presence. Furthermore, the Health Sector Strategy (2017-2020) also does not have information pertaining to specimen transport. [5] There is no evidence that Vanuatu has a public health institute.

[1] The Pacific Community. 14 June 2018. "Improved Laboratory-based surveillance and quality management systems in Vanuatu". [<https://www.spc.int/updates/blog/2018/06/improved-laboratory-based-surveillance-and-quality-management-systems-in>]. Accessed 16th September 2020.

[2] Pacific Public Health Surveillance Network. 2015. "LabNet". [<https://www.pphsn.net/Services/LabNet/intro.htm>]. Accessed 16th September 2020.

[3] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 16th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 16th September 2020.

[5] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 16th September 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 evidence of a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak in Vanuatu. The Ministry of Health indicates that Vila Central Hospital in Port Vila and Northern Provincial Hospital in Luganville are the two referral hospitals in the country and that laboratory services are included in the list of services provided by these hospitals. [1] Neither of these hospitals has an online presence. There is no mention of such a plan either in the World Health Organisation (WHO) Country Cooperation Strategy 2018-2022, the Health Sector Strategy 2017-2020 or the Vanuatu Infrastructure Strategic Investment Plan 2015-2024. [2,3,4] There exists a private laboratory by the name of Vanuatu Medical Laboratory but there is no evidence if it supplements the capacity of the national laboratory system in event of an outbreak. [5] There is no relevant information shared via the public websites of the Ministry of Health and the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [6,7] There is no evidence of a national public health institute in the country.

[1] Ministry of Health. "List of Hospital Services". [<https://moh.gov.vu/index.php/curative-services/hospital-services>]. Accessed 16th September 2020.

[2] World Health Organisation. 2017. "Country Cooperation Strategy 2018-2022: Vanuatu". [<https://iris.wpro.who.int/handle/10665.1/13959>]. Accessed 16th September 2020.

[3] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 16th September 2020.

[4] Government of the Republic of Vanuatu. "Vanuatu Infrastructure Strategic Investment Plan 2015-2024". [<https://www.gov.vu/images/publications/VISIP%202015-2024%20Report.pdf>]. Accessed 16th September 2020.

[5] Vanuatu Medical Laboratory. "Home". [<http://www.vanmedlab.com>]. Accessed 16th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 16th September 2020.

[7] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 16th September 2020.

2.3 REAL-TIME SURVEILLANCE AND REPORTING

2.3.1 Indicator and event-based surveillance and reporting systems

2.3.1a

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

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

Current Year Score: 0

There is not enough evidence to confirm that Vanuatu is conducting ongoing event-based surveillance (EBS) and analysis for infectious disease. The Ministry of Health's Surveillance Unit describes EBS as being among its services, and also states that routine EBS was an objective for 2017; however, it does not indicate whether this objective was achieved or whether EBS is ongoing. [1] The Health Sector Strategy 2017-2020 defines the strengthening of surveillance systems as a priority area, but does not mention EBS. [2] Neither the websites of the Ministry of Health nor the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity contains any additional information about EBS. [3,4] There is no evidence that Vanuatu has a national public health institute. The central laboratory (Port Vila Central Hospital) does not have an online presence. A 2015 report from the United Nations' Office for the Coordination of Humanitarian Affairs (OCHA) mentions that the government was attempting to set up a surveillance system in response to Tropical Cyclone Pam, but there is no additional evidence that this occurred or that such a system is still operational. [5]

[1] Ministry of Health. "Surveillance Unit". [<https://moh.gov.vu/index.php/public-health/surveillance-unit>]. Accessed 16th September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 16th September 2020.

[3] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 16th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 16th September 2020.

[5] United Nations' Office for the Coordination of Humanitarian Affairs. 24 March 2015. "Vanuatu: Tropical Cyclone Pam". [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/OCHA_VUT_TCPam_Sitrep10_20150324.pdf]. Accessed 16th September 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 Vanuatu reported a potential public health emergency of international concern (PHEIC) to the World Health Organisation (WHO) within the last two years . No emergencies were reported on the World Health Organization's (WHO) Disease Outbreak News page or on the WHO's emergency page for Vanuatu. [1, 2] Additionally, the World Organisation for Animal Health (OIE) weekly disease information archive did not contain any mention of Vanuatu. [3] No relevant information is shared via a public website by the Ministry of Health. [4] There is no evidence if Vanuatu has reported COVID-19 as a PHEIC to WHO. As of 15th October 2020, Vanuatu has not recorded any COVID-19 cases. [5] There is no evidence of relevant news reports or academic studies.

[1] World Health Organisation. "Emergencies preparedness, response".

[<http://www.who.int/csr/don/archive/country/vut/en/>]. Accessed 17th September 2020.

[2] World Health Organisation. "Emergencies". [<http://www.who.int/vanuatu/emergencies>]. Accessed 17th September 2020.

[3] World Health Organisation for Animal Health. "Weekly Disease Information".

[http://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI/index/newlang/en]. Accessed 17th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 2020.

[5] Ministry of Health. COVID-19 Updates. [<https://covid19.gov.vu/>]. Accessed 15th October 2020.

2.3.2 Interoperable, interconnected, electronic real-time reporting systems

2.3.2a

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

Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence that the Government of Vanuatu operates an electronic reporting surveillance system at both the national and sub-national level. In 2013, the Ministry of Health decided to build an electronic health information system called VanPHIS2, which became operational in 2014. In 2018, the ministry tendered a consultant to expand and develop the VanPHIS2 database, with a particular emphasis on "integrating several standalone disease-specific information systems into VanPHIS2. [1, 2] The Health Sector Strategy 2017-2020 recognizes the role of electronic capabilities in the health sector and sets the objective to "develop and implement an eHealth Strategy". [3] However, there is no evidence to confirm the electronic reporting surveillance system at both the national and sub-national level. There is no relevant information shared via a public website by the Ministry of Health. [4] There is no evidence of a national public health institute in the country.

[1] United Nations Global Marketplace. 2018. "Support for development of Vanuatu Public Health Information System". [<https://www.ungm.org/Public/Notice/70553>]. Accessed 17th September 2020.

[2] Daily Post. 2017. "Digicel and TVL to provide free access to web-based Public Health Information System for Ministry of Health workers". [http://dailypost.vu/news/digicel-and-tvl-to-provide-free-access-to-web-based/article_da97737d-d71e-5efc-be83-6031b2062420.html]. Accessed 17th September 2020.

[3] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 2020.

2.3.2b

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence to indicate that Vanuatu's electronic reporting surveillance system collects laboratory data in real time. In 2013, the Ministry of Health decided to build an electronic health information system called VanPHIS2, which became operational in 2014. In 2018, the Ministry tendered a consultant to expand and develop the VanPHIS2 database, with a particular emphasis on "integrating several standalone disease-specific information systems into VanPHIS2. [1, 2,3] However, there is no information whether data is collected in real time, or if the system is fully operational at both the national and sub-national level. The Health Sector Strategy 2017-2020 recognizes the role of electronic capabilities in the health sector and sets the objective to "develop and implement an eHealth Strategy". [4] There is no relevant information shared via a public website by the Ministry of Health. [5] There is no evidence of a national public health institute in the country.

[1] United Nations Global Marketplace. 2018. "Support for development of Vanuatu Public Health Information System". [<https://www.ungm.org/Public/Notice/70553>]. Accessed 17th September 2020.

[2] World Health Organisation "Health Information and Informatics Support for eHealth and Hospital Information Management System Consultant". June 20th 2018. [<https://www.ungm.org/Public/Notice/73444>]. Accessed 17th September 2020.

[3] Daily Post. 2017. "Digicel and TVL to provide free access to web-based Public Health Information System for Ministry of Health workers". [http://dailypost.vu/news/digicel-and-tvl-to-provide-free-access-to-web-based/article_da97737d-d71e-5efc-be83-6031b2062420.html]. Accessed 17th September 2020.

[4] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 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 evidence that electronic health records are used in Vanuatu but they are not commonly in use. The Ministry of Health has a designated Health Information System (HIS) Unit which stores health data and one of its key objectives is "establishment of information technology links across a national network". [1] Furthermore, the Ministry of Health has developed a patient information system to store patient records at the Vila Central Hospital. [2] However, there is no evidence if health records are commonly used. Additionally, a 2009 report states that the country's health information system is disjointed and lacks coordination. [3] The World Health Organization's Country Cooperation Strategy 2018-2022 outlines implementation of the health information system strategic plan as an objective, but such a health information system strategic plan was not found. [4] The Health Sector Strategy 2017-2020 recognizes the role of electronic capabilities in the health sector and sets the objective to "develop and implement an eHealth Strategy". [5] But nothing specific in the form of electronic health records is discussed.

[1] Ministry of Health. "Health Information System (HIS) Unit". [<https://moh.gov.vu/index.php/docsp/health-information-system-unit>]. Accessed 17th September 2020.

[2] Daily Post. 17 August 2019. "New Patient Information System Launched". [https://dailypost.vu/news/new-patient-information-system-launched/article_eca91213-0a80-5b89-8d68-59a7d3665799.html]. Accessed 17th September 2020.

[3] Lum On, Miriam, et al. November 2009. "Health Information Systems in the Pacific: A Case Study of Vanuatu". Health Information Systems Knowledge Hub, School of Population Health, The University of Queensland. [https://www.researchgate.net/profile/Maxine_Whittaker/publication/264205190_Strengthening_Health_information_systems_in_the_Pacific_a_case_study_of_Vanuatu/links/53d2252a0cf228d363e913da/Strengthening-Health-information-systems-in-the-Pacific-a-case-study-of-Vanuatu.pdf]. Accessed 17th September 2020.

[4] World Health Organisation. "Country Cooperation Strategy 2018-2022". [<http://iris.wpro.who.int/bitstream/handle/10665.1/13959/WPRO-2017-DPM-025-vut-eng.pdf>]. Accessed 17th September 2020.

[5] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

2.4.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that the national public health system has access to electronic health records of individuals in their country. Electronic health records are used in Vanuatu but they are not commonly in use. The Ministry of Health has a designated Health Information System (HIS) Unit which stores health data and one of its key objectives is "establishment of information technology links across a national network". [1] Furthermore, the Ministry of Health has developed a patient information system to store patient records at the Vila Central Hospital. [2] However, there is no evidence that the public health system can access the records which exist. Additionally, a 2009 report states that the country's health information system is disjointed and lacks coordination. [3] The World Health Organization's Country Cooperation Strategy 2018-2022 outlines implementation of the health information system strategic plan as an objective, but such a health information system strategic plan was not found. [4] The Health Sector Strategy 2017-2020 recognizes the role of electronic capabilities in the health sector and sets the objective to "develop and implement an eHealth Strategy". [5] But nothing specific in the form of electronic health records is discussed. There is no other relevant information shared via a public website by the Ministry of Health. [6]

[1] Ministry of Health. "Health Information System (HIS) Unit". [<https://moh.gov.vu/index.php/docsp/health-information-system-unit>]. Accessed 17th September 2020.

[2] Daily Post. 17 August 2019. "New Patient Information System Launched". [https://dailypost.vu/news/new-patient-information-system-launched/article_eca91213-0a80-5b89-8d68-59a7d3665799.html]. Accessed 17th September 2020.

[3] Lum On, Miriam, et al. November 2009. "Health Information Systems in the Pacific: A Case Study of Vanuatu". Health Information Systems Knowledge Hub, School of Population Health, The University of Queensland. [https://www.researchgate.net/profile/Maxine_Whittaker/publication/264205190_Strengthening_Health_information_systems_in_the_Pacific_a_case_study_of_Vanuatu/links/53d2252a0cf228d363e913da/Strengthening-Health-information-systems-in-the-Pacific-a-case-study-of-Vanuatu.pdf]. Accessed 17th September 2020.

[4] World Health Organisation. "Country Cooperation Strategy 2018-2022". [<http://iris.wpro.who.int/bitstream/handle/10665.1/13959/WPRO-2017-DPM-025-vut-eng.pdf>]. Accessed 17th September 2020.

[5] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 2020.

2.4.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of data standards to ensure data is comparable. The Ministry of Health has a designated Health Information System (HIS) Unit which stores health data and one of its key objectives is "establishment of information technology links across a national network". [1] Furthermore, the Ministry of Health has developed a patient information system to store patient records at the Vila Central Hospital. [2] However, these records are not commonly used and there is no evidence of adoption of data standards for these records. Additionally, a 2009 report states that the country's health information system is disjointed and lacks coordination. [3] The World Health Organization's Country Cooperation Strategy

2018-2022 outlines implementation of the health information system strategic plan as an objective, but such a health information system strategic plan was not found. [4] The Health Sector Strategy 2017-2020 recognizes the role of electronic capabilities in the health sector and sets the objective to "develop and implement an eHealth Strategy". [5] But nothing specific in the form of electronic health records is discussed. There is no other relevant information shared via a public website by the Ministry of Health. [6]

[1] Ministry of Health. "Health Information System (HIS) Unit". [<https://moh.gov.vu/index.php/docsp/health-information-system-unit>]. Accessed 17th September 2020.

[2] Daily Post. 17 August 2019. "New Patient Information System Launched". [https://dailypost.vu/news/new-patient-information-system-launched/article_eca91213-0a80-5b89-8d68-59a7d3665799.html]. Accessed 17th September 2020.

[3] Lum On, Miriam, et al. November 2009. "Health Information Systems in the Pacific: A Case Study of Vanuatu". Health Information Systems Knowledge Hub, School of Population Health, The University of Queensland.

[https://www.researchgate.net/profile/Maxine_Whittaker/publication/264205190_Strengthening_Health_information_systems_in_the_Pacific_a_case_study_of_Vanuatu/links/53d2252a0cf228d363e913da/Strengthening-Health-information-systems-in-the-Pacific-a-case-study-of-Vanuatu.pdf]. Accessed 17th September 2020.

[4] World Health Organisation. "Country Cooperation Strategy 2018-2022".

[<http://iris.wpro.who.int/bitstream/handle/10665.1/13959/WPRO-2017-DPM-025-vut-eng.pdf>]. Accessed 17th September 2020.

[5] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 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 that Vanuatu has established mechanisms for the human, animal and environmental health authorities to share data. According to the World Health Organisation for Animal Health (OIE) PVS Gap Analysis Mission Report from 2017, there is a need to develop standard operating procedures in Vanuatu to share information with the Ministry of Health. No evidence was found that this had been completed however. [1] The central hospital (Port Vila Central Hospital) does not have a website. No information regarding surveillance data sharing is found on the website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [2] The Health Sector Strategy (2017-2020) calls for sharing of health information across provinces, but does not provision surveillance data sharing mechanisms across ministries. [3] No supporting information is found on the website of the Department of Environmental Protection and Conservation. [4] There is no relevant information shared via a public website by the Ministry of Health. [5] There is no evidence that Vanuatu has a public health institute.

[1] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 17th September 2020.

[2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 17th

September 2020.

[3] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[4] Department of Environmental Protection and Conservation. [<https://environment.gov.vu/>] Accessed 17th September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 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

Vanuatu does not make de-identified health surveillance data on disease outbreaks publicly available. Evidence of the publication of such data is also not found on the website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [1] The World Health Organisation's country page for Vanuatu does not provide such information. [2] There is no evidence of the existence of a public health institute that might publish such information. The Pacific Public Health Surveillance Network publishes outbreak reports of all Pacific Island Countries including Vanuatu. At present, no Vanuatu-specific country reports are present. [3] There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 17th September 2020.

[2] World Health Organisation. "Country Page-Vanuatu". [<http://www.who.int/vanuatu/>]. Accessed 17th September 2020.

[3] Pacific Public Health Surveillance Network (PPHSN). "Outbreak Reports". [<https://www.pphsn.net/Outbreak/Reports/Intro.htm>] Accessed 17th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 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: 0

There is no evidence of de-identified COVID-19 surveillance available via daily reports. As of 15th October 2020, Vanuatu is one of the few countries which have not recorded any COVID-19 cases. The government has built a dedicated website for COVID-19, which provides updates and information related to the pandemic. Press releases and situation reports can also be found on this website. [1] No further information about de-identified COVID-19 surveillance data is available on the website of the Ministry of Health. [2] The main government laboratory, Port Villa Hospital, does not have a website; and there is no evidence of a public health institute in the country.

[1] Ministry of Health COVID-19 Updates. "Home". [<https://covid19.gov.vu>]. Accessed 17th September 2020.

[2] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 2020.

2.4.4 Ethical considerations during surveillance

2.4.4a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Vanuatu has laws or guidelines safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. The central laboratory (Port Vila Central Hospital) does not have a website, and the Health Sector Strategy (2017-2020) does not refer to confidentiality of identifiable health information. [1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity also does not have any supporting information. [2] There is no evidence of a national public health institute. Vanuatu also does not have a general data privacy law. [3] There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 17th September 2020.

[3] DLA Piper. "Data protection laws of the world". [<https://www.dlapiperdataprotection.com/>] Accessed 17th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 2020.

2.4.4b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of laws, regulations, or guidelines in Vanuatu that mention safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, and they do not include any mention of protections from cyber attacks. The central laboratory (Port Vila Central Hospital) does not have a website, and the Health Sector Strategy (2017-2020) does not refer to confidentiality of identifiable health information. [1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity also does not have any supporting information. [2] There is no evidence of a national public health institute. Vanuatu also does not have a general data privacy law. [3] There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 17th September 2020.

[3] DLA Piper. "Data protection laws of the world". [<https://www.dlapiperdataprotection.com/>] Accessed 17th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 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 no publicly available evidence to suggest that the government of Vanuatu has made commitments to share surveillance data for any number of diseases during a public health emergency with other countries in the region. There is no mention of surveillance data sharing on the websites of the Ministry of Health or the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [1,2] Vanuatu participates in the Pacific Animal Health Laboratory Network (PAHLNet), organised through the Pacific Regional Influenza Pandemic Preparedness Project (PRIPPP); it also participates in LabNet, which comprises public health laboratories in its 22 Pacific nation members. [3,4,5,6,7] Vanuatu presumably shares surveillance with these regional laboratory networks, since both seek to ensure early detection of infectious diseases. However, neither PAHLNet or LabNet shares via a public website information on surveillance during emergencies. There is no evidence that Vanuatu has a national public health institute. There is no evidence of other relevant media reports or studies. The central laboratory (Port Vila Central Hospital) does not have an online presence.

[1] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 17th September 2020.

[3] Pacific Community (SPC). "SPC Members". [<http://www.spc.int/our-members/>]. Accessed 17th September 2020.

[4] Pacific Community (SPC) Land Resources Division. "Pacific Animal Health Laboratory Network (PAHLNet)". [<https://lrd.spc.int/information-and-networks/pahlNet>]. Accessed 17th September 2020.

[5] World Health Organisation, Western Pacific Region. "Division of Pacific Technical Support". [<https://www.who.int/westernpacific/about/how-we-work/pacific-support>]. Accessed 17th September 2020.

[6] Pacific Public Health Surveillance Network (PPHSN). [<https://www.pphsn.net/Structure/Membership.htm>]. Accessed 17th September 2020.

[7] World Health Organisation, Western Pacific Region. "The Pacific Public Health Surveillance Network (PPHSN)". [<https://www.who.int/westernpacific/about/how-we-work/pacific-support/pphsn>]. Accessed 17th September 2020.

2.5 CASE-BASED INVESTIGATION

2.5.1 Case investigation and contact tracing

2.5.1a

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

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

Current Year Score: 0

There is no publicly available evidence to suggest the existence of a national system that provides support at the sub-national level to expand contact tracing in the event of a public health emergency or for developing capacities for future public health emergencies. However, there is evidence of considerations for contact tracing during an emergency. [1,2] The current Health Sector Strategy 2017-2020 mentions strengthening of contact tracing in the event of public health emergencies like Zika virus and Chikungunya as one of its objectives. [3] Furthermore, as part of its efforts to fight COVID-19, the government has undertaken contact tracing as one of the activities under disease surveillance. [4] However, there is no mention of a system or structure that provides support to sub-national health departments in terms of contact tracing. Additionally, Vanuatu is party to the Pacific Public Health Surveillance Network (PPHSN), which provides contact tracing guidelines for diseases like tuberculosis. [5] There is no relevant information shared via a public website by the Ministry of Health. [6] There is no evidence that Vanuatu has a national public health institute. There is no evidence of other relevant media reports or studies. The central laboratory (Port Vila Central Hospital) does not have an online presence.

[1] Ministry of Health. 2021. 'Surveillance'. [<https://covid19.gov.vu/index.php/surveillance>]. Accessed 10th May 2021.

[2] Ministry of Health Covid-19. 'VanGov Plan'. 2021. [<https://covid19.gov.vu/index.php/updates/vangov-plan>]. Accessed 17th May 2021.

[3] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[4] Ministry of Health COVID-19 Updates. 11 May 2020. "Surveillance and Testing". [<https://covid19.gov.vu/index.php/general-info/surveillance-and-testing>]. Accessed 17th September 2020.

[5] Pacific Public Health Surveillance Network (PPHSN). March 2016. "Pacific Outbreak Manual". [https://www.pphsn.net/Publications/Pacific_Outbreak_Manual_Mar_2016.pdf]. Accessed 17th September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 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 evidence of provision of wraparound services in Vanuatu to enable cases and suspected cases to self-isolate; however, it is limited to medical attention only, and is only for COVID-19. As part of the government's response to COVID-19, repatriates were quarantined at government-designated hotels. "During the quarantine period, services and support provided included accommodation, meals, exercise, daily health checks, and psychosocial assessments and support." [1] But no economic support was provided to these individuals. In addition, the Health Sector Strategy 2017-2020 and the Quarantine Act make no mention of wraparound services. [2,3] There is no relevant information shared via a public website by the Ministry of Health. [4] There is no evidence that Vanuatu has a national public health institute. There is no evidence of other relevant media reports or studies. The central laboratory (Port Vila Central Hospital) does not have an online presence.

[1] Ministry of Health COVID-19 Updates. 10 July 2020. "Press Releases: Vanuatu Celebrates Successful End to Phase 1 of Repatriation Plan". [<https://covid19.gov.vu/index.php/updates/press-releases/173-vanuatu-celebrates-successful-end-to>]

phase-1-of-repatriation-plan]. Accessed 17th September 2020.

[2] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 17th September 2020.

[3] Department of Tourism. 2006. "Quarantine Act".

[<https://tourism.gov.vu/assets/docs/acts/QuarantineAct/1Quarantine.pdf>]. Accessed 17th September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 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 evidence of de-identified data on contact tracing efforts for COVID-19 available via daily reports on government websites. As of 15th October 2020, Vanuatu is one of the few countries which have not recorded any COVID-19 cases. The government has built a dedicated website for COVID-19, which provides updates and information related to the pandemic. Press releases and situation reports can also be found on this website. [1] No further information is available on the website of the Ministry of Health. [2] The main government laboratory, Port Villa Hospital, does not have a website; and there is no evidence of a public health institute in the country.

[1] Ministry of Health COVID-19 Updates. "Home". [<https://covid19.gov.vu>]. Accessed 17th September 2020.

[2] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 17th September 2020.

2.5.2 Point of entry management

2.5.2a

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

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

Current Year Score: 0

There is insufficient 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 a public health emergency or the ongoing public health emergency caused by Covid-19. There is no evidence from the Ministry of Health to indicate that there exists a joint plan of action between the public health system and border control authorities to contain the spread of Covid-19. [1] The Ministry of Health has issued a travel advisory amidst the COVID-19 pandemic for international travellers which states that international arrivals would be placed in quarantine. It has been released on the website of the Department of Vanuatu Immigration and Passport Services. [2] The government has built a dedicated website for COVID-19, which provides updates and information related to the pandemic and as part of its efforts to fight the pandemic, the government has undertaken contact tracing as one of the activities under disease surveillance. [3] However, there is no specific mention of contact tracing of international travellers. As of 15th October 2020, Vanuatu is one of the few countries which have not recorded any COVID-19 cases. The current Health Sector Strategy 2017-2020 mentions

strengthening of contact tracing in the event of public health emergencies like Zika virus and Chikungunya as one of its objectives. [4] However, the strategy makes no mention of contact tracing of international travellers. There is no relevant information shared via a public website by the Ministry of Health. [5] There is no evidence that Vanuatu has a national public health institute. There is no evidence of other relevant media reports or studies. The central laboratory (Port Vila Central Hospital) does not have an online presence.

[1] Ministry of Health. 2021. 'Surveillance'. [<https://covid19.gov.vu/index.php/surveillance>]. Accessed 10th May 2021.

[2] Department of Vanuatu Immigration and Passport Services. "COVID-19 Advisories".

[<https://immigration.gov.vu/index.php/news-updates/covid-19-advisories>]. Accessed 21st September 2020.

[3] Ministry of Health COVID-19 Updates. 11 May 2020. "Surveillance and Testing.

[<https://covid19.gov.vu/index.php/general-info/surveillance-and-testing>]. Accessed 21st September 2020.

[4] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 21st September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 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 an applied epidemiology training program available in Vanuatu. The Postgraduate Certificate in Field Epidemiology (PGCFE) programme was established through a partnership with the Vanuatu Ministry of Health and South Pacific Community in collaboration with the World Health Organization. [1] Accredited by Fiji National University, this programme has been developed by partners of the Pacific Public Health Surveillance Network. There is no public evidence of specific funding for participants to travel outside of Vanuatu for other training programmes. The Health Sector Strategy (2017-2020) does not provide any information on resources to send citizens to another country to participate in applied epidemiology training programs. [2] There is no relevant information shared via a public website by the Ministry of Health. [3] There was no evidence found via the Centers for Disease Control (CDC) or the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) of any other applied epidemiology training programs being conducted. [4,5]

[1] South Pacific Community. 18 June 2017. "Upskilling Vanuatu Health Workers with Epidemiology Training".

[<https://www.spc.int/updates/news/2017/06/upskilling-vanuatu-health-workers-with-epidemiology-training>]. Accessed 21st September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 21st September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 2020.

[4] Centers for Disease Control. "Field Epidemiology Training Program (FETP)".

[<https://www.cdc.gov/globalhealth/healthprotection/fetp/>]. Accessed 21st September 2020.

[5] TEPHINET. "Training Programs". [<https://www.tephinet.org/training-programs>]. Accessed 21st September 2020.

2.6.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that the available field epidemiology training programme in Vanuatu is explicitly inclusive of animal health professionals or that there a specific animal health field epidemiology training program offered. The Postgraduate Certificate in Field Epidemiology (PGCFE) programme was established through a partnership with the Vanuatu Ministry of Health and South Pacific Community in collaboration with the World Health Organisation. [1] Accredited by Fiji National University, this programme has been developed by partners of the Pacific Public Health Surveillance Network. However, there is no evidence that this programme is inclusive of animal health professionals. Nor is there publicly available evidence that a specific animal health field epidemiology training program offered (such as FETPV) is available in Vanuatu. In 2010, training was given in Vanuatu on animal disease surveillance and field diagnostic techniques. This was organised and funded by the Secretariat of the Pacific Community, but is it unclear if this programme is still available. [2] There is no relevant information shared via a public website by the Ministry of Health. [3] There was no evidence found via the Centers for Disease Control (CDC) or the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) of any other applied epidemiology training programs being conducted. [4,5]

[1] South Pacific Community. 18 June 2017. "Upskilling Vanuatu Health Workers with Epidemiology Training".

[<https://www.spc.int/updates/news/2017/06/upskilling-vanuatu-health-workers-with-epidemiology-training>]. Accessed 21st September 2020.

[2] Secretariat of the Pacific Community. 07 September 2010. "Animal disease surveillance and field diagnostic training manual for PICTs". [<https://lrd.spc.int/our-work/animal-health-and-production/109/animal-disease-surveillance-and-field-diagnostic-training-manual-for-pacific-island-countries-and-territories>]. Accessed 21st September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 2020.

[4] Centers for Disease Control. "Field Epidemiology Training Program (FETP)".

[<https://www.cdc.gov/globalhealth/healthprotection/fetp/>]. Accessed 21st September 2020.

[5] TEPHINET. "Training Programs". [<https://www.tephinet.org/training-programs>]. Accessed 21st September 2020.

2.6.2 Epidemiology workforce capacity

2.6.2a

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

Yes = 1 , No = 0

Current Year Score: 0

2020

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

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

3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

3.1.1 National public health emergency preparedness and response plan

3.1.1a

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

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

Current Year Score: 0

There is no publicly available evidence that Vanuatu has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with pandemic potential. The Strategic Plan (2016-2020), launched in 2015 by the National Disaster Management Office (NDMO) in Vanuatu does not specifically mention epidemics/pandemics as a threat. [1] It uses the general term "emergencies". There is also no supporting evidence in other documentation available on the website of the NDMO. [2] The Ministry of Internal Affairs does not have a website. The Health Sector Strategy (2017-2020) discusses the need to develop emergency plans, but does not refer to a specific public health emergency response plan. [3] Only the "Standard Operating Procedures (SOPs)" of the NDMO include epidemics and pandemics in the list of hazards that require putting these SOPs into practice. [4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] National Disaster Management Office (NDMO). October 2015. "Strategic Plan (2016-2020)"

[<https://ndmo.gov.vu/images/download/NDMO/Documents/ndmo-strategic-plan-2016-2020.pdf>] Accessed 21st September 2020.

[2] National Disaster Management Office (NDMO). "Downloads". [<https://ndmo.gov.vu/resources/downloads>] Accessed 21st September 2020.

[3] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 21st September 2020.

[4] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures".

[<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 21st September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 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 Vanuatu has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with pandemic potential. The Strategic Plan (2016-2020), launched in 2015 by the National Disaster Management Office (NDMO) in Vanuatu does not specifically mention epidemics/pandemics as a threat. [1] It uses the general term "emergencies". There is also no supporting evidence in other documentation available on the website of the NDMO. [2] The Ministry of Internal Affairs does not have a website. The Health Sector Strategy (2017-2020) discusses the need to develop emergency plans, but does not refer to a specific public health emergency response plan. [3] Only the "Standard Operating Procedures (SOPs)" of the NDMO include epidemics and pandemics in the list of hazards that require putting these SOPs into practice. [4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] National Disaster Management Office (NDMO). October 2015. "Strategic Plan (2016-2020)"

[<https://ndmo.gov.vu/images/download/NDMO/Documents/ndmo-strategic-plan-2016-2020.pdf>] Accessed 21st September 2020.

[2] National Disaster Management Office (NDMO). "Downloads". [<https://ndmo.gov.vu/resources/downloads>] Accessed 21st September 2020.

[3] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 21st September 2020.

[4] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures".

[<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 21st September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 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 Vanuatu has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with pandemic potential that includes considerations for paediatric and other vulnerable populations. The Strategic Plan (2016-2020), launched in 2015 by the National Disaster Management Office (NDMO) in Vanuatu does not specifically mention epidemics/pandemics as a threat. [1] It uses the general term "emergencies". There is also no supporting evidence in other documentation available on the website of the NDMO. [2] The Ministry of Internal Affairs does not have a website. The Health Sector Strategy (2017-2020) discusses the need to develop emergency plans, but does not refer to a specific public health emergency response plan. [3] Only the "Standard Operating Procedures (SOPs)" of the NDMO include epidemics and pandemics in the list of hazards that require putting these SOPs into practice. [4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] National Disaster Management Office (NDMO). October 2015. "Strategic Plan (2016-2020)"

[<https://ndmo.gov.vu/images/download/NDMO/Documents/ndmo-strategic-plan-2016-2020.pdf>] Accessed 21st September 2020.

[2] National Disaster Management Office (NDMO). "Downloads". [<https://ndmo.gov.vu/resources/downloads>] Accessed 21st September 2020.

[3] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 21st September 2020.

[4] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures".

[<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 21st September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 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 insufficient evidence that Vanuatu has a specific mechanism for engaging with the private sector to assist with outbreak emergency preparedness and response. The "Standard Operating Procedures (SOPs)", developed by the National Disaster Management Office (NDMO) in 2013, outlines the responsibilities of the country's National Emergency Operations Centre (EOC). [1] The EOC is responsible to "coordinate the response and recovery and included personnel from government and the Vanuatu Humanitarian Team (VHT) i.e., Red Cross, NGOs, UN Agencies, donors, private sector, etc". Furthermore, Senior Planning and Research Officers of the NDMO are required, as part of existing SOPs, to "collaborate closely with the NGO community and the private sector to ensure that their resources are identified and made available for planning". [1] The Vanuatu Recovery Strategy 2020-2023 mentions that the government will work with the private sector to enable recovery from COVID-19 and Tropical Cyclone (TC) Harold. [2] However, there is no specific mechanism laid out for this. The Health Sector Strategy (2017-2020) discusses the need to develop emergency plans, but does not discuss a specific role for the private sector in this regard. [3] There is no further information available. There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures".

[<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 21st September 2020.

[2] Government of Vanuatu. July 2020. "Vanuatu Recovery Strategy 2020-2023".

[https://reliefweb.int/sites/reliefweb.int/files/resources/tc_harold_and_covid-19_vanuatu_recovery_strategy_v3_130820.pdf]. Accessed 21st September 2020.

[3] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 21st September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 2020.

3.1.3 Non-pharmaceutical interventions planning

3.1.3a

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

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

Current Year Score: 0

There is no evidence of a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic. The country's COVID-19 response plan is available via the Ministry of Health website but does not contain guidelines for implementing NPIs. The government has built a dedicated website for COVID-19 where it has provided information on best practices for the public to prevent the spread of infection like washing hands frequently, physical distancing, respiratory hygiene, etc. [1] However, there does not exist a policy or a plan to implement non-pharmaceutical interventions to limit the spread of a disease with epidemic or pandemic potential. The current Health Strategy 2017-2020 similarly does not include such measures. [2] There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] Ministry of Health COVID-19 Updates. 29 March 2021. "Questions & Answers: Prevention".

[<https://covid19.gov.vu/index.php/questions-answers>]. Accessed 10th May 2021.

[2] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 10th May 2021.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 10th May 2021.

3.2 EXERCISING RESPONSE PLANS

3.2.1 Activating response plans

3.2.1a

Does the country meet one of the following criteria?

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

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

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

Current Year Score: 1

There is evidence that Vanuatu activated its national emergency response plan for an infectious disease outbreak in the past year. A National State of Emergency was declared on March 24th 2020 to deal with the ongoing pandemic. The Ministry of Health's COVID-19 website states that the President of Vanuatu signed an emergency declaration on 26 March 2020 for a two-week period in order to strengthen prevention and containment measures for COVID-19. The emergency declaration was enabled by the Disaster Risk Management Act No. 23 of 2019. [1] Vanuatu has a National Disaster Management Office (NDMO), which has its own website which provides NDMO Strategic Plan 2016-2020 and Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030. [2] The government has a COVID-19 Preparedness and Response Plan in 2020. However, there is no evidence of a national plan which covers infectious disease outbreaks which was activated for the

COVID-19 pandemic preparation. [3] The Health Strategy 2017-2020 mentions development of disaster and emergency response plans as one of its objectives. [4] There is no evidence that Vanuatu has completed a national-level biological threat-focused exercise in the past year. It has not been documented on the World Health Organisation (WHO) extranet. [5] There is no mention of such an exercise on the website of the Biosecurity department. [6] The Ministry of Health has a designated Surveillance, Research & Emergency Response Unit but there is insufficient evidence of an emergency response plan. [7]

[1] Ministry of health Covid-19 updates. [<https://covid19.gov.vu/index.php/updates/soe>]. Accessed 20th April 2021.

[2] National Disaster Management Office. "Strategic Documents". [<https://ndmo.gov.vu/resources/downloads/category/10-strategic-documents>]. Accessed 21st September 2020.

[3] Ministry of Health. 12 March 2020. "Summary of COVID-19 Preparedness and Response Plan". [https://covid19.gov.vu/images/To_Know/Summary_of_COVID-19_Preparedness_and_Response_Plan.pdf]. Accessed 21st September 2020.

[4] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 21st September 2020.

[5] World Health Organisation (WHO). "Simulation Exercise". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 21st September 2020.

[6] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 21st September 2020.

[7] Ministry of Health. [<https://moh.gov.vu/index.php/public-health/surveillance-unit>]. Accessed 21st September 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. The World Health Organisation's (WHO) Strategic Partnerships Portal does not have information on a conducted or planned After Action Review (AAR) for Vanuatu. [1] There is also no information about AARs on the WHO page for Vanuatu. [2] No information about an AAR is available via the National Disaster Management Office. [3] There is no evidence that Vanuatu has completed a national-level biological threat-focused exercise in the past year. It has not been documented on the WHO extranet. [4] There is no mention of such an exercise on the website of the Biosecurity department of Vanuatu. [5] There is no relevant information shared via a public website by the Ministry of Health. [6]

[1] World Health Organisation. "After action review activities". [<https://extranet.who.int/sph/after-action-review>]. Accessed 21st September 2020.

[2] World Health Organisation. "Our Work in Vanuatu". [<https://www.who.int/vanuatu/our-work>]. Accessed 21st September 2020.

[3] National Disaster Management Office. [<https://ndmo.gov.vu>]. Accessed 21st September 2020.

[4] World Health Organisation (WHO). "Simulation Exercise". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 21st September 2020.

[5] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>].

Accessed 21st September 2020.

[6] Ministry of Health. [<https://moh.gov.vu>]. Accessed 21st September 2020.

3.2.2 Private sector engagement in exercises

3.2.2a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that Vanuatu, in the past year, has undergone a national-level biological threat-focused exercise that has included private sector representatives. No such exercise has been documented on the World Health Organisation (WHO) extranet. [1] Also, there is no mention of such an exercise on the website of the Biosecurity department. [2] There is no information about such an exercise on the WHO page for Vanuatu. [3] There is no relevant information shared via public websites of the Ministry of Health and the National Disaster Management Office. [4,5]

[1] World Health Organisation (WHO). "Simulation Exercise". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 21st September 2020.

[2] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu/>]. Accessed 21st September 2020.

[3] World Health Organisation. "Our Work in Vanuatu". [<https://www.who.int/vanuatu/our-work>]. Accessed 21st September 2020.

[4] Ministry of Health. [<https://moh.gov.vu>]. Accessed 21st September 2020.

[5] National Disaster Management Office. [<https://ndmo.gov.vu>]. Accessed 21st September 2020.

3.3 EMERGENCY RESPONSE OPERATION

3.3.1 Emergency response operation

3.3.1a

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

Yes = 1 , No = 0

Current Year Score: 1

Vanuatu has in place an emergency operations centre. The National Emergency Operations Centre (NEOC) is part of the National Disaster Management Office (NDMO) in Vanuatu. [1] NEOC is generalised to all types of emergencies, including epidemics/pandemics as per the "Standard Operating Procedures". [2] Some of the key functions of NEOC include "coordinating the response and recovery and included personnel from government and the Vanuatu Humanitarian Team (VHT) i.e., Red Cross, NGOs, UN Agencies, donors, private sector, etc" as well as "controlling and directing the allocation of aid provided by government, bi-lateral, multilateral and non-government agencies" and "coordinating requests for assistance". [2] In July 2018, two provincial Emergency Operations Centres (PEOCs) were opened in the country in an effort to decentralize disaster management capacity. [3] Additionally, "the National Health Emergency Operations Centre (NHEOC) structure was adapted" as a response to Tropical Cyclone Harold in April 2020. [4]

- [1] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 21st September 2020.
- [2] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures". [<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 21st September 2020.
- [3] ReliefWeb. "Vanuatu officially opens two Provincial Emergency Operations Centres in Malampa and Sanma". [<https://reliefweb.int/report/vanuatu/vanuatu-officially-opens-two-provincial-emergency-operations-centres-malampa-and>]. Accessed 21st September 2020.
- [4] Ministry of Health. 15 April 2020. "Vanuatu National Health Situation". [https://moh.gov.vu/images/TC-Harold/Vanuatu_TC_Harold_NHEOC_SitRep1_15042020.pdf]. Accessed 21st September 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 available evidence that Vanuatu's Emergency Operations Centre (EOC) is required to conduct a drill at least once per year. The National Emergency Operations Centre (NEOC) as part of the National Disaster Management Office (NDMO) is the EOC in Vanuatu. [1] NEOC is generalized to all types of emergencies including epidemics/pandemics as per the "Standard Operating Procedures". [2] The SOPs require the Senior Training and Awareness Officer working in the NDMO to "assist the development, activation and review of national and agency exercises to test response arrangements". But there is no further discussion of this in the document. Drills are, however, listed as a future opportunity in the Strategic Plan (2016-2020). [3] There is no relevant information shared via a public website by the Ministry of Health. [4]

- [1] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 21st September 2020.
- [2] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures". [<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 21st September 2020.
- [3] National Disaster Management Office. October 2015. "Strategic Plan (2016-2020)". [https://ndmo.gov.vu/resources/downloads/com_jaextmanager/category/10-strategic-documents]. Accessed 21st September 2020.
- [4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 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 available evidence that Vanuatu's Emergency Operations Centre (EOC) can conduct, or has conducted within the last year, a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario. The National Emergency Operations Centre (NEOC) is part of the National Disaster Management Office (NDMO) in Vanuatu. [1] NEOC is generalised to all types of emergencies, including epidemics/pandemics as per the "Standard Operating Procedures". [2] The SOPs require the Senior Training and Awareness Officer working in the NDMO to "assist the development, activation and review of national and agency exercises to test response arrangements"; however, there is no further discussion of coordinated emergency responses or exercises. [2]

Additionally, "the National Health Emergency Operations Centre (NHEOC) structure was adapted" as a response to Tropical Cyclone Harold in April 2020 and its report states that "the National Health Emergency Operations Center (NHEOC) was already activated due to the COVID-19 global pandemic". [3] However, there is no evidence that the NHEOC or its related activities/exercises were activated within 120 minutes of the identification of the public health emergency. There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 21st September 2020.

[2] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures".

[<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 21st September 2020.

[3] Ministry of Health. 15 April 2020. "Vanuatu National Health Situation". [https://moh.gov.vu/images/TC-Harold/Vanuatu_TC_Harold_NHEOC_SitRep1_15042020.pdf]. Accessed 21st September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 21st September 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 evidence that Vanuatu has standard operating procedures or other agreements between the public health and security authorities to respond to biological events, or that any joint exercises have been carried out. There is no mention in the "Health Sector Strategy (2017-2020)" of Standard Operating Procedures (SOPs) being developed. [1] No supporting information is found on the website of the National Disaster Management Office. [2] There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 22nd September 2020.

[2] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 22nd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 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

Vanuatu does not have a national public health emergency response plan in place which outlines how messages will reach populations and sectors with different communications needs. The Strategic Plan (2016-2020), launched in 2015 by the National Disaster Management Office (NDMO) in Vanuatu, does outline how messages will reach populations and sectors with different communications needs. Radio Vanuatu, the national radio station will be used to reach all communities, tele radios, 'coconut news,' messaging and for coordination, the government will be utilising HF Radios, VHF, internet, SMS, satellite phones, NDMO, Digicel, TVL and development partners. However, this plan does not specifically mention epidemics/pandemics as a threat. [1] It uses the general term "emergencies". There is no supporting evidence in other documentation available on the website of the NDMO. [2] The Ministry of Internal Affairs does not have a website. The Health Sector Strategy (2017-2020) discusses the need to develop emergency plans, but does not refer to a specific public health emergency response plan. [3] In its effort to fight COVID-19, the government has introduced "The COVID-19 Risk Communication Package for Healthcare Facilities" but it does not outline how the messages will reach populations and is specifically aimed at healthcare facilities. [4] Furthermore, the government has undertaken risk communication activities like mass media campaigns using newspapers, information hotline, websites, etc. [5] However, it is specifically a part of the government's response to COVID-19 and there is no evidence if these campaigns are applicable in event of other public health emergencies. There is no relevant information shared via a public website by the Ministry of Health. [6]

[1] National Disaster Management Office (NDMO). October 2015. "Strategic Plan (2016-2020)" [<https://ndmo.gov.vu/images/download/NDMO/Documents/ndmo-strategic-plan-2016-2020.pdf>] Accessed 22nd September 2020.

[2] National Disaster Management Office (NDMO). "Downloads". [<https://ndmo.gov.vu/resources/downloads>] Accessed 22nd September 2020.

[3] Ministry of Health. 2017. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 22nd September 2020.

[4] Ministry of Health. "The COVID-19 Risk Communication Package for Healthcare Facilities". [https://covid19.gov.vu/images/Awareness-material/Health-Staff/Package_COVID-19_Risk_Communication_English-min.pdf]. Accessed 22nd September 2020.

[5] Ministry of Health COVID-19 Updates. 10 April 2020. "Press Releases - Key Achievements to Prevent Coronavirus". [<https://covid19.gov.vu/index.php/updates/press-releases/157-key-achievements-to-prevent-coronavirus-10-april-2020>]. Accessed 22nd September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 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

Vanuatu does not have a risk communication plan for use during a public health emergency. The country does have an overall disaster risk reduction (DRR) strategy; however, there is no mention of public health emergencies and no specifics on the communication used during such an event. [1] No further information or documents relevant to public health emergency planning or risk communication are available from the website of the National Disaster Management Office (NDMO). [2] The "Standard Operating Procedures (SOPs)" of the NDMO include epidemics and pandemics in the list of hazards that require putting these SOPs into practice, but there is no section detailing a risk communication plan. [3] In its effort to fight COVID-19, the government has introduced "The COVID-19 Risk Communication Package for Healthcare Facilities" but it does not outline how the messages will reach populations and is specifically aimed at healthcare facilities. [4] Furthermore, the government has undertaken risk communication activities like mass media campaigns using newspapers, information hotline, websites, etc. to disseminate information about COVID-19. [5] However, there is no evidence of a risk communication plan in place. There is no relevant information shared via a public website by the Ministry of Health. [6]

[1] National Disaster Management Office. October 2015. "Strategic Plan (2016-2020)".

[https://ndmo.gov.vu/resources/downloads/com_jaextmanager/category/10-strategic-documents]. Accessed 22nd September 2020.

[2] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 22nd September 2020.

[3] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures".

[<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>] Accessed 22nd September 2020.

[4] Ministry of Health. "The COVID-19 Risk Communication Package for Healthcare Facilities".

[https://covid19.gov.vu/images/Awareness-material/Health-Staff/Package_COVID-19_Risk_Communication_English-min.pdf]. Accessed 22nd September 2020.

[5] Ministry of Health COVID-19 Updates. 10 April 2020. "Press Releases - Key Achievements to Prevent Coronavirus".

[<https://covid19.gov.vu/index.php/updates/press-releases/157-key-achievements-to-prevent-coronavirus-10-april-2020>]. Accessed 22nd September 2020.

[6] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 2020.

3.5.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. Vanuatu does not have a risk communication plan for use during a public health emergency. The country does have an overall disaster risk reduction (DRR) strategy; however, there is no mention of public health emergencies and no specifics on the communication used or a primary spokesperson to the public during such an event. [1]

No further information or documents relevant to public health emergency planning or risk communication are available from the website of the National Disaster Management Office (NDMO). [2] The "Standard Operating Procedures (SOPs)" of the NDMO include epidemics and pandemics in the list of hazards that require putting these SOPs into practice, but there is no section detailing a risk communication plan. [3] In its effort to fight COVID-19, the government has introduced "The COVID-19 Risk Communication Package for Healthcare Facilities" but it does not outline how the messages will reach populations and is specifically aimed at healthcare facilities. [4] Furthermore, the government has undertaken risk communication activities like mass media campaigns using newspapers, information hotline, websites, etc. to disseminate information about COVID-19. [5] However, there is no evidence of a risk communication plan in place and no mention of a specific position to serve as the spokesperson. There is no relevant information shared via a public website by the Ministry of Health. [6]

[1] National Disaster Management Office. October 2015. "Strategic Plan (2016-2020)". [https://ndmo.gov.vu/resources/downloads/com_jaextmanager/category/10-strategic-documents]. Accessed 22nd September 2020.

[2] National Disaster Management Office. "Welcome". [https://ndmo.gov.vu/]. Accessed 22nd September 2020.

[3] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures". [https://ndmo.gov.vu/resources/downloads/category/16-operational-documents] Accessed 22nd September 2020.

[4] Ministry of Health. "The COVID-19 Risk Communication Package for Healthcare Facilities". [https://covid19.gov.vu/images/Awareness-material/Health-Staff/Package_COVID-19_Risk_Communication_English-min.pdf]. Accessed 22nd September 2020.

[5] Ministry of Health COVID-19 Updates. 10 April 2020. "Press Releases - Key Achievements to Prevent Coronavirus". [https://covid19.gov.vu/index.php/updates/press-releases/157-key-achievements-to-prevent-coronavirus-10-april-2020]. Accessed 22nd September 2020.

[6] Ministry of Health. [https://moh.gov.vu/]. Accessed 22nd September 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 evidence that the public health system shares messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns. The Vanuatu government publishes press releases on its own official website. [1] The Ministry of Health has a Facebook page on which it shares information on health emergencies. [2] Vanuatu's government has created a new Twitter page in 2020 to share information regarding emergencies. [3] The government has built a dedicated website for COVID-19, which provides updates and information related to the pandemic. Press releases and situation reports can also be found on this website. [4] There is no relevant information currently shared via a public website by the Ministry of Health. [5]

[1] Government of Vanuatu. "Press Releases". [https://www.gov.vu/en/public-information/press-release]. Accessed 22nd September 2020.

[2] Ministry of Health. "Home". [https://www.facebook.com/Health-Promotions-Vanuatu-1674266679566197/]. Accessed

22nd September 2020.

[3] Government of Vanuatu Twitter Page. [<https://twitter.com/GovtOfVanuatu>] Accessed 22nd September 2020.

[4] Ministry of Health COVID-19 Updates. "Home". [<https://covid19.gov.vu>]. Accessed 22nd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 2020.

3.5.2b

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

No = 1, Yes = 0

Current Year Score: 1

There is no evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years. No evidence of misinformation or disinformation was found on the government portal or the website of Ministry of Health. [1,2] No such evidence was found on international and national news outlets. [3,4,5]

[1] Government of Vanuatu. "Press Releases". [<https://www.gov.vu/en/public-information/press-release>]. Accessed 22nd September 2020.

[2] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 2020.

[3] The Guardian. "Vanuatu" [<https://www.theguardian.com/world/vanuatu>]. Accessed 22nd September 2020.

[4] Daily Post. [<https://dailypost.vu>]. Accessed 22nd September 2020.

[5] Vila Times. [<https://www.vilatimes.com>]. Accessed 22nd September 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: 25.72

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: 88.44

2019

International Telecommunication Union (ITU)

3.6.3 Female access to a mobile phone

3.6.3a

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

Input number

Current Year Score: 2.87

2018-2019

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: 4.44

2018-2019

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 evidence that Vanuatu has, in the past year, issued a restriction on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak. The website of Department of Trades and Industry operating under the Ministry of Tourism, Trade, Industry, Commerce and Ni-Vanuatu Business mentions no such restriction. [1] The Ministry of Foreign Affairs, International Cooperation and External Trade does not have a website. No relevant information was found on the websites of the Ministry of Health; Ministry of Agriculture, Livestock, Forestry, Fisheries, and Biosecurity; the Biosecurity Unit. [2,3,4]

[1] Vanuatu Trade Mainstreaming. "Home". [<https://trade-vanuatu.gov.vu/index.php>]. Accessed 22nd September 2020.

[2] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 2020.

[3] Ministry of Agriculture, Livestock, Forestry, Fisheries, and Biosecurity. [<https://malffb.gov.vu/index.php>]. Accessed 22nd September 2020.

[4] Ministry of Agriculture, Livestock, Forestry, Fisheries, and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu>]. Accessed 22nd September 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 evidence that Vanuatu has, in the past year, issued a restriction on the export/import of on-medical goods (e.g. food, textiles, etc.) due to an infectious disease outbreak. The website of Department of Trades and Industry operating under the Ministry of Tourism, Trade, Industry, Commerce and Ni-Vanuatu Business mentions no such restriction. [1] The Ministry of Foreign Affairs, International Cooperation and External Trade does not have a website. No relevant information was found on the websites of the Ministry of Health; Ministry of Agriculture, Livestock, Forestry, Fisheries, and Biosecurity; the Biosecurity Unit. [2,3,4]

[1] Vanuatu Trade Mainstreaming. "Home". [<https://trade-vanuatu.gov.vu/index.php>]. Accessed 22nd September 2020.

[2] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 2020.

[3] Ministry of Agriculture, Livestock, Forestry, Fisheries, and Biosecurity. [<https://malffb.gov.vu/index.php>]. Accessed 22nd September 2020.

[4] Ministry of Agriculture, Livestock, Forestry, Fisheries, and Biosecurity. "Biosecurity". [<https://biosecurity.gov.vu>]. Accessed 22nd September 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 evidence that Vanuatu has, in the past year, implemented a ban on international travellers due to an infectious disease outbreak. This ban relates to the COVID-19 pandemic under which, all international flights and vessels (with the exception of movement of freight) are to be restricted. [1] This notice can also be found on the home page of the Customs and Inland Revenue Department website. [2] A more recent report states that all incoming international travellers would be placed in a 14-day quarantine. [3] No relevant information was found on the website of Ministry of Health. [4] The Ministry of Foreign Affairs, International Cooperation and External Trade does not have a website.

[1] Republic of Vanuatu. 12 May 2020. "Extraordinary Gazette No. 1".

[https://covid19.gov.vu/images/Soe/EXTRAORDINARY_GAZETTE_NO_1_of_2020_Dated_12_May_2020.pdf]. Accessed 22nd September 2020.

[2] Vanuatu Customs and Inland Revenue Department. "Home". [<https://customsinlandrevenue.gov.vu>]. Accessed 22nd September 2020.

[3] Ministry of Health. 24 March 2020. "Vanuatu Situation Report 4". [https://covid19.gov.vu/images/Situation-reports/Situation_Report_4_1.pdf]. Accessed 22nd September 2020.

[4] Ministry of Health. [<http://moh.gov.vu/>]. Accessed 22nd September 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: 16.53

2016

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 142.47

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 insufficient public evidence that Vanuatu has a public health workforce strategy in place, updated in the past five years. The Ministry of Health's Health Sector Strategy lays out the need to improve the health workforce as well as steps to be taken between 2017 and 2020 and to develop a plan. [1] However, the plan does not appear to be publicly available, if drafted. Additionally, the Human Resources for Health Country Profiles: Republic of Vanuatu mentions that the country faces severe health worker shortages. It further mentions that the Ministry of Health is attempting to create new permanent posts

and review salary scales. [2] However, there is no evidence if this has been done. There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 22nd September 2020.

[2] World Health Organisation. "Human Resources for Health Country Profiles: Republic of Vanuatu". [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiiz6_Fpe3rAhUNSX0KH3vCKkQFjABegQIARAB&url=https%3A%2F%2Fapps.who.int%2Firis%2Frest%2Fbitstreams%2F920783%2Fretrieve&usg=AOvVaw28MrGCxpzUsznToQWWom19]. Accessed 22nd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 2020.

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 170

2008

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 evidence that Vanuatu has the capacity to isolate patients with highly communicable diseases in a in a biocontainment patient care unit or a patient isolation room facility. The Ministry of Health's COVID-19 website does not mention presence of any permanent isolation facility. [1] There is no suggestion of permanent isolation facility or plan to build such infrastructure in the local news as well. However, there is publicly available evidence that in order to fight the Covid-19 pandemic, the country has installed containers outside an airport to isolate people suspected of being infected at the time of arrival for 12 hours, after which they would be moved to isolation wards if they are tested positive. There is no public information on the capabilities of the isolation units (positive/negative pressure capabilities, separate entrance/exits, etc). [2] Additionally, the China Civil Engineering Construction Corporation (CCECC) has provided "12 units of container houses to be used as isolation centre at the Vila Central Hospital (VCH)". [3] There is another report which states that isolation wards are being prepared at the VCH. [4] No relevant information was found on the website of the Ministry of Health. [5]

[1] Ministry of Health Covid-19. 22nd April 2021. [<https://covid19.gov.vu/index.php>]. Accessed 10th May 2021.

[2] Daily Post. 21 March 2020. "Containers Installed near Airport for Quarantine and Isolation Purposes: Pelam". [https://dailypost.vu/news/containers-installed-near-airport-for-quarantine-and-isolation-purposes-pelam/article_bf5af5cc-4dda-11ea-af4e-f79de5838203.html]. Accessed 22nd September 2020.

[3] Daily Post. 3 April 2020. "CCECC helps Vila Central Hospital Boost COVID-19 Response". [<https://dailypost.vu/news/ccecc->

helps-vila-central-hospital-boost-covid-19-response/article_e9d2718c-752a-11ea-a26a-430fd02626f4.html]. Accessed 22nd September 2020.

[4] RNZ Pacific. 30 April 2020. "Isolation Unit on Track for Vanuatu Central Hospital".

[https://www.rnz.co.nz/international/pacific-news/415527/isolation-unit-on-track-for-vanuatu-central-hospital]. Accessed 22nd September 2020.

[5] Ministry of Health. [https://moh.gov.vu/]. Accessed 22nd September 2020.

4.1.2c

Does the country meet one of the following criteria?

- Is there evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years?

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

Yes = 1, No = 0

Current Year Score: 1

There is publicly available evidence to suggest that Vanuatu has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak or has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years. In order to fight the COVID-19 pandemic, the country has installed containers outside an airport to isolate people suspected of being infected at the time of arrival for 12 hours, after which they would be moved to isolation wards if they are tested positive. These isolation units are temporary. [1] No further information is available on the websites for the Ministry of Health, Ministry of Agriculture, Biosecurity Vanuatu or local media. [2,3,4,5]

[1] Daily Post. 21 March 2020. "Containers Installed near Airport for Quarantine and Isolation Purposes: Pelam".

[https://dailypost.vu/news/containers-installed-near-airport-for-quarantine-and-isolation-purposes-pelam/article_bf5af5cc-4dda-11ea-af4e-f79de5838203.html]. Accessed 10th May 2021.

[2] Ministry of health. Government of Vanuatu. [https://moh.gov.vu/]. Accessed April 22, 2021.

[3] Ministry of health Covid-19 updates. Government of Vanuatu. [https://covid19.gov.vu/index.php/general-info/quarantine-and-isolation]. Accessed April 22, 2021.

[4] Ministry of agriculture. Government of Vanuatu. [https://malffb.gov.vu/]. Accessed April 22, 2021.

[5] Biosecurity Vanuatu. Government of Vanuatu. [https://biosecurity.gov.vu/index.php/resources/latest-news]. Accessed April 22, 2021.

[6] Ministry of Health Covid-19. 22nd April 2021. [https://covid19.gov.vu/index.php]. Accessed 10th May 2021.

4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

4.2.1 Routine health care and laboratory system supply

4.2.1a

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

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

Current Year Score: 1

Vanuatu has a national procurement protocol in place for the acquisition of laboratory supplies and medical supplies by the Ministry of Health, but there is no evidence of a similar system that is accessible for the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity.

All government hospitals in Vanuatu utilise a central procurement system. These hospitals are required to place orders for equipment including laboratory needs via "central medical stores" which are then responsible for placing orders with vendors, as well as for other processes including custom clearance, collection of deliveries and receiving and delivering of supplies to the laboratory stores. Medical supplies are distributed via provincial pharmacies to all levels of health service providers. [1, 2] In terms of legislation, the Public Finance and Economic Management Act and the Government Contracts and Tenders Act issued by the Government of Vanuatu in 2002 and 1998 outline the rules and guidelines for government level procurement. [3, 4] There is also an established Central Tender Board which adjudicates and awards tenders for Central Government and any other institutions specified under the Acts for the delivery of works, services and supplies related services. [5, 6] The Ministry of Health's Central Medical Store manages procurement for the ministry and describes its services and procedures on the ministry's website, but otherwise there is no other relevant information shared via a public website by the Ministry of Health. [7] No evidence was found if the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity can utilise the national procurement protocol for the acquisition of laboratory and medical supplies. [8]

[1] United Nations Development Programme. 2017. "Multi-Country TB Supervisory Evaluation Visit Report".

[[http://www.pacific.undp.org/content/dam/fiji/docs/Multi-](http://www.pacific.undp.org/content/dam/fiji/docs/Multi-Country%20TB%20Supervisory%20Evaluation%20Visit%20Report%202017.pdf)

[Country%20TB%20Supervisory%20Evaluation%20Visit%20Report%202017.pdf](http://www.pacific.undp.org/content/dam/fiji/docs/Multi-Country%20TB%20Supervisory%20Evaluation%20Visit%20Report%202017.pdf)] Accessed 22nd September 2020.

[2] South Med Review. 2012. "The Vanuatu Medical Supply System - Documenting Opportunities and Challenges to meet the Millennium Development Goals".

[[https://www.researchgate.net/publication/281091452_The_Vanuatu_medical_supply_system_-](https://www.researchgate.net/publication/281091452_The_Vanuatu_medical_supply_system_-_documenting_opportunities_and_challenges_to_meet_the_Millennium_Development_Goals)

[_documenting_opportunities_and_challenges_to_meet_the_Millennium_Development_Goals](https://www.researchgate.net/publication/281091452_The_Vanuatu_medical_supply_system_-_documenting_opportunities_and_challenges_to_meet_the_Millennium_Development_Goals)] Accessed 22nd September 2020.

[3] Government of Vanuatu. Act 8 of 2002. "Public Finance and Economic Management Act".

[https://doft.gov.vu/images/2009_pfem_act.pdf]. Accessed 22nd September 2020.

[4] Government of Vanuatu. NO. 10 OF 1998. "Government Contracts and Tenders Act".

[http://prdrse4all.spc.int/system/files/government_contracts_and_tenders_act_1998.pdf]. Accessed 22nd September 2020.

[5] Government of Vanuatu. "Central Tender Board". [<https://ctb.gov.vu>]. Accessed 22nd September 2020.

[6] AHMADU, MOHAMMED. 2005. "Evaluating Public Procurement Regimes in the South Pacific: Perspectives on Fiji, Samoa and Vanuatu". [<https://www.usp.ac.fj/index.php?id=13294>]. Accessed 22nd September 2020.

[7] Ministry of Health. [<https://moh.gov.vu/index.php/docsp/central-medical-store>]. Accessed 22nd September 2020.

[8] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity [<https://malffb.gov.vu/index.php>]. Accessed 15th October 2020.

4.2.2 Stockpiling for emergencies

4.2.2a

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

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

Current Year Score: 0

There is no publicly available evidence to suggest that Vanuatu has a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency. The Central Medical Store is responsible for storage of all medical supplies. [1] However, there is no evidence if there is a stockpile available for use during a public health emergency. There is an article mentioning that the country has received medical supplies from Australia to fight the COVID-19 pandemic. [2] Neither the website of the National Disaster Management Office nor the Vanuatu Police provide information on this. [3,4] There is no relevant information shared via a public website by the Ministry of Health. [5] The Ministry of Health's Principal Pharmacist is responsible for maintaining the availability of essential medicines. [6]

[1] Ministry of Health. "Central Medical Store". [<https://moh.gov.vu/index.php/docssp/central-medical-store>]. Accessed 22nd September 2020.

[2] Ministry of Health COVID-19 Updates. 30 May 2020. "Press Releases - Health acknowledges support from Pacific neighbour". [<https://covid19.gov.vu/index.php/updates/press-releases/170-health-acknowledges-support-from-pacific-neighbour>]. Accessed 22nd September 2020.

[3] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 22nd September 2020.

[4] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 22nd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 2020.

[6] Ministry of Health. "Principal Pharmacist". [<https://moh.gov.vu/index.php/docssp/principal-pharmacist>]. Accessed 22nd September 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 evidence that Vanuatu has a stockpile of laboratory supplies for national use during a public health emergency. The Central Medical Store is responsible for storage of laboratory supplies like reagents and one of its key functions is to ensure availability of reagents. [1] However, there is no evidence if there is a stockpile available for use during a public health emergency. Neither the website of the National Disaster Management Office nor the Vanuatu Police provide information on this. [2,3] There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] Ministry of Health. "Central Medical Store". [<https://moh.gov.vu/index.php/docssp/central-medical-store>]. Accessed 22nd September 2020.

[2] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 22nd September 2020.

[3] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 22nd September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 22nd September 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 evidence that Vanuatu conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. There is no evidence via the Ministry of Health that Vanuatu either maintains a

national stockpile or requires a review of its contents. [1] The website of National Disaster Management Office (NDMO) does state that part of its responsibilities including ensuring "sufficient stocks of antibiotics, PPE (masks, respirators, gloves, gowns), etc." However, no mention is made of an annual review required for a stockpile, either for COVID-19 or otherwise. [2] Vanuatu does not have a website for the Ministry of Defence.

[1] Ministry of health. Government of Vanuatu. [<https://moh.gov.vu/>]. Accessed April 22, 2021.

[2] National Disaster Management Office. Government of Vanuatu. [<https://ndmo.gov.vu/covid-19/timeline-covid-19-tc-harold>]. Accessed April 22, 2021.

4.2.3 Manufacturing and procurement for emergencies

4.2.3a

Does the country meet one of the following criteria?

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

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

Current Year Score: 0

There is no evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) or a plan/mechanism to procure medical supplies for national use during a public health emergency in Vanuatu. The Central Medical Store is responsible for procurement of medical supplies in the country. [1,2] There is evidence that Vanuatu depends on other countries like Australia, China and international donors like Asian Development Bank (ADB) for procurement of medical supplies to fight COVID-19. [3,4,5] The Health Sector Strategy 2017-2020 makes no mention of such an agreement or mechanism. [6] Neither the website of the National Disaster Management Office nor the Vanuatu Police provide information on this. [7,8] There is no relevant information shared via a public website by the Ministry of Health. [9] There is evidence that the country has received testing kits from China to fight the COVID-19 pandemic. [10]

[1] Ministry of Health. "Central Medical Store". [<https://moh.gov.vu/index.php/docsp/central-medical-store>]. Accessed 23rd September 2020.

[2] South Med Review. 2012. "The Vanuatu Medical Supply System - Documenting Opportunities and Challenges to meet the Millennium Development Goals". [https://www.researchgate.net/publication/281091452_The_Vanuatu_medical_supply_system_-_documenting_opportunities_and_challenges_to_meet_the_Millennium_Development_Goals] Accessed 23rd September 2020.

[3] Ministry of Health COVID-19 Updates. 30 May 2020. "Press Releases - Health acknowledges support from Pacific neighbour". [<https://covid19.gov.vu/index.php/updates/press-releases/170-health-acknowledges-support-from-pacific-neighbour>]. Accessed 23rd September 2020.

[4] China International Development Cooperation Agency. 5 May 2020. "China Sends Medical Supplies to Vanuatu for COVID-19 Fight". [http://en.cidca.gov.cn/2020-05/05/c_486906.htm]. Accessed 23rd September 2020.

[5] Asian Development Bank. 28 May 2020. "ADB, UNICEF Send Medical Supplies to Help Pacific Prepare for COVID-19". [<https://www.adb.org/news/adb-unicef-send-medical-supplies-help-pacific-prepare-covid-19>]. Accessed 23rd September 2020.

[6] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health->

sector-strategy-2017-2020]. Accessed 23rd September 2020.

[7] National Disaster Management Office. "Welcome". [https://ndmo.gov.vu/]. Accessed 23rd September 2020.

[8] Vanuatu Police. "What we do". [https://police.gov.vu/what-we-do]. Accessed 23rd September 2020.

[9] Ministry of Health. [https://moh.gov.vu/]. Accessed 23rd September 2020.

[10] Daily Post. 28 March 2020. "COVID-19: China to Supply Ventilators and Test Kits". [https://dailypost.vu/news/covid-19-china-to-supply-ventilators-and-test-kits/article_6d65db3e-707f-11ea-8a41-7bdc0fe2e187.html]. Accessed 23rd September 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 evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies or a plan/mechanism to procure laboratory supplies for national use during a public health emergency in Vanuatu. The Central Medical Store is responsible for procurement of laboratory supplies like reagents. [1] The Health Sector Strategy 2017-2020 makes no mention of such an agreement or mechanism. [2] Neither the website of the National Disaster Management Office nor the Vanuatu Police provide information on this. [3,4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] Ministry of Health. "Central Medical Store". [https://moh.gov.vu/index.php/docsp/central-medical-store]. Accessed 23rd September 2020.

[2] Ministry of Health. "Health Sector Strategy". [https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020]. Accessed 23rd September 2020.

[3] National Disaster Management Office. "Welcome". [https://ndmo.gov.vu/]. Accessed 23rd September 2020.

[4] Vanuatu Police. "What we do". [https://police.gov.vu/what-we-do]. Accessed 23rd September 2020.

[5] Ministry of Health. [https://moh.gov.vu/]. Accessed 23rd September 2020.

4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

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

4.3.1a

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Vanuatu has any plans for dispensing medical countermeasures during a public health emergency. An article was published by United Nations Children's Fund (UNICEF) on 18th December 2018, titled "Child

Given World's First Drone-Delivered Vaccine in Vanuatu" which reports that the government of Vanuatu carried out a drone delivery of vaccine for a child. It also states that the government is "interested in integrating the drone delivery of vaccines into their national immunization programme and using drones more widely to distribute health supplies". [1] However, there is no evidence of a plan to implement this. The Health Sector Strategy 2017-2020 makes no mention of such an agreement or mechanism. [2] Neither the website of the National Disaster Management Office nor the Vanuatu Police provide information on this. [3,4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] United Nations Children's Fund (UNICEF). 18 December 2018. "Child Given World's First Drone-Delivered Vaccine in Vanuatu". [<https://www.unicef.org/press-releases/child-given-worlds-first-drone-delivered-vaccine-vanuatu-unicef>]. Accessed 23rd September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[3] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 23rd September 2020.

[4] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 23rd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

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

4.3.2a

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

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence of a public plan in place to receive health personnel from other countries to respond to a public health emergency in Vanuatu. There is evidence that Vanuatu receives foreign medical staff which provides short-term clinical services. [1] However, there is no mention of a plan or Memorandum of Understanding (MOU) to receive foreign health personnel during a public health emergency. No information was found on the website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity; the Vanuatu Police or the National Disaster Management Office. [2,3,4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] South Med Review. 2012. "The Vanuatu Medical Supply System - Documenting Opportunities and Challenges to meet the Millennium Development Goals".

[https://www.researchgate.net/publication/281091452_The_Vanuatu_medical_supply_system_-_documenting_opportunities_and_challenges_to_meet_the_Millennium_Development_Goals]. Accessed 23rd September 2020.

[2] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 23rd September 2020.

[3] Vanuatu Police. "What we do". [<https://police.gov.vu/what-we-do>]. Accessed 23rd September 2020.

[4] National Disaster Management Office. "Welcome". [<https://ndmo.gov.vu/>]. Accessed 23rd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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: 89.4

2013

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: 9.9

2017

WHO Global Health Expenditure database

4.4.2 Paid medical leave

4.4.2a

Are workers guaranteed paid sick leave?

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

Current Year Score: 2

2020

World Policy Analysis Center

4.4.3 Healthcare worker access to healthcare

4.4.3a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of a government issued legislation, a policy or a public statement, committing to provide prioritised health care services to healthcare workers who become sick as a result of responding to a public health emergency in Vanuatu. There is no mention of prioritisation in the Health Sector Strategy 2017-2020. [1] Additionally, no mention was found in the National Disaster Management Office's Strategic Plan (2016-2020). [2] There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[2] National Disaster Management Office. October 2015. "Strategic Plan (2016-2020)". [https://ndmo.gov.vu/resources/downloads/com_jaextmanager/category/10-strategic-documents]. Accessed 23rd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

4.5.1 Communication with healthcare workers

4.5.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency. According to the Strategic Plan (2016-2020), the National Disaster Management Office will improve the Tele radios, cell phones, and land lines to provinces and establish a system of communication utilising Radio Vanuatu to reach all communities, tele radios; 'coconut news,' messaging. [1] It is not clear if this has been implemented. The Health Sector Strategy 2017-2020 makes no mention of such a system. [2] There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] National Disaster Management Office. October 2015. "Strategic Plan (2016-2020)". [https://ndmo.gov.vu/resources/downloads/com_jaextmanager/category/10-strategic-documents]. Accessed 23rd September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

4.5.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency. According to the Strategic Plan (2016-2020), the National Disaster Management Office will improve the Tele radios, cell phones, and land lines to provinces and establish a system of communication utilising Radio Vanuatu to reach all communities, tele radios; 'coconut news,' messaging. [1] It is not clear if this has been implemented. The Health Sector Strategy 2017-2020 makes no mention of such a system. [2] There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] National Disaster Management Office. October 2015. "Strategic Plan (2016-2020)".

[https://ndmo.gov.vu/resources/downloads/com_jaextmanager/category/10-strategic-documents]. Accessed 23rd September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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 insufficient evidence that the national public health system monitors for and tracking the number of health care associated infections (HCAI) that take place in healthcare facilities. There is no mention in the Health Sector Strategy (2017-2020) of monitoring of HCAI. [1] There is also no information on Vanuatu and HCAI tracking via PICNet, the Pacific Regional Infection Control Network, which is part of the Pacific Public Health Surveillance Network. [2] Additionally, there is no mention on the Ministry of Agriculture Livestock, Forestry, Fisheries, and Biosecurity; Department of Biosecurity or the Vanuatu Police's websites. [3,4,5] There is no relevant information shared via a public website by the Ministry of Health. [6] The national laboratory does not have a website and there is no national institute of health. Although the Ministry of Health's COVID-19 portal including data on traveller surveillance, case investigation and contact tracing, syndromic and sentinel surveillance, targeted active case finding, laboratory surveillance, hospital surveillance, and vaccination surveillance, there is no evidence of monitoring of infections of healthcare workers in hospital settings. [7] The Ministry of Health's 'Covid-19 Health Sector Preparedness and Response Plan' similarly does not include mention of such monitoring. [8]

[1] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

- [2] Pacific Public Health Surveillance Network. "PICNet - Pacific Regional Infection Control Network". [https://www.pphsn.net/Activities/PICNet/IC-Guidelines.htm]. Accessed 23rd September 2020.
- [3] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [https://malffb.gov.vu]. Accessed 23rd September 2020.
- [4] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. "Biosecurity". [https://biosecurity.gov.vu/]. Accessed 23rd September 2020.
- [5] Vanuatu Police. "What we do". [https://police.gov.vu/what-we-do]. Accessed 23rd September 2020.
- [6] Ministry of Health. [https://moh.gov.vu/]. Accessed 23rd September 2020.
- [7] Ministry of Health Covid-19. 'Surveillance'. March 2021. [https://covid19.gov.vu/index.php/surveillance]. Accessed 11th May 2021.
- [8] Ministry of Health Covid-19. 'VanGov Plan'. 'Health Sector Preparedness and Response Plan'. October 2020. [https://covid19.gov.vu/images/To_Know/MOH_COVID_HSPRP_2.pdf]. Accessed 11th May 2021. {Page no. 42,23,26,27,5}

4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

4.7.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available 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 in Vanuatu. An article was published by the Daily Post newspaper on 25th April 2019, titled "Doctors Oppose Clinical Trial" which mentions doctors' association's demand to establish a National Research and Ethics Committee. [1] The Health Sector Strategy 2017-2020 mentions expansion of health research with ethical boundaries as one of its goals. [2] However, no such committee or review board has been established yet. There is no Ministry of Research. There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] Daily Post. 25 April 2019. "Doctors Oppose Clinical Trial". [https://dailypost.vu/news/doctors-oppose-clinical-trial/article_1ffd6318-5069-53ff-b184-561f3e3e9ae9.html]. Accessed 23rd September 2020.

[2] Ministry of Health. "Health Sector Strategy". [https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020]. Accessed 23rd September 2020.

[3] Ministry of Health. [https://moh.gov.vu/]. Accessed 23rd September 2020.

4.7.1b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of an expedited process for approving clinical trials for unregistered medical countermeasures (MCMs) to treat ongoing epidemics or pandemics in Vanuatu. An article was published by the Daily Post newspaper on 25th April 2019, titled "Doctors Oppose Clinical Trial" which mentions doctors' association's demand to establish a National Research and Ethics Committee. [1] The Health Sector Strategy 2017-2020 mentions expansion of health research with ethical boundaries as one of its goals. [2] However, no such committee or review board has been established yet and there is no system in place to approve clinical trials for unregistered MCMs. There is no Ministry of Research. There is no relevant information shared via a public website by the Ministry of Health. [3]

[1] Daily Post. 25 April 2019. "Doctors Oppose Clinical Trial". [https://dailypost.vu/news/doctors-oppose-clinical-trial/article_1ffd6318-5069-53ff-b184-561f3e3e9ae9.html]. Accessed 23rd September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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: 0

There is no publicly available information that there is a government agency responsible for approving new medical countermeasures for humans. There is evidence indicating that there is a National Drugs and Therapeutics Committee, but there is no further information on its specific responsibilities concerning approval of new drugs. [1,2] The 2013 Dangerous Drugs Act: Legislative Review states "often new substances are sold and marketed without any control or approval". [3] The Health Sector Strategy 2017-2020 makes no mention of approval of new medical countermeasures. [4] There is no Ministry of Research. There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] Ministry of Health. "Principal Pharmacist". [<https://moh.gov.vu/index.php/docsp/principal-pharmacist>]. Accessed 23rd September 2020.

[2] Pacific Community. [https://www.spc.int/sites/default/files/eventfiles/2019-03/IP5_Item4_RSS%20Country%20Profile_Vanuatu.pdf]. Accessed 23rd September 2020.

[3] Vanuatu Law Commission. September 2013. "Dangerous Drugs Act: Legislative Review". [https://lawcommission.gov.vu/images//final-reports//Dangerous_Drugs_Final_Report.pdf]. Accessed 23rd September 2020.

[4] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

4.7.2b

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence of an expedited process for approving medical countermeasures (MCMs) for human use during public health emergencies. There is evidence indicating that there is a National Drugs and Therapeutics Committee, but there is no further information on its specific responsibilities concerning approval of new drugs. [1,2] The 2013 Dangerous Drugs Act: Legislative Review states "often new substances are sold and marketed without any control or approval". [3] The Health Sector Strategy 2017-2020 makes no mention of approval of medical countermeasures. [4] There is no Ministry of Research. There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] Ministry of Health. "Principal Pharmacist". [<https://moh.gov.vu/index.php/docsp/principal-pharmacist>]. Accessed 23rd September 2020.

[2] Pacific Community. [https://www.spc.int/sites/default/files/eventfiles/2019-03/IP5_Item4_RSS%20Country%20Profile_Vanuatu.pdf]. Accessed 23rd September 2020.

[3] Vanuatu Law Commission. September 2013. "Dangerous Drugs Act: Legislative Review". [https://lawcommission.gov.vu/images//final-reports//Dangerous_Drugs_Final_Report.pdf]. Accessed 23rd September 2020.

[4] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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 evidence that pandemics are integrated into the national risk reduction strategy, nor is there is not a standalone national disaster risk reduction strategy for pandemics. Pandemics and epidemics are not mentioned in either the National Disaster Management Office's (NDMO) Strategic Plan (2016-2020) or the Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030, both written in 2015. [1,2] Only the "Standard Operating Procedures (SOPs)" of the NDMO include epidemics and pandemics in the list of hazards that require putting these SOPs into practice. [3] There is no national institute of public health. There is no relevant information shared via a public website by the Ministry of Health. [4]

[1] National Disaster Management Office. October 2015. "Strategic Plan (2016-2020)".

[https://ndmo.gov.vu/resources/downloads/com_jaextmanager/category/10-strategic-documents]. Accessed 23rd September 2020.

[2] National Disaster Management Office. 2015. "Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030".

[<http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/laws/8239.pdf>]. Accessed 23rd September 2020.

[3] National Disaster Management Office (NDMO). 2013. "Standard Operating Procedures".

[<https://ndmo.gov.vu/resources/downloads/category/16-operational-documents>]. Accessed 23rd September 2020.

[4] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

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

5.2.1 Cross-border agreements

5.2.1a

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

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

Current Year Score: 2

There is evidence that Vanuatu has cross-border agreements, protocols or MOUs with neighbouring countries, or as part of a regional group, with regards to public health emergencies. Vanuatu is part of the Pacific Public Health Surveillance Network (PPHSN) which operates Epi-Net, a network of "multi-disciplinary national/territorial outbreak response teams" to aid response to public health emergencies. [1] In addition, the PPHSN provides a mechanism for communication regarding public health emergencies, including those of international concern (PacNet). [2] No other relevant information was found via a public website by the Ministry of Health. [3]

[1] Pacific Public Health Surveillance Network. "EpiNet - Multi-disciplinary national/territorial outbreak response teams".

[<https://www.pphsn.net/Services/EpiNet/intro.htm>]. Accessed 23rd September 2020.

[2] Pacific Public Health Surveillance Network. "PacNet - PPHSN's early warning system".

[<https://www.pphsn.net/Services/PacNet/intro.htm>]. Accessed 23rd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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 Vanuatu has cross-border agreements, protocols or MOUs with neighbouring countries, or as part of a regional group, with regards to animal health emergencies. Vanuatu is part of the Pacific Public Health Surveillance Network (PPHSN) which operates Epi-Net, a network of "multi-disciplinary national/territorial outbreak response teams "to aid response to public health emergencies". [1] However, it makes no mention of animal health emergencies. There is no evidence of such agreements in Vanuatu's 2017 PVS Gap Analysis Mission Report. [2] Vanuatu is part of a joint partnership agreement with international donors, which was signed in 2011, under which development partners agree to supporting the Ministry of Health. [3] However, there is no mention of animal health emergencies. No further information related to public health emergencies MOUs, cross-border agreements or protocols was found on the website of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [4] There is no relevant information shared via a public website by the Ministry of Health. [5]

[1] Pacific Public Health Surveillance Network. "EpiNet - Multi-disciplinary national/territorial outbreak response teams". [<https://www.pphsn.net/Services/EpiNet/intro.htm>]. Accessed 23rd September 2020.

[2] World Health Organisation for Animal Health. September 2017. "PVS Gap Analysis Mission Report". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/20180802_PVS_Gap_Analysis_Vanuatu.pdf]. Accessed 23rd September 2020.

[3] Government of the Republic of Vanuatu. January 2011. "Joint Partnership Arrangement between The Government of Vanuatu and Development Partners in relation to the delivery of the Vanuatu Health Sector Strategy 2010-2016". [<https://www.dfat.gov.au/sites/default/files/2011-01-25-final-health-joint-partnership-arrangement.pdf>]. Accessed 23rd September 2020.

[4] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://www.malffb.gov.vu/>]. Accessed 23rd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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: 0

2021

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

5.4.1b

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

Yes = 1, No = 0

Current Year Score: 0

2021

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

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

5.4.2a

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

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

5.4.2b

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

Yes = 1, No = 0

Current Year Score: 1

2021

OIE PVS assessments

5.5 FINANCING

5.5.1 National financing for epidemic preparedness

5.5.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that Vanuatu has allocated national funds to improve capacity to address epidemic threats within the past three years. The Budget Policy Statement 2021 mentions strengthening health capabilities as one of the objectives. This includes "specialist training for frontline health officers to handle any highly infectious diseases like COVID 19" among other things. [1] Additionally, the statement mentions identifying fiscal risks brought about by viral pandemics. [1] However, there is no mention of allocation of national funds to address future epidemic threats. Similarly, the Health Sector Strategy 2017-2020 makes no mention of allocation of national funds for epidemic threats. [2] No relevant information was found on the websites of the Department of Strategic Planning, Policy & Aid Coordination; Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity; Ministry of Health. [3,4,5]

[1] Finance and Treasury. "Budget Policy Statement 2021".

[https://doft.gov.vu/images/2020/Budget/Policy_Statement/2021_Budget_Policy_Statement_English.pdf]. Accessed 23rd September 2020.

[2] Ministry of Health. "Health Sector Strategy". [<https://www.dfat.gov.au/about-us/publications/Pages/vanuatu-health-sector-strategy-2017-2020>]. Accessed 23rd September 2020.

[3] Department of Strategic Planning, Policy & Aid Coordination. [<https://dsppac.gov.vu>]. Accessed 23rd September 2020.

[4] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu>]. Accessed 23rd September 2020.

[5] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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 a publicly identified special emergency public financing mechanism and funds which Vanuatu can access in the face of a public health emergency. Vanuatu is an International Development Association (IDA) eligible borrowing country, and thus has access to the World Bank Pandemic Emergency Financing Facility (PEF), which is a mechanism developed by the World Bank together with the World Health Organisation (WHO) and private sector partners to provide financing for response efforts in countries affected by a large-scale outbreak in order to prevent the outbreak from reaching pandemic proportions. [1, 2]

[1] International Development Association. "Borrowing Countries". [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed 23rd September 2020.

[2] Pandemic Emergency Financing Facility. December 2017. "Pandemic Emergency Financing Facility (PEF): Operational Brief for Eligible Countries". [<http://pubdocs.worldbank.org/en/119961516647620597/PEF-Operational-Brief-Dec-2017.pdf>]. Accessed 23rd September 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 of Vanuatu have, in the past three years made a public commitment either to improve the country's own domestic capacity to address epidemic threats by expanding financing or requesting support; or to support other countries to improve capacity to address epidemic threats by providing financing or other support. There is evidence that Vanuatu has received funding to improve its capacity in the past three years (according to the Global Health Security Tracking Dashboard); however, there is no evidence of a related public commitment from senior leaders. [1] Additionally, Vanuatu has received funding from Australia to enable the country to respond to the COVID-19 pandemic and tropical cyclone Harold but there is no evidence of requests made on the part of Vanuatu's government leaders. [2] There is no public evidence that Vanuatu has made a commitment to support other countries to improve capacity to address epidemic threats. Neither the Ministry of Health nor the Office of the Prime Minister shares relevant information via a publicly available website. [3,4] There is no publicly available website for the Ministry of Foreign Affairs, International Cooperation and External Trade.

[1] GHS Tracking Dashboard. "Vanuatu". [<https://tracking.ghscosting.org/details/248/recipient>]. Accessed 23rd September 2020.

[2] Ministry of Health COVID-19 Updates. 30 May 2020. "Press Releases - Health Acknowledges Support from Pacific Neighbour". [<https://covid19.gov.vu/index.php/updates/press-releases/170-health-acknowledges-support-from-pacific-neighbour>]. Accessed 23rd September 2020.

[3] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

[4] Office of the Government Chief Information Officer, Prime Minister's Office. [<https://ogcio.gov.vu/>]. Accessed 23rd September 2020.

5.5.4b

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

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

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

Current Year Score: 1

There is evidence that Vanuatu has, in the past three years, requested financing or technical support from donors to improve domestic capacity to address epidemic threats as the country has invested donor finances to improve domestic capacity to address epidemic threats. There is evidence via the Global Health Security Funding Tracker that Vanuatu has invested donor finances to improve domestic capacity to address epidemic threats. The tracker notes that Vanuatu has received funding from multiple donors to enhance their capacity on global security preparedness, including US\$407.11k from Sweden for malaria elimination strategy which has been disbursed from 2014-2020. [1] There is no evidence that Vanuatu has provided other countries with financing or technical support to improve capacity to address epidemic threats. Neither the Ministry of Health; the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity; nor the National Disaster Management Office shares any relevant information via a public website. [2,3,4] There is no publicly available website for the Ministry of Foreign Affairs, International Cooperation and External Trade. There is no evidence of relevant media reports or academic studies. There is no evidence that Vanuatu has a national public health institute. Neither the World Health Organisation nor

the United Nations shares relevant information about Vanuatu. [5,6]

[1] Global Health Security Funding Tracker. [<https://tracking.ghscosting.org/details/248/recipient>]. Accessed 23rd September 2020.

[2] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

[3] Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://malffb.gov.vu/>]. Accessed 23rd September 2020.

[4] National Disaster Management Office. [<https://ndmo.gov.vu>]. Accessed 23rd September 2020.

[5] World Health Organisation. "Vanuatu". [<https://www.who.int/countries/vut/en/>]. Accessed 23rd September 2020.

[6] UN News. "Vanuatu". [<https://news.un.org/en/tags/vanuatu>]. Accessed 23rd September 2020.

5.5.4c

Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?

Yes = 1 , No = 0

Current Year Score: 0

2021

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

5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

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

5.6.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available plan or policy for sharing genetic data, epidemiological data, clinical specimens, and/or isolated specimens with international organizations and/or other countries that goes beyond influenza. There is no information of such a plan on the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity website. [1] There is no relevant information shared via a public website by the Ministry of Health. [2] There is no Ministry of Research in the country.

[1] The Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity. [<https://www.malffb.gov.vu/>]. Accessed 23rd September 2020.

[2] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 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 Pandemic Influenza Preparedness (PIP) framework in the past two years. No information was found on the World Health Organisation (WHO) websites ("Pandemic Influenza Preparedness" and "Emergencies preparedness, response"). [1,2] No reports were found via news outlets or on social media.

[1] World Health Organisation. "Pandemic Influenza Preparedness (PIP)". [<http://www.who.int/influenza/pip/en/>]. Accessed 23rd September 2020.

[2] World Health Organisation. "Emergencies preparedness, response". [<https://www.who.int/csr/don/archive/country/vut/en/>]. Accessed 23rd September 2020.

5.6.1c

Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?

Yes = 0, No = 1

Current Year Score: 1

There is no public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years. No information was found from the Government of Vanuatu's website or the World Health Organisation (WHO) Disease Outbreak News. [1,2] Also, there is no evidence of Vanuatu not sharing COVID-19 samples. As of 15th October 2020, Vanuatu is one of the few countries which have not recorded any COVID-19 cases. [3] No reports were found via news outlets or on social media.

[1] Government of Vanuatu - Prime Minister's Office. "Press Release". [<https://pmo.gov.vu/index.php/en/public-information/press-release>]. Accessed 23rd September 2020.

[2] World Health Organisation. "Disease Outbreak News (DONs)". [<http://www.who.int/csr/don/en/>]. Accessed 23rd September 2020.

[3] Ministry of Health COVID-19 Updates. "Home". [<https://covid19.gov.vu>]. Accessed 15th October 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: 3

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: 3

2020

Economist Intelligence

6.1.1e

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

Input number

Current Year Score: 43

2020

Transparency International

6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1g

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.2 Orderly transfers of power

6.1.2a

How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?

Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

Current Year Score: 3

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: 4

2021

Economist Intelligence

6.1.4b

What is the level of illicit arms flows within the country?

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

Current Year Score: 4

2020

UN Office of Drugs and Crime (UNODC)

6.1.4c

How high is the risk of organized criminal activity to the government or businesses in the country?

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

Current Year Score: 3

2021

Economist Intelligence

6.1.5 Armed conflict

6.1.5a

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

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

Current Year Score: 4

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: 2

2021

Economist Intelligence

6.2 SOCIO-ECONOMIC RESILIENCE

6.2.1 Literacy

6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

Current Year Score: 87.51

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: 0.5

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: 3.3

2010

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

The share of employment in the informal sector in Vanuatu is more than 50%. As stated in a ILO article dated 26th February 2021, "Informal employment is usually characterized by a lack of structure, including non-regular working hours and a lack of access to secure benefits, welfare protection or representation. However, as it accounts for more than half of all jobs in Vanuatu, it has quickly been identified as a key driver for economic recovery across the Pacific region in the post-COVID19 era." [1] There's no further granular data/information regarding employment in the informal sector available publicly on the Vanuatu National Statistics Office or Pacific Data Hub. [2,3] There is a 2008 report projecting that only 12% of the working age population in Vanuatu would be employed in the formal sector by 2015, leaving 129,000 workers outside the formal sector. [4] No information about the actual % of employment in the informal sector in Vanuatu is available either through ILOSTAT database or the World Bank databank. [5,6] No other relevant information was found on the website of the Ministry of Health. [7]

[1] International Labour Organization 'Informal sectors of Fiji, Palau, Tonga and Vanuatu key to COVID-19 economic recovery'. February 26, 2021. [https://www.ilo.org/suva/public-information/press-releases/WCMS_774071/lang--en/index.htm]. Accessed April 21, 2021.

- [2] Vanuatu National Statistics Office. 'HouseHold Income & Expenditure Survey (HIES)'. [<https://vnso.gov.vu/index.php/en/census-and-surveys/surveys/household-income-expenditure-survey-hies#hies>]. Accessed April 21, 2021.
- [3] Pacific Data Hub. 'National Sustainable Development Plan Baseline Survey 2019, Household Income and Expenditure Survey 2019'. [<https://microdata.pacificdata.org/index.php/catalog/742>]. Accessed April 21, 2021.
- [4] Lowy Institute for International Policy. September 2008. "Beyond Good Governance: Shifting the Paradigm for Australian Aid to the Pacific Islands Region". [<https://www.files.ethz.ch/isn/92194/2008-09.pdf>]. Accessed 23rd September 2020.
- [5] ILOSTAT Explorer. [https://www.ilo.org/shinyapps/bulkexplorer44/?lang=en&segment=indicator&id=SDG_A831_SEX_RT_A]. Accessed 23rd September 2020.
- [6] World Bank-Databank. [<https://databank.worldbank.org/reports.aspx?source=2&series=SL.ISV.IFRM.ZS&country=>]. Accessed 23rd September 2020.
- [7] Ministry of Health. [<https://moh.gov.vu/>]. Accessed 23rd September 2020.

6.2.3c

Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

Current Year Score: 0

2016, or latest available

World Bank; Economist Impact calculations

6.2.4 Public confidence in government

6.2.4a

Level of confidence in public institutions

Input number

Current Year Score: 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: 2

2021

Economist Intelligence Democracy Index

6.2.6 Inequality

6.2.6a

Gini coefficient

Scored 0-1, where 0=best

Current Year Score: 0.38

Latest available.

World Bank; Economist Impact calculations

6.3 INFRASTRUCTURE ADEQUACY

6.3.1 Adequacy of road network

6.3.1a

What is the risk that the road network will prove inadequate to meet needs?

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

Current Year Score: 1

2021

Economist Intelligence

6.3.2 Adequacy of airports

6.3.2a

What is the risk that air transport will prove inadequate to meet needs?

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

Current Year Score: 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: 2

2021

Economist Intelligence

6.4 ENVIRONMENTAL RISKS

6.4.1 Urbanization

6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 25.39

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

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: 1

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: 70.32

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: 986.3

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 3.62

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 24.1

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 25.2

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: 91.26

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 34.07

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: 68.98

2018

WHO Global Health Expenditure database

6.5.4 Trust in medical and health advice

6.5.4a

Trust medical and health advice from the government

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

Current Year Score: 1

2018

Wellcome Trust Global Monitor 2018

6.5.4b

Trust medical and health advice from medical workers

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

Current Year Score: 1

2018

Wellcome Trust Global Monitor 2018