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Overpopulation and Climate Change

By ARTHUR H. WESTING

PUTNEY, VERMONT — With the continuing failure of governments to reach agreements on combating climate change, the outlook for both humans and nature remains bleak.

And nowhere is the failure more conspicuous than in the avoidance of the subject of population growth. Population is a double-barreled environmental problem — not only is population increasing; so are emissions per capita.

In 1970, when worldwide greenhouse gas emissions had just begun to transgress the sustainable capacity of the atmosphere, the world population was about 3.7 billion; today it's about 6.9 billion — an increase of 86 percent.

In that same period, worldwide emissions from fossil fuels rose from about 14 billion tons to an estimated 29 billion tons — an increase of 107 percent.

In other words, in 1970, such emissions were about 3.8 tons per capita; today, despite the growing awareness of climate change, they have actually risen to about 4.2 tons per capita.

The growing fraction of energy produced by low-emission means (solar, nuclear, wind, etc.) seems merely to be slowing down the rapidly growing dependence on fossil fuels in response to ever increasing energy demand.

Yet inexplicably and inexcusably, recommendations by the United States, the United Nations and independent research groups essentially never include — and certainly never stress — population as a contribution to global warming.

No rapid solution to the population problem is in sight, so we must continue to promote emission-control measures ever more vigorously. And nothing is more important than persistent education and publicity. In the matter of global warming, no idea is more critical than the notion that the atmosphere must come to be regarded as a global commons, a common heritage of mankind.

A principle of fairness follows from this. The time has come to apportion an overall, safely sustainable level of emissions into the atmosphere to all the countries of the world in an equitable fashion. Such apportioning cannot be based on amounts currently being discharged by various industrialized or rapidly industrializing countries. Neither can it be based on population, for this would reward over-populated countries and encourage further population growth.

Approaches to achieving reductions include frugality; greater use of energy-efficient devices; carbon capture and sequestration; emission-neutral means of generation; rainforest protection; a levy on emissions ("carbon tax"); and the lease or purchase of emission rights by over-emitters from under-emitters ("cap-and-trade").

If appropriate international agreements could be forged (clearly no easy feat), cap-and-trade schemes in principle would be an excellent approach as long as the worldwide level of emissions being sought is a safe and sustainable one; a country's contribution to a safe level is equitably determined; and inefficiency and corruption in its administration, monitoring and international verification are eliminated or at least kept to an acceptable limit.

One environmentally and socially equitable approach to cap-and-trade would be to base the discharge allocations on that fraction of the atmosphere that a country's land mass supports. In such a scheme, many rich countries would currently be discharging more than their fair allotment; most of the poor countries probably less so.

The under-discharging countries would then be able to lease (not sell) some portion of their discharge rights until such time as they are able, with the help of this income, to develop their own discharging infrastructure. The leasing countries, for their part, would have time to institute changes to stay within their fair allotment, which might well include retrenchment of individual energy consumption or, barring that, even reduced population numbers, difficult as that might be.

In the end, we must all recognize that we have an obligation to share this earth with the other living things, an obligation that requires a reduction, by one means or another, in our population-driven demands on its natural resources. Bringing about this recognition is the task of civic education in the broadest sense.

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