

CWA 14747:2003 update: discussion paper

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Objectives of the update:

- ***Reducing the overall time*** necessary for carrying out a set of tests (wherever possible to reduce the necessary amount of attempts/time for achieving reliable results)
- Giving the ***user guidance***, based on recommendations of necessary steps, tests giving the required information for working in minefields (reduced and optimum requirements)
- Implementing ***new scientific knowledge***
- New techniques used by metal detectors/users and how to approach testing of this new equipment/techniques

Proposals for the update:

- The amount of tests (31) in the CWA is for people inexperienced in testing too large, they should find more guidance in using the CWA to come to minimum requirements for detectors and tests, key performance information should be defined
- The basic approach to any change should focus on time reduction for all activities including the experiences collected by BAM and JRC as the main user and implementer of the CWA
- All tests have to be planned and executed in accordance with the rules of the statistical design of experiments.
- All tests need to take into account the human factor and its possible influence on the results
- Lab test updates
 - More emphasis on in-soil testing, less on in-air
 - A more reproducible measurement of sensitivity
 - Improved method for profile/footprint measurement
 - Abbreviate optimum speed test
 - Fewer points in drift test,
 - Pinpointing only in soil not in air or lab conditions (achieved accuracy are few millimetres)
 - Resolve ambiguity in procedure for repeatability on set-up
 - Revise battery Life test
- Field test updates
 - Revise definition of soil types to emphasise frequency difference and Ground Reference Height (see test reports Laos, Mozambique), instead of absolute susceptibility (see RMA project)
 - Specify the design, data analysis, and reporting of experiments (e.g. Graeco-Latin square) for both reliability tests and in-field sensitivity
 - Explain how to calculate uncertainties
 - Recommend minimum number of repetitions in test (incl. lab)
- Tests should simulate demining operations as closely as possible.
- The use of a total station in field trials (to reduce errors during measurements, data transfer, and time) should be recommended