

Clean Soil Act needed to fix EPA issues

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Science for Sale

EPA can only regulate an infinitesimally small fraction of all the environmental pollutants that may play a role in causing cancer, birth defects, neurological disorders and other environmentally triggered diseases and disorders. Just determining the total number of different molecular structures of pollutants found in the environment would be like trying to count grains of sand along the seashore. Moreover, unlike prescription drugs, pollutants are regulated without considering any synergistic effects they have when mixed with other pollutants.

The futility of our current regulatory approach is becoming increasingly evident as the incidence of cancer, autism, Alzheimer's Disease, rheumatoid arthritis, Parkinson's Disease, ALS and other environmentally triggered diseases and disorders rises, and as their onset begins to occur earlier in life. We may be witnessing what I call exceeding our toxic soup capacity. It's the genetic capacity of a population to withstand exposures to increasingly complex combinations of harmful chemical and biological agents.

Once exceeded, the incidence of adverse health effects triggered by environmental pollutants, food contaminants, medical interventions and other exposures will continue to rise until, eventually, all of the population is affected. It marks the point at which adverse health effects associated with exposures to environmental pollutants begin to outpace the rates at which evolutionary processes can enable populations to adapt.

Every one of us is genetically vulnerable to some number of environmental pollutants, or combinations of pollutants, that can trigger serious adverse health effects. As the levels and complexity of pollutant combinations rise, we eventually reach a point at which no one in our population can escape catastrophic adverse effects. The steady increase we're seeing with autism, and earlier onset of cancer and neurological disorders, may indicate that we're beginning to approach that endpoint.

Congress has passed the Clean Water and Clean Air Acts but no Clean Soil Act. Soil remains the only part of Earth where high levels of municipal and industrial pollutants can be released on a global scale and go unmonitored. In 1993, EPA promulgated the 503 sludge rule, which allows these pollutants to pass through sewer systems and be treated with lime for application to farms, forests, school playgrounds, public parks and other public and private lands. Priority pollutants, the ones we worry about the most, aren't broken down by wastewater treatment processes, or even composting.

Priority pollutants include, for example, endocrine disruptors, pesticides, pharmaceuticals and plasticizers. They once flowed into rivers and were diluted in oceans. Now they are concentrated on land where we live, work and play at millions of times higher

concentrations. Instead of applying them to land, we should be reducing them to simple inorganic compounds using new technologies such as supercritical water gasification.

Congress needs to pass a Clean Soil Act, and make polluters responsible for destroying toxic organic chemicals and recovering metals and radioactive elements at the source. Then EPA can be given the one simple task that could actually turn this escalating crisis around, which is just making sure everyone's gasification and recovery units are switched on and working.

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