

Supplementary File 4: Meta-data Extraction

Question 1:

- Study identification (first author, year published, title, DOI)
- Study location
- Study design
- Population description (e.g., criteria for inclusion, sample size, if applicable)
- Assessment of population exposure
- Comparator description, if applicable
- Environment type (river, stream, pond, lake, quarry, estuary, canal, multiple, other)
- Exposure route (contact, ingestion, other)
- Recreational activity (e.g., swimming, plunging, or other recreational activities)
- Health outcome type (exposure, colonisation, infection, death)
- Site of health outcome, if applicable (gastrointestinal, respiratory, dermal, urinary tract, other)
- Microbiological target(s) (e.g., bacterial species or taxonomic group, mixed community, antibiotic resistance genes)
- Methods for AMR detection and enumeration (phenotypic/genotypic)
- Risk metrics associated with AMR outcomes (relative risk, odds ratio, etc, if available)

Question 2:

- Study identification (authors, year published, title, DOI)
- Study site (type of freshwater body, name, location, coordinates)
- Study design (transect, longitudinal), sampling method, sample type (water, sediment), sample size, reported statistics (e.g., measures of variance)
- Sampling conditions (type of sampling, weather conditions (including temperature and rainfall prior to sampling))
- Identified pollution source, if applicable (e.g. type and distance from site)
- Tested bacteria (species and/or taxonomic group, number of total isolates, number of AMR isolates)
- AMR characterisation (phenotypic and/or genotypic)
- AMR genes, mobile genetic elements, e.g. class 1 integrons (type, method for detection, quantity of gene copy numbers)
- Quantitative measure of the prevalence of resistance (e.g., percentage, proportion, fraction of resistance)
- Effect of dilution and degradation, where reported.