Facing the Future Together: Building on the World Congress of Soil Science 2022

At the British Society of Soil Science (BSSS), we are determined to ensure that the World Congress of Soil Science 2022 (WCSS22) will not be a forgotten moment, that legacies from the Congress will live on and continue to inform the future of soil science.

In this open letter to the soil science community, we aim to support the legacy of WCSS22 through the sharing of learned experience and as a benchmark for the future.

BSSS hosted WCSS22 on behalf of the International Union of Soil Sciences (IUSS) from 31 July to 5 August 2022 in Glasgow (UK). There were four pillars defining the Congress strategy: Science, Culture, Social, and Environment.

WCSS22 represented one of the first opportunities for the soil science community to gather post-Covid, with almost 1,700 delegates participating (see Appendix One). The scientific programme was a triumph for representation within the community, with the final programme featuring presentations from all regions of the globe across a variety of research themes. Measures taken such as blind peer-reviewing, concessionary rates for delegates from low-income countries, and generous grant awards, helped achieve this outcome.

Measures should be taken to ensure diversity is fully integrated into future events.

Taking soils beyond the academic and relating them to professionals in practice and those in their everyday lives, was kept in mind throughout Congress planning and delivery. Considering culture early, allowed *Our Living Soil* to be established. This fringe programme delivered multiple exhibitions, community programmes, workshops, and multi-media projects by working through local partnerships.

Our ambition to deliver outcomes more widely than WCSS' traditional scientific audience, should be maintained to make the most of momentum from hosting any event.

Science does not exist in a vacuum. Cultural and social needs should be addressed when hosting any event. The wider world is beginning to understand the need to preserve and protect our shared environment, and we in the soil community understand the role of soils in that.

We addressed this with the introduction of the first ever Soils Policy session at a World Congress of Soil Science. This session hosted stakeholders including policymakers, academics, landowners, practitioners, lobbyists, campaign groups, environmental organisations, all engaging on soils policy. The room had to be extended due to demand, such was the need for and importance of the session. The *Soil Policy Report Summary* is the outcome of the recommendations made during the session.

We would encourage continued evidence-based advocacy of soils within local, and global, governance and regulation.

Understanding the importance of soils to healthy environmental functioning, we considered the environmental impact of hosting WCSS22.

We took steps such as commissioning an Environmental Impact Assessment (pending publication), developing an internal procurement policy focusing on circular economy principles, reducing food waste and using local suppliers, amongst others. Our methods have seen us shortlisted for the Best Sustainable Conference at the ABPCO Excellence Awards.

An advice document, *Delivering Sustainable Events*, was produced in conjunction with the International Congress and Conventions Association (ICCA) with recommendations for reducing the impact of the international congress sector.

Our environmental research should be used as a baseline which future congresses aim to improve upon.

We faced significant challenges, including Covid and sometimes had to compromise in the face of operational and logistical constraints. We hope that by being transparent, sharing data and materials, we will aid others in improving from the legacy we have left.
Recommendations

Our recommendations are broken down based on the four core pillars of WCSS22:

**SCIENCE**

**Scientific Programme**

- Equality, diversity and inclusivity (EDI) should be embedded throughout the Congress planning. This should include where practicable an even split of gendered representation on the local organising committee, a nominated EDI representative on the committee and blind reviewing of abstracts to ensure an unbiased approach
- More time should be committed to panel discussions, to allow a balance of international opinions and expertise
- A minimum of six months’ notice should be provided to accepted presenters, before the Congress begins, to provide time for visa applications and processing
- Grants to support in-person attendance for delegates from low-income countries should be available
- Remote conference attendance was low in comparison to in-person attendance (1.7% of total attendees) and was a significant cost in delivering. Filming the event and posting the content post-event may be an alternative to delivering a hybrid model.

**Tours Programme**

- Tours are a valuable opportunity to learn about local soils, however are often difficult for those in their early career to attend. Tours should be tailored to provide those early in their career with the opportunity to attend
- The tours only benefit a small number of participants and steps should be taken to record and make available, the learnings from the tours.

**Soil Judging Competition**

- Team coaches and participants should be identified at least a year in advance. This will provide the coaches with an opportunity to meet, support the local host and for the teams to prepare
- The Soil Judging Competition organiser should be a part of the local organising committee and clear documentation from IUSS should be produced setting out the exact requirements and syllabus for the competition
- Much of the taught programme is valuable to soil scientists not participating in the competition and to further knowledge sharing, should be made available to a wider group.

**CULTURE**

Scientists should be encouraged to see soil from a cultural perspective and the public should be encouraged to understand soils’ importance.

- Cultural activities should be delivered during the Congress to meet the first of these objectives. This is likely to include representation from local artists and opportunities for delegates to interact with soil in an arts context
- To engage the public, the Congress should include local arts exhibitions, outreach activities and community projects, to extend the legacy of the Congress and increase its reach to a broader, non-scientific audience.

**SOCIAL**

To widen participation and engage a larger community, the following activities should become core activities within future WCSS:

- Early Careers networking opportunities: to encourage knowledge-sharing and collaboration amongst those at the start of their careers
- Policy programme: bringing together policymakers, scientists and practitioners to provide evidence and recommendations to those making societal decisions.

Equality, diversity and inclusion (EDI) should be actively considered and external supporters and spokespeople should be from a wide-range of cultural and social backgrounds, to appeal to the broad range of delegate experiences.

**ENVIRONMENT**

Actions should be taken to reduce the environmental impact of the Congress. This may include considering whether there is an optimal location for the event to take place, based on the location of members of the international soil science community, or whether several local but connected events could be a possibility. A full list of environmental recommendations can be found in Delivering Sustainable International Events.

An environmental impact assessment should be undertaken with the aim of identifying whether a reduction in the environmental impact from the 2022 event, has been made.

**OPERATIONS**

Operationally, a Memorandum of Understanding (MoU) between the local organising committee and IUSS would be recommended early in the process. The MoU should be clear as to the obligations of both parties and the activities which must be delivered as part of the Congress.

It is also recommended that a separate company is established to deliver the Congress to provide clarity over governance and financial processes.

The next Congress should build on our foundation. All resources and legacies from the WCSS22 will be provided to IUSS, the Chinese and Canadian Soil Science Societies. We encourage IUSS to make these documents freely available to others, whether within soil science, other scientific sectors or the international conference organising community, to help make our legacy, last.

Yours faithfully

Dr Bruce Lascelles
Chair, World Congress of Soil Science 2022
On behalf of the Board of Trustees
Appendix One

Delegate Type

![Pie chart showing delegate type]

**Fig1:** The breakdown of delegates attending WCSS22 in person and online

Delegate Origins

![Pie chart showing delegate origins]

**Fig2:** The breakdown of delegate countries of origin, displayed as total numbers and percentages

Oral Presenter Origins

![Pie chart showing oral presenter origins]

**Fig3:** The breakdown of oral presenters’ countries of origin, displayed as a percentage

Oral Presenter Gender

![Pie chart showing oral presenter gender]

**Fig4:** The breakdown of oral presenters’ gender, displayed as a percentage