Arboviral Surveillance and Response Capacity Survey 2021

Section I: Respondent details

1. Country

San Marino

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)

29/7/2021

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.

Chikungunya	Not selected
Dengue	Not selected
Yellow fever	Not selected
Zika	Not selected

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

No

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

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

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

No programme

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

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

	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

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

National	Paper-based

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?

No

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

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

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

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)

Outbreak periods	Subset of suspect cases tested
Non-outbreak periods	Subset of suspect cases tested

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

Non-outbreak (routine) percentage in a year	0
During outbreaks percentage per identifed cluster	0

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

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

    Yes. Please specify where:

Italy - Emilia Romagna

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

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

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

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

Samples from suspected arboviral diseases routinely notified	Not selected
Samples routinely collected from patients with fever of unknown origin	Not selected

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

Chikungunya virus	Not selected
Dengue viruses	Not selected
Yellow fever virus	Not selected
Zika virus	Not selected

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

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)?

> No. If so, where are patients with severe disease treated? Please specify in comments field.

San Marino has an agreement with Emilia Romagna Region and Second Level Hospital

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

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?

> NA

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

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

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?

30. Do you conduct larval/pupal mosquito surveillance?

31. Are trapped mosquitoes identified to species?

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:

    NA

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

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

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

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

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?

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

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?)

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)

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

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?

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)?

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?

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?

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, mobilisation and acceptance of interventions in your country? (Check all that apply)

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?

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

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?

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

48b. Please upload the contingency plan

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

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

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

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?

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

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?

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).

(NA = Not Available)

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

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

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

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.

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.

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)

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

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

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

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

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