



Welcome to the 2nd Global Workshop on PSS
 A brief report on the IUSS Working group on proximal soil sensing (WG-PSS)

Raphael VISCARRA ROSSEL



1st Global Workshop on High Resolution Digital Soil Sensing and Mapping
 February 2008



90 attendees from 18 different countries: soil scientists, agronomists, agricultural engineers, spectroscopists, statisticians, geostatisticians and proximal and remote sensing specialists



PROPOSAL FOR A WORKING GROUP ON Proximal Soil Sensing (WG-PSS)

The Working Group would operate under the auspices of the Commissions on Soil Pedometrics (C1.5) and Soil Physics (C2.1) who are jointly supporting this proposal.

Prepared on behalf of Commissions 1.5 and 2.1 by

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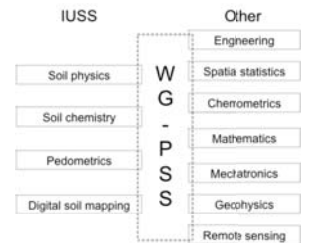
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Some reasons for the WG-PSS

1. Enable greater interaction and collaboration between scientists and engineers working on sensing to study the soil
2. Help to avoid 'reinventing the wheel' by ensuring dialogue between engineers, remote sensing specialists and soil scientists who are addressing similar problems.
3. Allow us to address generic issues about data analysis and processing, ensuring that best statistical practice is generally adopted
4. It will help to ensure that technical (engineering) development remains properly linked to the requirements of soil science.



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A vote was supervised by the chair of Pedometrics: Murray Lark

Raphael VISCARRA ROSSEL – Chair
 CSIRO Land and Water
 Canberra, Australia

Viacheslav ADAMCHUK – vice Chair
 University of Nebraska – Lincoln
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2009 - 2013



Planned activities

- Hold biannual meetings/workshops in conjunction with IUSS Commissions and national soil science societies
- Publications on PSS
- Construct a website and mailing list (google groups?)
- Incorporate the group developing the global spectral libraries
- Coordinate activities with Pedometrics and WG-DSM
- Provide training workshops for capacity building
- Developing a set of guidelines, norms and quality standards for PSS.



Workshops/Meetings

- IUSS WG-PSS session at 19th WCSS, Brisbane 1–6 August 2010
- EGU Session on soil spectroscopy, Vienna 3–8 April, 2011
- 2nd Global Workshop on PSS, Montreal 15–18 May 2011
- WG-PSS session at EUROSOIL, Bari 2–6 July 2012
- 3rd Global Workshop on PSS, - ???



Publications

- Book on PSS published by SPRINGER
- Special issue Geoderma on soil spectroscopy
- Special issue from this workshop planned for Geoderma

~10–15 papers selected by scientific committee



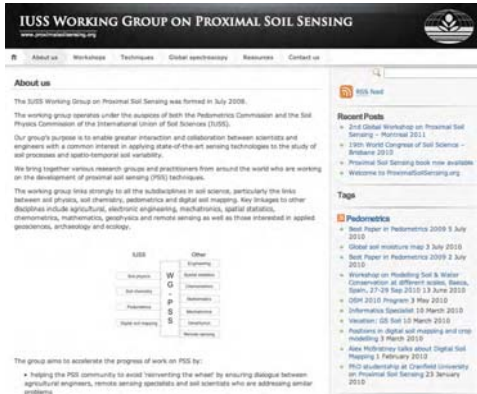
Website



www.proximalsoilsensing.org



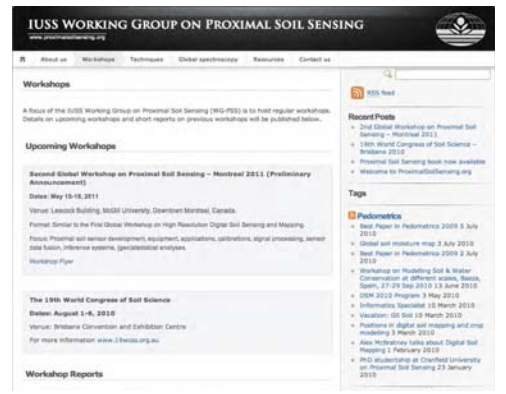
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This workshop:

This meeting is attended by engineers, soil scientists, proximal and remote sensing specialists, statisticians, economist and students.

We have an unique opportunity to:

- better understand the approaches to, and synthesise our thinking about proximal soil sensing
- help define our discipline

Communicate and interact

It's a workshop (not a conference)

get involved, discuss, make suggestions & DISCUSS!



Some questions that we might want to think about:

What is(are) the most suitable technique(s) for measuring key soil properties? – what are these key soil properties? – carbon, PAW, BD, P...

How can we gain a better understanding of the often-complex interactions between the soil matrix and sensor signals?

Do we need a better understanding of the underlying mechanisms that allow prediction of soil properties from indirect proximal soil sensors?

Which are the 'better', more widely applicable methods that could lead to standardization to help advance collaborative research and PSS?

How do we fuse data from multiple sensors to produce useful soil information?

Where do we measure with our sensors to cover both geographic and property spaces?



PSS has an important role to play!

Soil science needs PSS to device solutions to many of the global issues that we face today –

food, water, energy securities,
climate change...

Finally, I wish you all have a brilliant workshop!

Thank you