



FROM THE DESK OF RATTAN LAL
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Sub: Soils and Global Issues

Dear Soil Scientists,

Soil scientists have, are and must continue serving agriculture. Nonetheless, other global issues of the 21st century must not be ignored. It is essential that soil scientists seek interdisciplinary cooperation with:

1. ***Health scientists*** and human nutritionists to mitigate hidden hunger and malnutrition affecting ~2 billion people,
2. ***Pharmaceutical industry*** to discover antibiotics and other medicinal compounds produced by soil biota and biochemical processes,
3. ***Climatologists*** to predict paleoclimate from soil properties, project positive/negative feedback(s) from temperature-induced mineralization of soil organic matter, and develop improved global circulation models involving critical pedospheric processes,
4. ***Sedimentologists*** and fluvial geomorphologists to determine the pathways and fate of carbon transported and redistributed over the landscape by erosional processes (water, wind, gravity, and tillage),
5. ***Astronomers*** to study soils of extraterrestrial bodies and soil processes under hypogravity conditions,
6. ***Biogeochemists*** and hydrologists to study coupled cycling of C with H₂O, N, P, S in the vadose zone,
7. ***Political scientists*** to translate the soil science data into practical action plans, and agenda of global relevance,
8. ***Social scientists*** to enhance awareness of the importance of soil science to addressing global issues,
9. ***Economists*** to assess the societal (rather than monetary) value of ecosystem services provisioned by soils of natural and managed ecosystems, and
10. ***Psychologists*** to raise the stature of soil science for attracting the best and brightest to the soil science profession.

Soil scientists can bring about the paradigm shift, and sky is no longer the limit!

Sincerely,

Rattan Lal,
President, International Union of Soil Sciences

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