



Presenting the 3rd edition of WRB

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The third edition of the international soil classification system “World Reference Base for Soil Resources” (WRB) will be presented during the 20th World Congress of Soil Science, Jeju, Korea, June 9-12. The second edition was published in 2006 and the first in 1998, which, in turn, was based on the Legends of the FAO Soil Map of the World. Now, after eight years of experience with the second edition, time was due for a revision. The major changes are:

1. The second edition had two different qualifier sequences for naming soils (IUSS Working Group WRB, 2006, update 2007) and for creating map legends (Guidelines for creating small-scale map legends using the WRB; IUSS Working Group WRB, 2010). The third edition has one sequence for both. The qualifiers for every Reference Soil Group are subdivided into a small number of main qualifiers that are ranked and a larger number of additional qualifiers that are not ranked and given in an alphabetical order. The name of a pedon must comprise all applying qualifiers. The name of a map unit comprises a specified small number of main qualifiers, depending on scale, whereas all other qualifiers are optional.
2. For some soils, problems have been reported. Albeluvisols are difficult to detect in the field and cover only small surfaces. They have been replaced by Retisols, which have a broader definition that is easier to identify in the field.
3. The use of some diagnostics was difficult. Examples are: The argic horizon had too low limit values, so we had much more soils with argic horizons than justified. The definitions of the cambic horizon and the gleyic and stagnic properties were not precise enough. Organic material, mollic and umbric horizons had an unnecessary complicated definition.
4. Some changes in the key to the Reference Soil Groups seemed to be justified. Fluvisols were moved further down, Durisols and Gypsisols switched their position, also Arenosols and Cambisols. The soils with an argic horizon were brought into a new sequence.
5. The umbrella function of WRB aims to allow the allocation of soil classes existing in a national classification system within the WRB. Characteristics that in a national system are regarded to be important must be considered in WRB - not necessarily at the highest level, but at least somewhere. The third edition of WRB allows a better accommodation of soil types, e.g., of the Australian and the Brazilian system.
6. Some environments or even ecoregions had not been well represented in WRB. The third edition allows a better accommodation of soils of ultra-continental permafrost regions, acid-sulphate soils and Technosols.
7. How to explain complicated sets of characteristics? For the third edition, efforts were made to give better structured definitions that can be more easily grasped.

The editors of the third edition are convinced that the new WRB allows a more precise classification of soils including both, a better naming of pedons and a better elaboration of soil map legends.