From dust bowl to dead zone

By Derrick Schokman

It was the philosopher-mathematician Bertrand Russel, I think, who said that when science or technology solved one problem it caused another.

This is well illustrated in the environmental problems associated with the US dust bowl in the 1930s and what is happening now in the Mississipi basin and the Gulf of Mexico.

In that apocalyptic moment in 1934 when the soil of the Dakotas darkened the sky at high noon over New York, a warning was sounded for all time that farmers could exhaust the soil by trying to get quick returns without proper soil management.

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In the dust bowl tragedy, farmers had exhausted the prairie soils, reducing them to a dust which was caught up by the wind and swept away. This brought in train the penalties of disappearing farms and homelands.

But as the US showed, it was possible to arrest the devastating process of soil erosion and restore something of the lost virtues of the land by proper conservation and management.

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Can the same be said of the dead zone?

The dead zone is an area of around 7,700 sq. miles in the Gulf of Mexico, where fishermen are unable to take a catch anymore. Their nets come up empty every time.

Study

A recent study released by the Clinton administration has attributed the cause of the dead zone to lie up-river on the Mississippi in the cornfields of Illinois and the hog farms of Iowa.

Nitrogen washed down into streams and rivers and finally carried to the Gulf from fertilizer applied to crops, and from poorly managed hog (pig) manure, does the same thing in the ocean that it does on land — it boosts plant growth causing immense algae blooms to form.

The algae steal nitrogen from the ocean in a phenomenon known as hypoxia. This causes shrimp and fish to flee the suffocated area.

This environmental problem is now provoking a new civil war (in wards) between north and south, this time between farmers of the north and the South's fishermen.

Recommended

Remedial measures have been recommended to counteract this problem by cutting back 20 per cent on the use of nitrogen fertilizer in the Mississippi basin. And by returning 5 million acres of farmland to wetlands to make up for the loss of thousands of acres of Gulf coast wetlands which once filtered nitrogen run-off to the ocean.

The American authorities on the whole however do not favour such action. Especially since farmers are still recovering from the crisis of the 1980s which bankrupted many of them. If these recommendations are implemented they believe that small towns and farms could disappear as they did during the time of the dust bowl.

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It is very unlikely that the use of nitrogen fertilizer will be reduced. Government officials have no plans or resources to enforce nitrogen fertilizer restrictions on a widespread scale.

If the authorities should decide to take action, it would be more likely that they adopt a mixture of carrot and stick.

Corn farmers will be required to plant prairie grass as buffer strips between fields, and maybe take bottom lands out of production in order to filter-out nitrogen fertilizer run-off.

Hog farmers will be compelled to improve their manure control operations.

And just as dust bowl farmers were aided by the Federal Government to adopt soil conservation measures, farmers in the Mississippi basin too will be state-aided to adopt the requisite conservation practices.

Grouse

Where does this leave the fishermen in the Gulf of Mexico, who have a legitimate grouse that they are not receiving any aid at all?

"We are farmers too," they say," farming the sea instead of the land, but we don't get any privileged treatment like the farmers up-river."

They have no other alternative but to avoid the algae blooms and go to the extreme edges of the dead zone to catch any fish.

This is getting much harder to do because the dead zone in the Gulf is spreading and they have to go further away to fish.

Bertrand Russel could not have been more right. If it is not one problem it is another. If not the dust bowl then the dead zone.