

Energy and Ecosystems

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BioScience

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Energy and Ecosystems

The release in March of the synthesis report of the Millennium Ecosystem Assessment (MEA), an authoritative, multistakeholder scrutiny of 24 sample natural systems around the globe, may come to be seen as a turning point for common wisdom about the earth's life-support mechanisms. Most of the ecosystems evaluated are being degraded by human activity, the survey revealed, and the damage makes more likely droughts, diseases, and famines that could impoverish or kill millions. Fisheries and water supplies are already faltering. People in poor countries will, as usual, suffer most. The MEA board warned that pressure on ecosystems will grow in coming decades unless policies change.

Right on cue, the US House of Representatives passed a month later a far-ranging energy bill that would increase pressure on one pristine ecosystem by opening up the coastal plain of the Arctic National Wildlife Refuge (ANWR)—as well as other places—for oil and gas development. Politicians may have come to the tipping point in the bitter battle over drilling in the Alaskan coastal plain, a biologically unique, federally protected area and cause célèbre for more than a decade. A Senate fight is likely, but hope that the rigs can be kept out of Area 1002, the part of the coastal plain where caribou most often go to calve, seems to be fading. ANWR's abundant caribou, polar bears, grizzlies, and migratory birds may have seen their best days.

Drilling opponents point out that ANWR's fossil fuel resources will most likely provide only 1 percent of US energy needs over their expected 50-year lifetime. Yet, drilling advocates argue, preservation of fauna in unsullied landscapes and the cultural preferences of a few thousand Eskimo and Native Americans cannot compromise energy security. Refineries are running at full capacity, demand for oil and natural gas is growing rapidly, and most analysts doubt that production can long match it. Prices are soaring, and the world's automobiles can't run on caribou scat.

The fate of Area 1002, however compelling to biologists who appreciate its unique features, is a small affair on a global scale. Few human populations will be immediately affected, and some of those will be glad of the economic boost. But the coastal plain's despoliation, if that is what it comes to, will be symbolically potent. It will advertise how desperate the search for energy has become.

Politically unpopular drilling might thus boost support for energy initiatives that have been inexcusably neglected, such as the raising of vehicle efficiency standards. (Although US new vehicle fuel economy is now no higher than it was in 1980, the House-passed energy bill conspicuously avoids mandating any improvements.) The National Commission on Energy Policy, which provided consensus recommendations on energy choices recently, endorsed commonsense measures like this one—as well as more controversial ones, such as renewed development of nuclear power and a cautious approach to limiting greenhouse gas emissions.

The MEA makes clear how crucial the choices are, but it is only a beginning. Assessment of ecosystems, many now changing rapidly in a way that could threaten large fractions of the earth's population, will have to be a never-ending effort. The effort is essential if politicians are to be given reliable information they can use to argue for sound policies.

TIMOTHY M. BEARDSLEY
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