

## CDC GIS in Public Health Emergencies Needs Assessment

The purpose of this survey is to identify and understand gaps and successes associated with current use of GIS for emergency response and preparedness in CDC/ATSDR.

The survey should take approximately 15 minutes to complete. Responses will be used to develop recommendations for geospatial policy and practice in the agency.

### Survey Questions:

1. User Name (optional): \_\_\_\_\_
2. Center – select from dropdown
3. Division – select from Dropdown

CDC estimates the average public reporting burden for this collection of information as approximately 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden statement or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer, 1600 Clifton Road, MS D-74, Atlanta, GA 30333, ATTN: PRA (0923-0047).

### General Background

4. In your branch/program, what kind of decisions are currently made using geographic information?
  - Financial
  - Strategic Planning
  - Programmatic
  - Research Design
  - Advocacy
  - Education
  - Policy
  - Survey Design
  - Other \_\_\_\_\_
5. Do you think you need additional spatial data/maps/visualizations to inform your decision making process? (Yes/No/Maybe)
6. If you marked 'Yes' or 'Maybe' to the previous question, please describe.
7. Would you like to be contacted, via email, by the GIS in Public Health Emergencies Working Group to discuss this further? (Y/N)
8. What type of geographic information systems (GIS) user are you?
  - None. I have no training or exposure to GIS.
  - I have heard of it but have little exposure.
  - Minimal training and use it rarely.
  - Trained to at least an intermediate level, but I do not use GIS.
  - Trained to at least an intermediate level, and I use GIS occasionally.
  - Trained to at least an intermediate level, and I use GIS regularly.
9. On a scale of 1-5 (5 is most important), how useful are geospatial methods and personnel to emergency response activities?
10. On a scale of 1-5 (5 is most important), how useful are geospatial methods and personnel to non-emergency public health activities?
11. In as few words as possible, please describe your overall opinion of CDC's use of GIS in public health emergencies (Please write 'N/A' if you are unsure):
  - Strengths (internal):
  - Weaknesses (internal):

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- Opportunities (external):
- Threats (external):

12. I am responsible for purchasing GIS licenses. Y/N → *Apply logic to include GIS Admin Section*

**GIS Administrators** → *Skip logic: Should only appear if answer yes to Q2.*

13. Are you a GIS Administrator? (Y/N)

14. Have you had any issues purchasing GIS licenses or software for CDC colleagues? (Y/N)

- If Y, please describe

15. Have you had any issues purchasing GIS licenses or software for Ministry of Health colleagues/partners? (Y/N)

- If Y, please describe

16. Do you have a point of contact (POC) who you could ask questions about GIS licenses or software? (Y/N)

17. As a GIS administrator, is there any other feedback you would like to provide?

### Field Data Collection

18. Have you ever collected spatial data (GPS Coordinates, addresses for mapping, etc.) while deployed or out in the field? (Y/N) → *apply skip logic to # 19 for no and #20 for yes*

19. If no, what was the reason? (Select all that apply.)

- Did not need/want to collect spatial data for this assignment
- Preferred device was not available for check out from EOC equipment room
- The EOC equipment room did not stock device
- Devices were available, but I was uncertain how to use them properly.
- Uncertain of IRB protocols
- I have not deployed or worked in the field.
- Other \_\_\_\_\_, specify → *Apply skip logic to GIS request section*

20. If yes, what device(s) did you use? (Select all that apply.)

- GPS unit
- Blackberry
- iPhone
- Android phone
- Tablet
- Handheld Camera
- Recorded address on survey
- Other \_\_\_\_\_, specify

21. If you did collect spatial data, did you receive training at any time on how to *transfer data* from the device to your computer after collecting it? (Y/N)

22. What platform/s have you used to collect data? (Select all that apply.)

- EpiInfo
- Open Data Kit (ODK)
- DHIS Tracker
- KoboCollect
- CommCare
- EpiSample
- Survey123
- Ona
- Other

23. Which platforms do you prefer? (Select your top two preferred platforms.)

- EpiInfo
- Open Data Kit (ODK)
- DHIS Tracker
- KoboCollect
- CommCare

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- EpiSample
  - Survey123
  - Ona
  - Other
24. Which platforms do you least prefer? (Select your top two least preferred platforms.)
- EpiInfo
  - Open Data Kit (ODK)
  - DHIS Tracker
  - KoboCollect
  - CommCare
  - EpiSample
  - Survey123
  - Ona
  - Other
25. What is your typical use-case for mobile data collection? Please describe.
26. How/where did you store the data while in the field?
27. How was data archived in the field?
28. After collecting spatial data, how was spatial visualization and/or analysis completed? Select all that apply:
- I completed this in the field
  - Completed in the field by in-country resources
  - Completed in the field by other deployer(s)
  - Seek support/guidance from Atlanta office
  - I was unaware of spatial techniques that applied to my data.
29. If you worked with the spatial data yourself, did you have training on the GIS software prior to use? (Y/N)
30. Did you use a mapping platform for navigational or personal use? (Y/N)
31. Did you have trouble accessing software in the field? (Y/N)
32. If yes, please list which softwares and the barriers to access.
33. Have you had difficulty receiving or sending large spatial files in the field? (Y/N) If yes, please note difficulties encountered below.
34. Did you know you can check out a GPS unit from the EOC equipment room for any kind of deployment? (Y/N)
35. Have you had any training on using the following GPS devices? (Select all that apply).
- GPS MAP 62 (add picture)
  - GPS Oregon (add picture)
  - I have had training but don't remember which device.
  - No training on GPS device. Other
  - Other
36. Have you ever used one of the above EOC-provided GPS devices above while deployed or out in the field? (Y/N)
37. If yes, was the GPS device adequate for the duties needed to be performed? (Y/N)
38. If the device was not adequate, please describe the issues encountered.

### GIS Requests

39. Did you know that you can request maps, data, or other geographic products from an agency within CDC/ATSDR? (Y/N) → *If no, apply skip logic to software section.*
40. In the last 2 years, did you request maps, data, or other geographic products from an agency within CDC/ATSDR? (Y/N) → *if yes, skip to Q42.*
41. If no, please check all the reasons why you did not utilize these services:
- I have no need for this skill set in my team/branch's work
  - It isn't clear how this skill set would be used in my team/branch's work
  - Past products provided were not what I envisioned
  - Funding: unclear how much money is needed to request services
  - These services are already available in my branch, program, or division

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→ Apply skip logic to GIS Professionals section.

### If yes...

42. Did you know who to contact to get the services/products you needed? (Y/N)

43. Over the last 2 years, what branch/group/individuals did you request from? Select all that apply.

- Emergency Operations Center: Situational Awareness Team
- Geospatial Research, Analysis, and Services Program (GRASP)
- Epi-Info Team
- GIS Individuals in my branch
- CDC GIS Individuals in a country office
- External Stakeholder
- Ministry of Health/In-country GIS in government (non-CDC)
- Other

44. What kind of support did you request?

- Programmatic results-based maps linking epidemiology, laboratory, and results to geographic units such as counties/states/countries
- Locator or reference maps: base maps of country/area, health facility maps
- Spatial Analysis: i.e. cluster analysis, rate smoothing, geospatial regression, etc.
- Spatial Modeling: i.e. space-time modeling
- Survey support
- GIS Software support
- GIS Training

45. After requesting product/service did GIS staff typically respond within:

- 24 hours
- 48 hours
- Within work week
- Within two weeks
- Did not respond

46. How did you request GIS products/services?

- I sent an email to a GIS staff member
- I emailed Situational Awareness
- I used the GRASP request portal
- I asked a person directly

47. Did you receive what was requested? (Y/N)

48. On a scale of 1-5 (with 5 being highest quality), how would you rate the quality of the received geographic products?

49. Were geospatial products/services used in order to aid in decision-making during the response? Y/N

50. Did you encounter any other challenges to obtaining spatial data/products or services that are not captured above? (Y/N) If yes, please describe.

51. In which of the following languages do you typically need map products? Select all that apply.

- English
- French
- Spanish
- Portuguese
- Arabic
- Russian
- Mandarin
- Other

52. Are the non-English products you requested of sufficient quality for your work? (Y/N)

- If no, please describe.

## GIS Professionals

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53. Do you use geospatial technologies to support public health emergencies in any way? → *Apply skip logic to the end of survey!*
54. Please briefly describe the most common GIS or GPS-related products, activities, methods etc. you utilize or produce related to public health emergencies.
55. How are GIS support requests received? (Select all that apply).
- Online Request system
  - Email
  - Ad-hoc, no system
  - Other \_\_\_\_\_
56. How are requests assigned to individuals within your branch?
- Email
  - Tracking system
  - Supervisor-assigned
  - No system/ad-hoc
57. Have you received requests for the following geospatial products? (Y/N) Which ones?
- Programmatic results-based maps linking epidemiology, laboratory, and results to geographic units such as counties/states/countries
  - Locator or reference maps: base maps of country/area, health facility maps
  - Spatial Analysis: i.e. cluster analysis, rate smoothing, geospatial regression, etc.
  - Spatial Modeling: i.e. space-time modeling
  - Survey support
  - GIS Software support
  - GIS Training
  - I proposed needed work after reviewing request
58. Do you offer trainings related to the skillsets listed in Question 55? (Y/N)
- Data collection
  - Data processing/manipulation
  - Data visualization
  - Spatial analysis
  - Spatial statistics
  - Spatial modeling
  - Other, please specify: \_\_\_\_\_
59. If you do offer trainings, please describe what they cover below.
60. Have you deployed and completed GIS work during a response?
- Yes to the field
  - Yes to the EOC
  - Yes to both
  - No, but I would like to
  - No, I am not interested
61. If no, but you are interested, why have you not deployed?
- No GIS detail request
  - Supervisor did not approve
  - Funding mechanism was unclear or unavailable
  - I do not have time
  - Unclear Terms of Reference
62. If you are interested in deploying, what GIS skillsets do you have? Select all that apply.
- Data collection
  - Data processing/manipulation
  - Data visualization
  - Spatial analysis
  - Spatial statistics

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- Spatial modeling
- Other, please specify: \_\_\_\_\_

### Software

63. What geospatial software do you use?

- ArcGIS
- QGIS
- EpiInfo
- RedSky
- MapBox
- R
- Spatial Statistical Software such as GeoDa, Satscan, ClusterSeer
- Qualitative platforms such as ATLAS.ti?
- Remote Sensing Softwares such as ENVI or ERDAS
- Other
- None

64. In a few words, briefly explain why that is your software(s) of choice?

65. Is language a barrier to use for you or your colleagues? (Y/N)

66. Are software training materials and other resources available in the language(s) preferred by your colleagues?

67. Have you taken any trainings provided by a group within CDC/ATSDR related to geospatial software and applications?

68. If so, who, or what group, taught the training(s) and what was the topic(s)?

### Thank You!

The GIS in Public Health Emergencies Working Group (GPHEW) appreciates your participation in this survey. If you have any questions about GPHEW, please contact Erica Adams ([yun2@cdc.gov](mailto:yun2@cdc.gov)).

Select Submit to complete this survey.