

# Laos

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

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

### 1.1 ANTIMICROBIAL RESISTANCE (AMR)

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

##### 1.1.1a

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

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

**Current Year Score: 2**

There is publicly available evidence that Laos has a national plan for surveillance, detection, and reporting of priority antimicrobial resistance (AMR) pathogens. The 'National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023', published in 2019 and set for implementation in 2023, serves as the national action plan for AMR for Laos. [1] This Plan encompasses 5 key strategies to overcome AMR challenges in the country including, the strategy to strengthen antimicrobial surveillance system. Under this strategy for surveillance, the NAP lists 5 action plans: "i) to increase the balance of government budget in surveillance and research on drug-resistant microorganisms; ii) to establish coordination mechanisms and laboratories; iii) to develop a standard operating manual for the analysis of human and animal health at each level; iv) to strengthen the laboratory for the surveillance of drug-resistant microorganisms in the laboratory for human and animal health; and v) to improve the exchange of information on antimicrobial resistance and the use of antibiotics throughout the sector. The NAP further includes a SWOT (strengths, weaknesses, opportunities, and threats) analysis for the country's AMR capacity". [1]

The plan designates Centers for Disease Control and Prevention National Science (SWC) responsible for reporting of AMR research and surveillance to the Ministry of Health, hospitals, health sector and, ASEAN Community Surveillance Network. The plan also states that Animal Disease Research Center (Animal Husbandry Department) And Fisheries, Ministry of Agriculture And forestry) holds the responsibility to conduct monitoring and surveillance for AMR in animal health, including leadership for the appropriate use of antimicrobials in animal husbandry. [1] Section four of this plan details monitoring and evaluation (M&E) for AMR, as part of which the country has set 5 targets for 2023 - "i) reduce AMR infections by 30%; ii) ensure prescription-only sales for antibiotics; iii) decrease antibiotic dosage prescribed in the human and animal health sectors by 20%; iv) ensure 20% increase in appropriate use of antibiotics; and v) ensure the country's Antimicrobial resistance management system is at par with international standards of 3". The plan further details how to achieve each of the targets between 2019 and 2023 providing a goal for each year. [1]

[1] World Health Organization (WHO). "Library of national action plans." [<http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed on 25 February 2021.

##### 1.1.1b

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

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

**Current Year Score: 1**

There is publicly available evidence that Laos has the capacity to test some of the 7+1 priority AMR pathogens. According to the Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, one of Laos' strengths in the AMR capacity category is that the country has the capacity to test for all priority antimicrobial-resistant pathogens at both the human health and animal health laboratories, but notes that quality assurance remains a key issue for the same. The JEE states that "The National Center for Laboratory and Epidemiology (NCLE) conducts detection and reporting of specific priority antimicrobial-resistant pathogens in humans. The national laboratory and Lao-OxfordMahosot Hospital-Wellcome Trust Research Unit (LOMWRU) have good capacity for antimicrobial susceptibility testing, with quality assurance by the United Kingdom National External Quality Assessment Service", however, "The National Animal Health Laboratory is not currently conducting detection and reporting of priority antimicrobial-resistant pathogens, nor testing for the presence of antibiotic residues in animals or animal products". [1] However, the national action plan on AMR for Laos, titled 'National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023' (ແຜນຍຸດທະສາດ 4.11.2019), notes instances of research (including testing) of only 5 of the priority AMR infections in the country among others, including, Salmonella typhi, Klebsiella pneumoniae, Enterobacteriaceae, Escherichia coli, Acinetobacter spp., Neisseria gonorrhoea, Group A Streptococcus (GAS), Orientia tsutsugamushi, Staphylococcus aureus, Streptococcus suis, Enterobacter cloacae, and Achromobacter xylosox. [2]

The National Centre for Laboratory and Epidemiology (NCLE) website is no longer functional and as such, gives no indication of capacity to test for any of the 7+1 priority AMR pathogens. [3] Conversely, news reporting from the World Health Organisation suggests that the country's Ministry of Health worked with Korea International Cooperation Agency (KOICA) and the World Health Organization to launch its Antimicrobial Resistance (AMR) Surveillance for "strengthening global and national surveillance systems through strengthening national laboratory capacities and the workforce for surveillance of AMR" and set its main objective as "to enhance capacity to detect and report priority antimicrobial-resistant pathogens". However, this does not mention whether Laos has any capacity to test for any of the 7+1 priority AMR pathogens. [4]

Neither the Ministry of Health nor the Ministry of Agriculture and Forestry websites contain information on critical pathogen surveillance. [5,6]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1] Accessed 25 February 2021.

[2] World Health Organization (WHO). Library of national action plans. November 2019. "National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023". [https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/] Accessed 25 February 2021.

[3] National Centre for Laboratory and Epidemiology (NCLE). [http://www.ncle.gov.la/] Accessed 25 February 2021.

[4] World Health Organisation. 11 July 2018. "The launch of the Antimicrobial Resistance Surveillance program in Lao People's Democratic Republic". [https://www.who.int/laos/news/detail/11-07-2018-the-launch-of-the-antimicrobial-resistance-surveillance-program-in-lao-people-s-democratic-republic] Accessed 25 February 2021

[5] Ministry of Health, Lao PDR. [http://www.moh.gov.la/] Accessed 25 February 2021.

[6] Ministry of Agriculture and Forestry, Lao PDR. [http://www.maf.gov.la/] Accessed 25 February 2021.

**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 Laos is conducting environmental AMR detection or surveillance for antimicrobial residues or AMR organisms. The National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023, published in 2019 contained action plan for AMR, but this does not mention AMR surveillance or detection in the environment [1]. Neither the Ministry of Health, Ministry of Natural Resources and the Environment, or the Ministry of Agriculture and Forestry websites contain information on critical pathogen surveillance. [2, 3, 4]. The Ministry of Natural Resources and Environment established the department of Pollution control and the department of environment to oversee and mitigate the impacts from investment on the environment. There is the guidance on the Environmental Impact Assessment published in 2019, however, this does not mention the testing of AMR in the waterways or soils [5]

[1] World Health Organization (WHO). Library of national action plans. 2019. "National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>] Accessed 25 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 25 February 2021.

[3] Ministry of Natural Resources and Environment, Lao PDR. [<http://www.monre.gov.la/>] Accessed 25 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>] Accessed 25 February 2021.

[5] Ministry of Natural Resources and Environment 2019, Environmental Impact Assessment, [<http://monre.myqnapcloud.com:8080/share.cgi?ssid=0hajqOi>]. Accessed 10 March 2021

## 1.1.2 Antimicrobial control

### 1.1.2a

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

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

**Current Year Score: 0**

There is insufficient evidence that Laos has national legislation or regulation in place requiring prescriptions for antibiotic use for humans. According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, "Lao People's Democratic Republic has capacity to detect some antimicrobial-resistant pathogens at various institutions and some regulatory frameworks exist to manage antibiotic use in humans". The JEE also notes that "there are multiple channels for procurement of antibiotics for human use, and over-the-counter sale is widely available; therefore, the availability, source and quality of antibiotics are not always well documented". [1] The national action plan for AMR titled 'National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023' published in 2019 states strengthening surveillance for antibiotic exploitation and overuse as one of its key objective under section 2 describing the Antimicrobial Strategy for Lao PDR. [2] There is no further evidence of antibiotic legislation on the website of the Ministry of Health and the website of the Food & Drug Department of the Ministry of Health in Laos. [3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 25 February 2021.

[2] World Health Organization (WHO). Library of national action plans. 2019. "National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>].

Accessed 25 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 25 February 2021.

[4] Lao Food & Drug Department of the Ministry of Health. [<http://www.fdd.gov.la/>] Accessed on 25 February 2021.

### 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 some evidence of national legislation or regulation in place requiring prescriptions for antibiotic use for animals and there is no evidence of gaps in enforcement. On 13 March 2020, the Lao government published its 'Decree No. 199' for Veterinary Medicine (Lao version) which covers the use of Veterinary Antimicrobials, the prescriptions for antibiotic use for animals [1]. It states under Article 40 - Principle for the Usage - that antimicrobials can only be used as necessary and per prescriptions from the Veterinary. [1]The national action plan for AMR titled 'National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023' published in 2019 states reducing prescriptions of antibiotics by animal health professionals and veterinarians by 20% as one of its key objectives under section 2 describing the Antimicrobial Strategy for Lao PDR. This plan also lists awareness generation for antibiotic use and revision of antibiotic legislation for animals and humans [2]. There is no further evidence on the websites of the Ministry of Health and Ministry of Agriculture [3,4]

[1] Lao Government 2020, Decree on Veterinary Medicine,

[<http://laogov.gov.la/legaldoc/pages/document.aspx?ItemID=611>]. Accessed 25 February 2021.

[2] World Health Organization (WHO). Library of national action plans. 2019. "National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 25 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 25 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed 25 February 2021.

## 1.2 ZOOONOTIC 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 of a plan or equivalent strategy document on zoonotic disease.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, despite detection capacity at the national level, there is no systematic surveillance system for some priority zoonotic diseases and other unknown zoonotic diseases in the animal health sector; sharing of information between animal health and human health sectors occurs largely during outbreaks and is mostly ad hoc (i.e. not routine). [1] The existing coordination mechanism is not fully operational and faces challenges sustaining its functions and relevance. [1]

The country receives immediate technical assistance for animal health systems to address emerging and priority zoonotic diseases and health threats. The project is funded by the United States of America for Oct 2020 - Sept 2021 [2]

Neither the Ministry of Health nor the Ministry of Agriculture and Forestry websites features information on zoonotic diseases. [3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 15 February 2021.

[2] FAO. [<http://www.fao.org/emergencies/la-fao-en-action/projets/projet-detail/fr/c/1329808/>]. Accessed on 11 March 2021

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 15 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>] Accessed on 15 February 2021.

### 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 public evidence of a plan or equivalent strategy document on zoonotic disease and therefore no evidence of national legislation, plans or equivalent strategy documents which include measures for risk identification and reduction for zoonotic disease spillover events from animals to humans.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, despite detection capacity at the national level, there is no systematic surveillance system for some priority zoonotic diseases and other unknown zoonotic diseases in the animal health sector; sharing of information between animal health and human health sectors occurs largely during outbreaks and is mostly ad hoc (i.e. not routine). [1] The existing coordination mechanism is not fully operational and faces challenges sustaining its functions and relevance. [1]

The country receives immediate technical assistance for animal health systems to address emerging and priority zoonotic diseases and health threats. The project is funded by the United States of America for Oct 2020 - Sept 2021 [2]

Neither the Ministry of Health nor the Ministry of Agriculture and Forestry websites features information on zoonotic diseases. [3,4]

Reported in the sixth report to the Convention of Biodiversity, Lao's National Protected Areas increases from 14.2 per cent to around 20.2 per cent of the land areas with the addition of Provincial Protected Areas and District Protected Areas. However, the report does not mention any information relevant to zoonotic diseases and other unknown zoonotic diseases [5]. And there is no such information in the Law on Wildlife and Aquatic Law [6]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 15 February 2021.

[2] FAO. [<http://www.fao.org/emergencies/la-fao-en-action/projets/projet-detail/fr/c/1329808/>]. Accessed on 11 March 2021

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 15 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>] Accessed on 15 February 2021.

[5] Ministry of Natural Resources and Environment 2021, Fifth National Report to the United Nations Convention on Biological Diversity, <https://www.cbd.int/doc/world/la/la-nr-05-en.pdf>, accessed on 1 May 2021.

[6] National Assembly 2007, Wildlife and Aquatic Law, <https://www.maf.gov.la/wp-content/uploads/2015/12/3.-%e0%ba%81%e0%ba%bb%e0%ba%94%e0%bb%9d%e0%ba%b2%e0%ba%8d%e0%ba%a7%e0%bb%88%e0%ba%b2%e0%ba%94%e0%bb%89%e0%ba%a7%e0%ba%8d%e0%ba%aa%e0%ba%b1%e0%ba%94%e0%ba%99%e0%bb%89%e0%ba%b3-%e0%bb%81%e0%ba%a5%e0%ba%b0%e0%ba%aa%e0%ba%b1%e0%ba%94%e0%ba%9b%e0%bb%88%e0%ba%b2.pdf>, accessed on 1 May 2021.

### 1.2.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence of a plan or equivalent strategy document on zoonotic disease and therefore no evidence of national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, despite detection capacity at the national level, there is no systematic surveillance system for some priority zoonotic diseases and other unknown zoonotic diseases in the animal health sector; sharing of information between animal health and human health sectors occurs largely during outbreaks and is mostly ad hoc (i.e. not routine). [1] The existing coordination mechanism is not fully operational and faces challenges sustaining its functions and relevance. [1]

The country receives immediate technical assistance for animal health systems to address emerging and priority zoonotic diseases and health threats. The project is funded by the United States of America for Oct 2020 - Sept 2021 [2]

Neither the Ministry of Health nor the Ministry of Agriculture and Forestry websites features information on zoonotic diseases. [3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 15 February 2021.

[2] FAO. [<http://www.fao.org/emergencies/la-fao-en-action/projets/projet-detail/fr/c/1329808/>]. Accessed on 11 March 2021

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 15 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>] Accessed on 15 February 2021.

### 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 evidence of a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries in Laos.



The National Committee for Communicable Disease Control (NCCDC) was established following the Avian Influenza outbreak in 2007. The NCCDC was chaired by the prime minister and also included various ministers and deputy ministers. It also featured a sub-committee on the Prevention and Control of Animal Communicable Diseases, under the Ministry of Agriculture and Forestry. According to an International Federation of Red Cross and Red Crescent (IFRC) report, however, these committees no longer exist; in practice, their roles and responsibilities are undertaken by the National Emerging Infectious Diseases Control Office (NEIDCO). [1]

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017 states that the country's response mechanism, the National Zoonotic Diseases Coordination Mechanism for the Health and Animal Sectors, provides "operational guidelines for multisectoral coordination". It further mentions that there exists a "memorandum of understanding in place between the Ministry of Agriculture and Forestry and Ministry of Health for sharing of information on priority and other zoonotic diseases". [2] There is no further evidence on the websites of the Ministry of Health and Ministry of Agriculture [3,4]

[1] International Federation of Red Cross and Red Crescent Societies (IFRC). 2009. "Legal Preparedness for Responding to Disasters and Communicable Disease Emergencies in Lao PDR". [[http://www.ifrc.org/PageFiles/93704/IDRL\\_Red-Cross-Report-Laos\\_v27-ENG.pdf](http://www.ifrc.org/PageFiles/93704/IDRL_Red-Cross-Report-Laos_v27-ENG.pdf)]. Accessed on 28 February 2021.

[2] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.

## 1.2.2 Surveillance systems for zoonotic diseases/pathogens

### 1.2.2a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence of a national mechanism for livestock owners to report animal diseases to a central government agency. According to the national English-language newspaper, the Vientiane Times, amendments made in 2016 to the Law on Livestock Production and Veterinary Matters require people who suspect the onset of any animal disease to inform animal husbandry and veterinary authorities within 24 hours. [1] Once a suspected disease is confirmed, the authorities are required to inform international organisations when it is deemed necessary and if the disease is found to have affected humans, the authorities are required to inform the health authorities within 24 hours. [1] However, no reporting mechanism or system for this reporting is detailed. The previous version of the law in 2008 stipulates that owners of animals shall inform the nearest Livestock and Veterinary Management Authority or village authority immediately upon the detection of any sick or dead animals with unknown causes, but again no reporting mechanism to a central government agency is mentioned. [2] A 2012 government decree similarly requires animal owners to notify immediately the veterinary office in case of multiple animals becoming sick but indicates no reporting mechanism. [3] The World Organisation for Animal Health (OIE) 2011 Performance of Veterinary Services (PVS) report mentioned the lack of a functioning disease-reporting system as a weakness in the Lao veterinary system and classified the Lao veterinary services as having "no passive surveillance programme". [4] During the

Avian Influenza outbreak in 2007 Laos developed a detailed National Pandemic Influenza Response Plan that included surveillance and reporting measures. [5] However, according to the International Federation of Red Cross and Red Crescent (IFRC), the procedures and relationships are not sufficiently defined in legal instruments. [5] There is no easily available evidence for a reporting mechanism for animal disease on the website of the Ministry of Agriculture and Forestry, but the ministry's development strategy lists the need to improve and develop the surveillance system for animal disease and to improve the reporting system "on accurate, timely basis in order to take a response measure as quickly as possible". [6, 7] There is no further evidence on the website of the Ministry of Health. [8]

- [1] Vientiane Times. November 14, 2016. "Law Amendments to Enhance Livestock Industry, Food Hygiene". [<https://laotiantimes.com/2016/11/14/law-amendments-enhance-livestock-industry-food-hygiene/>]. Accessed 16 February 2021.
- [2] National Assembly of the Lao PDR. No.03/NA. 25 July 2008. "Draft Law on Livestock Production and Veterinary Matters". [[http://laotradeportal.gov.la/kcfinder/upload/files/Law%20on%20Livestock%20Production%20and%20Veterinary%20Matters%20No.03%20\(2008\)\\_English.pdf](http://laotradeportal.gov.la/kcfinder/upload/files/Law%20on%20Livestock%20Production%20and%20Veterinary%20Matters%20No.03%20(2008)_English.pdf)]. Accessed 16 February 2021.
- [3] Government of the Lao PDR. No 228/GoL, 31 May 2012. Decree on the Prevention and Control of Animal Diseases. [[https://www.wto.org/english/thewto\\_e/acc\\_e/lao\\_e/WTACCLAO36A1\\_LEG\\_7.pdf](https://www.wto.org/english/thewto_e/acc_e/lao_e/WTACCLAO36A1_LEG_7.pdf)]. Accessed 16 February 2021.
- [4] World Organisation for Animal Health (OIE). August-September 2011. "PVS Evaluation Report: Lao Peoples' Democratic Republic". [[http://www.oie.int/fileadmin/Home/eng/Support\\_to\\_OIE\\_Members/pdf/PVS-FU\\_Report-Lao.pdf](http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/PVS-FU_Report-Lao.pdf)]. Accessed 16 February 2021.
- [5] International Federation of Red Cross and Red Crescent Societies (IFRC). 2009. "Legal Preparedness for Responding to Disasters and Communicable Disease Emergencies in Lao PDR". [[http://www.ifrc.org/PageFiles/93704/IDRL\\_Red-Cross-Report-Laos\\_v27-ENG.pdf](http://www.ifrc.org/PageFiles/93704/IDRL_Red-Cross-Report-Laos_v27-ENG.pdf)]. Accessed 16 February 2021.
- [6] Ministry of Agriculture and Forestry Lao PDR. "Agriculture Development Strategy to the year 2025 and Vision to 2030". [<http://www.maf.gov.la/wp-content/uploads/2016/01/MDS-2025-and-Vision-to-2030-Eng.pdf>]. Accessed 16 February 2021.
- [7] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>] Accessed 16 February 2021.
- [8] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 15 February 2021.

### 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 evidence of legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners). There is no publicly available evidence for a national mechanism for livestock owners to report animal diseases.

Article 11 of an updated version of the Law on Livestock and Veterinary in 2016 mentions the data collection on livestock production (types, amount, area for farming, diseases, market, etc.). The Livestock and Veterinary Agency shall coordinate with relevant sectors to investigate and document livestock information in order to provide data for the livestock development in a specific area/region. [1]

Article 17 of an updated version of the Law on Livestock and Veterinary in 2016 mentions registration and tracking. The Livestock and Veterinary Agency shall establish registration and tracking system of livestock [1]. No safeguard for the confidentiality of information is mentioned in both articles.

No mention of confidentiality of information regarding surveillance activities for animals is found on the websites of the

Ministry of Health and Ministry of Agriculture, or within the Lao Strategy for Agricultural Development 2011-2020. [2, 3,4]

[1] National Assembly 2016, Law on Livestock and Veterinary,

[<https://www.laoofficialgazette.gov.la/index.php?r=site/display&id=1152>]. Accessed 16 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 16 February 2021.

[3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.

[4] MAF Lao PDR. Agriculture Strategy to 2025 and Vision to the Year 2030, <https://www.maf.gov.la/wp-content/uploads/2016/01/MDS-2025-and-Vision-to-2030-Eng.pdf>]. Accessed 16 February 2021.

### 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 Laos conducts surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors).

In 2019, the United States agreed to support the development a National Wildlife Disease Surveillance Network nationwide across Lao PDR but there is no evidence of surveillance of zoonotic disease in wildlife. This project is led by the Wildlife Conservation Society and the Department of Livestock and Fisheries, Ministry of Agriculture and Forestry. This project is still ongoing. [1, 2]

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, notes that the country has surveillance systems in place for priority zoonotic diseases/pathogens but gives no details of surveillance of wildlife. [3]

There is no further evidence on the websites of the Ministry of Health and Ministry of Agriculture [4,5]

[1] U.S. Embassy in Laos 2019, U.S. Announced Support for Laos to Develop a National Wildlife Disease Surveillance Network. [<https://la.usembassy.gov/u-s-announces-support-for-laos-to-develop-a-national-wildlife-disease-surveillance-network/>]. Accessed on 28 February 2021.

[2] Wildlife Conservation Society. [<https://laos.wcs.org/Initiative/Wildlife-Health.aspx>]. Accessed on 28 February 2021.

[3] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[5] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.

## 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: 2.2**

2018

OIE WAHIS database

### 1.2.4b

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

Input number

**Current Year Score: 77.19**

2018

OIE WAHIS database

## 1.2.5 Private sector and zoonotic

### 1.2.5a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence of a national plan on zoonotic disease or other legislation, regulations, or plans that include mechanisms for working with the private sector in controlling or responding to zoonoses.

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, states that plans are in place for private companies to deliver medications in case of emergency responses that require medical countermeasures but does not include zoonoses in this assessment. [1]

There is no further evidence on the websites of the Ministry of Health and Ministry of Agriculture [2,3]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.

## 1.3 BIOSECURITY

### 1.3.1 Whole-of- government biosecurity systems

#### 1.3.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that Laos has 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.

There is no information on the websites of the Ministry of Defence, Ministry of Health, Ministry of Agriculture and Forestry, Ministry of Science and Technology. [1,2,3,4]

Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [5]

There is also no information on the VERTIC Database. [6]

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, states that there is no comprehensive national inventory identifying what and in which facilities dangerous pathogens and toxins are housed and recommends that Laos conducts a national inventory of dangerous pathogens across all human and animal health laboratories. [7] There is no evidence that this has yet occurred. [7] The JEE states that several national public health laboratories (National Center for Laboratories and Epidemiology, Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Institut Pasteur du Laos and the National Animal Health Laboratory) have started to monitor and update their records of stored pathogens and toxins. [7]

[1] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed on 16 February 2021.

[2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/>]. Accessed on 16 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 16 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 16 February 2021.

[5] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed on 16 February 2021.

[6] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

[7] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021

### 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 evidence that Laos has legislation or regulations in place to cover biosecurity for facilities in which especially dangerous pathogens and toxins are stored or processed.

There is no information available on legislation or regulations for biosecurity on the websites of the Ministry of Defence, Ministry of Health, Ministry of Agriculture and Forestry, Ministry of Science and Technology. [1, 2,3,4]

The country has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [5] There is also no information on the VERTIC Database. [6]

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, lists only the 2004 National Biosafety Framework, which focuses exclusively on genetically-modified organisms, and the National Healthcare Waste Management Decision of 2016, which governs waste management practices at laboratories. [7]

[1] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed 16 February 2021.

[2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 16 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 16 February 2021.

[4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.

[5] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021

[6] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

[7] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021

### 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 evidence that Laos has an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations.

There is no information available on legislation or regulations for biosecurity on the websites of the Ministry of Defence, Ministry of Health, Ministry of Agriculture and Forestry, Ministry of Science and Technology. [1, 2,3,4]

The country has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [5] There is also no information on the VERTIC Database. [6]

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, lists only the 2004 National Biosafety Framework, which focuses exclusively on genetically-modified organisms, and the National Healthcare Waste Management Decision of 2016, which governs waste management practices at laboratories. [7]

[1] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed 16 February 2021.

[2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 16 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 16 February 2021.

[4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.

[5] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021

[6] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

[7] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021

### 1.3.1d

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence that Laos has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities.

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that "there is no national plan to consolidate dangerous pathogens and toxins to a minimum number of facilities". [1] The JEE lists the main public health laboratories as the National Center for Laboratories and Epidemiology (NCLE), the Center for Malaria, Parasitology and Entomology, the National Tuberculosis Reference Laboratory and the National Animal Health Laboratory. [1] There are also international foundation laboratories in Laos: Centre d'Infectiologie Christophe Mérieux du Laos, Institut Pasteur du Laos and the Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit. [1] According to the JEE, all these mentioned laboratories have active biosafety and biosecurity management programmes and supporting biosafety, biosecurity and incident response plans. [1]

There is no publicly available evidence of a consolidation plan at the websites of the Ministry of Defence, Ministry of Health, and Ministry of Agriculture and Forestry. [2,3,4]



Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [5] There is also no information on the VERTIC Database. [6]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.
- [2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 16 February 2021.
- [3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 16 February 2021.
- [4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.
- [5] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports".  
[<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021
- [6] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.  
[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

### 1.3.1e

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

Yes = 1, No = 0

**Current Year Score: 1**

There is public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for Ebola, but evidence that the country can conduct PCR-based testing for anthrax is insufficient. Lao laboratories have the capacity to carry out classical diagnostic techniques, such as polymerase chain reaction (PCR), as detailed in the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017. The JEE also states the Laos also has the "capacity to carry out classical diagnostic techniques, such as polymerase chain reaction (PCR), is developed and specific diagnostic SOPs are in place (e.g. influenza real-time PCR [RT-PCR], dengue RT-PCR, Japanese encephalitis immunoglobulin M [IgM] testing by ELISA, and measles and rubella IgM testing by ELISA)". [1] In September 2009, the Centers for Disease Control and Prevention (CDC), a US public health institute, and the World Health Organization (WHO), turned over to Lao health authorities a real-time PCR machine and also provided assistance in establishing "first-time" testing for the detection of anthrax in human beings at the National Center for Laboratory and Epidemiology. [2] The Institut Pasteur du Laos has been mandated by the Ministry of Health to set up a laboratory plan to investigate locally suspected cases of Ebola. [3] The Institut Pasteur laboratory in the Lao capital, Vientiane, is equipped to conduct PCR testing, with trials conducted in 2014 showing a mean time to obtain a first RT-PCR result for Ebola of 5 hours, 30 minutes. [3]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.
- [2] Voice of America Editorials. October 12, 2009. "Pandemic Preparedness In Laos". [<https://editorials.voa.gov/a/a-41-2009-10-13-voa3-84656392/1481386.html>]. Accessed 16 February 2021.
- [3] Institut Pasteur du Laos. "Response to health alert". [<http://www.pasteur.la/decreed-of-the-prime-minister-in->



english/response-to-health-alert/]. Accessed 16 February 2021.

## 1.3.2 Biosecurity training and practices

### 1.3.2a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence for a standardized biosecurity training requirement for personnel working with especially dangerous pathogens, toxins, or biological materials with pandemic potential.

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that no comprehensive needs assessment for biosafety and biosecurity training has been conducted and that no credentialing or database of trained personnel exists for biosafety/biosecurity officers and security managers. [1] Standardised training is available at the main laboratories which handle dangerous pathogens, but is not mandatory: the JEE points out that the National Center for Laboratories and Epidemiology (NCLE) and the biosafety technical working group have developed a common training curriculum for all facilities housing or working with dangerous pathogens in health care facilities. [1] This curriculum is being used and adopts World Health Organization (WHO) guidelines as the underlying standard. [1] While induction and refresher training is conducted for most laboratory staff at national and some provincial facilities, district and community-level staff have very limited training. [1] The JEE recommends that Laos establish a national licensing and regulating body for biosafety and biosecurity that would create national standards and guidelines for training and certification. [1]

There is no reference to biosecurity training on the websites of the Ministry of Defence, Ministry of Health, and Ministry of Agriculture and Forestry. [2,3,4]

Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [5] There is also no information on the VERTIC Database. [6]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.

[2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 16 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.

[4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.

[5] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

[6] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

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

#### 1.3.3a

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

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

**Current Year Score: 0**

There is no publicly available evidence that 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.

There is no reference to such regulations on the websites of the Ministry of Defence, Ministry of Health or the Ministry of Agriculture and Forestry. [1,2,3]

Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [4] There is also no information on the VERTIC Database. [5]

[1] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 16 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.

[3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed November 16, 2018.

[4] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

[5] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

### 1.3.4 Transportation security

#### 1.3.4a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no public evidence that Laos has national regulations on the safe and secure transport of infectious substances (Categories A and B).

An international freight transport company, FedEx, lists import prohibitions for Laos as including infectious substances, bioproducts, and dangerous goods as defined by the International Air Transport Association but there is no mention of category A and B. [1]

There is no information on such regulations on the websites of the Ministry of Defence, Ministry of Health, Ministry of

Agriculture and Forestry, the Ministry of Public Security or the Ministry of Public Works and Transport. [2,3,4,5,6]

The Pasteur Institute in the capital, Vientiane, runs a dedicated training centre that teaches on procedures for storage and transport of biological specimens and biosafety but there is no mention of category A and B. [7]

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, recommends that Laos establish a national licensing and regulating body for biosafety and biosecurity that would create national standards and guidelines for the transportation of samples both domestically and internationally. [8]

Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [9] There is also no information on the VERTIC Database. [10]

[1] FedEx Cross Border. "Laos Prohibited and Restricted Items". [<https://crossborder.fedex.com/us/assets/prohibited-restricted/laos/index.shtml>]. Accessed 16 February 2021.

[2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 16 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 16 February 2021.

[4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.

[5] Ministry of Public Security, Lao PDR. [<http://www.laosecurity.gov.la/>]. Accessed 16 February 2021.

[6] Ministry of Public Works and Transport, Lao PDR. [<https://www.mpwt.gov.la/en/>]. Accessed 16 February 2021.

[7] Pasteur Institute. "Training center". [<http://www.pasteur.la/trainingteaching/training-center/>]. Accessed 16 February 2021.

[8] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.

[9] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

[10] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

## 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 public information available on national regulations, legislation or guidance on the cross-border transfer and end-user screening of especially dangerous pathogens and toxins in Laos.

The Pasteur Institute documents a case where snails gathered in southern Laos and suspected of containing schistosomiasis were sent to Japan for analysis: authorisation for shipping was obtained from the Ministry of Health. [1] However, no regulation or guideline is available for this process. The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao

People's Democratic Republic, conducted in 2017, recommends that Laos establish a national licensing and regulating body for biosafety and biosecurity that would create national standards and guidelines for the transportation of samples both domestically and internationally. [2] An international freight transport company, FedEx, lists import prohibitions for Laos as including infectious substances, bioproducts, and dangerous goods as defined by the International Air Transport Association although there is no evidence of cross-border transfer and end-user screening. [3]

There is no information on such regulations on the websites of the Ministry of Defence, Ministry of Health and the Ministry of Agriculture and Forestry. [4,5,6] There is no identifiable regulation document on the Food and Drug Department's online download list. [7] There is also no information on the VERTIC Database. [8] Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [9]

[1] Institut Pasteur. "SATREPS Project: Project for Development of Innovative Research Techniques in the Genetic Epidemiology of Malaria and Other Parasitic Diseases in the Lao PDR for Containment of Their Expanding Endemicity". [<http://www.pasteur.la/satreps-project-project-for-development-of-innovative-research-techniques-in-the-genetic-epidemiology-of-malaria-and-other-parasitic-diseases-in-the-lao-pdr-for-containment-of-their-expanding-endemi/>]. Accessed 16 February 2021.

[2] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 16 February 2021.

[3] FedEx Cross Border. "Laos Prohibited and Restricted Items". [<https://crossborder.fedex.com/us/assets/prohibited-restricted/laos/index.shtml>]. Accessed 16 February 2021.

[4] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 16 February 2021.

[5] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.

[6] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.

[7] Food and Drug Department, Ministry of Health, Lao PDR. "List of controled, precibed & OTC medicine" (sic). [[http://fdd.gov.la/download/contents\\_documents/1474436263List%20of%20controled,%20precibed%20&%20OTC%20medicine.pdf](http://fdd.gov.la/download/contents_documents/1474436263List%20of%20controled,%20precibed%20&%20OTC%20medicine.pdf)]. Accessed 16 February 2021.

[8] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

[9] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

## 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 for any legislation or national regulations on biosafety. The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017 states that there is no biosafety

legislation, regulations, policy or regulatory body in place. [1] The JEE reports that there is a National Biosafety Framework, developed in 2004, which focuses on genetically modified organisms and recommends that Laos establish a national licensing and regulating body for biosafety. [1] There is no evidence on the websites of the Ministry of Health, the Ministry of Agriculture and Forestry, [2,3] There is no legislation on biosafety in the documents listed under the Lao PDR on the VERTIC database. [4] Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [5]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 16 February 2021..
- [2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.
- [3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.
- [4] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.  
[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.
- [5] United Nations Office at Geneva. " Lao People's Democratic Republic. Available Confidence Building Measures Reports ".  
[<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

#### 1.4.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence for any legislation or national regulations on biosafety or an established agency responsible for the enforcement of biosafety legislation and regulations. The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017 states that there is no biosafety legislation, regulations, policy or regulatory body in place. [1] The JEE reports that there is a National Biosafety Framework, developed in 2004, which focuses on genetically modified organisms and recommends that Laos establish a national licensing and regulating body for biosafety. [1] There is no evidence on the websites of the Ministry of Health, the Ministry of Agriculture and Forestry, [2,3] There is no legislation on biosafety in the documents listed under the Lao PDR on the VERTIC database. [4] Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter.[5]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 16 February 2021..
- [2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.
- [3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.
- [4] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.  
[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.
- [5] United Nations Office at Geneva. " Lao People's Democratic Republic. Available Confidence Building Measures Reports ".

[<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

## 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 for a standardized biosafety training requirement for personnel working with especially dangerous pathogens, toxins, or biological materials with pandemic potential. The mission report for the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that no comprehensive needs assessment for biosafety and biosecurity training has been conducted and that no credentialing or database of trained personnel exists for biosafety/biosecurity officers and security managers. [1] The JEE also points out that the National Center for Laboratories and Epidemiology (NCLE) and the biosafety technical working group have developed a common biosafety and biosecurity training curriculum for all facilities housing or working with dangerous pathogens in health care facilities. [1] This curriculum is being used and adopts World Health Organization (WHO) guidelines as the underlying standard but there is no evidence that the training is mandatory. [1] While induction and refresher training is conducted for most laboratory staff at national and some provincial facilities, district and community-level staff have very limited training. [1] There is no reference to biosafety training on the websites of the Ministry of Health, or Ministry of Agriculture and Forestry [2,3]. Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [4] The JEE recommends that Laos establish a national licensing and regulating body for biosafety and biosecurity that would create national standards and guidelines for training and certification. [1] There is also no information on the VERTIC Database. [5]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. accessed on 17 February 2021.

[3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. accessed on 17 February 2021.

[4] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports ". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed on 26 February 2021.

[5] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

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

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

#### 1.5.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that Laos has conducted an assessment to determine whether dual-use research is occurring. Much of the research into dangerous pathogens, toxins, and pandemic potential is conducted in partnership with established international research institutions that are subject to audit in their home countries. These include Centre d'Infectiologie Christophe Mérieux du Laos, Institut Pasteur du Laos and the Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit. [1] According to the mission report for the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, overall capacity for research on pathogens is poor in Laos with maintenance of essential laboratory equipment limited, operational costs for core testing externally supported, and minimal capability for testing novel or emerging pathogens. [1] The JEE also states that "there is no policy for the control of dangerous pathogens across human and animal health laboratories in the country". The websites of the Ministry of Defence, Ministry of Health, Ministry of Agriculture and Forestry, and Ministry of Science and Technology, do not contain any information about dual-use research. [2,3,4,5,] There is no legislation such assessment in the documents listed under the Lao PDR on the VERTIC database [6]. Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [7]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 17 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 17 February 2021.

[4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 17 February 2021.

[5] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed on 17 February 2021.

[6] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

[7] United Nations Office at Geneva. " Lao People's Democratic Republic. Available Confidence Building Measures Reports ". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed on 26 February 2021.

#### 1.5.1b

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

Yes = 1 , No = 0



**Current Year Score: 0**

There is no publicly available evidence of legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research in Laos. The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that there is no policy for the control of dangerous pathogens across human and animal health laboratories in the country and that no biosafety and biosecurity legislation, regulations, policy or regulatory body are in place. [1] The websites of the Lao Ministry of Defence, Ministry of Health, Ministry of Agriculture and Forestry, or Ministry of Science and Technology do not contain any information about dual-use research policy. [2,3,4,5]. Traditionally health research in Laos has been supervised and monitored by the Council of Medical Sciences and the Lao Tropical and Public Health Institute (TPHI, formerly known as the National Institute of Public Health), both bodies of the Ministry of Health. [6] The TPHI and the University of Health Sciences operate the Lao PDR Health Research Portal, but this also contains no information on dual-use or dangerous pathogen research. [7]. There is no legislation on dual-use research in the documents listed under the Lao PDR on the VERTIC database [8]. Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [9] There is no research ministry in Laos.

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.

[2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 17 November 2018.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.

[4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.

[5] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed 26 February 2021.

[6] National Institute of Public Health/Council on Health Research for Development. 2006. "National Health Research System Mapping in Laos". [[https://www.healthresearchweb.org/files/NHRSmapping\\_Laos.pdf](https://www.healthresearchweb.org/files/NHRSmapping_Laos.pdf)]. Accessed 16 February 2021.

[7] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. Health Research Portal. "Governance, Policies, and Procedures for Health Research". [<http://laohrp.com/index.php/hrp/about/index/governance>]. Accessed 16 February 2021.

[8] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic.

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

[9] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports ". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021

### 1.5.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence for any agency being assigned responsibility for oversight of research with dangerous pathogens, pathogens with pandemic potential, or dual-use research in Laos. The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that there is no policy for the control of dangerous pathogens across human and animal health laboratories in the country and that no biosafety and biosecurity



legislation, regulations, policy or regulatory body are in place. [1] The websites of the Lao Ministry of Defence, Ministry of Health, Ministry of Agriculture and Forestry, or Ministry of Science and Technology do not contain any information about dual-use research policy. [2,3,4,5]. Traditionally health research in Laos has been supervised and monitored by the Council of Medical Sciences and the Lao Tropical and Public Health Institute (TPHI, formerly known as the National Institute of Public Health), both bodies of the Ministry of Health. [6] The TPHI and the University of Health Sciences operate the Lao PDR Health Research Portal, but this also contains no information on dual-use or dangerous pathogen research. [7]. There is no legislation on dual-use research in the documents listed under the Lao PDR on the VERTIC database [8]. Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995. Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [9] There is no research ministry in Laos.

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.
- [2] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed 17 November 2018.
- [3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.
- [4] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 16 February 2021.
- [5] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed 26 February 2021.
- [6] National Institute of Public Health/Council on Health Research for Development. 2006. "National Health Research System Mapping in Laos". [[https://www.healthresearchweb.org/files/NHRSmapping\\_Laos.pdf](https://www.healthresearchweb.org/files/NHRSmapping_Laos.pdf)]. Accessed 16 February 2021.
- [7] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. Health Research Portal. "Governance, Policies, and Procedures for Health Research". [<http://laohrp.com/index.php/hrp/about/index/governance>]. Accessed 16 February 2021.
- [8] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.
- [9] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

## 1.5.2 Screening guidance for providers of genetic material

### 1.5.2a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no clear evidence available that synthesized DNA must be screened before it is sold in Laos. The Lao National Biosafety Frameworks (LNBF), published in 2004, provide some administrative and technical instruments that include reporting on the handling of DNA, but do not mention the screening, synthesis or sale of DNA. [1] A biosafety law was intended to follow the LNBF but there is no evidence that in the national legislation repository that this law has been passed or promulgated. [1] There is no mention of legal requirements for DNA screening on the websites of the Ministry of Health, Ministry of Agriculture and Forestry, the Ministry of Defence or the Ministry of Public Works and Transport. [2,3,4,5] There is no legislation on synthesized DNA in the documents listed under the Lao PDR on the VERTIC database [6]. Laos has not submitted a Confidence Building Measures report on the Biological Weapons Convention to the United Nations since 1995.

Access to that report is restricted to the public, and it is unknown if it contains information on this matter. [7]

[1] Science, Technology and Environment Agency, Prime Minister's Office, Lao PDR. 25 December 2004. "Lao National Biosafety Frameworks". [[https://data.opendevelopmentmekong.net/library\\_record/lao-national-biosafety-frameworks](https://data.opendevelopmentmekong.net/library_record/lao-national-biosafety-frameworks)]. Accessed 17 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 17 February 2021.

[3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed 17 February 2021.

[4] Ministry of Defence, Lao PDR. [<http://www.mod.gov.la/>]. Accessed 17 February 2021.

[5] Ministry of Public Works and Transport, Lao PDR. [<https://www.mpwt.gov.la/en/>]. Accessed 17 February 2021.

[6] VERTIC Biological Weapons and Materials Legislation Database. Lao People's Democratic Republic. [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/l/>]. Accessed on 16 February 2021.

[7] United Nations Office at Geneva. "Lao People's Democratic Republic. Available Confidence Building Measures Reports". [<https://bwc-ecbm.unog.ch/state/lao-peoples-democratic-republic>]. Accessed 26 February 2021.

## 1.6 IMMUNIZATION

### 1.6.1 Vaccination rates

#### 1.6.1a

##### Immunization rate (measles/MCV2)

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

Current Year Score: 0

2019

World Health Organization

#### 1.6.1b

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

Yes = 1, No = 0

Current Year Score: 1

2020

OIE WAHIS database

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

### 2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

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

##### 2.1.1a

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

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

**Current Year Score: 2**

There is publicly available evidence that the national laboratory system in Laos has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests. According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, Lao national laboratories can perform nine of the ten core tests identified by WHO International Health Regulations. The JEE lists the nine tests that Laos can carry out as influenza, HIV, tuberculosis, malaria [*Plasmodium* spp.], typhoid fever [*Salmonella typhi*], dengue, measles and rubella, diarrhoea and Japanese encephalitis. [1] At least five of these tests follow the requested testing procedures: the JEE clarifies that Laos has the capacity to carry out polymerase chain reaction (PCR) testing for influenza. [1] The US President's Emergency Plan for AIDS Relief (PEPFAR) 2017 Sustainability Index and Dashboard Summary for Laos confirms that the country can perform HIV diagnosis by rapid testing, a serological test. [2] Rapid diagnostic testing for plasmodium spp. (malaria) has been used in Laos since at least 1998 when it was trialled in a study in Vang Vieng, Vientiane Province. [3] A paper by Iem, Somphavong et al., published in the BioMed Central (BMC) Infectious Diseases journal in 2013, documents smear microscopy and culture testing for mycobacterium tuberculosis in Laos. [4] Another 2013 paper, published in the Journal of Clinical Microbiology by Castonguay-Vanier et al., states that laboratories in the capital, Vientiane, are able to culture and identify *S. Typhi*. [5]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] The US President's Emergency Plan for AIDS Relief (PEPFAR). 2018. "2017 Sustainability Index and Dashboard Summary: Lao People's Democratic Republic". [<https://www.pepfar.gov/documents/organization/279508.pdf>]. Accessed on 17 February 2021.

[3] AC Labbé, DR Pillai, B Hongvangthong et al. 2000. "Diagnosis of plasmodium falciparum malaria in the Lao Peoples' Democratic Republic Using Rapid Diagnostic Assays".

[[https://path.azureedge.net/media/documents/TS\\_burgess\\_malaria\\_lao\\_pos.pdf](https://path.azureedge.net/media/documents/TS_burgess_malaria_lao_pos.pdf)]. Accessed on 17 February 2021.

[4] Iem, Vibol & Somphavong, Silaphet & Buisson, Yves & Steenkeste, Nicolas & Breyse, Franck & Chomarat, Monique & Sylavanh, Phannasinh & Nanthavong, Phouratsamy & Rajoharison, Alain & Berland, Jean-Luc & Paboriboune, Phimpha. June 2013. "Resistance of Mycobacterium tuberculosis to antibiotics in Lao PDR: First multicentric study conducted in 3 hospitals". BMC Infectious Diseases. 13[1] :275.

[[https://www.researchgate.net/publication/239941681\\_Resistance\\_of\\_Mycobacterium\\_tuberculosis\\_to\\_antibiotics\\_in\\_Lao\\_PDR\\_First\\_multicentric\\_study\\_conducted\\_in\\_3\\_hospitals](https://www.researchgate.net/publication/239941681_Resistance_of_Mycobacterium_tuberculosis_to_antibiotics_in_Lao_PDR_First_multicentric_study_conducted_in_3_hospitals)]. Accessed on 17 February 2021.

[5] Josée Castonguay-Vanier, Viengmon Davong, Latsanyphone Bouthasavong, Davanh Sengdetka, Manivone Simmalavong,

Amphayvanh Seupsavith, David A. B. Dance, Stephen Baker, Tu Le Thi Phuong, Manivanh Vongsouvath, and Paul N. Newton. January 2013. "Evaluation of a Simple Blood Culture Amplification and Antigen Detection Method for Diagnosis of Salmonella enterica Serovar Typhi Bacteremia". Journal of Clinical Microbiology; 51[1] : 142-148. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3536227/>]. Accessed on 17 February 2021.

### 2.1.1b

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

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

**Current Year Score: 0**

There is insufficient evidence of a plan or equivalent strategy document for conducting testing during a public health emergency, which includes considerations for testing for three areas: novel pathogens, scaling capacity, and defining goals for testing.

There is a Joint National Preparedness and Contingency Plan for Avian Influenza to guide its response [1]. Documented in the WHO article 2020, the steps that the country took were: "(i) Case management and isolation of cases and close contacts, testing of close contacts, (ii) A meeting was conducted between the Provincial Health Department and the Provincial Department of Agriculture and Forestry to discuss and plan for the rapid response, (iii) An epidemiological investigation is ongoing and includes with veterinarians from the Provincial Department of Agriculture and Forestry, (iv) Risk communication has been initiated for the public and healthcare workers, (v) Strengthened surveillance and disinfection of the surrounding environment, including the patient's residence and suspected exposure areas and (vi) Laboratory samples will be shared with the WHO Collaboration Centre" [2]. However, novel pathogens are not mentioned.

There is a Plan of Action for Disaster Risk Reduction and Management in Agriculture (2014-2016) and the Inter-Agency Contingency Plan (September 2019) which show that the country has an established mechanism to guide the response for the event of an emergency although there is no evidence of conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing. [3,4]

The country has a specific testing strategy for COVID-19. The country prepared to expand its readiness in three areas: location, human resources and medical equipment. In term of capacity, it plans to train 24 doctors a day to be ready to station at temporary sites [5].

[1] OEI 2020, Joint National Preparedness and Contingency Plan for Avian Influenza. [<https://rr-asia.oie.int/wp-content/uploads/2020/01/lao-pdr.pdf>]. Accessed on 28 February 2021.

[2] WHO 2020, Avian Influenza A(H5N1)- Lao People's Democratic Republic. [<https://www.who.int/csr/don/17-november-2020-ah5n1-lao/en>]. Accessed on 28 February 2021.

[3] Ministry of Agriculture and Forestry 2014. [[http://www.fao.org/fileadmin/user\\_upload/FAO-countries/Laos/docs/PoA\\_Lao.pdf](http://www.fao.org/fileadmin/user_upload/FAO-countries/Laos/docs/PoA_Lao.pdf)]. Accessed on 28 February 2021.

[4] Inter-agency Contingency Plan. [[https://reliefweb.int/sites/reliefweb.int/files/resources/lao\\_pdr\\_inter-agency\\_contingency\\_plan\\_3sep19.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/lao_pdr_inter-agency_contingency_plan_3sep19.pdf)]. Accessed on 28 February 2021.

[5] Centre of Information and Education for Health, Ministry of health, 2021, COVID 19 Response plan, <https://www.facebook.com/CIEH.MoH.Lao/videos/1405000593199424>, accessed 1 May 2021

## 2.1.2 Laboratory quality systems

### 2.1.2a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence Laos has 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]).

There is no evidence that the National Center for Laboratory and Epidemiology (NCLE), which is the national reference laboratory in Laos, is accredited. According to the Joint External Evaluation for Laos (JEE), conducted in February 2017, no laboratories in Laos have valid ISO 17025, 15189 or 17025 accreditation. [1]

In 2019, The Center of Infectiology Lao Christophe Mérieux in Vientiane, Laos, receives accreditation for ISO 15189:2012 and ISO 15190:2003 standards for HIV viral load testing [2].

There is no evidence on the websites of the Ministry of Health and Ministry of Agriculture [3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] The Center of Infection Lao Christophe Merieux 2019, The Center of Infection Lao Christophe Merieux, obtains accreditation for two ISO Standards. [<https://www.fondation-merieux.org/en/news/the-center-of-infectiology-lao-christophe-merieux-first-laboratory-in-laos-to-obtain-accreditation-for-two-iso-standards>]. Accessed on 17 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.

### 2.1.2b

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is publicly available evidence that Laos has a national laboratory that serves as a reference facility which is subject to external quality assurance review. There are external quality assurance (EQA) programmes for Lao laboratories, including for the national reference laboratory, according to the World Health Organization (WHO) Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017. [1] The JEE says that Lao laboratories participate in several international EQA programmes and that the national reference laboratory, the National Center for Laboratory and Epidemiology has been accredited by WHO for testing of priority diseases such as influenza, measles, rubella and Japanese encephalitis. [1] National laboratory quality standards were drafted in 2016 and the Laboratory Quality Management System has been implemented in five provincial laboratories and selected central laboratories using the Laboratory Quality Stepwise Implementation tool. [1]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

## 2.2 LABORATORY SUPPLY CHAINS

### 2.2.1 Specimen referral and transport system

#### 2.2.1a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no available evidence that Laos has a national specimen transport system in place.

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that Laos has standardised standard operating procedures (SOPs) for specimen collection, packaging and transport and that a specimen referral network is documented in the Operational Guidelines for Health Laboratory Networking. [1] According to the JEE, these guidelines cover transport of specimens "from the peripheral level to national laboratories and describe each of the tests necessary to detect and confirm etiologies for all the country's priority diseases including influenza, dengue, diarrhoea, measles and rubella, Japanese encephalitis and multidrug-resistant tuberculosis". [1] The JEE rates Laos's specimen transportation and packaging specifications as in compliance with United Nations standards. [1] However, there is no mention of a transport system and the JEE recommends that Laos establish a national licensing and regulating body for biosafety and biosecurity that would create national standards and guidelines for packaging and transport of samples both domestically and internationally. [1] It also describes the sustainability of the laboratory referral system as vulnerable because specimen transport costs are currently supported by external partners. [1]

No details for a national referral and transport system are given on the websites of the Ministry of Health, Ministry of Agriculture and Forestry and Ministry of Public Work and Transport [2,3,4]

In January 2019 the US Embassy in Laos advertised for a service provider able to conduct "human specimen collection, packing and transportation from project sites at provincial levels to laboratory in Vientiane". [5]

In October 2020, PanAust's Lao-registered Company, Phu Bia Mining (PBM) donated Laos' first mobile medical sample collection unit valued US\$68,000 to the Government of Laos in Vientiane. The mobile sample collection unit will be used by the Lao National Center for Laboratory and Epidemiology (NCLE) to collect COVID-19 and other specimens for laboratory testing across the country, particularly from those living in remote Provinces. [6]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 17 February 2021.

[3] Ministry of Agriculture and Forestry. [<http://www.maf.gov.la/>]. Accessed on 17 February 2021.

[4] Ministry of Public Works and Transport. [<https://www.mpwt.gov.la/en/>]. Accessed on 17 February 2021.

[5] Embassy of the United States of America to the Lao PDR. "Scope of Work". 30 January 2019.

[<https://la.usembassy.gov/wp-content/uploads/sites/85/Human-specimen-testing-charge-at-Laboratory-in-Vientiane.pdf>].

Accessed on 17 February 2021.

[6] PanAust 2020, PanAust donates Laos' first mobile sample collection unit. [<https://panaust.com.au/node/1842>]. Accessed

on 17 February 2021.

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

Since the Covid-19 pandemic, WHO with support from donor countries has provided 10 provincial laboratories to build capacity to test COVID-19 by portable PCR. In Champasak Province, for example, WHO set up a laboratoes which could test 200 COVID-19 samples daily by real-time PCR. There is a plan to expand to 7 more provinces. In addition, the Ministry of Health received support from the bilateral cooperation with other countries. The total testing capacity nationwide has been increased to 900-1000 tests per day [1]. However, there is no information on the national plan for rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak.

There exists a Joint National Preparedness and Contingency Plan for Avian Influenza to guide its response [2]. Documented in the WHO article 2020, the steps that country took were: "(i) Case management and isolation of cases and close contacts, Testing of close contacts, (ii) A meeting was conducted between the Provincial Health Department and the Provincial Department of Agriculture and Forestry to discuss and plan for the rapid response, (iii) An epidemiological investigation is ongoing and includes with veterinarians from the Provincial Department of Agriculture and Forestry, (iv) Risk communication has been initiated for the public and healthcare workers, (v) Strengthened surveillance and disinfection of the surrounding environment, including the patient's residence and suspected exposure areas and (vi) Laboratory samples will be shared with the WHO Collaboration Centre" [2]. There is no information on authorization or licensing of laboratories in the plan.

There is no information on authorization or licensing of laboratories available in the websites of Ministry of Health and Ministry of Agriculture and Forestry [3,4].

[1] WHO."WHO works with the National Center of Laboratory and Epidemiology to strengthen COVID-19 testing capacity during this pandemic". [<https://www.who.int/laos/news/detail/10-09-2020-who-works-with-the-national-centre-of-laboratory-and-epidemiology-to-strengthen-covid-19-testing-capacity-during-this-pandemic/>]. Accessed on 17 February 2021.

[2] WHO 2020, Avian Influenza A(H5N1)- Lao People's Democratic Republic. [<https://www.who.int/csr/don/17-november-2020-ah5n1-lao/en/>]. Accessed on 17 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 17 February 2021.

[4] Ministry of Agriculture and Forestry. [<http://www.maf.gov.la/>]. Accessed on 17 February 2021.



## 2.3 REAL-TIME SURVEILLANCE AND REPORTING

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

#### 2.3.1a

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

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

**Current Year Score: 1**

There is evidence that Laos is conducting ongoing event-based surveillance and analysis for infectious disease. The World Health Organization (WHO) Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that the Lao National Center for Laboratory and Epidemiology (NCLE) has both indicator-based and event-based surveillance systems with demonstrated capacity to detect public health threats. It states that these surveillance systems are "closely linked to human resource development through participation of FEPT fellows in surveillance and response functions. Information generated through the surveillance system is shared between Ministry of Health departments, administrative levels, sectors and partners to inform public health action." [1] A 2014 paper published by the WHO documents the development of the EWARN electronic warning system for cases of dengue fever in 2008. [2] Moreover, according to the JEE, "While the current indicator-based surveillance system does not transfer data from the district or provincial levels to the central level in real-time, the reporting system is considered appropriate given limitations in information technology infrastructure, especially at the local level. Urgent events are communicated by telephone, otherwise reporting is on a weekly basis". [1]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.

[2] Bouaphanh Khampapongpane, Hannah C Lewis, Pakapak Ketmayoon et al. March 2014. "National dengue surveillance in the Lao People's Democratic Republic, 2006-2012: epidemiological and laboratory findings". Western Pacific Surveillance Response Journal. 2014 Jan-Mar; 5[1] : 7-13. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3984965/>]. Accessed 16 February 2021.

#### 2.3.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence that Laos has reported a potential public health emergency of international concern to the WHO within the last two years, including for Covid-19. There is no record of an outbreak reported on the Diseases outbreak news page of the WHO, on the WHO country page for Lao and on the website of the Ministry of Health. [1,2, 3]

[1] World Health Organization (WHO). "Emergencies preparedness, response. Lao People's Democratic Republic. Disease outbreak news". [<http://www.who.int/csr/don/archive/country/laos/en/>]. Accessed 16 February 2021.



[2] WHO. "Countries: Lao People's Democratic Republic". [<http://www.who.int/countries/lao/en/>]. Accessed 16 February 2021.

[3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 16 February 2021.

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

### 2.3.2a

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence that the government of Laos operates an electronic reporting surveillance system at both the national and the sub-national level.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, "the indicator-based surveillance system, the Lao Early Warning Alert and Response Network (Lao EWARN), has been in place since 2008 and reports data on 17 notifiable diseases and syndromes from the provinces to the central level on a weekly basis. The flexibility of the system was demonstrated through the introduction of daily reporting during a dengue outbreak in 2013." It also notes, "several vertical indicator-based surveillance programmes, such as those for tuberculosis, malaria and HIV, use electronic real-time reporting systems from district level". [1] However, it also notes, as a challenge, that "Indicator-based surveillance reports from province to districts are paper-based, which adversely impacts timelines". The JEE also notes that Lao's system is a mixture of paper and electronic surveillance but it does feed into the national electronic system: "While the current indicator-based surveillance system does not transfer data from the district or provincial levels to the central level in real-time, the reporting system is considered appropriate given limitations in information technology infrastructure, especially at the local level. Urgent events are communicated by telephone, otherwise reporting is on a weekly basis. However, several vertical indicator-based surveillance programmes, such as those for tuberculosis, malaria and HIV, use electronic real-time reporting systems from district level". [1]

There is no additional information on an electronic reporting surveillance system available on the website of the Ministry of Health [2].

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 17 February 2021.

### 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 insufficient evidence that the government of Laos operates an electronic reporting surveillance system at both the national and the sub-national level that collects ongoing or real-time laboratory data.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, "the indicator-based surveillance system, the Lao Early Warning Alert and Response Network (Lao EWARN), has been in place since 2008 and reports data on 17 notifiable diseases and syndromes from the provinces to the central level on a weekly basis. The flexibility of the system was demonstrated through the introduction of daily reporting during a dengue outbreak in 2013." It also notes, "several vertical indicator-based surveillance programmes, such as those for tuberculosis, malaria and HIV, use electronic real-time reporting systems from district level". [1] However, it also notes, as a challenge, that "Indicator-based surveillance reports from province to districts are paper-based, which adversely impacts timelines".

There is no information on an electronic reporting surveillance system available on the websites of the Ministry of Health [2].

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 17 February 2021.

## 2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

### 2.4.1 Coverage and use of electronic health records

#### 2.4.1a

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

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

**Current Year Score: 0**

There is no public evidence that electronic health records (EHR) are commonly used in Laos.

The World Health Organization Global Observatory for eHealth published a 2015 Atlas entry on Laos which shows that there is no national EHR system and no legislation governing the use of EHR system. [1] In addition, there is no data for use of EHR in primary, secondary or tertiary health care facilities on the website of the Ministry of Health. [2]

The Lao-Luxembourg Health Sector Support Programme Phase II (LAO/027) has been working on introducing the Electronic Medical Record system in the three provincial hospitals (Vientiane, Bolikhamxay and Khammouane) and expected to completed in the year 2022. This process could make the data more reliable and available more quickly for epidemiological and management purposes. Currently, patient health information is being processed manually in various hospitals across the country. [3]

[1] World Health Organization Global Observatory for eHealth. "Lao People's Democratic Republic".

[[www.who.int/goe/publications/atlas/2015/lao.pdf](http://www.who.int/goe/publications/atlas/2015/lao.pdf)]. Accessed 16 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed 26 February 2021.

[3] LuxDev 2021, LAOS - Digitalisation in the Health Care Sector. [<https://luxdev.lu/en/news/sector/health>]. Accessed 26 February 2021.

### 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 public evidence that the national public health system has access to electronic health records of individuals in Laos.

The World Health Organization Global Observatory for eHealth published a 2015 Atlas entry on Laos which shows that there is no national EHR system and no legislation governing the use of EHR system. [1] In addition, there is no data for use of EHR in primary, secondary or tertiary health care facilities on the website of the Ministry of Health. [2]

The Lao-Luxembourg Health Sector Support Programme Phase II (LAO/027) has been working on introducing the Electronic Medical Record system in the three provincial hospitals (Vientiane, Bolikhamxay and Khammouane) and expected to completed in the year 2022. This process could make the data more reliable and available more quickly for epidemiological and management purposes. Currently, patient health information is being processed manually in various hospitals across the country. [3]

[1] World Health Organization Global Observatory for eHealth. "Lao People's Democratic Republic".

[www.who.int/goe/publications/atlas/2015/lao.pdf]. Accessed 16 February 2021.

[2] Ministry of Health, Lao PDR. [http://www.moh.gov.la/]. Accessed 26 February 2021.

[3] LuxDev 2021, LAOS - Digitalisation in the Health Care Sector. [https://luxdev.lu/en/news/sector/health]. Accessed 26 February 2021.

### 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 that data standards are employed to ensure data is comparable as there is no evidence that Laos has EHRs in place.

The World Health Organization Global Observatory for eHealth published a 2015 Atlas entry on Laos which shows that there is no national EHR system and no legislation governing the use of EHR system. [1] In addition, there is no data for use of EHR in primary, secondary or tertiary health care facilities on the website of the Ministry of Health. [2]

The Lao-Luxembourg Health Sector Support Programme Phase II (LAO/027) has been working on introducing the Electronic Medical Record system in the three provincial hospitals (Vientiane, Bolikhamxay and Khammouane) and expected to completed in the year 2022. This process could make the data more reliable and available more quickly for epidemiological and management purposes. Currently, patient health information is being processed manually in various hospitals across the country. [3]

[1] World Health Organization Global Observatory for eHealth. "Lao People's Democratic Republic".

[www.who.int/goe/publications/atlas/2015/lao.pdf]. Accessed 16 February 2021.

[2] Ministry of Health, Lao PDR. [http://www.moh.gov.la/]. Accessed 26 February 2021.

[3] LuxDev 2021, LAOS - Digitalisation in the Health Care Sector. [<https://luxdev.lu/en/news/sector/health>]. Accessed 26 February 2021.

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

### 2.4.2a

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence of established mechanisms at the relevant ministries responsible for animal, human and wildlife surveillance to share data although the Ministry of Health shares weekly surveillance reports with relevant departments and partners. According to the Joint External Evaluation for Laos (JEE), conducted in February 2017, weekly surveillance reports are sent to the Ministry of Agriculture and Forestry, development partners (e.g. Institut Pasteur du Laos, United States Centers for Disease Prevention and Control and WHO) and international nongovernmental organizations. [1] The JEE also states that "in addition to being circulated via weekly surveillance reports, laboratory and sentinel surveillance data are rapidly shared with relevant stakeholders during outbreaks". The reports are also posted on the website of the National Center for Laboratories and Epidemiology. [2] Annual Surveillance, Risk Assessment and Response Workshops are held to review the surveillance and response system and to develop recommendations for improvements. [3] However, the JEE notes that sharing of information between animal health and human health sectors occurs largely during outbreaks and is mostly ad hoc. [1] While a memorandum of understanding between the Ministry of Health and the Ministry of Agriculture and Forestry covers information-sharing arrangements including surveillance data and laboratory findings for priority zoonotic diseases such as avian influenza and rabies, the JEE concludes that this mechanism is "not fully operational and faces challenges sustaining its functions and relevance". [1] There is no mention of information-sharing on zoonotic diseases on the website of the Lao Tropical and Public Health Institute. [4] There is no further evidence on the website of the Ministry of Health. [5]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2017.35-eng.pdf>]. Accessed 16 February 2021.

[2] National Center for Laboratories and Epidemiology, Lao PDR. 05/07/2018. "Weekly surveillance report 2018".

[<http://www.ncle.gov.la/weekly-surveillance-report-en/weekly-surveillance-report-2018/>]. Accessed 16 February 2021.

[3] Vientiane Times. March 2018. "Annual National Surveillance, Risk Assessment and Response Workshop of Notifiable Selected Diseases". [<http://www.ncle.gov.la/latest-news-and-activities/annual-national-surveillance-risk-assessment-and-response-workshop-of-notifiable-selected-diseases-march-2018/>]. Accessed 16 February 2021.

[4] Lao Tropical and Public Health Institute. [<https://www.nioph.gov.la/en/>]. Accessed 16 February 2021.

[5] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

## 2.4.3 Transparency of surveillance data

### 2.4.3a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient evidence that Lao makes de-identified health surveillance data on infectious diseases publicly available via reports (or other formats) on government websites. There is no evidence of the availability of de-identified health surveillance data in the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017. [1] There is also no further evidence on the websites of the Ministry of Health and Ministry of Agriculture. [2,3]

The government however makes information available on Covid-19 and contact tracing on their dedicated Facebook page and website. The de-identified Covid-19 data published includes the confirmed number of people tested, number of positive confirmed cases, number of Covid-19 related deaths, and the number of recovered cases. [4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.

[4] Ministry of Health. COVID Daily Report. [<https://www.covid19.gov.la/index.php>] accessed on 18 February 2021.

### 2.4.3b

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is publicly available evidence that the country makes de-identified Covid-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar). The Government makes information on Covid-19 available on their dedicated Facebook page and website [1]. The de-identified Covid-19 data published by Laos includes the confirmed number of people tested, the number of positive confirmed cases, the number of Covid-19 related deaths, and the number of recovered cases. [2,3] Laos' National Taskforce Committee which involves multi-sectors is established to provide guidance on Covid-19 [4].

[1] Centre of Information and Education for Health Facebook. [<https://www.facebook.com/CIEH.MoH.Lao>] Accessed on 18 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Ministry of Health. COVID Daily Report. [<https://www.covid19.gov.la/index.php>]. Accessed on 18 February 2021.

[4] Laos' National Taskforce Committee. [<https://www.covid19.gov.la/index.php?r=site/contents&id=34>]. Accessed on 18 February 2021.

## 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 public evidence of a provision for protecting the confidentiality of information generated through health surveillance activities in Laos.

While Article 32 of the English translation of the 2005 and updated version 2014 "Law on Health Care" states that all health-care professionals shall "strictly maintain confidentiality in respect of illnesses or details of patients" there is no mention in this, or in the 2011 and the updated version of the 2019 "Law on Hygiene, Disease Prevention and Health Promotion", of protection of information during surveillance or surveys. [1,2,3,4]

There is no mention of the confidentiality of information regarding health surveillance on the website of the Ministry of Health. [5]

The World Health Organization (WHO) Global Observatory for eHealth published a 2015 atlas entry on Laos which shows that the Lao legal framework does not provide protection for the privacy of individuals' health-related data held in electronic format. [6] Confidentiality within the health sector is generally recognised as a problem in Laos.

A 2014 Ministry of Health/WHO report acknowledges medical staff often do not maintain patient confidentiality that common complaints include "breaches of confidentiality concerning information in medical records". [7]

In May 2017 the government enacted an Electronic Data Protection Law which states that general data can be circulated as long as the source is indicated but that specific information is not to be circulated without authorisation from the owner. [8]

[1] National Assembly No. 09/NA. 9 November 2005. "Law on Health Care".[[https://www.wto.org/english/thewto\\_e/acc\\_e/lao\\_e/WTACCLAO29\\_LEG\\_3.pdf](https://www.wto.org/english/thewto_e/acc_e/lao_e/WTACCLAO29_LEG_3.pdf)]. Accessed on 11 March 2021.

[2] National Assembly No. 58/NA. 24 December 2014. "Law on Health Care". [<https://data.opendevlopmentmekong.net/dataset/f8f2dc7a-d8fc-4059-b2df-a05f1023d921/resource/148542ea-a795-4194-b470-58cae6829b5f/download/-pdf>]. Accessed on 11 March 2021.

[3] National Assembly. No. 08/NA. 21 December 2011. "Law on Hygiene, Disease Prevention and Health Promotion"(Unofficial translation). [[http://laoofficialgazette.gov.la/kcfinder/upload/files/Hygiene,%20Disease%20Prevention%20and%20Health%20promotion%20Law%20%20\(%20Amended%20\).pdf](http://laoofficialgazette.gov.la/kcfinder/upload/files/Hygiene,%20Disease%20Prevention%20and%20Health%20promotion%20Law%20%20(%20Amended%20).pdf)]. Accessed on 11 March 2021.

[4] National Assembly. No. 73/NA. 23 November 2019, "Law on Hygiene, Disease Prevention and Health Promotion", [<https://www.laoofficialgazette.gov.la/kcfinder/upload/files/73%E0%BA%AA%E0%BA%9E%E0%BA%8A2019.pdf>]. Accessed on 11 March 2021.

[5] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 11 March 2021.

[6] World Health Organization Global Observatory for eHealth. "Lao People's Democratic Republic". [[www.who.int/goe/publications/atlas/2015/lao.pdf](http://www.who.int/goe/publications/atlas/2015/lao.pdf)]. Accessed 16 February 2021.

[7] Kongsap Akkhavong, Chanthakhath Paphassarang et al. 2014. "Lao People's Democratic Republic Health System Review". Ministry of Health/World Health Organization. Asia Pacific Observatory on Health Systems and Policies. Health Systems in Transition Vol. 4 No.1 2014. [[apps.who.int/iris/bitstream/10665/207762/1/9789290616481\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/207762/1/9789290616481_eng.pdf)]. Accessed on 11 March 2021.

[8] National Assembly, Data Protection Law 2017. [<http://laoofficialgazette.gov.la/kcfinder/upload/files/0918570.pdf>]. Accessed on 11 March 2021.

#### 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 public evidence of 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).

While Article 32 of the English translation of the 2005 and updated version 2014 "Law on Health Care" states that all health-care professionals shall "strictly maintain confidentiality in respect of illnesses or details of patients" there is no mention in this, or in the 2011 and the updated version of the 2019 "Law on Hygiene, Disease Prevention and Health Promotion", of protection of information during surveillance or surveys. [1,2,3,4]

There is no mention of the confidentiality of information regarding health surveillance on the website of the Ministry of Health. [5]

The World Health Organization (WHO) Global Observatory for eHealth published a 2015 atlas entry on Laos which shows that the Lao legal framework does not provide protection for the privacy of individuals' health-related data held in electronic format. [6] Confidentiality within the health sector is generally recognised as a problem in Laos.

A 2014 Ministry of Health/WHO report acknowledges medical staff often do not maintain patient confidentiality that common complaints include "breaches of confidentiality concerning information in medical records". [7]

In May 2017 the government enacted an Electronic Data Protection Law which states that general data can be circulated as long as the source is indicated but that specific information is not to be circulated without authorisation from the owner. [8]

[1] National Assembly No. 09/NA. 9 November 2005. "Law on Health Care". [[https://www.wto.org/english/thewto\\_e/acc\\_e/lao\\_e/WTACCLAO29\\_LEG\\_3.pdf](https://www.wto.org/english/thewto_e/acc_e/lao_e/WTACCLAO29_LEG_3.pdf)]. Accessed on 11 March 2021.

[2] National Assembly No. 58/NA. 24 December 2014. "Law on Health Care". [<https://data.opendevelopmentmekong.net/dataset/f8f2dc7a-d8fc-4059-b2df-a05f1023d921/resource/148542ea-a795-4194-b470-58cae6829b5f/download/-pdf>]. Accessed on 11 March 2021.

[3] National Assembly. No. 08/NA. 21 December 2011. "Law on Hygiene, Disease Prevention and Health Promotion"(Unofficial translation).

[[http://laoofficialgazette.gov.la/kcfinder/upload/files/Hygiene,%20Disease%20Prevention%20and%20Health%20promotion%20Law%20%20\(%20Amended%20\).pdf](http://laoofficialgazette.gov.la/kcfinder/upload/files/Hygiene,%20Disease%20Prevention%20and%20Health%20promotion%20Law%20%20(%20Amended%20).pdf)]. Accessed on 11 March 2021.

[4] National Assembly. No. 73/NA. 23 November 2019, "Law on Hygiene, Disease Prevention and Health Promotion", [<https://www.laoofficialgazette.gov.la/kcfinder/upload/files/73%E0%BA%AA%E0%BA%9E%E0%BA%8A2019.pdf>]. Accessed on 11 March 2021.

[5] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 11 March 2021.

[6] World Health Organization Global Observatory for eHealth. "Lao People's Democratic Republic". [[www.who.int/goe/publications/atlas/2015/lao.pdf](http://www.who.int/goe/publications/atlas/2015/lao.pdf)]. Accessed 16 February 2021.

[7] Kongsap Akkhavong, Chanthakhath Paphassarang et al. 2014. "Lao People's Democratic Republic Health System Review". Ministry of Health/World Health Organization. Asia Pacific Observatory on Health Systems and Policies. Health Systems in



Transition Vol. 4 No.1 2014. [[apps.who.int/iris/bitstream/10665/207762/1/9789290616481\\_eng.pdf](https://apps.who.int/iris/bitstream/10665/207762/1/9789290616481_eng.pdf)]. Accessed on 11 March 2021.

[8] National Assembly, Data Protection Law 2017. [<http://laoofficialgazette.gov.la/kcfinder/upload/files/0918570.pdf>]. Accessed on 11 March 2021.

## 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: 2**

There is publicly available evidence that the government of Laos has made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region for more than one disease. Laos has multilateral regional and bilateral reporting agreements with neighbouring countries through the Mekong Basin Disease Surveillance consortium. The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, documents a "memorandum of understanding (MOU) between health ministries of the six Mekong Basin countries on the Mekong Basin Disease Surveillance consortium (Cambodia, China, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam)". [1] The original Mekong Basin Disease Surveillance MOU states that the scope of the cooperation includes information exchange, joint outbreak responses and other joint activities specifically for a list of priority diseases, "vaccine-preventable diseases", emerging diseases and "to any public health emergencies of international concern". Point 2 of the MoU clearly specify that "The priority diseases are HIV/AIDS, Plague, TB, Malaria, Severe diarrhea (including cholera), Vaccine Preventable Diseases, Rabies, Emerging diseases like SARS and highly Pathogenic Avian Influenza e.g H5N1, H7N9, H5N6 and others influenza transmitted from animal to human and outbreak of emerging/re-emerging infectious diseases with global, regional and sub-national significant[2]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] Mekong Basin Disease Surveillance (MBDS). "MBDS: Memorandum of Understanding". [<http://www.mbdnet.org/mbds-memorandum-of-understanding/>]. Accessed on 17 February 2021.

## 2.5 CASE-BASED INVESTIGATION

### 2.5.1 Case investigation and contact tracing

#### 2.5.1a

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

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



**Current Year Score: 0**

There is no public evidence of a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of an active or future public health emergency.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, an emergency operation center has been established in the Ministry of Health to coordinate response operations in the event of an emergency. However, there is no information on contact tracing mentioned in the report. [1]

There is no further evidence on the website of the Ministry of Health. [2]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 2.5.1b

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

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

**Current Year Score: 0**

There is no public evidence that Laos provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, an emergency operation center has been established in the Ministry of Health to coordinate response operations in the event of an emergency. However, there is no information on wraparound services mentioned in the report. [1]

There is no further evidence on the website of the Ministry of Health or the Ministry of Labour and Social Welfare. [2,3]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 28 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Ministry of Labour and Social Welfare. [<http://www.molsw.gov.la/>]. Accessed on 28 February 2021.

### 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 that the country makes de-identified data on contact tracing efforts for Covid-19 (including the percentage of new cases from identified contacts) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar).

However, there is publicly available evidence that the country makes de-identified Covid-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar). The Government makes information on Covid-19 available on their dedicated Facebook page and website [1]. The de-identified Covid-19 data published by Laos includes the confirmed number of people tested, the number of positive confirmed cases, the number of Covid-19 related deaths, and the number of recovered cases. [2,3] Laos' National Taskforce Committee which involves multi-sectors is established to provide guidance on Covid-19 [4].

[1] Centre of Information and Education for Health Facebook. [<https://www.facebook.com/CIEH.MoH.Lao>] Accessed on 18 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Ministry of Health. COVID Daily Report. [<https://www.covid19.gov.la/index.php>]. Accessed on 18 February 2021.

[4] Laos' National Taskforce Committee. [<https://www.covid19.gov.la/index.php?r=site/contents&id=34>]. Accessed on 18 February 2021.

## 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 that there is a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of an active or future public health emergency.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, the country scores a "4" for the Public Health and Security authorities which includes border control. The national committee is an existing mechanism through which the Ministry of Health can coordinate on the public health emergency and the guideline and the standard of operation exist at points of entry, with identified points of contact and trigger for information sharing between public health and, animal health and security authorities [1]

According to the 2017 Law on Prevention and Control of Communicable Disease, the country has public health coordination in place in the event of an emergency. Article 29 covers the prevention at the border Prevention and Control of Communicable Disease and how to handle when cases are confirmed [2]. There is no further evidence on the website of the Ministry of Health. [3]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17–24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 28 February 2021.
- [2] National Assembly 2017, Law on Prevention and Control of Communicable Disease.  
[<https://data.opendevlopmentmekong.net/dataset/3555ecd0-142c-4dea-b4ff-864f74f8e3d4/resource/2cc042a8-7817-4805-9185-96de95b194ff/download/-.pdf>]. Accessed on 28 February 2021.
- [3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

## 2.6 EPIDEMIOLOGY WORKFORCE

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

#### 2.6.1a

Does the country meet one of the following criteria?

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

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

**Current Year Score: 1**

Laos has a national Field Epidemiology Training Programme (FETP) in place and also holds regular in-service Field Epidemiology Training Programme for Veterinarians (FETPV). According to the Joint External Evaluation for Laos (JEE), conducted in February 2017, Laos established a one-year modified FETP in February 2009. Each year, eight trainees from national and provincial levels are selected to participate in the programme from human health, animal health and other related sectors. At the time data was collected for the last JEE published for Laos, in early 2017, the FETP alumni network numbered 55 graduates, including at least one graduate from each of the 18 provinces of Lao People's Democratic Republic. [1]

Lao health professionals have previously attended FETP courses in Thailand. [2]

A Food and Agriculture Office of the United Nations (FAO) Emergency Centre for Transboundary Animal Diseases documents Lao para-veterinarians attending FETPV training courses in Thailand. [3]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.
- [2] Field Epidemiology Training Programme (FETP) Thailand. "Training Course on International FETP Training for Trainer (IFETP Training for Trainer)".  
[[http://www.interfetpthailand.net/course\\_index.php?1c092a1b53a7a471fe7c04735dad699b=training\\_trainer](http://www.interfetpthailand.net/course_index.php?1c092a1b53a7a471fe7c04735dad699b=training_trainer)]. Accessed on 17 February 2021.
- [3] Food and Agriculture Office of the United Nations (FAO) Regional Office for Asia and the Pacific. Emergency Centre for

Transboundary Animal Diseases. 2011. "ECTAD-RAP News May-Jun 2011".  
[[www.fao.org/docrep/014/al909e/al909e00.pdf](http://www.fao.org/docrep/014/al909e/al909e00.pdf)]. Accessed on 17 February 2021.

### 2.6.1b

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

Yes = 1 , No = 0

**Current Year Score: 1**

Laos has regular in-service Field Epidemiology Training Programmes for Veterinarians (FETPV), according to the Joint External Evaluation for Laos (JEE), conducted in February 2017. [1] The webpage for Thailand's FETP programme also notes the inclusion of veterinarians in the program. [2] The JEE also states there is ad hoc in-service training to allow the animal health workforce to strengthen their capabilities. [1] However, the JEE notes that while animal health workers participate in each cohort of FETP and FETPV, their numbers are inadequate to meaningfully contribute to surveillance and response to zoonotic diseases, especially at provincial and district levels. [1] A Food and Agriculture Office of the United Nations (FAO) Emergency Centre for Transboundary Animal Diseases documents Lao para-veterinarians attending FETPV training courses in Thailand, including at Khon Kaen University, Thailand, in June 2011. [3]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] International Field Epidemiology Training Program - Thailand. "Lao PDR Field Epidemiology Training Programme".

[<https://www.tephinet.org/training-programs/lao-pdr-field-epidemiology-training-program>]. Accessed on 17 February 2021.

[3] A Food and Agriculture Office of the United Nations (FAO) Regional Office for Asia and the Pacific. Emergency Centre for Transboundary Animal Diseases. 2011. [<http://www.fao.org/3/al841e/al841e00.pdf>]. Accessed on 17 February 2021.

## 2.6.2 Epidemiology workforce capacity

### 2.6.2a

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

Yes = 1 , No = 0

**Current Year Score: 1**

2020

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

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

### 3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

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

##### 3.1.1a

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

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

**Current Year Score: 1**

There is insufficient evidence that Laos has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential, although there is evidence of disease-specific plans.

According to the World Health Organization (WHO) Joint External Evaluation for Laos (JEE), conducted in February 2017, Laos has developed a series of disease-specific preparedness and response plans, including for Ebola, MERS-CoV, Zika, meningitis, pandemic influenza, avian influenza and dengue. [1] The JEE says that "all of these plans have been implemented, tested by simulation exercises, drills and real events, and have been updated regularly". [1]

In October 2014 the national work plan was tested through a simulation exercise conducted to assess Laos's readiness to detect, respond and contain imported cases of Ebola. [2] The JEE also reports that a simulation exercise was held for containment of Middle East respiratory syndrome coronavirus (MERS-CoV) in 2015, an exercise that included activation of the emergency operations centre, and that an avian influenza table-top exercise was carried out in 2014. [1] According to the International Federation of Red Cross and Red Crescent, "the National Pandemic Influenza Response Plan for the Health Sector addresses how responsibilities are to be divided between provincial and central level authorities in the health sector" [3]. The JEE states that the national workplan was revised in 2015 and that it has eight key areas, including "public health emergency preparedness using a multisectoral approach". [1] According to a summary of the plan presented in May 2018, an implementation review was due in 2018. [4] In late 2016 the Ministry of Health's Department of Communicable Disease Control (DCDC) and Ministry of Agriculture and Forestry's Department of Livestock and Fisheries (DLF) announced a National Five-Year Roadmap to build capacity for strengthened prevention, detection and response to emerging infectious disease threats with pandemic potential. [5] The Ministry of Health has published a National Strategic Plan for Malaria Control and Elimination 2016-2020 [6] and National Tuberculosis Control Program, National TB Strategic Plan 2017-2020 [7] The Laos WHO Country Cooperation Strategy 2017-2021 also mentions the National Work Plan for Emerging Infectious Diseases and Public Health Emergencies 2016-2020. However, this document is not available online. [8] There is no further evidence on the website of the Ministry of Health. [9]

[1] World Health Organization (WHO). February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 25 February 2021.

[2] WHO. 14 May 2015. "WHO support the Ministry of Health in annual monitoring and evaluation exercise to manage emerging disease threats and public health emergencies".

[[http://www.wpro.who.int/laos/mediacentre/releases/2015/20150514\\_apsed\\_ihr\\_me\\_review\\_2015/en/](http://www.wpro.who.int/laos/mediacentre/releases/2015/20150514_apsed_ihr_me_review_2015/en/)]. Accessed on 17 February 2021.

[3] International Federation of Red Cross and Red Crescent Societies (IFRC). 2009. "Legal Preparedness for Responding to Disasters and Communicable Disease Emergencies in Lao PDR". [[http://www.ifrc.org/PageFiles/93704/IDRL\\_Red-Cross-Report-Laos\\_v27-ENG.pdf](http://www.ifrc.org/PageFiles/93704/IDRL_Red-Cross-Report-Laos_v27-ENG.pdf)]. Accessed on 17 February 2021.

[4] Sibounhoum Archkhawongs. May 2018. "National Work Plan for EID, PHE and Health Security Lao PDR 2016-2020 implementation review". Presentation at the Meeting of the Bi-regional Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III).

[[www.searo.who.int/entity/ihr/session9\\_paneldiscussion1\\_naphs\\_laos.pdf](http://www.searo.who.int/entity/ihr/session9_paneldiscussion1_naphs_laos.pdf)]. Accessed on 17 February 2021.

[5] U.S. Embassy in Laos. 5 January, 2017. "Lao PDR Advances Commitment to Global Health Security".

[<https://la.usembassy.gov/lao-pdr-advances-commitment-to-global-health-security/>]. Accessed on 17 February 2021.

[6] Ministry of Health 2016, National Strategic Plan for Malaria Control and Elimination 2016-2020.

[[https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos\\_Malaria-NSP.pdf](https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos_Malaria-NSP.pdf)]. Accessed on 12 March 2021.

[7] Ministry of Health 2017, National Tuberculosis Control Program, National TB Strategic Plan 2017-2020.

[<https://ccmlaopdr.org/?mdocs-file=2548>]. Accessed on 12 March 2021.

[8] WHO 2017, Country Cooperation Strategy 2017-2021. [<https://apps.who.int/iris/rest/bitstreams/1080893/retrieve>]. Accessed on 12 March 2021.

[9] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 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 insufficient evidence that Laos has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential and therefore no evidence that it has been updated in the past three years.

According to the World Health Organization (WHO) Joint External Evaluation for Laos (JEE), conducted in February 2017, Laos has developed a series of disease-specific preparedness and response plans, including for Ebola, MERS-CoV, Zika, meningitis, pandemic influenza, avian influenza and dengue. [1] The JEE says that "all of these plans have been implemented, tested by simulation exercises, drills and real events, and have been updated regularly". [1]

In October 2014 the national work plan was tested through a simulation exercise conducted to assess Laos's readiness to detect, respond and contain imported cases of Ebola. [2]The JEE also reports that a simulation exercise was held for containment of Middle East respiratory syndrome coronavirus (MERS-CoV) in 2015, an exercise that included activation of the emergency operations centre, and that an avian influenza table-top exercise was carried out in 2014.[1] According to the International Federation of Red Cross and Red Crescent, "the National Pandemic Influenza Response Plan for the Health Sector addresses how responsibilities are to be divided between provincial and central level authorities in the health sector" [3]. The JEE states that the national workplan was revised in 2015 and that it has eight key areas, including "public health emergency preparedness using a multisectoral approach". [1] According to a summary of the plan presented in May 2018, an implementation review was due in 2018. [4] In late 2016 the Ministry of Health's Department of Communicable Disease Control (DCDC) and Ministry of Agriculture and Forestry's Department of Livestock and Fisheries (DLF) announced a National Five-Year Roadmap to build capacity for strengthened prevention, detection and response to emerging infectious disease threats with pandemic potential. [5] The Ministry of Health has published a National Strategic Plan for Malaria Control and Elimination 2016-2020 [6] and National Tuberculosis Control Program, National TB Strategic Plan 2017-2020 [7] The Laos

WHO Country Cooperation Strategy 2017-2021 also mentions the National Work Plan for Emerging Infectious Diseases and Public Health Emergencies 2016-2020. However, this document is not available online. [8] There is no further evidence on the website of the Ministry of Health. [9]

[1] World Health Organization (WHO). February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 25 February 2021.

[2] WHO. 14 May 2015. "WHO support the Ministry of Health in annual monitoring and evaluation exercise to manage emerging disease threats and public health emergencies". [[http://www.wpro.who.int/laos/mediacentre/releases/2015/20150514\\_apsed\\_ihr\\_me\\_review\\_2015/en/](http://www.wpro.who.int/laos/mediacentre/releases/2015/20150514_apsed_ihr_me_review_2015/en/)]. Accessed on 17 February 2021.

[3] International Federation of Red Cross and Red Crescent Societies (IFRC). 2009. "Legal Preparedness for Responding to Disasters and Communicable Disease Emergencies in Lao PDR". [[http://www.ifrc.org/PageFiles/93704/IDRL\\_Red-Cross-Report-Laos\\_v27-ENG.pdf](http://www.ifrc.org/PageFiles/93704/IDRL_Red-Cross-Report-Laos_v27-ENG.pdf)]. Accessed on 17 February 2021.

[4] Sibounhoum Archkhawongs. May 2018. "National Work Plan for EID, PHE and Health Security Lao PDR 2016-2020 implementation review". Presentation at the Meeting of the Bi-regional Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III). [[www.searo.who.int/entity/ihr/session9\\_paneldiscussion1\\_naphs\\_laos.pdf](http://www.searo.who.int/entity/ihr/session9_paneldiscussion1_naphs_laos.pdf)]. Accessed on 17 February 2021.

[5] U.S. Embassy in Laos. 5 January, 2017. "Lao PDR Advances Commitment to Global Health Security". [<https://la.usembassy.gov/lao-pdr-advances-commitment-to-global-health-security/>]. Accessed on 17 February 2021.

[6] Ministry of Health 2016, National Strategic Plan for Malaria Control and Elimination 2016-2020. [[https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos\\_Malaria-NSP.pdf](https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos_Malaria-NSP.pdf)]. Accessed on 12 March 2021.

[7] Ministry of Health 2017, National Tuberculosis Control Program, National TB Strategic Plan 2017-2020. [<https://ccmlaopdr.org/?mdocs-file=2548>]. Accessed on 12 March 2021.

[8] WHO 2017, Country Cooperation Strategy 2017-2021. [<https://apps.who.int/iris/rest/bitstreams/1080893/retrieve>]. Accessed on 12 March 2021.

[9] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 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 insufficient evidence that Laos has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential and therefore no evidence that it includes considerations for pediatric and/or other vulnerable populations.

According to the World Health Organization (WHO) Joint External Evaluation for Laos (JEE), conducted in February 2017, Laos has developed a series of disease-specific preparedness and response plans, including for Ebola, MERS-CoV, Zika, meningitis, pandemic influenza, avian influenza and dengue. [1] The JEE says that "all of these plans have been implemented, tested by simulation exercises, drills and real events, and have been updated regularly". [1]

In October 2014 the national work plan was tested through a simulation exercise conducted to assess Laos's readiness to detect, respond and contain imported cases of Ebola. [2]The JEE also reports that a simulation exercise was held for containment of Middle East respiratory syndrome coronavirus (MERS-CoV) in 2015, an exercise that included activation of the emergency operations centre, and that an avian influenza table-top exercise was carried out in 2014.[1] According to the



International Federation of Red Cross and Red Crescent, "the National Pandemic Influenza Response Plan for the Health Sector addresses how responsibilities are to be divided between provincial and central level authorities in the health sector" [3]. The JEE states that the national workplan was revised in 2015 and that it has eight key areas, including "public health emergency preparedness using a multisectoral approach". [1] According to a summary of the plan presented in May 2018, an implementation review was due in 2018. [4] In late 2016 the Ministry of Health's Department of Communicable Disease Control (DCDC) and Ministry of Agriculture and Forestry's Department of Livestock and Fisheries (DLF) announced a National Five-Year Roadmap to build capacity for strengthened prevention, detection and response to emerging infectious disease threats with pandemic potential. [5] The Ministry of Health has published a National Strategic Plan for Malaria Control and Elimination 2016-2020 [6] and National Tuberculosis Control Program, National TB Strategic Plan 2017-2020 [7] The Laos WHO Country Cooperation Strategy 2017-2021 also mentions the National Work Plan for Emerging Infectious Diseases and Public Health Emergencies 2016-2020. However, this document is not available online. [8] There is no further evidence on the website of the Ministry of Health. [9]

[1] World Health Organization (WHO). February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 25 February 2021.

[2] WHO. 14 May 2015. "WHO support the Ministry of Health in annual monitoring and evaluation exercise to manage emerging disease threats and public health emergencies". [[http://www.wpro.who.int/laos/mediacentre/releases/2015/20150514\\_apsed\\_ihr\\_me\\_review\\_2015/en/](http://www.wpro.who.int/laos/mediacentre/releases/2015/20150514_apsed_ihr_me_review_2015/en/)]. Accessed on 17 February 2021.

[3] International Federation of Red Cross and Red Crescent Societies (IFRC). 2009. "Legal Preparedness for Responding to Disasters and Communicable Disease Emergencies in Lao PDR". [[http://www.ifrc.org/PageFiles/93704/IDRL\\_Red-Cross-Report-Laos\\_v27-ENG.pdf](http://www.ifrc.org/PageFiles/93704/IDRL_Red-Cross-Report-Laos_v27-ENG.pdf)]. Accessed on 17 February 2021.

[4] Sibounhoum Archkhawongs. May 2018. "National Work Plan for EID, PHE and Health Security Lao PDR 2016-2020 implementation review". Presentation at the Meeting of the Bi-regional Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III). [[www.searo.who.int/entity/ihr/session9\\_paneldiscussion1\\_naphs\\_laos.pdf](http://www.searo.who.int/entity/ihr/session9_paneldiscussion1_naphs_laos.pdf)]. Accessed on 17 February 2021.

[5] U.S. Embassy in Laos. 5 January, 2017. "Lao PDR Advances Commitment to Global Health Security". [<https://la.usembassy.gov/lao-pdr-advances-commitment-to-global-health-security/>]. Accessed on 17 February 2021.

[6] Ministry of Health 2016, National Strategic Plan for Malaria Control and Elimination 2016-2020. [[https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos\\_Malaria-NSP.pdf](https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos_Malaria-NSP.pdf)]. Accessed on 12 March 2021.

[7] Ministry of Health 2017, National Tuberculosis Control Program, National TB Strategic Plan 2017-2020. [<https://ccmlaopdr.org/?mdocs-file=2548>]. Accessed on 12 March 2021.

[8] WHO 2017, Country Cooperation Strategy 2017-2021. [<https://apps.who.int/iris/rest/bitstreams/1080893/retrieve>]. Accessed on 12 March 2021.

[9] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 3.1.1d

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

Yes = 1 , No = 0

Current Year Score: 0

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

### 3.1.2 Private sector involvement in response planning

#### 3.1.2a

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

Yes = 1, No = 0

**Current Year Score: 1**

There is evidence that the country has a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, agreements with private sector suppliers are in place to rapidly deliver medications in support of emergency responses that require medical countermeasures [1]

Private sector is identified as the main partner in the National Tuberculosis Control Program, National TB Strategic Plan 2017-2020 and the National Strategic Plan for Malaria Control and Elimination 2016-2020 [2,3]. There is no additional information available on the website of the Ministry of Health. [4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 25 February 2021.

[2] Ministry of Health 2017, National Tuberculosis Control Program, National TB Strategic Plan 2017-2020. [<https://ccmlaopdr.org/?mdocs-file=2548>]. Accessed on 28 February 2021.

[3] Ministry of Health 2016, National Strategic Plan for Malaria Control and Elimination 2016-2020. [[https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos\\_Malaria-NSP.pdf](https://www2.malariafreemekong.org/wp-content/uploads/2019/03/Laos_Malaria-NSP.pdf)]. Accessed on 28 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 3.1.3 Non-pharmaceutical interventions planning

#### 3.1.3a

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

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

**Current Year Score: 1**

There is public evidence that the country has a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic for one disease - Covid-19.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, the country has a mechanism for risk communication for public health emergencies which is managed by the Centre of

Information and Education for Health [1]. There is no mention of NPIs in the report.

NPIs are also not mentioned in the Joint National Preparedness and Contingency Plan for Avian influenza A(H7N9) and A(H5N1) for Lao PDR. [2]

However, in the case of Covid-19, the government makes information available on its website and highlights NPIs such as social distancing and wearing masks. [3,4] There is no further evidence on the website of the Ministry of Health. [5]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 25 February 2021.

[2] WHO 2020, Avian Influenza A(H5N1)- Lao People's Democratic Republic. [<https://www.who.int/csr/don/17-november-2020-ah5n1-lao/en/>]. Accessed on 25 February 2021.

[3] Ministry of Health, COVID-19. [<https://www.covid19.gov.la/index.php>]. Accessed on 25 February 2021.

[4] Centre of Information and Education for Health Facebook. [<https://www.facebook.com/CIEH.MoH.Lao>]. Accessed on 25 February 2021.

[5] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 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 sufficient public evidence that the country has activated their national emergency response plan for an infectious disease outbreak during the Covid-19 outbreak. Laos' National multisector Taskforce Committee was established to provide guidance on Covid-19, and a plan was activated based on an existing emergency response plan.[1] The country has in place a policy and a law on Control and Prevention of Communicable Diseases. [3][4] In the past year, there is evidence that the country has conducted a simulation exercise between 22-24 March 2016. [5] The Mekong Basin Diseases Surveillance -Table Top Exercise (MBDS-TTX) Lao MOH hosted this event and the objective was to "test coordination among MBDS countries as well as in-country coordination, technical area of communication by using context of AI". The public health emergency category was avian influenza.

[1] Laos' National Taskforce Committee. [<https://www.covid19.gov.la/index.php?r=site/contents&id=34>]. Accessed on 2 May 2021.

[2] WHO, Simulation Exercise. [<https://extranet.who.int/sph/simulation-exercise?region=All&country=343>]. Accessed on 28 February 2021.

[3] National Assembly 2017, Law on Control and Prevention of Communicable Diseases,

[[http://www.na.gov.la/files/laws/pha\\_yard\\_tit\\_tor\\_2017.pdf](http://www.na.gov.la/files/laws/pha_yard_tit_tor_2017.pdf)], accessed on 2 May 2021.

[4] Ministry of Health, Policy on Control and Prevention of Communicable Diseases,

[<https://www.covid19.gov.la/index.php?r=site%2Fdetail&id=365>], accessed on 2 May 2021.

[5] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 3.2.1b

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

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

**Current Year Score: 0**

There is no publicly available evidence that Laos has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities in the past year. Most recently, Laos conducted two After Action Reviews (AAR) for an infectious disease response or a biological-threat focused exercise in November and December of 2017. The activities concerned AARs for dengue fever and Hepatitis A. Both are listed on the WHO Strategic Partnerships Portal. [1] However, the reports from these AARs are not publicly available on the WHO Portal. [1] The Ministry of Health makes available an Annual Report of its activities and challenges including its plan for the next year [2]. In 2018, in partnership with WHO, there was a study on the "Overview of Lao Health System Development 2009-2017" developed in partnership with the World Health Organization in 2018. [3]

[1] WHO Strategic Partnership for International Health Regulations (2005) and Health Security (SPH). "Country Profiles Lao PDR". [<https://extranet.who.int/sph/after-action-review?region=All&country=343>]. Accessed on 20 February 2021.

[2] Ministry of Health. 2019 Report and 2020 Plan. [<https://moh.gov.la/index.php/download/plan19-20h/>]. Accessed on 20 February 2021.

[3] WHO 2018. Overview of Lao Health System Development 2009-2017.

[<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf?>] Accessed on 20 February 2021

## 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 insufficient evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives.

There is evidence that the country has conducted a simulation exercise between 22-24 March 2016. [1] The Mekong Basin Diseases Surveillance -Table Top Exercise (MBDS-TTX) Lao MOH hosted this event and the objective was to "test coordination among MBDS countries as well as in-country coordination, technical area of communication by using context of AI". The public health emergency category was avian influenza. However, there is no mention of private sector representatives. There

is no further evidence of this on the website of the Ministry of Health. [2]

[1] WHO, Simulation Exercise. [<https://extranet.who.int/sph/simulation-exercise?region=All&country=343>]. Accessed on 28 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

## 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**

Laos has an Emergency Operations Center (EOC) in place. Laos established a national Emergency Operations Centre (EOC) in 2013 to coordinate public health response to emergencies. According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, the EOC was established in the Ministry of Health to coordinate response operations and has been activated for many events, including 2015-2016 outbreak of circulating vaccine-derived poliovirus (cVDPV) and 2013 dengue outbreak. The JEE notes that the "EOC Secretariat supports operations during an event" and the "Ministerial level contacts are available 24/7 to provide guidance and decisions". [1]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 25 February 2021.

#### 3.3.1b

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no publicly available evidence that the national Emergency Operations Centre (EOC) is required to conduct a drill at least once per year or that such a drill is conducted annually.

According to the Joint External Evaluation for Laos (JEE), conducted in February 2017, the EOC has conducted a limited number of exercises/simulations with after-action reports, but these have not necessarily tested Incident Management System (IMS) functions. [1] The JEE states that although a successful Ebola exercise was conducted in 2014, the after-action report did not address the effectiveness of the IMS (if used) or the utility of the EOC. [1] The JEE recommends that Laos conduct at least one table-top and one functional exercise per year to reinforce IMS personnel training, skills and EOC operations. [1]

An April 2018 mission report by the Bill & Melinda Gates Foundation on Laos's EOC Planning and Design suggests that drills are regularly carried out but gives no mention of a mandated requirement [2].

There is no evidence on the websites of the Ministry of Health and Ministry of Defence that the requirement for EOC drills has been updated since the JEE. [3,4]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 17 February 2021.
- [2] Bill & Melinda Gates Foundation. April 2018. Lao PDR Emergency Operations Center Planning and Design Mission Draft Report. [<https://www.gatesfoundation.org/~media/GFO/Documents/How-We-Work/RFP-Lao-PDR-EOC/Lao-PDR-EOC-Planning-and-Design-Mission-Report.pdf?la=zh-CN>]. Accessed on 17 February 2021.
- [3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [4] Ministry of Defence, Lao PDR. [<http://www.mod.gov.la/>]. Accessed 17 February 2021.

### 3.3.1c

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no publicly available evidence 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.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, although EOC activations have taken place, the lack of approved standard operating procedures for EOC activation is a serious limitation which needs to be addressed. There is no further evidence of EOC activation within the stipulated time frame in the JEE report [1]

The Ministry of Health activated the EOC in July 2018 in response to the floods caused by the collapse of a saddle dam at the Xe Pian-Xe Nam Noy hydropower project in Attapeu province, southern Laos. According to a report from the UN team in Laos, the EOC was activated a day after the event. [2]

There is no evidence on the websites of the Ministry of Health and the Ministry of Defence that the national EOC has been activated within 120 minutes of identification of an emergency. [3,4]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.35/en/>]. Accessed on 17 February 2021.
- [2] UN Office for the Coordination of Humanitarian Affairs, UN Country Team in Laos. 6 Aug 2018. "LAO PDR: Disaster Response Plan (August 2018-December 2018)". [<https://reliefweb.int/report/lao-peoples-democratic-republic/lao-pdr-disaster-response-plan-august-2018-december-2018>]. Accessed on 17 February 2021.
- [3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [4] Ministry of Defence, Lao PDR. [<http://www.mod.gov.la/>]. Accessed 17 February 2021.

## 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 insufficient publicly available evidence that Laos has carried out an exercise to respond to a potential deliberate biological event or that it has standard operating procedures or other agreements between the public health and security authorities to respond to a potential deliberate biological event.

According to the Joint External Evaluation for Laos (JEE), conducted in February 2017, "protocols for rapid detection, identification and mobilization of a joint response to a deliberately caused public health emergency currently do not exist." The JEE reports that the National Committee for Communicable Disease Control (NCCDC) facilitates the sharing of information and the coordination of responses to public health events within all convened ministries, including the Ministry of National Defence and Ministry of Public Security. The NCCDC is intended to be the national coordinating mechanism to ensure ministries work together during a suspected or confirmed biological event. [1] The JEE states that there is no memorandum of understanding in place between the Ministry of Health, Ministry of National Defence and the Ministry of Public Security, but that the decree which established the NCCDC is the equivalent reference document used by the Ministry of Health to facilitate communications with the Ministry of National Defence and the Ministry of Public Security regarding public health events. [1]

This decree is not available on the websites of the online repository for Lao laws, the Lao Official Gazette, the Ministry of Health or the Ministry of Defence. [2,3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 25 February 2021.

[2] Lao Official Gazette, Ministry of Justice, Lao PDR. "Search Legislation".

[<http://laoofficialgazette.gov.la/index.php?r=site/displaythemostrecentxx&category=Legal%20Document>]. Accessed on 18 February 2021.

[3] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 18 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.



## 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**

Although Laos has a risk communication plan, there is insufficient evidence that it outlines how messages will reach populations and sectors with different communications needs. The National Risk Communication Strategy and Action Plan serves as a risk communication plan although the plan is not in the public domain to verify.

However, according to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, the Centre of Information and Education for Health (CIEH) has conducted mapping of stakeholders and partner organizations with programmes on community engagement at national and local levels while the Ministry of Health, through its provincial and district level health authorities, has a mechanism to tap into village health volunteers, village heads, religious leaders, teachers and youth for community engagement. [1] The JEE also states that a system for developing information, education and communication materials is in place and coordinated centrally, with mechanisms for local-level dissemination. [1] The JEE gives the example of translation of communication materials into ethnic minority languages such as Hmong and Khmou during emergencies such as the polio outbreak in 2015. [1] There is no further evidence on the website of the Ministry of Health. [2]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 25 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 3.5.1 Risk communication planning

#### 3.5.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence of a risk communication plan that is specifically intended for use during a public health emergency in Laos. According to the Joint External Evaluation for Laos (JEE), conducted in February 2017, the National Risk Communication Strategy and Action Plan 2016-2020 guides the actions of trained risk communication officers at central, provincial and district levels. [1] The JEE adds that "risk communication is integrated in the national emergency preparedness and response plans, where activities, budget, responsible bodies and partners are also identified". The National Risk Communication Strategy and Action Plan has been tested in a simulation exercise for Ebola in 2014 and for Middle East respiratory syndrome

coronavirus (MERS-CoV) in 2015 [1] However, the plan is not publicly available.

There is no further evidence on the Lao Official Gazette, the websites of the Ministry of Health and the Ministry of Defence. [2,3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 18 February 2021.

[2] Lao Official Gazette, Ministry of Justice, Lao PDR. "Search Legislation". [<http://laoofficialgazette.gov.la/>]. Accessed on 18 February 2021.

[3] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 18 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 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**

Although Laos has a risk communication plan, there is insufficient evidence that it designates a specific position within the government to serve as the primary spokesperson to the public during a public health emergency.

However, according to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, the Centre of Information and Education for Health (CIEH) has conducted mapping of stakeholders and partner organizations with programmes on community engagement at national and local levels while the Ministry of Health, through its provincial and district level health authorities, has a mechanism to tap into village health volunteers, village heads, religious leaders, teachers and youth for community engagement. [1] The JEE also states that a system for developing information, education and communication materials is in place and coordinated centrally, with mechanisms for local-level dissemination. [1] The JEE gives the example of translation of communication materials into ethnic minority languages such as Hmong and Khmou during emergencies such as the polio outbreak in 2015. [1] There is no further evidence on the website of the Ministry of Health. [2]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 25 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

## 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 information during active emergencies but insufficient evidence of information-sharing more regularly.

Laos' National Taskforce Committee which involves multi-sectors has been established to provide guidance on Covid-19 [1]. The Government information available on Covid -19 on their dedicated website. [2,3]

According to the Joint External Evaluation for Laos (JEE), conducted in February 2017, media engagement is through the Ministry of Information, Culture and Tourism, using multiple platforms such as television, radio, newspapers and community loud speakers. The JEE states that public communication is coordinated at both the technical and strategic level through the Ministry of Health cabinet and the Centre of Information and Education for Health (CIEH). The JEE cites a lack of evidence on the effectiveness of public communications and recommends that the ministry develop capacity to use new media, including social media and mobile telephones. The CIEH has already started a Facebook page on which it posts information on public emergencies. [4]

In 2008, the 166 hotline was established to respond to public health concerns, deliver health messages and gather reports and rumours from the community. In 2014, the 166 hotline was re-established with a broader focus on communicable diseases and other acute public health events.[5]. Cited in the Overview of Lao Health System Development 2009-2017, The second National Health Information Strategy and Action Plan 2018-2025 was approved in December 2017. [5] However, the Strategy is not publicly available online. There is no further evidence on the website of the Ministry of Health regarding the regular utilisation of media sources. [6]

[1] Laos' National Taskforce Committee. [<https://www.covid19.gov.la/index.php?r=site/contents&id=34>]. Accessed on 28 February 2021.

[2] Ministry of Health, COVID Daily Report. [<https://www.covid19.gov.la/index.php>]. Accessed on 28 February 2021.

[3] Centre of Information and Education for Health Facebook. [<https://www.facebook.com/CIEH.MoH.Lao>]. Accessed on 28 February 2021.

[4] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017". [<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2017.35-eng.pdf>]. Accessed on 28 February 2021.

[5] WHO, Overview of Lao Health System Development 2009-2017.

[<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf>]. Accessed on 28 February 2021.

[6] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

### 3.5.2b

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

No = 1, Yes = 0

**Current Year Score: 1**

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

There is no such information available on the website of the Ministry of Health. [1] There is also no such information available on international news websites such as BBC News, Nikkei Asia , Al Jazeera and Reuters. [2,3,4,5]

[1] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[2] BBC News. [<https://www.bbc.co.uk/search?q=Lao+share+misinformati&page=1>]. Accessed on 28 February 2021.

[3] Nikkei Asia. [<https://asia.nikkei.com/search?query=lao+share+misinformati>]. Accessed on 28 February 2021.

[4] Al Jazeera. [<https://www.aljazeera.com/search/Lao%20share%20misinformati>]. Accessed on 28 February 2021.

[5] Reuters. [<https://www.reuters.com/search/news?blob=lao+share+misinformati>]. Accessed on 28 February 2021.

## 3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

### 3.6.1 Internet users

#### 3.6.1a

Percentage of households with Internet

Input number

**Current Year Score: 25.51**

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: 60.84**

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: 3.0

2019

Gallup; Economist Impact calculation

### 3.6.4 Female access to the Internet

#### 3.6.4a

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

Input number

Current Year Score: 9.0

2019

Gallup; Economist Impact calculation

## 3.7 TRADE AND TRAVEL RESTRICTIONS

### 3.7.1 Trade restrictions

#### 3.7.1a

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

Yes = 0, No = 1

Current Year Score: 1

There is no evidence that the country has issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak.

There is no such information available on the website of the Ministry of Health and Ministry of Foreign Affairs. [1,2] There is also no such information available on international news websites such as BBC News, Nikkei Asia, Al Jazeera and Reuters. [3,4,5,6]

[1] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[2] Ministry of Foreign Affairs. [<http://www.mofa.gov.la/>]. Accessed on 28 February 2021.

[3] BBC News. [<https://www.bbc.co.uk/search?q=Lao+share+misinformati&page=1>]. Accessed on 28 February 2021.

[4] Nikkei Asia. [<https://asia.nikkei.com/search?query=lao+share+misinformati>]. Accessed on 28 February 2021.

[5] Al Jazeera. [<https://www.aljazeera.com/search/Lao%20share%20misinformati>]. Accessed on 28 February 2021.

[6] Reuters. [<https://www.reuters.com/search/news?blob=lao+share+misinformati>]. Accessed on 28 February 2021.

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

There is no such information available on the website of the Ministry of Health and Ministry of Foreign Affairs. [1,2] There is also no such information available on international news websites such as BBC News, Nikkei Asia, Al Jazeera and Reuters. [3,4,5,6]

[1] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[2] Ministry of Foreign Affairs. [<http://www.mofa.gov.la/>]. Accessed on 28 February 2021.

[3] BBC News. [<https://www.bbc.co.uk/search?q=Lao+share+misinformati&page=1>]. Accessed on 28 February 2021.

[4] Nikkei Asia. [<https://asia.nikkei.com/search?query=lao+share+misinformati>]. Accessed on 28 February 2021.

[5] Al Jazeera. [<https://www.aljazeera.com/search/Lao%20share%20misiinformati>]. Accessed on 28 February 2021.

[6] Reuters. [<https://www.reuters.com/search/news?blob=lao+share+misinformati>]. Accessed on 28 February 2021.

## 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 public evidence that the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak.

During the Covid-19 outbreak, international flights in Laos were mostly limited to emergencies and repatriation. Authorities banned chartered flights from locations with a COVID-19 outbreak. Citizens were also banned from non-essential international travel and most land borders remained closed through the pandemic. [1,2,3]

[1] GardaWorld, Laos: Authorities extend COVID-19 restrictions through Jan 31 2021. [<https://www.garda.com/crisis24/news-alerts/423386/laos-authorities-extend-covid-19-restrictions-through-jan-31-2021-update-16>]. Accessed 12 March 2021.

[2] GardaWorld, Laos: Authorities extend COVID-19 restrictions until December 31. [<https://www.garda.com/crisis24/news-alerts/395516/laos-authorities-extend-covid-19-restrictions-until-december-31-update-8>]. Accessed 12 March 2021.

[3] TravelBan, Laos. [<https://travelbans.org/asia/laos/>]. Accessed 12 March 2021.

## 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: 37.26

2017

WHO; national sources

##### 4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 95.22

2018

WHO; national sources

##### 4.1.1c

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

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that the country has a health workforce strategy in place (which has been updated in the past five years) to identify fields where there is an insufficient workforce and strategies to address these shortcomings.

Laos has a public workforce strategy that was updated in 2015 and seeks to fill gaps in its healthcare system. According to a fact sheet issued by the Universal Health Coverage (UHC) Partnership in 2017, the update to the Health Personnel Development Strategy 2010-2020 was effected through a five-year action plan 2016-2020 with financial support from the World Health Organisation. [1] However, since the strategy was last updated in 2015, it falls outside of the five-year period that this question requires.

As part of the updated strategy, all provinces completed three-year Provincial Health Workforce Development Plans to



provide guidance for staffing of health services and training of health personnel over the period 2016 to 2020, as reported by a health programme in Laos funded by the government of Luxembourg. [2] The Luxembourg report described the updated Health Personnel Development Strategy as an endeavour "to build staff skills and capacity in order to improve the quality of health care delivery, and to provide short-term training to fill skills gaps because of inefficiencies in the current national training programmes". [2]

Cited in the WHO Overview of Lao Health System Development 2009-2017, (i) in 2010 the Ministry of Health endorsed its Health Personnel Development Strategy by 2020 addressed five main areas for improvement: health personnel capacity-building, utilization of health personnel, health personnel management, equity and equality of opportunity, and health personnel incentives; and (ii) the Health Personnel Development Strategy and its five-year Action Plan by 2025[3]. However, these strategies are not publicly available online. There is no further evidence on the website of the Ministry of Health. [4]

[1] Universal Health Coverage (UHC) Partnership. 2017. "Lao PDR HEALTH SECTOR REFORM STRATEGY AND FRAMEWORK TILL 2025, 2013-2025". [<https://uhcpartnership.net/wp-content/uploads/2017/05/8-new-LAO.pdf>]. Accessed on 28 February 2021.

[2] Lao-Luxembourg Health Sector Support Programme - Phase II. March 2016. "Focus Assessment Lao/027". [[https://luxdev.lu/files/documents/LAO027\\_FA\\_EN1.pdf](https://luxdev.lu/files/documents/LAO027_FA_EN1.pdf)]. Accessed on 28 February 2021.

[3] WHO, Overview of Lao Health System Development 2009-2017.

[<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf>]. Accessed on 28 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

## 4.1.2 Facilities capacity

### 4.1.2a

#### Hospital beds per 100,000 people

Input number

**Current Year Score: 150**

2012

WHO/World Bank; national sources

### 4.1.2b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is insufficient public evidence that Laos has the capacity to isolate patients with highly communicable diseases in a biocontainment patient unit or isolation facility.

During Covid-19 Outbreak, the country prepared an isolation facility for Covid-19 patients. In Vientiane, Mittaphab, Mahosot, Sethathirath, 103 military hospitals are designated to handle Covid-19 cases. The provincial hospitals have been tasked to prepare isolation facilities. In the provinces, suspected patients will be isolated at provincial hospitals.[1,2,3] There is no evidence that these will hold for other types of public health emergencies.

The World Health Organization (WHO) Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, states that there is no dedicated space or facilities for screening, isolation, assessment or quarantine of potentially contaminated/infected travellers or animals either at point of entry to the country "or through liaison with local public health services". [4]

There is no evidence for the existence of biocontainment patient units or isolation facilities on the website of the Ministry of Health. [5]

There is no evidence that Lao hospitals maintain a website but a US/Japan charity, Friends Without a Border, reports that the Lao Friends Hospital for Children in the northern city of Luang Prabang installed a new ventilation system in both isolation rooms of the hospital's Emergency Department in late 2018. [6]. However, there is no evidence that these rooms are designed for containment of highly communicable diseases. During the SARS outbreak in Southeast Asia in 2003 an isolation unit was available at the Mittaphab (Friendship) Hospital in Vientiane Capital. [7]

[1] Centre of Information and Education for Health 2020.

[<https://www.facebook.com/CIEH.MoH.Lao/posts/3051984384826235>]. Accessed on 12 March 2021.

[2] Global Times 2020, Laos suspends tourist visas, closes schools to prevent COVID-19.

[<https://www.globaltimes.cn/content/1183094.shtml>]. Accessed on 12 March 2021.

[3] Lao National Taskforce on COVID-19 2020, <https://www.covid19.gov.la/index.php?r=site%2Fdetail&id=366>. Accessed on 12 March 2021.

[4] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[5] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 18 February 2021.

[6] Friends Without a Border. November 20, 2018. "Reducing the Risk of Airborne Infection". [<https://fwab.org/reducing-the-risk-of-airborne-infection/>]. Accessed on 18 February 2021.

[7] World Health Organization (WHO). 2013. "Fifty years: working for health in the Lao People's Democratic Republic, 1962-2012". [<https://apps.who.int/iris/handle/10665/206907>]. Accessed on 18 February 2021

#### 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 public evidence and the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak and the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak. According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, the country has a national multisectoral public health emergency for preparedness and response at the point of entry and the plan is being revised to include dedicated areas for screening, quarantine or isolation of potentially contaminated travelers. [1] it is also mentioned in the report that the country has prioritized

dedicated areas for traveler health assessment and quarantine procedure in the Wattay International Airport expansion plan and a plan is tested in 2020 where the airport has a designate areas for health assessment and sample collection. [2]

During Covid-19 Outbreak, the country prepared an isolation facility for Covid-19 patients. In Vientiane, Mittaphab, Mahosot, Sethathirath, 103 military hospitals are designated to handle Covid-19 cases. The provincial hospitals have been tasked to prepare isolation facilities. In the provinces, suspected patients will be isolated at provincial hospitals.[3,4,5] There is no evidence that these will hold for other types of public health emergencies.

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2017.35-eng.pdf>]. Accessed on 18 February 2021.

[2] WHO 2020, COVID-19 pandemic changes our approach to air travel at international airports.

[<https://www.who.int/laos/news/detail/19-11-2020-covid-19-pandemic-changes-our-approach-to-air-travel-at-international-airports>]. Accessed on 3 May 2021.

[3] Centre of Information and Education for Health 2020.

[<https://www.facebook.com/CIEH.MoH.Lao/posts/3051984384826235>]. Accessed on 12 March 2021.

[4] Global Times 2020, Laos suspends tourist visas, closes schools to prevent COVID-19.

[<https://www.globaltimes.cn/content/1183094.shtml>]. Accessed on 12 March 2021.

[5] Lao National Taskforce on COVID-19 2020, <https://www.covid19.gov.la/index.php?r=site%2Fdetail&id=366>. Accessed on 12 March 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: 0**

There is no publicly available evidence to show that Laos has 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.

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, recommends that Laos moves to ensure the sustainability of laboratory testing by securing reagents, supplies, key equipment and maintenance contracts. Procurement systems and delivery time of supplies to the field should be tested by table-top or functional exercise during public health emergency [1]

There is no media reporting suggesting a procurement system has been introduced and no evidence of such a system on the websites of the Ministry of Health and Ministry of Agriculture and Forestry. [2,3]

Much of the laboratory system in Laos is internationally funded. Main laboratories include the Centre d'Infectiologie

Christophe Mérieux du Laos, Institut Pasteur du Laos and the Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit.  
[1]

In the WHO Overview of Lao Health System Development 2009-2017, it is mentioned that much progress has been made in the pharmaceutical sector in terms of improving availability and accessibility to quality essential medicines, strengthening supply chain management through selection, procurement, registration, and quality control and assurance of medicines, strengthening National Regulatory Authority (NRA), especially for the regulatory system, and pre-marketing and post-marketing surveillance. [4]. Global atlas Medical Device 2014 states that procurement at the national level is only for sophisticated equipment and high value [5]. There is no clear evidence that the country has a specific procurement plan for medical supplies or laboratory equipment.

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2017.35-eng.pdf>]. Accessed on 18 February 2021.
- [2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 18 February 2021.
- [4] WHO, Overview of Lao Health System Development 2009-2017.  
[<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf>]. Accessed on 12 March 2021
- [5] WHO, Global Atlas Medical Device 2014, Lao PDR. [[https://www.who.int/medical\\_devices/countries/lao.pdf?ua=1](https://www.who.int/medical_devices/countries/lao.pdf?ua=1)].  
Accessed on 12 March 2021

## 4.2.2 Stockpiling for emergencies

### 4.2.2a

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

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

**Current Year Score: 2**

There is public evidence that the country has a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, the country has national stockpiles of medicine in the event of public health emergency and regional stockpiles of ASEAN in Malasia can be mobilized. The National Stockpiles including medical supplies, medicines, equipment and personal protection equipment, and are updated annually [1].

There is no further information about emergency stockpiles of medical supplies on the websites of the Ministry of Health and Ministry of Defence [2,3]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2017.35-eng.pdf>]. Accessed 12 March 2021.
- [2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [3] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 28 February 2021.

#### 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 public evidence that the country has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency.

The Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, does not make a mention of any existing stockpiles of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. [1]

There is no information of emergency stockpiles of laboratory supplies on the websites of the Ministry of Health and Ministry of Defence [2,3]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 28 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 28 February 2021.

#### 4.2.2c

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

Yes = 1, No = 0

**Current Year Score: 0**

There is insufficient evidence that the country conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. In the WHO Overview of Lao Health System Development 2009-2017, it is mentioned that the country has integrated monitoring and evaluation in the planning and review process of International Health Regulation (IHR 2005) the country made solid progress through their annual planning and review meetings for the National Work Plan for Emerging Disease, Public Health Emergencies and Health Security Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III). [1] However, it does not mention information on national stockpile. In the 2019 Annual Report and 2020 Plan of the Ministry of Health, there is a section report on the number of times that the department received and distribute medicine and medical supply. [2] However, it does not mention any information on annual review of the national stockpile. There is no information on the websites of Ministry of Labour and Social and Welfare, Ministry of Public Security and Ministry of Agriculture and Forestry. [3][4][5]

[1] WHO, Overview of Lao Health System Development 2009-2017.

[<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf>]. Accessed on 12 March 2021.

[2] Ministry of Health 2019, the 2019 Annual Report and 2020 Plan. [<https://moh.gov.la/index.php/download/plan19-20h/>]. Accessed on 3 May 2021.

[3] Ministry of Labour and Social Welfare. [<http://www.molsw.gov.la/>]. Accessed on 3 May 2021.

[4] Ministry of Public Security. [<http://laosecurity.gov.la/test/index.php?lang=en>]. Accessed on 3 May 2021.

[5] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 3 May 2021. [1] WHO, Overview of Lao Health System Development 2009-2017. [<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf>]. Accessed on 12 March 2021.

[2] Ministry of Health 2019, the 2019 Annual Report and 2020 Plan. [<https://moh.gov.la/index.php/download/plan19-20h/>]. Accessed on 3 May 2021.

[3] Ministry of Labour and Social Welfare. [<http://www.molsw.gov.la/>]. Accessed on 3 May 2021.

[4] Ministry of Public Security. [<http://laosecurity.gov.la/test/index.php?lang=en>]. Accessed on 3 May 2021.

[5] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 3 May 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: 1**

There is evidence that the country has a plan/agreement to leverage domestic manufacturing capacity to produce or to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency.

The Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017 states that "Agreements with private sector suppliers are in place to rapidly deliver medications in support of emergency responses that require medical countermeasures." It also states that "the Ministry of Health has agreements with two pharmaceutical companies to deliver basic emergency medicines within 24 hours during an emergency." [1]

The WHO Overview of Lao Health System Development 2009-2017 does not mention any agreement/plan for procurement or leveraging of domestic manufacturing capacity for medical supplies. However, it recommends that further work is required on clinical management during outbreaks, personnel deployment, and information-sharing mechanisms, health infrastructure, response medical countermeasures and guidance on other priority diseases, such as chikungunya. [2]

There is no information about a plan/agreement to leverage domestic manufacturing capacity or to procure medical supplies on the websites of the Ministry of Health and the Ministry of Defence [3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021

[2] WHO, Overview of Lao Health System Development 2009-2017.

[<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf>]. Accessed 12 March 2021

[3] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 18 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

#### 4.2.3b

Does the country meet one of the following criteria?

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

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

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

**Current Year Score: 0**

There is insufficient evidence that the country has a plan/agreement to leverage domestic manufacturing capacity or to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency.

There is no evidence of an agreement for procurement or leveraging of domestic manufacturing capacity for laboratory supplies in the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017. The Ministry of Health has agreements with two pharmaceutical companies to deliver basic emergency medicines within 24 hours during an emergency but there is no mention of laboratory supplies. [1]

The WHO Overview of Lao Health System Development 2009-2017 does not mention any agreement/plan for procurement or leveraging of domestic manufacturing capacity for laboratory supplies. However, it recommends that further work is required on clinical management during outbreaks, personnel deployment, and information-sharing mechanisms, health infrastructure, response medical countermeasures and guidance on other priority diseases, such as chikungunya. [2]

There is no information about a plan/agreement to leverage domestic manufacturing capacity or to procure laboratory supplies on the websites of the Ministry of Health and the Ministry of Defence [3,4]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed 26 February 2021

[2] WHO, Overview of Lao Health System Development 2009-2017.

[<https://apps.who.int/iris/bitstream/handle/10665/274721/9789290618621-eng.pdf>]. Accessed 12 March 2021

[3] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 18 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

## 4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

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

#### 4.3.1a

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

Yes = 1, No = 0



**Current Year Score: 0**

There is no public evidence that the country has a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency.

According to the Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in 2017, Laos maintains national disaster stockpiles that include medical supplies, medicines, equipment and personal protection equipment which are positioned in several parts of the country and can be mobilised at short notice. [5] However, there is no indication in the JEE that these countermeasures can be dispensed.

There is no information on the websites of the Ministry of Health and the Ministry of Defence [2,3]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic". Mission Report 17-24 February 2017.

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/10thADMM/index.html>]. Accessed on 18 February 2021.

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

#### 4.3.2a

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

Yes = 1, No = 0

**Current Year Score: 0**

There is no evidence of a public plan in place to receive health personnel from other countries to respond to a public health emergency. There is no indication for such a plan on the websites of the Ministry of Foreign Affairs or the Ministry of Health.

[1,2] According to the World Health Organization (WHO) Joint External Evaluation (JEE) of IHR Core Capacities of the Lao People's Democratic Republic, conducted in February 2017, while "mechanisms are in place to mobilize surge capacity for emergency response", the country is in need of a formal plan "to receive, assess and process foreign medical personnel and supplies for deployment during major public health emergencies". Per the JEE report, the Ministry of Health makes decisions to accept the support of foreign personnel during emergencies, in collaboration with the Ministry of Foreign Affairs. [3] The JEE also states that systems "should be put in place to support this function, such as processes to send and receive health personnel, and procedures to accredit foreign medical and public health personnel." [3] During the response to the flooding that followed the collapse of the Xe Pian-Xe Nam Noy dam in Attapeu southern province in July 2018, the Ministry of Health accepted the support of international emergency medical teams from China, Malaysia, South Korea, Thailand and Vietnam. [4]

[1] Ministry of Foreign Affairs, Lao PDR. [<http://www.mofa.gov.la/>] Accessed on 26 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>] Accessed on 26 February 2021.

[3] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 26 February 2021.

[4] WHO Representative Office Lao PDR. August 14 2018. "Partners, Ministry of Health set up disease early warning system in Attapeu". WHO Western Pacific Region.. [<http://www.wpro.who.int/laos/mediacentre/releases/2018/20180810-early-warning-system-in-attapeu/en/>]. Accessed on 18 February 2021.

## 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: 2**

2020

World Policy Analysis Center

#### 4.4.1b

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

Input number

**Current Year Score: 64.4**

2017

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: 82.18**

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

The government adopted the Law on Prevention and Control of Communicable Disease in 2017 and the National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023 although neither contains any information on prioritized healthcare services. [1,2]

The 2013 Law on Social Security mentions the services that members will receive from work accidents or employment injuries and various events. It is only applicable for those who volunteer to be members and does not contain any information on prioritized healthcare services.[3]

There is no further information on the websites of Ministry of Health and the Ministry of Defence. [4,5]

[1] National Assembly 2017, Law on Prevention and Control of Communicable Disease, 2017 [Lao PDR].

[<https://data.opendevlopmentmekong.net/en/dataset/law-on-prevention-and-control-of-communicable-disease-2017-lao-pdr/resource/2cc042a8-7817-4805-9185-96de95b194ff>]. Accessed 13 March 2021

[2] Ministry of Health 2019, the National Strategic Plan on Antimicrobial Resistance in Lao PDR 2019-2023.

[<https://www.who.int/publications/m/item/lao-pdr-national-strategic-plan-on-antimicrobial-resistance-in-lao-pdr-2019-2023>]. Accessed 13 March 2021

[3] National Assembly 2013, Law on Social Security. [<http://laogov.gov.la/legaldoc/pages/document.aspx?ItemID=310>]. Accessed 13 March 2021

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[5] Ministry of Defence, Lao PDR. "Home". [<http://www.mod.gov.la/>]. Accessed on 18 February 2021.

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

### 4.5.1 Communication with healthcare workers

#### 4.5.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence of a system in place for public health officials and healthcare workers to communicate during a public health emergency. While the World Health Organization (WHO) Joint External Evaluation for Laos (JEE), conducted in February 2017, states that there is a reliable Emergency Operations Center (EOC) communications structure and information sharing across sectors functions well during emergencies, it gives no evidence for a communications system linked directly to healthcare workers. [1] The JEE also states that there are robust communication mechanisms in place to manage public health emergencies through the National Committee for Communicable Disease Control (NCCDC) but makes no reference to healthcare workers. [1] Similarly, there is no easily available evidence for a communication system between health officials and healthcare workers on the website of the Ministry of Health, and the websites for Tropical and Public Health Institute or the National Center for Laboratories and Epidemiology are no longer functional. [2,3,4] It appears that communications do function but on an ad hoc basis. A site visit to a provincial EOC in Champassak by the Bill and Melinda Gates Foundation in 2017 found that communication was mainly by phone with no video conferencing system. [5] A 2014 paper on health worker performance in rural Laos found that when mobile phones with prepaid cards were provided to village health volunteers and their supervisors, submissions of vital event surveillance reports significantly increased. [6] The WHO 2018 Asia Pacific Strategy for Emerging Diseases Evaluation Report states that Laos is better prepared for communicable disease outbreaks than it was previously, that chains of communication are identifiable but that paradoxically, the procedures and relationships are not sufficiently defined in legal instruments. [7] It continues with an example of how the National Pandemic Influenza Response Plan for the Health Sector addresses how responsibilities are divided between provincial and central health authorities during an outbreak, but only to a limited extent the communication chain between them. [7]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 28 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[3] Lao Tropical and Public Health Institute. [<https://www.nioph.gov.la/en/>]. Accessed on 18 February 2021.

[4] National Center for Laboratories and Epidemiology, Lao PDR.12/06/2018. "Dengue in Lao PDR".

[<http://www.ncle.gov.la/outbreaks-and-emergencies/dengue-outbreak/>]. Accessed on 18 February 2021.

[5] Bill & Melinda Gates Foundation. April 2018. Lao PDR Emergency Operations Center Planning and Design Mission Draft Report. [<https://www.gatesfoundation.org/~media/GFO/Documents/How-We-Work/RFP-Lao-PDR-EOC/Lao-PDR-EOC-Planning-and-Design-Mission-Report.pdf?la=zh-CN>]. Accessed on 18 February 2021.

[6] Nonaka D., Pongvongsa T., Nishimoto F. et al. February 2014. "Successful mobile phone network-based approach to integration of the health care system in rural Laos: strengthening lay health worker performance". Rural Remote Health. 14:2588. Epub 2014 Feb 18. [<https://www.rrh.org.au/journal/article/2588>]. Accessed on 18 February 2021.

[7] WHO Regional Office for the Western Pacific. 2018. "Asia Pacific Strategy for Emerging Diseases (APSED) Evaluation Report 2005-2015". [<http://iris.wpro.who.int/bitstream/handle/10665.1/14028/9789290618287-eng.pdf>]. Accessed on 18 February 2021.

#### 4.5.1b

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public evidence of a system for public health officials and healthcare workers to communicate during an emergency that encompasses healthcare workers in both the public and private sector. While the World Health Organization (WHO) Joint External Evaluation for Laos (JEE), conducted in February 2017, states that there is a reliable Emergency Operations Center (EOC) communications structure and information sharing across sectors functions well during emergencies, it gives no evidence for a communications system linked directly to healthcare workers. [1] The JEE also states that there are robust communication mechanisms in place to manage public health emergencies through the National Committee for Communicable Disease Control (NCCDC) but makes no reference to healthcare workers. [1] Similarly, there is no easily available evidence for a communication system between health officials and healthcare workers on the website of the Ministry of Health, and the websites for Tropical and Public Health Institute or the National Center for Laboratories and Epidemiology are no longer functional. [2,3,4] It appears that communications do function but on an ad hoc basis. A site visit to a provincial EOC in Champassak by the Bill and Melinda Gates Foundation in 2017 found that communication was mainly by phone with no video conferencing system. [5] A 2014 paper on health worker performance in rural Laos found that when mobile phones with prepaid cards were provided to village health volunteers and their supervisors, submissions of vital event surveillance reports significantly increased. [6] The WHO 2018 Asia Pacific Strategy for Emerging Diseases Evaluation Report states that Laos is better prepared for communicable disease outbreaks than it was previously, that chains of communication are identifiable but that paradoxically, the procedures and relationships are not sufficiently defined in legal instruments. [7] It continues with an example of how the National Pandemic Influenza Response Plan for the Health Sector addresses how responsibilities are divided between provincial and central health authorities during an outbreak, but only to a limited extent the communication chain between them. [7]

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 28 February 2021.
- [2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [3] Lao Tropical and Public Health Institute. [<https://www.nioph.gov.la/en/>]. Accessed on 18 February 2021.
- [4] National Center for Laboratories and Epidemiology, Lao PDR.12/06/2018. "Dengue in Lao PDR".  
[<http://www.ncle.gov.la/outbreaks-and-emergencies/dengue-outbreak/>]. Accessed on 18 February 2021.
- [5] Bill & Melinda Gates Foundation. April 2018. Lao PDR Emergency Operations Center Planning and Design Mission Draft Report. [<https://www.gatesfoundation.org/~media/GFO/Documents/How-We-Work/RFP-Lao-PDR-EOC/Lao-PDR-EOC-Planning-and-Design-Mission-Report.pdf?la=zh-CN>]. Accessed on 18 February 2021.
- [6] Nonaka D., Pongvongsa T., Nishimoto F. et al. February 2014. "Successful mobile phone network-based approach to integration of the health care system in rural Laos: strengthening lay health worker performance". Rural Remote Health. 14:2588. Epub 2014 Feb 18. [<https://www.rrh.org.au/journal/article/2588>]. Accessed on 18 February 2021.
- [7] WHO Regional Office for the Western Pacific. 2018. "Asia Pacific Strategy for Emerging Diseases (APSED) Evaluation Report 2005-2015". [<http://iris.wpro.who.int/bitstream/handle/10665.1/14028/9789290618287-eng.pdf>]. Accessed on 18 February 2021.

## 4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

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

#### 4.6.1a

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

Yes = 1 , No = 0

**Current Year Score: 0**

There is no public 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.

According to the World Health Organization Joint External Evaluation for Laos (JEE), conducted in February 2017, the National Strategy on infection prevention and control (IPC) for all Health Care Facilities was developed in 2014 and there are strategies, committees, standard operating procedures and guidelines available at national and subnational levels, as well as at health care facilities. [1] However, the JEE reports that there is no national programme to monitor compliance with the IPC programme and no dedicated IPC unit at the hospital level to facilitate IPC programme implementation. [1] .

There is no public evidence that healthcare workers contracted COVID-19 through their work. There is no further information on the websites of the Ministry of Health and the Ministry of Agriculture and Forestry. [2,3]

[1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".

[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 28 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 18 February 2021

[3] Ministry of Agriculture and Forestry (MAF), Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 18 February 2021

## 4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

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

#### 4.7.1a

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is 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 Laos. According to the Ministry of Health, all medical research in Laos is subject to approval by one of the country's two ethics review committees. [1] The Ministry of Health's research strategy states that proposals for medical research can be submitted online through the National Institute of Health Research Portal or directly to the two ethics review committees, the Ethics Committee of the University of Health Sciences and the National Ethics Committee for Health Research. [1,2] According to the Ministry of Health's research strategy, published in 2015, five-year National Health Research master plans (NHRMP) have been developed since 1992, and in 2013 the ministry established the Department of Training and Research for overall management of health research. [1] In August 2014, this department published a Strategy on the Promotion and Management of Health Research by 2020. Manuals on the approval process for research ethics have been endorsed and published. [3] Several examples of clinical trial research proposals submitted for approval in the last two years are available at the National Institute of Health Research Portal, originating from bodies including the Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit and the Lao Tropical and Public Health Institute.

[4]

[1] Ministry of Health Lao PDR. 2015. "Strategy on the Promotion and Management of Health Research by 2020". [http://www.laohrp.com/index.php/hrp/about/index/files]. Accessed on 18 February 2021.

[2] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. "Health Research Portal". [http://laohrp.com/index.php/hrp/about]. Accessed on 18 February 2021.

[3] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. Health Research Portal. "Governance, Policies, and Procedures for Health Research". [http://laohrp.com/index.php/hrp/about/index/governance]. Accessed on 18 February 2021.

[4] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. Health Research Portal. "Research". [http://laohrp.com/index.php/hrp/search/advancedResults]. Accessed on 18 February 2021.

#### 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 public evidence of an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics.

According to the 2011 Law on Medical Product, "the clinical trial of drugs or medical product can be conducted if only it is authorized by the health sector" (article 31) and "the States shall have the right to import or produce the intellectual property-related drugs and medical product in case of necessity for the use for the disease prevention and treatment, but shall not for commercial purpose, for instance, in the case of an epidemic." (article 30 - new) [1]. Approval for all medical research is given through the National Institute Health Research Portal or directly by the two ethics review committees, the Ethics Committee of the University of Health Sciences and the National Ethics Committee for Health Research. [2] However, there is no mention of an expedited process for approving clinical trials for unregistered medical countermeasures.

There is no evidence on the website of the Ministry of Health. [3]

[1] National Assembly 2011, Law on Drugs and Medical Product (Amended).

[http://www.fdd.gov.la/download/contents\_documents/2019-07-05\_100305am\_Law%20on%20Medical%20Products%20(Eng).pdf]. Accessed on 28 February 2021.

[2] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. "Health Research Portal". [http://laohrp.com/index.php/hrp/about]. Accessed on 18 February 2021

[3] Ministry of Health, Lao PDR. [http://www.moh.gov.la/]. Accessed on 28 February 2021.

### 4.7.2 Regulatory process for approving medical countermeasures

#### 4.7.2a

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

Yes = 1 , No = 0

**Current Year Score: 1**



There is public evidence of a government agency responsible for approving new medical countermeasures (MCM) for humans.

According to Article 13 of the Law on Medical Product, "the drugs and medical products which shall be used, trafficked and distributed in the Lao PDR shall be subjected to prior registration with the Department of Food and Drugs of the Ministry of Health". [1] The Ministry of Health has issued a regulation outlining requirements and steps to be taken for drug registration. [2]

Approval for all medical research is given through the National Institute Health Research Portal or directly by the two ethics review committees - the Ethics Committee of the University of Health Sciences and the National Ethics Committee for Health Research. [3]

[1] National Assembly 2011, Law on Drugs and Medical Product (Amended).

[[http://www.fdd.gov.la/download/contents\\_documents/2019-07-05\\_100305am\\_Law%20on%20Medical%20Products%20\(Eng\).pdf](http://www.fdd.gov.la/download/contents_documents/2019-07-05_100305am_Law%20on%20Medical%20Products%20(Eng).pdf)]. Accessed on 13 March 2021

[2] Ministry of Health, Drug Registration.

[[http://www.fdd.gov.la/download/contents\\_documents/1469680478Drug%20Registration.pdf](http://www.fdd.gov.la/download/contents_documents/1469680478Drug%20Registration.pdf)]. Accessed on 13 March 2021

[3] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. "Health Research Portal".

[<http://laohrp.com/index.php/hrp/about>]. Accessed on 18 February 2021

#### 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 insufficient evidence of an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies.

According to Article 13 of the Law on Medical Product "the drugs and medical products which shall be used, trafficked and distributed in the Lao PDR shall be subjected to prior registration with the Department of Food and Drugs of the Ministry of Health" and "the States shall have the right to import or produce the intellectual property-related drugs and medical product in case of necessity for the use for the disease prevention and treatment, but shall not for commercial purpose, for instance, in the case of epidemic." (Article 30 - new) [1]. The Ministry of Health has issued a regulation outlining requirements and steps to be taken for drug registration. [2] There is no mention of an expedited process for approving medical countermeasures.

Approval for all medical research is given through the National Institute Health Research Portal or directly by the two ethics review committees - the Ethics Committee of the University of Health Sciences and the National Ethics Committee for Health Research. [3] There is no further evidence on the website of the Ministry of Health. [4]

[1] National Assembly 2011, Law on Drugs and Medical Product (Amended).

[[http://www.fdd.gov.la/download/contents\\_documents/2019-07-05\\_100305am\\_Law%20on%20Medical%20Products%20\(Eng\).pdf](http://www.fdd.gov.la/download/contents_documents/2019-07-05_100305am_Law%20on%20Medical%20Products%20(Eng).pdf)]. Accessed on 13 March 2021

[2] Ministry of Health, Drug Registration.

[[http://www.fdd.gov.la/download/contents\\_documents/1469680478Drug%20Registration.pdf](http://www.fdd.gov.la/download/contents_documents/1469680478Drug%20Registration.pdf)]. Accessed on 13 March 2021

[3] National Institute of Public Health/University of Health Sciences Lao PDR. Lao P.D.R. "Health Research Portal".

[<http://laohrp.com/index.php/hrp/about>]. Accessed on 18 February 2021

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

## 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 public evidence of a national disaster risk reduction (DRR) strategy in Laos. The government reported the lack of such a strategy in the UN International Strategy for Disaster Reduction (UNISDR) Sendai Framework readiness review of 2017, saying that it was in the process of preparing a national DRR strategy. [1] There has been no further update on this. There is no publicly available evidence on the websites of the Ministry of Health that a DRR has since been implemented. [2]

[1] UN International Strategy for Disaster Reduction (UNISDR) PreventionWeb. 2017. "Lao PDR Sendai Framework data readiness review report". [<https://www.preventionweb.net/english/professional/policies/v.php?id=53156>]. Accessed on 28 February 2021.

[2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

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

### 5.2.1 Cross-border agreements

#### 5.2.1a

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

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

**Current Year Score: 2**

There is publicly available evidence that Laos has cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies and there is no evidence of gaps in implementation.

Laos is a member of various regional networks designed to foster co-operation during public health emergencies. Laos is a member of the Mekong Basin Disease Surveillance consortium, along with its neighbours Cambodia, China, Myanmar, Thailand and Vietnam. [1] The memorandum of understanding (MOU) for this consortium describes cooperation which "aims to strengthen national and regional capabilities in disease surveillance, risk assessment and outbreak preparedness and response to any public health emergencies." [1]

As a member of the Association of Southeast Asian Nations (ASEAN), Laos is also party to the ASEAN Agreement on Disaster Management and Emergency Response (AADMER). AADMER was formally established in July 2005 by ten member countries of ASEAN to strengthen technical assistance, proactive cooperation and resource mobilization for disasters and AADMER Work programme 2021-2025 has been developed [2]. Operations are coordinated by the regional Asian Disaster Preparedness Centre. [3]. In addition, in January 2021, ASEAN Regional Reserve of Medical Supplies (RRMS) for public health emergency was launched during the 37th ASEAN Summit [4].

[1] Mekong Basin Disease Surveillance (MBDS). "Mekong Basin Disease Surveillance (MBDS) Network". [https://www.nbr.org/wp-content/uploads/pdfs/programs/MBDS.pdf]. Accessed on 18 February 2021.

[2] Association of Southeast Asian Nations (ASEAN).. "ASEAN Agreement on Disaster Management and Emergency Response Work Programme 2021-2025". [https://asean.org/storage/AADMER-Work-Programme-2021-2025.pdf]. Accessed on 18 February 2021.

[3] Asian Disaster Preparedness Center (ADPC), ADPC At Glance. [https://www.adpc.net/igo/contents/adpcpage.asp?pid=2]. Accessed on 18 February 2021

[4] ASEAN 2021, Press Release by the Chairman of the ASEAN Foreign Ministers' Retreat (AMM Retreat). [http://www.asean2021.bn/Theme/news/news-21.01.21.aspx]. Accessed on 12 March 2021

#### 5.2.1b

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

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

**Current Year Score: 0**

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

Laos is a member of various regional networks designed to foster co-operation during public health emergencies, although there is no mention of animals. Laos is a member of the Mekong Basin Disease Surveillance consortium, along with its neighbours Cambodia, China, Myanmar, Thailand and Vietnam. [1] The memorandum of understanding (MOU) for this consortium describes cooperation which "aims to strengthen national and regional capabilities in disease surveillance, risk assessment and outbreak preparedness and response to any public health emergencies." [1]

As a member of the Association of Southeast Asian Nations (ASEAN), Laos is also party to the ASEAN Agreement on Disaster Management and Emergency Response (AADMER). AADMER was formally established in July 2005 by ten member countries of ASEAN to strengthen technical assistance, proactive cooperation and resource mobilization for disasters and AADMER Work programme 2021-2025 has been developed [2]. In addition, ASEAN establishes Coordinating Centre to address trans-boundary animal and zoonotic diseases in 2016 although there is no mention of animal health emergencies. [3,4] There is no further evidence on the websites of the Ministry of Health and Ministry of Agriculture [5,6]

[1] Mekong Basin Disease Surveillance (MBDS). "Mekong Basin Disease Surveillance (MBDS) Network". [https://www.nbr.org/wp-content/uploads/pdfs/programs/MBDS.pdf]. Accessed on 18 February 2021.

[2] Association of Southeast Asian Nations (ASEAN). "ASEAN Agreement on Disaster Management and Emergency Response Work Programme 2021-2025". [https://asean.org/storage/AADMER-Work-Programme-2021-2025.pdf]. Accessed on 18 February 2021.

[3] ASEAN 2016, ASEAN establishes Coordinating Centre to address trans-boundary animal and zoonotic diseases. [https://asean.org/asean-establishes-coordinating-centre-to-address-trans-boundary-animal-and-zoonotic-diseases-2]. Accessed 12 March 2021

[4] ASEAN 2016, Agreement on the Establishment of the ASEAN Coordination Centre for Animal Health and Zoonoses. [http://agreement.asean.org/media/download/20161108071810.pdf]. Accessed 12 March 2021

[5] Ministry of Health, Lao PDR. [http://www.moh.gov.la/]. Accessed on 28 February 2021.

[6] Ministry of Agriculture and Forestry, Lao PDR. [http://www.maf.gov.la/]. Accessed on 28 February 2021.

## 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: 2

2021

Biological Weapons Convention

## 5.3.2 Voluntary memberships

### 5.3.2a

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

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

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

Current Year Score: 0

2021

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

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

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

#### 5.4.1a

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

Yes = 1, No = 0

Current Year Score: 1

2021

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

#### 5.4.1b

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

Yes = 1, No = 0

Current Year Score: 0

2021

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

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

#### 5.4.2a

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

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

#### 5.4.2b

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

Yes = 1, No = 0

Current Year Score: 0

2021

OIE PVS assessments

## 5.5 FINANCING

### 5.5.1 National financing for epidemic preparedness

#### 5.5.1a

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

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years.

The country is currently developing its Financial Strategy for Disaster Risk Management through the South East Asia Disaster Risk Management Project. This is the third component which is the financial planning for disaster resilience. This component includes two subcomponents: support for strengthening national financial resilience, and payment of disaster risk insurance premium. The project is an ongoing project funded by the World Bank with a lifespan of 5 years and expected to complete by December 2022. [1,2] However, there is no evidence of improving capacity to address epidemic threats.

The government has also developed disaster risk financing mechanisms. The State Reserve Fund, established in 2013 under the Ministry of Finance, includes 3 percent of the annual expenditure budget. The Social Welfare Fund, established in 2015 under the Ministry of Social Welfare, covers disaster emergency relief [3]. However, there is no evidence of improving capacity to address epidemic threats. There is no further evidence on the website of the Ministry of Health. [4]

[1] The World Bank, Lao PDR Southeast Asia Disaster Risk Management Project. [<https://projects.worldbank.org/en/projects-operations/project-detail/P160930?lang=en>]. Accessed on 12 March 2021

[2] Ministry of Finance 2021, Consultation Workshop on Financial Strategy for Disaster Risk Management. [<https://www.mof.gov.la/index.php/2021/03/05/kongpasoumpakorpkhamhen-khoumkongphaipibut-laos/>]. Accessed on 12 March 2021

[3] Global Facility for Disaster Reduction Recovery, Lao PDR. [<https://www.gfdr.org/en/lao-peoples-democratic-republic>]. Accessed on 12 March 2021

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

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

#### 5.5.2a

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



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

**Current Year Score: 0**

2021

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

### 5.5.2b

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

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

**Current Year Score: 0**

2021

OIE PVS assessments

## 5.5.3 Financing for emergency response

### 5.5.3a

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

Yes = 1 , No = 0

**Current Year Score: 1**

There is evidence of a special emergency public financing mechanism and funds which the country can access in the face of a public health emergency.

Laos is eligible to borrow International Development Association (IDA) resources on blend credit terms and is, therefore, able to access the World Bank's Pandemic Emergency Financing Facility. [1,2]

[1] International Development Association (IDA). "Borrowing Countries". [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed on 29 February 2021.

[2] World Bank 2017. "Pandemic Emergency Financing Facility: Operational Brief for Eligible Countries". [<http://pubdocs.worldbank.org/en/119961516647620597/PEF-Operational-Brief-Dec-2017.pdf>]. Accessed on 29 February 2021.

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

### 5.5.4a

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

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

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

**Current Year Score: 1**

There is evidence to suggest that senior Lao leaders have made public commitments to either provide financial or other support to address epidemic threats in other countries, and to expand financing or request support to improve its own capacity to address epidemic threats in the past three years. The Joint Statement from Health Ministers of ASEAN and the United States on COVID-19 Cooperation (30 April 2020) addresses funding and capacity development for future disease outbreaks by stating that that the Ministers "[welcome] the announcement of the ASEAN Member States' plan to establish the COVID-19 Response Fund to address COVID-19 and future public health emergencies, and a Regional Reserve of Medical Supplies to enable rapid response to emergency medical supply needs, with the partnership of external partners." [1]

There is no further evidence of such commitments on the websites of the Ministry of Health, The Ministry of Foreign Affairs, or the Prime Minister's Office [2,3,4]

There have been no reports of requests for assistance with epidemic threats in the media including BBC News and Nikkei Asia [5,6]

- [1] Association of Southeast Asian Nations (ASEAN). 30 April 2020. "Joint Statement Special Video Conference of Health Ministers of ASEAN and the United States in Enhancing Cooperation on Coronavirus Disease 2019 (COVID-19) Response". [[https://asean.org/storage/2020/05/Adopted\\_ASEAN-US-Joint-Statement-on-COVID-19.pdf](https://asean.org/storage/2020/05/Adopted_ASEAN-US-Joint-Statement-on-COVID-19.pdf)]. Accessed September 2020.
- [2] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [3] Ministry of Foreign Affairs (MoFA). [<http://www.mofa.gov.la/>]. Accessed on 12 March 2021
- [4] Prime Minister's Office, Lao Government. [<http://laogov.gov.la/Pages/home.aspx>]. Accessed on 12 March 2021
- [5] BBC News. [<https://www.bbc.co.uk/search?q=Lao+call+assistance+emergency&page=1>]. Accessed on 12 March 2021
- [6] Nikkei Asia. [<https://asia.nikkei.com/search?query=lao+call+assistance+Emergency>]. Accessed on 12 March 2021

### 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 to suggest that Laos has requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats in the past three years.

There is evidence via the Global Health Security Funding Tracker that Laos has invested donor finances to improve domestic capacity to address epidemic threats. [1] The tracker notes that Laos has received funding from multiple donors to enhance their capacity on global security preparedness including from the World Health Organisation for control strategies, plans and capacities for diseases such as cholera, viral haemorrhagic fever, meningitis and influenza and those due to vector-borne, emerging and re-emerging pathogens. [1]

In May 2020, The United States has committed an additional US\$3.17 million in new funding support, provided through the U.S. Centers for Disease Control and Prevention (USCDC), for prevention, preparedness, and response activities in response to COVID-19 in Lao PDR. These resources will be used for surveillance, laboratory capacity building, infection prevention and control, community mitigation, emergency response, and vaccine preparedness [2]

ADB supported a project for Cambodia, Lao, Myanmar and Vietnam (CLMV) to strengthen the health system, including regional cooperation; surveillance and outbreak response; laboratory quality and biosafety; and hospital infection prevention and control (IPC). In Lao PDR, \$12 million will be invested in the project. The project will run for 5 years from mid-2017. [3]

The websites of the Ministry of Health and Ministry of Foreign Affairs do not contain information on Laos requesting financing or technical support from donors to improve the country's domestic capacity to address epidemic threats. [4,5].

[1] Global Health Security Funding Tracker. Lao PDR. [<https://tracking.ghscosting.org/details/981/recipient>]. Accessed on 19 February 2021.

[2] United States Embassy in Laos, United States Announces \$3 Million of CDC support for COVID-19 Response in Lao PDR. [<https://la.usembassy.gov/united-states-announces-3-million-of-cdc-support-for%E2%80%A8covid-19-response-in-lao-pdr/>]. Accessed on 19 February 2021.

[3] Lao Health Planning, Lao Health Planning and Project Management. [<http://laohealthplanning.org/en/health-security/project-description/>]. Accessed on 19 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[5] Ministry of Foreign Affairs, Lao PDR. "MOFA Leader-News". [<http://www.mofa.gov.la/>]. Accessed on 19 February 2021.

#### 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 clear evidence of 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.

Laos is party to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, but this treaty is more focused on the protection of national genetic resources than sharing of genetic data. [1, 2] Likewise, the 2004 National Biosafety Framework contains a section on "Accesses and Benefit Sharing to Genetic Resource", but again is more designed to protect national rights to benefit from the commercial use of genetic resources. [3]

No commitment to sharing of genetic or epidemiological data, clinical specimens, and/or isolated biological materials is evident on the websites of the Ministry of Health, the Ministry of Agriculture and Forestry, or the Ministry of Science and Technology. [4,5,6] There is also no evidence on the WHO country page for Lao. [7]

[1] Convention on Biological Diversity. "Parties to the Nagoya Protocol". [<https://www.cbd.int/abs/nagoya-protocol/signatories/default.shtml>]. Accessed on 28 February 2021.

[2] Secretariat of the Convention on Biological Diversity. 2011. "Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity: text and annex". [<https://www.cbd.int/abs/text/default.shtml>]. Accessed on 28 February 2021.

[3] Science, Technology and Environment Agency, Prime Minister's Office, Lao PDR. 25 December 2004. "Lao National Biosafety Frameworks". [[https://unep.ch/biosafety/old\\_site/development/Countryreports/LANBFrep.pdf](https://unep.ch/biosafety/old_site/development/Countryreports/LANBFrep.pdf)]. Accessed on 28 February 2021.

[4] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.

[5] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.

[6] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed on 28 February 2021.

[7] WHO Country Page, Lao PDR. [<https://www.who.int/laos>]. Accessed on 28 February 2021.

#### 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 insufficient public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years.

According to the World Health Organization Joint External Evaluation for Laos (JEE), conducted in February 2017, the Lao PDR participates in international laboratory networks including the Global Influenza Surveillance and Response System. [1]

There is no record or suggestion of Laos refusing any request for the sharing of samples on the websites of the Ministry of Science and Technology, Ministry of Health, Ministry of Agriculture and Forestry, and the Ministry of Foreign Affairs [2,3,4,5] There is no further evidence on the WHO country page for Lao. [6] There is no further evidence reported from international or local media sources.

- [1] World Health Organization (WHO). 17-24 February 2017. "Joint External Evaluation of IHR Core Capacities of the Lao People's Democratic Republic. Mission Report 17-24 February 2017".  
[<https://apps.who.int/iris/bitstream/handle/10665/258554/WHO-WHE-CPI-REP-2017.35-eng.pdf?sequence=1>]. Accessed on 19 February 2021.
- [2] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed on 28 February 2021
- [3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.
- [5] Ministry of Foreign Affairs (MoFA). [<http://www.mofa.gov.la/>]. Accessed on 28 February 2021.
- [6] WHO Country Page, Lao PDR. [<https://www.who.int/laos>]. Accessed on 28 February 2021.

**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 insufficient public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years including for Covid-19.

Lao and the WHO have worked closely together during the Covid-19 outbreak. There are weekly situation reports produced by WHO highlighting the most recent developments in the country office response to Covid-19 and there is no evidence of Laos not sharing samples. [1]

There is no record or suggestion of Laos refusing any request for sharing pandemic pathogen samples during an outbreak on the websites of the Ministry of Science and Technology, Ministry of Health, Ministry of Agriculture and Forestry, and the Ministry of Foreign Affairs [2,3,4,5] There is no further evidence on the WHO country page for Lao. [6] There is no further evidence reported from international or local media sources.

- [1] WHO, COVID Situation Report <https://www.who.int/laos/emergencies/covid-19-in-lao-pdr/situation-reports>, Accessed on 19 February 2021.
- [2] Ministry of Science and Technology, Lao PDR. [<https://www.most.gov.la/>]. Accessed on 28 February 2021
- [3] Ministry of Health, Lao PDR. [<http://www.moh.gov.la/>]. Accessed on 28 February 2021.
- [4] Ministry of Agriculture and Forestry, Lao PDR. [<http://www.maf.gov.la/>]. Accessed on 28 February 2021.

[5] Ministry of Foreign Affairs (MoFA). [<http://www.mofa.gov.la/>]. Accessed on 28 February 2021.

[6] WHO Country Page, Lao PDR. [<https://www.who.int/laos>]. Accessed on 28 February 2021.

## 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: 2

2020

Economist Intelligence

##### 6.1.1b

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

Input number

Current Year Score: 1

2020

Economist Intelligence

##### 6.1.1c

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

Input number

Current Year Score: 0

2020

Economist Intelligence

##### 6.1.1d

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

Input number

Current Year Score: 0

2020

Economist Intelligence

### 6.1.1e

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

Input number

Current Year Score: 29

2020

Transparency International

### 6.1.1f

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

Input number

Current Year Score: 0

2020

Economist Intelligence

### 6.1.1g

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

Input number

Current Year Score: 1

2020

Economist Intelligence

## 6.1.2 Orderly transfers of power

### 6.1.2a

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

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

Current Year Score: 0



2021

Economist Intelligence

### 6.1.3 Risk of social unrest

#### 6.1.3a

**What is the risk of disruptive social unrest?**

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

**Current Year Score: 2**

2021

Economist Intelligence

### 6.1.4 Illicit activities by non-state actors

#### 6.1.4a

**How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?**

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

**Current Year Score: 3**

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: 2**

2021

Economist Intelligence

## 6.1.5 Armed conflict

### 6.1.5a

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

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

Current Year Score: 3

2021

Economist Intelligence

## 6.1.6 Government territorial control

### 6.1.6a

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

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

## 6.1.7 International tensions

### 6.1.7a

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

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

Current Year Score: 3

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: 84.7**

2015

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: 0.54**

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: 4.9**

2012

World Bank; Economist Impact

### 6.2.3b

**Share of employment in the informal sector**

Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0

**Current Year Score: 1**

The share of employment in the informal sector in Laos is between 25% and 50%. According to the Mid-Term Report from the Decent Work Programme for Lao PDR (2017-2021), prepared by the Decent Work Country Programme Tripartite Monitoring and Evaluation TaskForce and the International Labour Organization in 2019, the employment for informal sector accounted for 27 per cent of total employment [1]. In 2019, the World Bank undertook Informal Sector Business Survey for Lao PDR but the result of the survey has not been published [2]

[1] Ministry of Labour and Social Welfare. 2019. "Mid-Term Review Report (2017-2019)". [<https://incci.la/?mdocs-file=7379>] Accessed on 20 February 2021.

[2] World Bank. 2020. [<https://datacatalog.worldbank.org/dataset/lao-pdr-informal-sector-business-survey-2019>] Accessed

on 20 February 2021.

### 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: 0**

2021

Economist Intelligence Democracy Index

## 6.2.6 Inequality

### 6.2.6a

**Gini coefficient**

Scored 0-1, where 0=best

**Current Year Score: 0.39**

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: 0

2021

Economist Intelligence

### 6.3.2 Adequacy of airports

#### 6.3.2a

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

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

Current Year Score: 3

2021

Economist Intelligence

### 6.3.3 Adequacy of power network

#### 6.3.3a

What is the risk that power shortages could be disruptive?

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

Current Year Score: 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: 35.65

2019

World Bank

## 6.4.2 Land use

### 6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: -1.62

2008-2018

World Bank; Economist Impact

## 6.4.3 Natural disaster risk

### 6.4.3a

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

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

Current Year Score: 0

2021

Economist Intelligence

## 6.5 PUBLIC HEALTH VULNERABILITIES

### 6.5.1 Access to quality healthcare

#### 6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 67.61

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: 699.9

2019

WHO

### **6.5.1c**

Population ages 65 and above (% of total population)

Input number

Current Year Score: 4.16

2019

World Bank

### **6.5.1d**

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 37.8

2018

World Bank

### **6.5.1e**

Prevalence of obesity among adults

Input number

Current Year Score: 5.3

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: 82.06

2017



UNICEF; Economist Impact

### 6.5.2b

**Percentage of homes with access to at least basic sanitation facilities**

Input number

**Current Year Score: 74.46**

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: 64.67**

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