



CONFERENCE/WORKSHOP ORGANISER'S REPORT

“Soil Change Matters” International Workshop, Bendigo, Australia 24-27 March 2014

The opinions expressed and arguments employed in this document are the sole responsibility of the authors and do not necessarily reflect those of the OECD or of the governments of its Member countries.

Brief Description of what the conference/workshop was about

The Soil Change Matters workshop brought together scientists monitoring or working on understanding and modelling critical changes in soil, policy representatives with state, national and international roles, and land managers. The impetus for soil change theme was the recognition that soil is a finite resource under increasing pressures from population, competing land uses and the need to produce more food. There is a social and scientific need to understand what changes are occurring, what the drivers are and what actions need to be taken to ensure soil security and the continued provision of ecosystem services from soil.

The workshop invitation posed questions within three themes: scientific/technical, policy, and public, and a program was developed to give each of these a point of focus. The workshop included presentations and discussions from policy perspectives from local to global scales.

A field trip prior to the workshop provided an opportunity for delegates, particularly the invited and sponsored speakers, to get to know each other, visit some farm sites, interact with farmers and discuss the land management and production issues relevant to the soils and sites visited.

The technical program of contributed and keynote/invited papers was scheduled to encourage the attendance of a broader audience than specialist soil scientists on day 1, and those with a policy orientated emphasis on day 2.

Participation – details of total number of participants, countries they came from, backgrounds (academia, industry, etc.)

200 delegates attended the Soil Change Matters workshop, representing 11 countries (Australia, USA, UK, New Zealand, France, Netherlands, Germany, Russia, Slovakia, Italy and Canada). Of the 200 delegates, 45% were identifiable as actively engaged in research (14.5% in Academia, 30.5% in Government), 20% as engaged in extension services or land management (including a few landholders), 15% engaged in policy at some level (including international, national, state, and catchment authorities), 9.5% were consultants, 5% students, and the remainder (6%) communications, journalism and sales. Sponsorship from the OECD enabled 8 international speakers to attend, and other sponsorship supported an additional 4 international keynote speakers. Several of the speakers were highly placed in science policy. These included the chair and three other members of the FAO's Intergovernmental Technical Panel on Soils, leaders and members of the working group for the (Australian) national research, development and extension strategy for soils, and the National Advocate for Soil Health.

Major highlights from the presentations

The opening address from the Advocate for Soil Health, Major General Michael Jeffery provided a considered perspective on the challenges that are being faced for land management in Australia ending with a memorable quotation ‘To save the planet, we have got to save the soil’. International delegates were particularly impressed by the fact that Australia has an advocate for soils, who is not a soil scientist, but, as an ex-Governor General for Australia, is well connected and is operating at a high level in government.



Key personnel from Australian government agencies and international agencies engaged in a half day facilitated ‘world café’ style workshop with soil scientists to develop directions for soil science policy and action. Participants were invited to ‘Imagine a future where...’

- Our soil is secure – scientists and policy makers have made this a success
- Governments provide long-term vision, guidance and assistance
- Research is targeted and timely
- Scientists and policy makers work as a team
- Researchers provide policy makers with exactly what they need’

Conversation was then directed to define the questions that needed to be addressed to reach this vision

This engaging component of the workshop was regarded as highly productive and was well received. The facilitation of this session and the graphic recording of the whole workshop won a prestigious award from The Australian Institute of Learning Professionals as the ‘Best Learning Solution’. <http://ilpworldwide.org/2014-impact-learning-awards/>. The graphic recording provided a valuable visual record of the workshop and the main chart was presented at three conferences in 2014: the World Congress of Soil Science in Korea in June, the Soil and Culture Forum in Devon, UK in July, and the Australian national soil conference in November 2014.



Figure. Portion of the main chart graphic produced by graphic recorder Erin Jancauskas

Major outcomes/conclusions in terms of policy relevance

This was a global conference with different countries having differing perspectives and problems and solutions to raising the profile of soil policy.

The group emphasised that maintaining soil health was a long run problem that competed for funding with short term immediacies, and tended to fall below the radar because of this. In international discussions it is very hard to get policy agreement regarding protection of land as a natural resource because land is a territorial concept and no nation wants their sovereignty compromised. As soil is a component of land, it too falls into a contentious area for debate and international agreement. The faltering of the proposed EU soil framework directive was given as an example of this. This presents a challenge for policy that requires resolution if soil security is to be achieved internationally.

Land area and the capacity to invest in managing soil security issues was not discussed, but there are issues of scale that need to be recognised. Densely settled and populated Europe and USA have vastly different resource constraints to Australia, which has a similar sized land area to administer but has a smaller revenue base per unit area.

It was recognised that on-going funding for soil policy and research is a political decision. Influencing politicians to make substantial long term investment in soil policy and research requires the general population to develop an understanding of the role that soils play in food security and ecosystem services. Achieving this goal will necessitate soil scientists thinking and expressing their concerns and discoveries in language and concepts that appeals to a wider



audience than themselves. Learning to give clear messages that summarise the problem succinctly is a skill that needs to be developed by many working in this field.

Traditional government funding of soils is being replaced by co-investment from private industry and agribusiness. Soil scientists and policy makers need to position themselves to understand and take advantage of this change.

Several talks were directly concerned with soil in policy and these encompassed both local, regional and international perspectives. Luca Montanarella, chair of the FAO's Intergovernmental Technical Panel for Soils', spoke on the Global Soil Partnership (GSP) and the five pillars of the GSP as setting the framework for the scientific community to translate science into something useful for the global policy:

1. Promote sustainable management of soil resources for soil protection, conservation and sustainable productivity
2. Encourage investment, technical cooperation, policy, education awareness and extension in soil
3. Promote targeted soil research and development focusing on identified gaps and priorities and synergies with related productive, environmental and social development actions
4. Enhance the quantity and quality of soil data and information: data collection (generation), analysis, validation, reporting, monitoring and integration with other disciplines
5. Harmonization of methods, measurements and indicators for the sustainable management and protection of soil resources

The themes under these five pillars were mirrored to a large extent by the goals of the National RD&E strategy for soils that was launched at the workshop.

http://www.agriculture.gov.au/natural-resources/soils/national_soil_rd_and_e_strategy

The workshop supported strongly the direction proposed by the GSP and the National RD&E Strategy for Soils. In this respect, some clarity and definition has evolved over the last two years and the workshop provided a good opportunity to expose and validate the work of these two groups.

Relevance to CRP theme(s)

The workshop aligns with Theme 1 (the natural resource challenge) objectives through focussing on the topic of soil change and sustainability of management practices, all of which is put into a policy perspective through engagement with international and regional policy personnel and technical specialists. The workshop will contribute to scientific knowledge, information and advice to inform policy for soil security.

Website for further details – please also indicate if the presentations are/will be available on the website

www.soilmatters.org this URL provides links to the presentations, abstracts, audio and graphic record of the workshop and graphic templates that were filled in by delegates during the afternoon science and policy 'world café'.

Two publications have been produced for selected papers from the Soil Change Matters workshop: 10 papers in a special issue of Soil Research, 2015 Volume 53, <http://www.publish.csiro.au/nid/85.htm> and 22 papers (including those from the 8 OECD sponsored speakers) in an open access online publication – Volume 25 IOP Conference Series: Earth and Environmental Science <http://iopscience.iop.org/1755-1315/25/1>.



Photo (by Ron Aggs). 40 delegates attended the pre-workshop field trip