



**Soil Knowledge for a Sustainable Planet: Inaugurating *GlobalSoilMap.net*
Earth Institute, Columbia University
February 17, 2009**

On February 17, 2009, over 100 participants gathered from many institutions, disciplines, and continents to inaugurate *GlobalSoilMap.net*, a pioneering new tool that will utilize innovative technology to digitally map the Earth's soil and its properties. Stakeholders discussed the wide reach of this initiative, examining the role and impact of *GlobalSoilMap.net* in regions around the globe and in a range of disciplines. Throughout the day, participants underlined the significance of the new digital soil map, discussing its potential in addressing key developmental and environmental issues facing the globe, such as food security, climate change, biodiversity, and deforestation, among others.

Professor Jeffrey D. Sachs, director of the Earth Institute and special advisor to UN Secretary-General Ban Ki-moon, opened the conference, stressing the importance of soil science and *GlobalSoilMap.net*. "Today's meeting speaks to the MDG hunger challenge and many others as well, including climate change, soil nutrient deficiency, nutrition, and water availability. Soil mapping is one of the pillars to the challenge of sustainable development, and the Earth Institute is proud to be a founding partner in this undertaking," Sachs stated. Participants were also welcomed in written or taped remarks by Kofi Annan, former UN secretary-general and chairman of the Alliance for a Green Revolution in Africa, and Jacques Diouf, director general of the Food and Agriculture Organization of the United Nations. Annan congratulated participants, stating that there "should be no mistake about the significance of this wonderful project. The scientists and technicians who have built this magnificent tool have made an enormous contribution to the Green Revolution in Africa."

After an introduction to soil science by Alfred Hartemink, coordinator of *GlobalSoilMap.net*, and an overview of the unique technology and process employed in digital soil mapping by Pedro Sanchez, director of the African component of the map, participants heard from the leaders of the global consortium. The panel underlined the global partnership that is guiding the initiative. This collaboration is a key aspect of the project, ensuring that it will avoid the piecemeal approach that results in incompatible outputs across the world. With *GlobalSoilMap.net*, data will be presented in a cohesive format, allowing for comparison and analysis between and among continents.

Presentations stressed the free public access of data. All data, soil maps, and soil management information for the African component of the map (Africa Soil Information Service [AfSIS]), for example, will be available online via open source software. Another key component in this regard is communication tools, including mobile phones, which will ensure two-way communication between scientists and end-users. The translation of soil maps into information accessible and understandable by users, such as farmers, policy makers, and agrodealers, is a key objective of the soil information system. Discussions also raised questions on whether the renewed focus on soil science as an important tool to address environmental challenges will lead to an intergovernmental panel or agreement on soil science, such as was the case with climate change or desertification. As participants stressed, *GlobalSoilMap.net*

will strengthen collaboration among scientists worldwide but participation of policymakers, who are a key stakeholder, is required for success.

In the second panel, participants discussed the applications of the new digital soil map for sustainable development, more specifically from the perspective of climate change, sustainable land use, food security, and soil biodiversity. In this constructive dialogue, scientists and policymakers presented their path-breaking research and efforts in the above disciplines, illustrating the importance of their work in solving the most pressing challenges facing the globe. As discussed, *GlobalSoilMap.net* will be instrumental in this regard, providing detailed information not formerly available. Scientists also presented their wish lists for information to be included in the soil map, clarifying that its reach and import can be further expanded.

Key Outcomes

- Members of the *GlobalSoilMap.net* consortium agreed to reach out to many disciplines regarding data to be collected to maximize the map's reach and import for a broad range of disciplines.
- Members of *GlobalSoilMap.net* agreed to continue fundraising for regional nodes that still require funding.
- Meeting participants are exploring a possible new scientific initiative on soil biodiversity, led by university colleagues.
- Cost calculations: 150 million km² of Earth's land
 - \$2/km² over four years
 - TOTAL: \$300 million over four years
 - \$0.20 per hectare
 - \$0.08 per acre

All presentations from the conference, as well as other background information, are available at www.globalsoilmap.net.