

New WRB developments

*World Soil Resources Report No 94
CD ROM*

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Classification, Hungary*

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New WRB developments

WRB for students has been published by FAO under the title: **'Lecture Notes on the Major Soils of the World'** as **World Soil Resources Report No 94**. It is available now from the FAO Publications and Sales Office, FAO, Via Delle Terme Di Caracalla, 00100 Rome, Italy or from ISRIC (sales@isric.nl). A free copy is being sent to each working group member of WRB. The price is still being negotiated.

Special FAO discounts are as follows:

For Sales Agents 50% in developed countries, 60% in developing countries

50% to other UN and governmental bodies, UN staff and FAO field projects

35% for individuals in developing countries.



The accompanying **'CDROM on the Major Soils of the World'** is being finalised by ISRIC, Wageningen. It will be produced by FAO early 2002.

WRB translations: WRB is now published in 9 international languages: English, French, German, Spanish, Italian, Lithuanian, Japanese, Romanian and Vietnamese. We are coming near to an arrangement for translation into Russian. I do hope that we shall find a volunteer to translate into Chinese, Arabic and Portuguese. Candidates are most welcome to put forward their name.

October has been a rather busy month for WRB. First of all there was the **'International Symposium on Soil Classification, 8 – 12 October, 2001, Velence, Hungary'**. This meeting was organized by the Hungarian Society of Soil Science, Szent Istvan University, Hungary and was supported by a number of international institutions such as IUSS, EU Joint Research Centre, FAO and USDA. It was a very successful event with attendance exceeding 50 international experts and soil scientists of more than thirty different nations

attended including the US, Russia, Canada, Australia and nearly all European countries. About 50 Hungarian soil scientists attended in addition. A report on this meeting is attached in annex 1.

Then there was the **'International Symposium on Soil Classification'** organised by the American Society of Soil Science, at **Charlotte**, North Carolina, USA from 18-27 October 2001. WRB was represented by Ahrens (USA), Costantini (Italy), Dudal (Belgium), Deckers (Belgium), Eswaran (USA), Laker (RSA), Nachtergaele (FAO), Napoli (Italy), Markku (Finland), Karklins Aldis (Latvia). I'm pleased to report that WRB was referred to as a means of soil correlation in many papers presented. We have some 30 American colleagues who have enlisted to our mailing list. I look forward to get more interaction from USA on WRB in the future.

From 2 – 11 December a **Regional WRB training course for West Africa** is being organised by the FAO Regional Office for Africa, Accra, Ghana, in collaboration with the Soil Research Institute (SRI) Ghana, the Institute for Environment and Agricultural Research (INERA) and the National Bureau of Soils (BUNASOLS) Burkina Faso. Participants are from 13 West-African countries. If all goes well Andrei Rozanov (Stellenbosch University, South Africa and Nikola Filippi (ISPRA, EU Joint Research Centre) will serve as international resource persons to facilitate the training. In fact we are happy to report that we received a very positive response from numerous candidates. It only proves that WRB is alive and that we can now rely on powerful ambassadors to represent WRB in international fora.

The next general meeting of our IUSS Working Group will be at the event of the **17th World Congress of Soil Science** at Bangkok, Thailand from 14 – 20 August 2002. Suzanna Pazos is organising Symposium Nr. 21, 'Soil classification, accomplishments and future'. Deckers will present a paper on WRB. As promised we are not proposing major changes, but will report on findings from all the field testing since 1998. We'll also throw light on the rationale behind the WRB system and look into the future.

Congress tours: The 4th circular of the 17 th World Congress of Soil Science reports on very exciting congress tours. I trust that each of these tours will be attended by a number of WRB members who will carry the WRB flag on the soil profile pits. As we have never been in Australia on a WRB testing I trust that the South-Western Australia tour (B7) should offer a rather exciting opportunity. A number of WRB members (Blume, Deckers, Napoli, Frederico, Fitzpatrick) have already expressed strong interest to join the party! Deckers is meanwhile investigating if we could also hop over to Canberra and Sydney to see some soil scapes in Eastern Australia with the participating WRB team.

For the future of WRB as a Working Group some important decisions have to be taken. One of them is the **WRB leadership**. The present chairman (Deckers), vice-chairman (Nachtergaele) and secretary (Spaargaren) have been in office since 1994. We were re-elected in 1998 at Montpellier. They thank the people who endorsed their mandate. It has been a rewarding job. However it is felt that time has come for a change, so as to keep up momentum of WRB. This does not mean that we shall not be continuing our full support to WRB, on the contrary. For practical reasons it would be wise to have one of the present three WRB taskforce members continue for the sake of 'institutional memory'. Otto Spaargaren whose Institute is the depository of World Soil Information (International Soils Reference and Information Centre (ISRIC), Wageningen is willing to keep his post. Otto will be proposed at Bangkok as Secretary of WRB. Candidates are needed to step into the mandate of Deckers (chairman) and Nachtergaele (vice-chairman). What is needed is people with (1) a good experience in international soil classification, (2) good knowledge of languages; (3) access to resources to support international travel; (4) the necessary time availability to organise/attend international meetings on soil classification; (5) good sense for pedopolitics. You are kindly invited to submit nominees (either yourself or a colleague) by e-mail to Deckers (seppe.deckers@agr.kuleuven.ac.be), copied to Spaargaren (spaargaren@isric.nl) and Nachtergaele (freddy.nachtergaele@fao.org) by January 31 2002. Please find in Annex 2 a Nomination form. We shall inform you on progress of the election procedure, the final steps of which will be held at the WRB business meeting at Bangkok in August 2002. In order to guarantee a smooth transition and institutional support needed, both Deckers and Nachtergaele will remain available to serve as resource persons in the WRB task force.

The Beta version of the CDROM 'Horizon Identification' has been released by E.A. Fitzpatrick. It contains a comprehensive data set of all known soil horizons and aims to identify unknown ones through getting the closest match to one of these horizons using numerical data within the framework of Excel. People who are interested to test this new approach to horizon identification can contact Dr. Fitzpatrick at following address: e.a.fitzpatrick@btinternet.com

Your opinion?

There are a number of issues for which we would appreciate your opinion:

A. Minor changes have been made on the key (ref. Annex 3).

Then there are a number of decisions to be made for which we would like to request your opinion. Options have been put together in table format and we would be grateful if you could fill out your opinion and mail it back to us before January 31/02 (see Annex 4).

Following issues are at stake:

Key out Cryosols before Histosols?

This is a proposal from Charles Tarnocai. For the time being WRB has been very reluctant to do this for following reasons: (1) In most soil classifications systems (including USDA Soil Taxonomy (until 1999) the key starts with the basic distinction between organic soils and mineral soils; (2) Dokuchaev also made the distinction between soils which grow from top up and the ones developing in the sub-soil; (3) WRB is rooted in FAO, which has always keyed out the Histosols first; (4) The Russian soil classification system keys out Histosols first; (5) WRB avoids to put a climatic criterion (Cryic) first in the key, which is in contradiction to the basic principle that climatic criteria should be avoided as much as possible in the classification system. On the other hand it is important to be in line with the two of the three countries where these soils are dominant and it is also fundamental that WRB retains a good link with Soil Taxonomy to ease correlations.

Delete Alisols from the key and lump them with the Acrisols

A major problem with Alisols is to map them at World scale. The present maps showing Alisols work with strong educated guesses based on lots of assumptions. Furthermore the definitions of Alic properties as defined in WRB at present are rather unpopular among WRB users, especially in developing countries. The laboratory requirements are rather complicated and most people identify the Alisols based on incomplete datasets. This is why Hari Eswaran proposes to delete Alisols as a reference Group and have instead Alic qualifiers which indicates high aluminium saturation on the CEC complex. To follow this suggestion would have a number of advantages: (1) we come close to FAO 1974 which also had Acrisols and Alisols under one group – the Acrisols; (2) reduction of the general bias in WRB on soils with an argic horizon at the highest level; (3) simplification of analytical requirements to key our soils at Reference base level.

An alternative solution is to go back to the Revised Legend definitions, keep the Alisols but redefine them as soils with a high CEC of the clay but with low base saturation. The balanced quadruplet Luvisols/Alisols/Acrisols/Lixisols pleased many pedologists.

Neosols instead of Anthropic Regosols

Alan Kosse is proposing to introduce a new Reference Group which would replace the Anthropic Regosols namely the Neosols. This group would comprise the enormous variety of city soils, garbage soils, mine spoils etc... It is of course true that this type of soil cover is ever increasing and is the subject of front-line research in present-day soil science (e.g. geochemistry of heavy metals etc...), so we may have a good reason for upgrading them to a Major Reference soil in WRB.

Anthric qualifier in all other Reference Groups

In view of the ever increasing anthropogenous influence on the Globe, it may be warranted to have an Anthric qualifier for all Reference soil groups. For instance in Mediterranean areas Chromic Luvisols commonly occur in areas which have been terraced for several centuries. An Anthri-bancanic qualifier would be very useful to specify this situation. For more background information I attach an article from Dudal et al. For easy reference (Annex 5)

Add soil family criteria for full classification purposes in WRB.

In order to enhance the usefulness of our Reference Groups a simple addition on soil texture, mineralogy and slope of the land is proposed. To keep things simple texture and slope criteria of the FAO Soil map of the World is proposed (only three classes for each). For mineralogy a semi-quantitative appreciation in terms of e.g. 'kaolinitic or montmorillonitic' would be aimed at.

Ranking order of the qualifiers: Unique – Intergrades – Others

It is proposed for international correlation purposes to rank the qualifiers of the WRB Reference groups in following order: (1) First the strong expression qualifiers are keyed out in alphabetic order; (2) then follow the Intergrades in order of the Key to the WRB reference Groups and then (3) the others in alphabetic order.

Example of the Ferralsols

Strong expression qualifiers

Geric
Gibbsic
Posic

Intergrade qualifiers (in order of key)

Histic
Gleyic
Andic
Plinthic
Mollic
Acric

Lixic
Umbric
Arenic
Other qualifiers (in alphabetic order)
Alumic
Dystric
Eutric
Ferric
Humic
Rhodic
Stagnic
Vetic
Xanthic

Last but not least we take this opportunity to send you our very best Season's Greetings.

J. Deckers

F. Nachtergaele

O. Spaargaren

