

Soil Science Society of America: Looking 40 years into the future

By Samira Daroub and members of the SSSA Looking Forward Taskforce

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What will soil science look like 40 years from now, and how should SSSA adapt to serve it? A new taskforce is examining ways to strengthen member engagement, embrace emerging fields, and build a more flexible organization while preserving the Society's long-standing disciplinary strengths.

The Soil Science Society of America (SSSA) has long served as the premier professional home for soil scientists, supporting disciplinary excellence through its established divisional structure. However, rapid changes in science, technology, workforce demographics, and societal expectations have created new challenges that affect the Society's ability to remain relevant, inclusive, and responsive to the evolving needs of the profession. Additionally, several divisions have seen declining meeting attendance and participation, highlighting opportunities for SSSA to better engage members and increase the value of Society membership.

In response, the SSSA Looking Forward Taskforce was established in late 2025 by then SSSA President Samira Daroub to critically evaluate the future direction of the Society over the next 40 years. The Taskforce brought together 24 members representing a broad range of disciplines, career stages, sectors, and perspectives across the soil science community, ensuring diverse viewpoints on the future of both the Society and the discipline.

Through its discussions and analyses, the Taskforce identified opportunities and challenges that warrant careful consideration of strategic, structural, and functional changes to ensure SSSA's continued leadership and impact in the decades ahead. Importantly, these recommendations are not intended to replace the Society's traditional strengths or disciplinary foundations. Rather, they seek to build upon those strengths by fostering a more adaptable, interdisciplinary, and member-centered organization that is better positioned to address emerging scientific priorities, attract new communities of practice, and strengthen member engagement.

Why change is needed

The Taskforce identified three interconnected concerns: declining membership retention, insufficient representation of emerging scientific disciplines, and limited engagement of key stakeholder groups. While graduate student participation remains relatively strong, many early-career professionals do not maintain long-term membership. Similarly, industry professionals, consultants, independent researchers, international members, and practitioners often report limited opportunities for meaningful engagement within the existing framework.



Advances in sensing technologies, computing, and data analytics are expanding the scope of modern soil science and creating new opportunities for interdisciplinary collaboration. Photo courtesy of

One factor contributing to these challenges may be the Society's current divisional structure. The existing divisions have served traditional soil science disciplines well, but they do not readily accommodate rapidly expanding interdisciplinary fields such as soil health and soil security, soil–human health connections, artificial intelligence, soil informatics, digital agriculture, biostimulants, social science, and data–driven soil research. Researchers working in these areas often find stronger professional identities within other organizations and conferences, reducing SSSA's visibility, influence, and membership growth in these emerging domains.

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Another issue is that soil science is becoming increasingly integrated with broader challenges involving climate change, food security, water quality, human health, environmental justice, technology, and public policy. As these connections expand, researchers require organizational structures that encourage cross-disciplinary

collaboration rather than confining participation within traditional scientific boundaries.

The Taskforce has been meeting monthly and continues to make steady progress toward developing its recommendations. *The Taskforce seeks to preserve the strengths and long-standing contributions of the Society's existing divisions while creating flexible mechanisms to accommodate emerging scientific priorities and interdisciplinary research as they develop.* Through this approach, SSSA can maintain its strong disciplinary foundations while enhancing its ability to attract new communities, foster innovation, and remain responsive to the changing landscape of soil science.

Several areas were identified as lacking a clear organizational "home" within SSSA. Examples include soil health and soil security, artificial intelligence and machine learning, pedometrics and digital soil science, soil informatics and digital soil mapping, social science and human dimensions of soil science, soil–human health connections, biostimulants, soil carbon, and greenhouse gas management. Without visible divisional and community structures supporting these topics, member researchers submit abstracts to other societies, participate in other conferences, and publish within competing professional communities. This creates fragmentation and limits SSSA's ability to serve as the discipline's leading voice.



Creating a professional home for emerging soil science fields will help

The Taskforce will be asking for input during CANVAS in Portland and follow-on surveys to explore a more flexible organizational model

keep researchers engaged within the Society.

that allows emerging topic areas, communities of interest, working groups, and cross-divisional networks to be created and adapted as scientific priorities evolve. Such a model would provide organizational agility without disrupting established divisions that continue to support core disciplinary expertise.

Strengthening of programs

Beyond organizational structure, functional changes are needed to improve the member experience and strengthen professional engagement across the Society. SSSA has made significant progress in recent years in improving member services, expanding opportunities for engagement, and strengthening the retention of students and early-career professionals. However, additional efforts are still needed to build a stronger sense of community, increase participation among industry professionals, consultants, international members, and practitioners to ensure that all members find meaningful value in their involvement with the Society. The Taskforce recognizes that many members seek greater opportunities for interaction, mentoring, networking, collaboration, and professional development. Taskforce recommendations will include increasing interdisciplinary programming, town halls, panel discussions, mentoring opportunities, continuing education programs, and industry engagement activities. The goals are to:

- Improve student-to-professional member retention.
- Expand leadership opportunities for early-career professionals.
- Increase participation from the industry and consulting sectors.
- Strengthen international engagement.

- Foster collaboration across scientific disciplines.



SSSA has made significant progress in recent years in strengthening the retention of students and early-career professionals.

These initiatives recognize that modern professional societies provide value not only through scientific presentations and publications, but also through networking, career development, workforce preparation, and interdisciplinary collaboration. The goal is to create and foster a strong sense of community among all members.

Path forward

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The Taskforce recommends a phased, evidence-based approach to evaluating and implementing potential changes within SSSA. Recognizing the importance of broad member participation, the Taskforce will actively solicit input through discussions at CANVAS in Portland, town halls, listening sessions, and member surveys. This feedback will help ensure that any proposed structural or functional changes are informed by member needs, aligned with the evolving landscape of soil science, and supported by data on emerging scientific priorities and community interests. By engaging members throughout the process, SSSA can pursue thoughtful, transparent, and inclusive change while maintaining the strengths that have long defined the Society.

Phase 1: Establish regular cross-divisional symposia

Establish regular cross-divisional symposia focused on emerging topics such as:

- Soil health and soil security
- Artificial intelligence in soil science
- Social science and soils
- Digital soil science and modeling

Importantly, these symposia should include both invited presentations and contributed abstracts, as well as discussion space, so

that all members have opportunities to participate. Attendance and submission data can then be used to determine long-term interest and demand.

Phase 2: Evaluate emerging areas

Collect and analyze data from multiple sources, including meeting attendance, abstract submissions, journal publications, member surveys, benchmarking against peer societies, and AI-assisted trend analyses. In addition, engage with professionals from adjacent and related societies to identify emerging areas of interest and opportunities for collaboration. These interactions also provide an opportunity to showcase SSSA, increase awareness of its programs and activities, and demonstrate how prospective members and disciplines may align with the organization. Overall, this information can help identify emerging scientific priorities and determine whether new organizational units, such as divisions or working groups, are warranted.

Phase 3: Develop flexible organizational structures

Create new mechanisms to establish and differentiate communities of interest, emerging topic networks, working groups, and cross-divisional committees. These



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structures can evolve more rapidly than formal divisions while maintaining organizational flexibility.

Phase 4: Consider targeted new divisions

If participation data support sustained demand, SSSA could consider establishing formal structures for areas such as: Human Dimensions of Soil Science (Social Science), Soil Security and Society, and Digital Soil Science and Informatics. These additions would provide long-term professional homes for growing research communities.

Phase 5: Strengthen member engagement

Implement initiatives that improve retention and participation through:

- Mentorship programs
- Industry panels and town halls
- Career development workshops
- Networking opportunities
- Enhanced communication and outreach
- Greater support for international and early-career members

In summary, emerging scientific fields, evolving workforce needs, and shifting societal challenges require a more flexible and inclusive organization. The Taskforce seeks to preserve SSSA disciplinary foundations while creating pathways for innovation,



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interdisciplinary collaboration, and broader participation. By adopting a phased, data-driven approach, SSSA can strengthen membership retention, attract new communities of scientists and practitioners, and continue to evolve as the premier professional home for soil science well into the future.

Listening to the community

We appreciate hearing from you. Please [use this link](#) to share your feedback, ideas, and suggestions as we work together to address current challenges and opportunities.

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This article was jointly discussed, written, and reviewed by all members of the Taskforce: Samira Daroub, Julie Howe and Xia Zhu-Barker (Co-Chairs); Rita Abi Ghanem; Elizabeth Gillispie; Eli Halverson; Javed Iqbal; Katie Lewis; Rebecca Lybrand; Tarah Sullivan; Darryn May; Sarah Paese; Rebecca Abney; Jacob F. Berkowitz; Kade Flynn; Rajan Ghimire; Sabine Grunwald; Gaurav Jha; Thorsten Knappenberger; Carrie Laboski; Michael Thompson; Brenda Tubana; and Wei Zhang.

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