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# Fewer and Fewer

By THOMAS E. LOVEJOY

WASHINGTON — The third “Global Biodiversity Outlook,” an assessment of the current state of the variety of life on the Earth and the implications of its continued reduction, was recently released. Not surprisingly, the outlook, prepared by the Convention on Biological Diversity, is not pretty. But it is also not all inevitable.

Few remember the first two such reports, in part because the outlook was not so grim. This report, based on national reports from 120 countries and with substantial scientific input and review, is truly hard to ignore.

The last time the nations of the world came together to deal with the state of the planet’s biology, they agreed to an overall target “to achieve a significant reduction of the current rate of global biodiversity loss.”

Yet not a single national report in the current Outlook showed a national target that had been met, despite important and significant achievements in conservation. In other words, the negative side of the planetary biological ledger continued to outweigh the positive.

One fundamental reason is that of all environmental concerns, biodiversity is the hardest to do anything about. As living beings ourselves, almost everything we do, including the simplest meal, affects living systems in some way.

Further, in addition to biodiversity loss being a problem in itself, every environmental problem — from toxic chemicals to climate change — affects living systems. So to address the biodiversity challenge it is necessary to some degree to address all environmental challenges.

The number of bird, mammal and amphibian species is declining; and the negative trend for corals is even steeper. Even species of current direct value to humans, such as livestock, are headed downward in diversity. Medicinal plants are increasingly threatened.

Extinction, of course, is always part of the picture of life on Earth, but by best calculations the rate has been elevated by human action to a thousand to ten thousand times higher than normal. Indeed, of all the indicators chosen to measure how the biology of the planet is doing, all but two continue to be negative.

In contrast to all the ecological red ink, there has been a substantial increase in the coverage of protected areas and a surge in the amount of development assistance directed to conservation.

Brazil has created by far the greatest number of new protected areas, mostly in the Amazon. Canada has also made a substantial contribution of new conservation units, and for the first time there has been a big increase in the number and extent of marine protected areas.

Nonetheless, disturbingly, the Outlook identifies serious tipping points on the horizon — some 13 of them.

Some are already underway, most notably the bleaching of tropical coral reefs. That started in 1983 but today is at such a pace that a major fraction of all reefs is affected — a matter of huge importance to the 5 percent of humanity living within 100 meters of reefs.

With humanity's trajectory unaltered, we can anticipate a proliferation of such tipping points, with many hard to predict in advance but all pretty obvious once they occur.

The conclusion is that the biology of the living planet has yet to reach its proper place in human affairs. Two efforts to right that balance stand out.

One is an effort to bring the “externalities” of biodiversity goods and ecosystem services (e.g. coastal wetlands as fish nurseries) as much as possible into economic decision-making. Without that we will be forever consigned to making economic decisions in our immediate interest while trying to address the biodiversity crisis as an add-on.

Initiated by the Group of 8, the Economics of Ecosystems and Biodiversity has much promise. Still in development, it includes some highly creative and simultaneously practical environmental economics. It has already demonstrated that benefits from nature constitute more than half of the realized “income” of the poor.

The second effort will be the subject of a meeting next week in South Korea — whether to create an intergovernmental science panel analogous to the one set up for climate change. The notion is for an “Intergovernmental Panel on Biodiversity and Ecosystem Services” to marshal biodiversity science in a fashion that has intergovernmental standing.

Even in the face of the natural reluctance to create yet another new structure, this one should not be ignored. The biology of this planet will never get the traction it deserves without intergovernmental endorsement.

In effect, the shape of the next “Global Biodiversity Outlook” depends, ironically, on human social systems — economics and intergovernmental science. So do the biological infrastructure and the habitability of the planet itself.

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