



**FROM THE DESK OF RATTAN LAL**  
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**Soil Degradation: The Case of Human Parasitism**

Fellow Soil Scientists,

The report released by the International Science-Policy Platform on Biodiversity and Ecosystem Services highlights that: (i) 75% of the Earth has been disturbed by humans, and the area will increase to > 90% by 2050, (ii) one-third of the Earth's land area is affected by accelerated erosion (water and wind) and prone to water pollution, (iii) 87% of the wetlands have been drained, (iv) the human-induced impact is equivalent to 10% if the total global gross domestic productivity on an annual basis, and (v) 3.2 billion (42% of the total population in 2017) people are impacted by the ramifications of land degradation. Continued deforestation and land use conversion, excessive withdrawal of water, growing consumption of fossil fuel and increasing emission of greenhouse gases are depleting and degrading the natural ecosystems, polluting the environment and weakening the ecosystem services. These observations lead to two contrasting responses: (1) the *Homo sapiens* are parasites, leading a non-symbiotic relationship with the host planet- Earth, and even triggering natural disasters, or (2) the humans have a natural instinct to survive, compete with other species, multiply and predominate and even envisage colonization of other planets. Proponents of the latter opinion argue that passing the "moral judgment" and being aggressive towards fellow humans is being counter-productive and doing good neither to the *Homo sapiens* nor to the Earth. The fact remains that all species, 8.7 million of them, have fully exploited the Earth and its ecospheres (hydro-, bio-, atmo-, litho- and pedosphere) but humans are the dominant force especially since the onset of "Anthropocene". However, the species which have survived and evolved through judicious adaptation may be better off by choosing the strategy of "mutualism" rather than "parasitism." The truism dictates that *Homo sapiens* cannot survive without positive interactions with other species. Thus, it is important to practice the concept of **give and take**, live in **symbiosis with other** species, and ensure that Earth's resources (especially the soil, water and air) **are used, improved and restored** by adopting the posture of cooperation (mutualism) and living in **harmony with the nature** on the present home planet (Earth) and also on another in the future (i.e., Mars). **The "mutualism" implies that "Less is More," there is only "One Earth," and on it depends "Our Common Future."**

Sincerely,

Rattan Lal,  
President, International Union of Soil Sciences