# Appendix IV: Checklist for Publishing Tephra Data

Listed here are the bare minimum data to be reported in published records. Although not all the information recorded may get published, it is important to record as much as possible so the data can be revisited later when other questions about the deposits may arise.

# Sample/deposit metadata

* Sample ID (that can be linked to an archive)
* GPS location
* Deposit thickness
* Depositional setting (ice, marine, lake, peat, terrestrial)

# Sample physical characteristics

* Color of juvenile material (pumices or glass shards) (white/clear, brown, black)
* Is glass microlitic or not?

# Sample Age

* report the method of dating (radiocarbon, mineral phase, fission track, correlation, modeled, magnetostratigraphy, etc.)
* report laboratory facility used for dating and their lab sample ID
* reported age
* standard error on age
* If calibrating ages, report calibration software and version used

# Sample geochemical characteristics

* Type of material analyzed (glass, Fe-Ti oxides, crystal phase, specific juvenile component etc.)
* Type of analysis (EPMA, ICPMS, LA-ICPMS, XRF, etc.)
* disclose type of instrument and location of facility
* disclose analytical conditions including beam diameter, accelerating voltage, beam current, count times for each element
* report any automation software and any correction routines (e.g. CIT-ZAF reduction of Armstrong, 1995)
* report calibration standards (primary standards) and which elements they were used to calibrate as well as and working standards (secondary standards)
* report methods used to monitor instrument drift during sample analyses (i.e. routine analysis of secondary standards and methods of correcting drift)
* report methods and software (including version) used to reduce Na2O diffusion
* Report analytical total (not just an average)
* Report number of point analyses per sample
* report raw, unnormalized, point data as supplementary material
* report raw, unnormalized, point data on working standard results as supplementary material

# Sample correlation

* Method used to correlate tephra including
  + Include which elements may have been excluded in geochemical correlations.