

Soil and Technosphere

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Holocene era that has nourished human civilization for the last ten thousand years, has given its way to a warming planet which is over populated, its forests are depleting and its fertile soils are rapidly destroyed due to increasing human activities in our time. Hence the word Anthropocene is being used for this era. Soils can sequester or release a large mass of carbon, maintain nutrients or flow them to the rivers where it may have impact on fishing industry. Sediment from soil erosion could affect power generation. Presently technology has advanced with such a pace that can lead to great changes in the soils. In this paper different scenarios are discussed for the future of the soils. They focus on how technology may have consequences on the condition of soils in the future. However, the greatest global processes that consume. The highest energy consumptions are related to geological events. We are encountered a new sphere developed through combined activities of man and technology, called technosphere. Technology effect on pedosphere is long lasting. Therefore, in far future, experiencing soils with great changes and interesting properties would not be out of expectations. This will take us to the discussion of smart soils. In a world that miniaturized computers are uniformly distributed, sensors and activators can be used to collect and relay environmental information about the state of the soil (temperature, moisture, relative motion of near particles) and coordinate with instructions relayed back from central computers. Considering cost reduction and increasing ability of computer chips, one can expect that what we now know as soil, land, water and vegetation management, will reach to a point that soils and other surface systems will be known as technological tools rather than natural systems.

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