

Code Evaluation questionnaire

this document aims to provide a guideline how to evaluate (R) code in my course

Please note: not all item might be applicable to the code you review - please cross-out any non-relevant part.

1. Informative naming of the script? ☐ absolutely ☐ not really because: _____

Script Meta-Information

2. Some information is provided at top of the script? ☐ Yes ☐ No
3. Authors name: _____
4. Contact details are provided (email, URL, git)? ☐ Yes ☐ No
5. Date of development is listed? ☐ Yes ☐ No
6. Main purpose of the script is explained? ☐ yes ☐ not really because: _____
7. Needed input is defined (format incl. which information are required, e.g. shp with column of type x and content of y)? ☐ yes ☐ not really because: _____
8. Output is defined (incl. explanations, format etc.)? ☐ yes ☐ not really because: _____
9. R version and R packages needed are listed? ☐ yes ☐ not really because: _____
10. Operating system used is listed or on which one it has been tested? ☐ yes ☐ no
11. Required other software is explained? ☐ yes ☐ not really because: _____
12. Informative header is well formatted? ☐ yes ☐ not really because: _____
13. All necessary details provided?
- ☐ Yes, I understand its aim and needed input
 - ☐ No, I need to check the script carefully
 - ☐ just some parts are provided.
14. What do you think until now what the output/results will be? Describe it briefly before checking the actual script:
- _____
- _____
- _____

Actual Code for the Analysis

15. Data import is generic (no full paths, direct import possible)? yes ☐—☐—☐—☐—☐ no
16. Well commented? horrible ☐—☐—☐—☐—☐ fantastic
remarks: _____
17. Ratio of Comments vs. Code? horrible ☐—☐—☐—☐—☐ fantastic
18. Easy to read (appropriate indentation and spacing)? horrible ☐—☐—☐—☐—☐ fantastic
19. The script is written for generic data analysis? ☐ absolutely ☐ not really because: _____
20. Does the code require a rigid data structure? (e.g. specific column names in data.frame)?
☐ absolutely ☐ no, quite flexible
21. Is the code flexible? (i.e allows inputs of different data types)? ☐ absolutely ☐ not really because: _____
22. Data can be retrieved without contacting the author? ☐ absolutely ☐ not really because: _____
- _____

23. Code follows a logical structure? ☐ absolutely ☐ not really because: _____
24. Code only includes useful information? ☐ absolutely ☐ not really because: _____
25. Are the variables derived within the code self-explanatory? (e.g. through clear variable names and/or comments)? ☐ absolutely ☐ not really because: _____
26. Does the script uses a standard documentation structure/naming convention? ☐ absolutely ☐ not really because: _____
27. Script can be run easily on other data sets (generic code)? ☐ absolutely ☐ not really because: _____
28. Appropriate use of commands - no unnecessary complex code snippets? ☐ absolutely ☐ not really because: _____
29. (If a function) is provided: are example code/data provided/explained? ☐ absolutely ☐ not really because: _____
- 30a. Does the code minimize the storage of data (e.g. removal of unused variables)? ☐ yes ☐ no
- 31a. Does the code minimize the use of RAM? (e.g. appropriate subsetting, no re-reading data)? ☐ yes ☐ no
- 32a. Data handling and transformation is coherent and well commented? yes ☐—☐—☐—☐—☐ no
33. Novel code not covered in the course is used? a lot ☐—☐—☐—☐—☐ just known commands
- 34a. The script triggered interest and you learned new things? yes, a lot ☐—☐—☐—☐—☐ no, not a bit
- 34b. Please describe what was special/interesting:
- _____
- _____
- 35a. Script is fast (based on performance measures) yes ☐—☐—☐—☐—☐ no
36. The code can be executed without any fixes? ☐ absolutely ☐ not really because: _____
- 36b. Which parts should be improved?
- _____
- _____
- _____
- 36b. What is missing?
- _____
- _____
- _____

Graphs and Maps

37. Graphs or Maps are providing key messages? ☐ absolutely ☐ not really because: _____
38. Plots/Maps are self-explanatory? ☐ absolutely ☐ not really because: _____
39. Graphs or Maps include all necessary items? ☐ absolutely ☐ not really because: _____
40. Plots/maps are not overloaded? yes, clean ☐—☐—☐—☐—☐ no, totally cluttered
41. Plots/maps are informative? yes ☐—☐—☐—☐—☐ no
42. Plots/maps layout is consistent? ☐ absolutely ☐ not really because: _____
43. Plots/maps have appropriate colour scheme? ☐ absolutely ☐ not really because: _____
44. Maps have scale bars, legend, coordinates? ☐ absolutely ☐ not really because: _____
45. Maps include landmarks, cities, roads for orientation? ☐ absolutely ☐ not really because: _____
- _____

Overall Impression

Please evaluate the following parts

46. Readability horrible ☐—☐—☐—☐—☐ fantastic

47. Information horrible ☐—☐—☐—☐—☐ fantastic

48. Aim horrible ☐—☐—☐—☐—☐ fantastic

49. Do you think it qualifies for being scientifically reproducible?

☐ yes

☐ no

☐ needs some more work

☐ details: _____

50. Is the script really worth the effort? ☐ Yes, totally. ☐ Probably not. ☐ Don't know.

51. Would you be interested to use this script for your analysis?

☐ yes, would love to

☐ No clue. I just can't figure it out. So sorry.

☐ yes, definitely parts of it.

52. Please describe your impression.

53. When you check your anticipated results/output (Q 14) at the beginning - where you expectations met? and if no, why not:

54. What do you especially like about this script:

55. What do you especially dislike about this script:
