

# Arboviral Surveillance and Response Capacity Survey 2021

## Section I: Respondent details

### 1. Country

Jordan

### 2. Respondent/person to be contacted for clarification, if needed (last name, first name, e-mail address)

### 3. Professional title and affiliation

### 4. Date (dd/mm/yyyy)

25/7/2021

## Section II: Arboviral disease surveillance system

### 5. Which arboviruses have circulated in your country at any time since the year 2000? This refers only to arboviruses with autochthonous i.e., local mosquito-borne transmission.

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|              |                                   |
|--------------|-----------------------------------|
| Chikungunya  | Not selected                      |
| Dengue       | Not selected                      |
| Yellow fever | Not selected                      |
| Zika         | Not selected                      |
| Other        | WNFV, RVFV, CCHFV, SAND FLY FEVER |

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### 6. Do you have any written arbovirus surveillance and control plan(s) and/or guideline(s) for your country?

Yes. We do not have arbovirus-specific guidelines, but arboviruses are included within general surveillance guidelines.

**6b. For which of the following arboviruses do you have written surveillance and control plans for your country? Please choose all that apply.**

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|              |              |
|--------------|--------------|
| Chikungunya  | Not selected |
| Dengue       | Not selected |
| Yellow fever | Yes          |
| Zika         | Yes          |

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**6c. Please upload surveillance and control plan(s) or protocol(s), or guideline(s)**  
0 file(s) submitted

**7. Is there a specific national programme for arboviral diseases surveillance or is it integrated in another programme? Please select the appropriate answer:**

Integrated in another programme

**7b. Please specify the programme into which arboviral diseases is integrated**

MALARIA CONTROL P./VECTOR CONTROL ACTIVITIES

**8. For which level of the health structure are individual and aggregated data available? (Select all relevant levels)**

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|                           | Individual level | Aggregated   |
|---------------------------|------------------|--------------|
| Primary health care level | Not selected     | Not selected |
| District level            | Not selected     | Not selected |
| Regional level            | Not selected     | Not selected |
| National level            | Yes              | Not selected |

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**9. What are the tools used for recording case data for surveillance purposes? Select all that apply**

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|          |               |
|----------|---------------|
| District | Mixed methods |
|----------|---------------|

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**10. Which training has been provided to the staff working on arboviral disease surveillance data?**

|   |              |
|---|--------------|
| One-time basic training on data capture and analysis (MS Excel, MS Access, EpiInfo) and/or geographic information systems (GIS) | Not selected |
| Repeated/continuing basic training on data capture, analysis, and/or GIS  | Not selected |
| One-time advanced training on statistical software for data analysis (e.g. STATA, R, SAS, Tableau, etc)) and GIS                | Not selected |
| Repeated/continuing training on advance statistical software for data analysis (eg STATA, R, SAS, etc) and GIS                  | Not selected |
| No training   | Yes          |

**11. Is reporting mandatory for any arboviral disease cases in your country?**

Yes

**11b. For which of the following arboviral disease cases is reporting mandatory in your country?**

|              |  |
|--------------|--|
| Yellow fever | Mandatory reporting of all suspect cases |
|--------------|--|

**11c. For which other arboviral diseases is reporting mandatory?**

**11d. Please upload document(s) containing surveillance case definitions used for reporting of arboviral diseases**

0 file(s) submitted

**12. In the last 2 years, did your country conduct national epidemiological surveillance for human cases of arboviral disease?**

No

**12b. How frequently are surveillance data reported to the national level?**

**12c. What type of national epidemiological surveillance was conducted?**

For reference, here are the relevant definitions:

**Active surveillance** is defined as having dedicated systems and staff that routinely and with effort survey for cases of disease or detection of vectors and associated pathogens by the public health department.

**Passive surveillance** is defined as having a reporting system where physicians, laboratories, mosquito control districts, academic institutions or others routinely report cases of disease or detection of vectors and associated pathogens to the public health department.

**12d. If available, please upload the most recent report(s) on arboviral surveillance in humans**

**13. Does your country provide regular training sessions for healthcare workers on notification of *Aedes*-borne arboviral diseases?**

No

**14. What do the arboviral disease surveillance staff perceive as factors contributing to the a) success and b) barriers/challenges to arboviral disease surveillance in humans?**

### **Section III: Arbovirus laboratory capacity**

**15. Is arbovirus diagnostic laboratory testing performed for confirmation of suspected cases in your country? (Please select the applicable option during outbreak periods and during non-outbreak periods, respectively)**

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Non-outbreak periods

All suspect cases tested

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**15b. On average, for what percentage of suspected arboviral disease cases your country is laboratory confirmatory testing performed? Please indicate for outbreak and non-outbreak periods, respectively**

**16. In the last two years, were the positive cases of arboviruses confirmed by a national reference laboratory?**

Yes, for all arboviral infections. Please specify them:

CHIKV, DENV, ZIKV, YFV

**16b. If your country does not have capacity to type and serotype arboviruses, do you send samples for typing to other countries?**

No

**17. Overall, what arboviral testing capacity(ies) is(are) available in your country? Please check all applicable boxes**

|              | Antigen testing | IgM antibody testing | IgG antibody testing | Neutralizing antibody testing | Virus isolation | RT-PCR or other nucleic acid amplification test | Viral gene/genome Sequencing |
|--------------|-----------------|----------------------|----------------------|-------------------------------|-----------------|---|------------------------------|
| Chikungunya  |                 |                      |                      |                               |                 | Yes   |                              |
| Dengue       |                 | Yes                  | Yes                  |                               |                 | Yes   |                              |
| Yellow fever |                 |                      |                      |                               |                 | Yes   |                              |
| Zika         |                 |                      |                      |                               |                 | Yes   |                              |
| Other        |                 |                      |                      |                               |                 | Yes   |                              |

**18. Which additional resources are most needed for your country to perform adequate testing for arboviral diseases? Please describe what would be needed for each checked resource in the adjacent comment field**

Additional laboratory equipment, reagents, etc.: REGARDS

**19. Do you perform virological surveillance on humans, ie, tracking of prevailing genotypes/serotypes? Please select all that apply**

Yes, using RT-PCR: NA

**19b. Which samples do you use for virological surveillance?**

|  |     |
|--|-----|
| Samples from suspected arboviral diseases routinely notified           | Yes |
| Samples routinely collected from patients with fever of unknown origin | Yes |

**19c. For which viruses do you perform virological surveillance? (check all that apply)**

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|                    |           |
|--------------------|-----------|
| Chikungunya virus  | Yes       |
| Dengue viruses     | Yes       |
| Yellow fever virus | Yes       |
| Zika virus         | Yes       |
| Other              | WEST NILE |

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**19d. Does your country provide regular training sessions for healthcare workers on arboviruses virological surveillance?**

No

**20. What do the arboviral diagnostic laboratory staff perceive as factors contributing to the a) success and b) barriers/challenges with respect to laboratory testing for arboviral infections?**

## **Section IV: Management of arboviral disease cases**

**21. Does your country have clinical guidelines for healthcare workers on diagnosis and clinical management of cases and severe cases of *Aedes*-borne arboviral diseases?**

No

**21b. Please upload the clinical guideline(s) for arboviral disease management**

**22. Are severe cases of arboviral diseases managed in a special area (part of the hospital, isolation beds)?**

I don't know

**23. How many hospital beds are available per 100,000 population?**

140

**24. Does your country provide regular training sessions for healthcare workers on clinical diagnosis and management of *Aedes*-borne arboviral diseases?**

No

25. What do the arboviral disease surveillance/clinical staff perceive as factors contributing to the a) success and b) barriers/challenges with respect to case management?

## Section V: Routine vector surveillance and control

26. Is there a disease programme, agency, or service in charge of arbovirus vector surveillance in your country?

Yes. If so, please specify in the comment field.

MALARIA AND VECTOR CONTROL PROGRAM

27. Which institution/department is in charge of reporting entomologic surveillance data to the national ministry of health/health department? (Check all that apply)

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|   |              |
|---|--------------|
| State/provincial health agencies                          | Not selected |
| Other national agency                                     | Yes          |
| City/country health departments                           | Not selected |
| Local mosquito control districts or similar organisations | Not selected |
| Universities or academic institutions                     | Not selected |
| Private companies   | Not selected |

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28. For the last 2 years, did your country conduct entomologic surveillance for arboviral infections in mosquito vectors?

No

28b. Please upload the most recent national vector surveillance report

28c. Did the entomologic surveillance entail country wide programmes or was it restricted to specific locations?

28d. How many sentinel surveillance sites do you have?

28e. How often was the surveillance conducted? Please choose one of the following:

29. Do you conduct adult mosquito surveillance?

Yes

30. Do you conduct larval/pupal mosquito surveillance?

Yes

31. Are trapped mosquitoes identified to species?

Yes

32. Does your country either calculate minimum infection rates (MIR) for any *Aedes*-borne arboviruses with your mosquito data or receive such data from other agencies? Please choose only one of the following:

No

33. Which laboratories performed testing for arboviruses on mosquito pools collected in your country in the last two years? (check all that apply)

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|   |              |
|---|--------------|
| National public health laboratory                                 | Not selected |
| State/provincial/regional public health laboratory                | Not selected |
| Local health department laboratory                                | Not selected |
| University or academic institution                                | Not selected |
| Local MCD (if different from county health dep't)                 | Not selected |
| Mosquito surveillance done, but no testing done on mosquito pools | Yes          |
| Not applicable (no mosquito surveillance done)                    | Not selected |

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34. Is there a record of *Aedes aegypti* or *Aedes albopictus* being found in your country in the past 5 years? Please choose only one of the following

Yes, only *Aedes albopictus*

34b. Please describe the potential public health threat from *Aedes aegypti* in your country



**34c. Please describe the potential public health threat from *Aedes albopictus* in your country**

*Aedes albopictus* populations are spreading and pose a significant public health threat

**35. Over the past two years, did your country use any of the following vector control methods in local jurisdictions (either using government staff and resources, or subcontracting to a different entity to do so)? Please select all that apply**

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|   |  |
|---|--|
| Adulticiding (insecticide application against adult mosquitoes) | Yes  |
| Larviciding   | Yes  |
| Insect growth regulators (eg , pyriproxyfen)                    | Not selected                                       |
| Wolbachia method  | Not selected                                       |
| Sterile insect release  | Not selected                                       |
| None  | Not selected                                       |
| Other   | ENVIROMNETAL AND<br>ENGINEERING CONTROL<br>METHODS |

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**35b. Would your country have conducted or financially supported adulticiding/larviciding or source reduction activities in the last two years if sufficient funding were available?**

**35c. Which adulticides and/or larvicides (brand and product name) were used?**

DELTAMETHRIN 2.5% EC TEMEPHOS 50% EC

**36. Does your country provide regular training sessions for staff in charge of vector control and vector surveillance?**

No

**37. For the last two years, did your country have a plan for mosquito-borne disease control that includes a threshold (eg, level of vector mosquito abundance or minimum infection rate) that would result in a recommendation for mosquito adulticiding/other mosquito reduction measures?)**

No – have a plan but there is no specific threshold

37b. Which indicator(s) is(are) used as threshold(s)?

38. Overall, are data on any of the following arboviral outbreak risk factors routinely collected and analysed? (Select all that apply)

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|                                      |              |
|--------------------------------------|--------------|
| House Index                          | Not selected |
| Breteau Index                        | Not selected |
| Container Index                      | Not selected |
| Temperatures                         | Not selected |
| Rainfall                             | Not selected |
| Migration of a non-immune population | Not selected |
| None                                 | Yes          |

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39. Is there a surveillance system in place for monitoring *Aedes* resistance to the insecticide(s) used?

No

40. What do the vector surveillance staff perceive as factors contributing to the a) success and b) barriers/challenges with respect to vector surveillance and control in the country?

VECTOR SURVAILLANCE AND CONTROL AT MCP LACK OF TRAINING  
OG ENTOMOLOGICAL STAFF

## Section VI: Animal surveillance

41. During the last 2 years, did your country conduct national epidemiological surveillance for arboviral disease in animals (eg, epizootic surveillance for yellow fever in endemic areas)?

No

41b. How often was the animal surveillance conducted?

41c. What type of surveillance was conducted in animals?

41d. Please upload a report on the animal surveillance

42. Does your country (or local jurisdictions within the country) perform sentinel animal surveillance or epizootic surveillance, eg, for yellow fever in nonhuman primates in endemic regions?

No

42b. For which viruses is sentinel surveillance conducted and in which animal species?

42c. Please upload the most recent report(s) on sentinel animal surveillance

## Section VII: Community sensitization and participation

43. Does your country have a community outreach program that also covers arboviral diseases?

No

43b. What entity(ies) is(are) in charge of the outreach program in your country?

43c. What is the geographical coverage of the outreach program in your country?

43d. Is the community outreach/social mobilization program sufficiently funded to cover staff time, prevention and outreach activities as needed?

43e. Which resources would help ensure adequate capacity?

**44. Did your national arboviral disease program issue notifications to the public about local transmission risk and/or possible vector-control activities (eg larviciding, adulticiding, community mobilization and participation, etc) as a prevention message for arboviral diseases within last 2 years? (Check all that apply)**

**44b. Which means does your program use for community sensitization, mobilization and acceptance of interventions in your country? (Check all that apply)**

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|   |              |
|---|--------------|
| Press releases to electronic and printed media                | Not selected |
| Public service announcements on television or radio           | Not selected |
| Passive distribution of informational brochures               | Not selected |
| Active distribution of informational brochures                | Not selected |
| Town, community, or neighborhood meetings                     | Not selected |
| Posting information on the home page of your agency's website | Not selected |
| Social media outlets (Facebook, Twitter, etc)                 | Not selected |
| Door-to-door outreach in selected locations                   | Not selected |
| Participation in community clean-ups                          | Not selected |
| Modification of messages for all local languages              | Not selected |

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**45. Does your country provide regular training sessions for staff in charge of community sensitization, mobilisation and acceptance of interventions dedicated to control arboviral diseases?**

No

**46. What do the community outreach staff perceive as factors contributing to the a) success and b) barriers/challenges with respect to community participation**

LACK OF AWARENESS BOUT VECTORS OF ARBOVIRAL DISEASES

## **Section VIII: Preparedness for arboviral outbreaks/epidemics**

**47. Is there either a surveillance and outbreak response committee in your country, or a steering committee for that purpose?**

No

**48. Does your country have a contingency plan to organize healthcare services during an outbreak (including outbreaks of arboviral diseases)?**

No

**48b. Please upload the contingency plan**

**49. Are there defined or established criteria for declaring an outbreak of arboviral disease outbreak in your country?**

No

**50. Do you have established collaborations with national/regional research institutions / international agencies that are planned to be activated in case of arboviral outbreak?**

No

**51. What vector control interventions are deployed in case of an emergency?**

ADULTICIDING AND LARVICIDING

**52. For the last 2 years, which of the following government levels had an emergency fund or a specified emergency funding mechanism for arbovirus outbreak response?**

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|                   |              |
|-------------------|--------------|
| National level    | Not selected |
| State/local level | Not selected |
| None              | Yes          |

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**53. Does your country provide regular training sessions for staff/committee in charge of preparedness for arboviral outbreaks/epidemics?**

No

**54. What do the arboviral disease surveillance staff perceive as factors contributing to the a) success and b) barriers/challenges with respect to preparedness of arboviral diseases epidemics in your country?**

LACK OF AWARENESS LACK OF TRAINING LACK OF RESOURCES

## Section IX: Arboviral disease surveillance data

55. Please provide total number of cases and deaths for the following arboviral diseases from 2015 to 2020 (if available).

|             | Dengue | Chikungunya | Yellow fever | Zika |
|-------------|--------|-------------|--------------|------|
| 2015 Cases  | 0      | 0           | 0            | 0    |
| 2015 Deaths | 0      | 0           | 0            | 0    |
| 2016 Cases  | 0      | 0           | 0            | 0    |
| 2016 Deaths | 0      | 0           | 0            | 0    |
| 2017 Cases  | 0      | 0           | 0            | 0    |
| 2017 Deaths | 0      | 0           | 0            | 0    |
| 2018 Cases  | 0      | 0           | 0            | 0    |
| 2018 Deaths | 0      | 0           | 0            | 0    |
| 2019 Cases  | 0      | 0           | 0            | 0    |
| 2019 Deaths | 0      | 0           | 0            | 0    |
| 2020 Cases  | 0      | 0           | 0            | 0    |
| 2020 Deaths | 0      | 0           | 0            | 0    |

(NA = Not Available)

55b. Were cases of other mosquito-borne arboviruses, not listed in the previous question, reported in your country from 2015-2020?

No

55c. Please select any of the following other mosquito-borne viruses that have been reported in your country from 2015-2020

55d. Please provide total number of cases and deaths due to each of the following other arboviruses that you selected from 2015-2020

56. Please provide the number of cases of locally acquired, mosquito-borne *Aedes*-borne arbovirus infections by case classification for 2020 and, if not available, for 2019

|              | Suspect cases | Probable cases | Confirmed cases | Deaths |
|--------------|---------------|----------------|-----------------|--------|
| Chikungunya  | 0             | 0              | 0               | 0      |
| Dengue       | 0             | 0              | 0               | 0      |
| Yellow Fever | 0             | 0              | 0               | 0      |
| Zika         | 0             | 0              | 0               | 0      |

**57. Do arbovirus surveillance staff have any perceived reasons for increasing trends in arboviral disease incidence? Check all answers that apply.**

|   |     |
|---|-----|
| Climate change (as evidenced by changes in meteorological data)                                       | Yes |
| Construction activities   | Yes |
| Population migration (within the country or between countries)  | Yes |
| Increased availability of peri-domestic water-bearing containers suitable for mosquito egg deposition | Yes |

## Section X: Surveillance staffing

**58. During 2019 (prior to the Covid-19 pandemic), indicate below the number of arbovirus surveillance staff at the national level.**

|  | Number of personnel |
|--|---------------------|
| Entomologists/ vector control specialists        | 3                   |
| Support staff (administration; logistics; other) | 3                   |

**59. Indicate below how many total staff persons are needed at the national level in your country to achieve full epidemiology and laboratory capacity\* to conduct arbovirus surveillance.**

|  | Number of personnel |
|--|---------------------|
| Clinicians                                       | 10                  |
| Epidemiologists                                  | 2                   |
| Laboratorians                                    | 3                   |
| Entomologists/vector control specialists         | 3                   |
| Support staff (administration; logistics; other) | 3                   |

**60. Optional comments to explain responses to questions 58 and 59 above**

**61. The national health authority/ministry of health has access to expertise in clinical management of arboviruses (Check all that apply)**

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|   |   |
|---|---|
| Within the ministry of health (eg, public health medical officers, clinicians in state hospitals) | Not selected  |
| Through other national agency with regulatory authority   | Not selected  |
| Through academic institution(s)   | Not selected  |
| Private hospitals   | Not selected  |
| Does not have access  | Not selected  |
| Other   | THERE IS NO EXPERTISE IN CLINICAL MANAGEMENT OF ARBOVIRUSES |

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**62. The national health authority/ministry of health has access to expertise in arbovirus epidemiology (Check all that apply)**

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|   |              |
|---|--------------|
| Within the ministry of health                           | Yes          |
| Through other national agency with regulatory authority | Not selected |
| Through academic institution(s)                         | Not selected |
| Does not have access                                    | Not selected |

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**63. The national health authority/ministry of health has access to expertise in arbovirus laboratory diagnosis (Check all that apply)**

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|   |              |
|---|--------------|
| Within the ministry of health (e.g., public health laboratory scientists) | Yes          |
| Through other national agency with regulatory authority                   | Not selected |
| Through academic institution(s)   | Not selected |
| Does not have access  | Not selected |

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**64. The national health authority/ministry of health has access to expertise in entomology (Check all that apply)**



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|   |              |
|---|--------------|
| Within the ministry of health                           | Yes          |
| Through other national agency with regulatory authority | Not selected |
| Through academic institution(s)                         | Not selected |
| Does not have access                                    | Not selected |

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**65. Optional comments to explain responses to any of Questions 61-64**

THEY ARE PUBLIC HEALTH STAFF IN GENERAL AND NOT COMPLETELY DENOTED FOR ARBOVIRUSES

## **Section XI: Survey conclusion**

**66. If you have any further comments to add regarding arbovirus surveillance and control in your country, including whether arboviruses other than *Aedes*-borne arboviruses are of higher priority, please do so in the text field below**