

Picking up on Dan's theme that "[it ain't over till it's over](#)," sometimes that's a good thing, as with the prospects for U.S. climate change legislation, but sometimes it's a bad thing. An example comes from the journal *Nature*, which recently carried a [news story about DDT](#) (subscription required). DDT, once widely used as an agricultural and disease-control insecticide that was banned in the U.S. in 1972, and in many other developed countries shortly thereafter. DDT is one of the best-known environmental success stories in the U.S. It had caused eggshell thinning in a number of birds, including the bald eagle, peregrine falcon, and brown pelican. With DDT's gradual disappearance from the environment and some habitat protection measures, all three of those species have been removed (at least in most locations) from the endangered and threatened list.

But it turns out that the story is not quite so happy in the oceans, where DDT continues to cycle. It is disappearing from the environment, through deposition in deep ocean sediments and destruction in the atmosphere. Both processes are slow. So large quantities of DDT remain available in the marine environment nearly forty years after the US ban, continuously cycling between evaporation from the ocean to the atmosphere and redissolving in the ocean.

According to a new computer modeling study, ocean cycling is now the major source of DDT in the environment:

[T]he re-emission of DDT from the ocean has become greater than from the three known modern releases of new DDT: its continued use in some countries for malaria control; degrading storage canisters; and other pesticides that contain DDT as a contaminant.

According to the model (which does not yet seem to have been verified by direct sampling) DDT concentrations are increasing in the northern hemisphere, despite the fact that there is little new use of DDT in the north, because the evaporation / deposition cycle drives DDT toward the colder waters of the north.

The DDT study is one more reminder of the need to address environmental problems at a global scale, as early as possible. And it's a powerful reminder of the need for patience while protective and restorative measures gradually take effect. The comment of Robbie MacDonald, an oceanographer interviewed for the *Nature* story, could apply to many other environmental problems:

“You would think this compound would have gone away by now,” he says, “but it’s still cascading through these reservoirs. People frequently ignore that. When you control emissions, [people] expect instant gratification, but you don’t get instant gratification.”