Today is Earth Day. Let's talk about something earthy: the dirt under our feet.

When I was a kid growing up in central Illinois, the topsoil was black and went down about a foot. When I was a little older and tried gardening, I was amazed at the fertility of the soil. When I've gone back there more recently, however, I've been startled by the thin, gray look of the soil on the farms. I wondered if it had eroded away, blown off the fields by the spring winds or washed into streams.

It looks like I was right. A recent study focusing on nearby Iowa showed that the soil there has been rapidly eroded. Here's what the researcher found:

"Using high-definition satellite imagery, a recent soil carbon index, and soil spectral data, they were able to show that across the Corn Belt — which includes all of Iowa and parts of Minnesota, Wisconsin, North Dakota, South Dakota, Missouri, Illinois, and Indiana — A-horizon soil was essentially no longer present on convex slopes. What they found on those slopes was B-horizon soil — subsoil in other words, with minimal fertility, which is only exposed after A-horizon soil has been removed.'"

The study concluded that somewhere between a quarter and half of the topsoil in the Corn Belt is gone. If this methodology can be perfected, it could enable much better monitoring of soil quality, which would make new interventions much more feasible.

The loss of this rich soil is not only a loss to farmers. It also impairs one of the key "sinks" in which carbon is stored. There's more carbon in soil than in plants and the atmosphere combined. We don't need to be releasing that carbon. On the contrary, what we need is to start sequestering more atmospheric carbon in the soil.

Restoring and improving natural carbon sequestration hasn't been a focus of environmental effort until lately, but things are starting to change. Some of the work led by Ken Alex at our environmental law center speaks to this effort. One of his projects is Grizzly Corp, which sends recent college grads each year to farm and forest communities in order to work on regenerative agriculture, ecological forestry, and carbon sequestration. Ken is also our lead on an effort with San Jose and other partners on an innovative pilot project in Coyote Valley that will pay landowners to affirmatively enhance their land, in conjunction with promotion of infill development projects in designated areas of the City. Of course, CLEE is far from alone in this effort, even at this one university.

On a much bigger scale, Secretary of Agriculture Tom Vilsack is considering how to use existing farm conservation programs to promote climate friendlier farming, including the possibility of getting support for a carbon market that would pay farmers for reducing emissions. During his confirmation hearing, he said thinks agriculture is “probably the first and best way to begin getting some wins in this climate area.” Let’s hope he’s right about that.