GLOBAL
SOIL BIODIVERSITY
INITIATIVE

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Colorado State University Announces the Launch of the Global Soil Biodiversity Initiative

FORT COLLINS – The School of Global Environmental Sustainability at Colorado State University is pleased to announce launch of the Global Soil Biodiversity Initiative (GSBI) in Wageningen, The Netherlands. This initiative, now open to all interested in sustaining soils, was formed based on growing international concern by scientists, policy makers and the public over the status of the world's soils and increased recognition that the life in soil is key to sustaining our food production, ecosystem maintenance and control of global atmosphere and climate warming. The GSBI will serve as a primary means of informing the newly announced Global Soil Partnership signed in Rome earlier in September by three international conventions.

The GSBI, announced in this month during the conference on Soil Science in a Changing World in Wageningen, The Netherlands, is a collaborative initiative brought forth by representatives from each of five institutions: Professor Diana Wall, Colorado State University, USA, Professor Wim van der Putten, Netherlands Institute of Ecology/Wageningen Centre for Soil Ecology, Professor Richard Bardgett, Lancaster Environment Centre, Lancaster University, UK, Professor Johan Six, University of California, Davis and Dr. Luca Montanarella, European Commission, Joint Research Centre, Ispra, Italy. These individuals will lead the further initiation of GSBI and be responsible for the development of an active platform for promoting the translation of expert knowledge on soil biodiversity into environmental policy to assure management and enhancement of ecosystem services such as water quality, food production, soil fertility, and biocontrol of human and animal diseases.

The GSBI will contribute biodiversity knowledge to the Global Soil Partnership signed in Rome, Italy, in early September that brings together 3 international agreements interested in sustaining soils: the Convention on Biological Diversity, the UN Convention on Desertification, the UN Framework Convention on Climate Change and will be operated by the Food and Agriculture Organization. The Global Soil Partners recognize that soils and their biodiversity are rapidly being degraded as a result is poor-management of soils, while acknowledging that proper soil management can, for example, increase soil carbon storage, thereby affecting global carbon cycling, and stabilize soils, thereby decreasing erosion, and promote other ecosystem services provided by soils and soil biodiversity, such as control of pests, pathogens and invasive species. The GSBI will encourage and bring together

interested people, including scientists and policy makers from many scientific, government and non-governmental organizations, to formulate plans, synthesize data and collectively address loss and maintenance of biodiversity in the subsurface.

Background

The Earth's soils are living, dynamic interfaces that are habitats for millions of microbial and animal species. One square metre of land houses thousands of soil species. The activities of these soil biota are critical to the wellbeing of humans, because they support the delivery of major ecosystem services like food and fiber provision, carbon sequestration and nutrient cycling, clean air and ground water, and they are vital for controlling erosion, and plant, animal and human diseases. However, intensive use and mis-use of soils, or their complete sealing due to urbanization, puts the sustainability of these biota-driven services at risk, while the majority of people are hardly aware of the significant role of soil biota. While human population is growing, we need to get more goods and services out of a continuously shrinking area of open land. It is essential that we incorporate into future regional and national management and policy plans the growing scientific knowledge on the provision of vital ecosystem services by the large numbers of species that live in soil. Here, the GSBI represents a global soil biodiversity venture to develop a comprehensive course of action for such issues.

Activities

The GSBI will make better use of the current knowledge on soil biodiversity and ecosystem services rather than starting new research. Through this, their mission goals are to:

1. Provide evidence and examples of possible solutions where soil biodiversity and helps makes a difference for human-well being and helps policy makers with their agenda.
2. Exchange of knowledge and questions from users and stakeholders at an open science conference in order to set agendas.
3. Provide a central forum for input to IPBES working groups on soil biodiversity and ecosystem services. A framework of agreed soil biodiversity and ecosystem services will be identified.
4. Provide a central focus to the Global Soil Partnership (GSP) for incorporating scientific knowledge on soil biodiversity and ecosystem services.
5. Sponsor follow-up workshops to identify case studies where integrating soil biodiversity knowledge might improve sustainable management of soils and the ecosystem services. The results will help address the GSP's mission of 'sustainable management of soil resources for food security and climate change adaptation and mitigation'.
6. To sponsor working groups to assess and integrate results across disciplines that can be used to: a) develop scenarios of how climate change or desertification will alter services in relation to (land) *management* types and types of biomes, and b) identify gaps needed for qualifying/quantifying global soil biodiversity and relating it to ecosystem functioning models.

Connect with the GSBI

Currently, partners from Europe, South America, Africa, Australia/New Zealand and Asia are being approached in order to broaden this initiative, with the hope that it may one day be incorporated into organizations involved in soil biodiversity and ecosystem services. For more information, please visit the GSBI website at http://www.globalsoilbiodiversity.org.