GUEST COMMENT

An Economist's Concern with Ecological Threats

Economists have been among the first to become aware of the impact of the environment on human welfare. Classical authors such as Pigou (1924) showed this already several decades ago, and among present-day economists Mishan (1969) has been analysing the 'cost of growth' extensively. Why, then, do 'environmentalists' often have the impression that economics has remained 'the dismal science', and that so much damage is done to the environment in the name of economic interest? I think the reasons are, first, that economic interests are not always represented by economists, but often by pressure-groups with a short-term view, and, secondly, that economists differ among themselves about the quantitative aspect of the damage which is being done. This gives rise to such differences of opinion as exist between, say, Beckerman (1972) and Kahn & Wiener (1967) on one hand, and Meadows *et al.* (1972) on the other.

Indeed the crucial point is that economic knowledge only becomes accurate when we make an effective attempt to measure the phenomena we are thinking about. Econometricians are the economists who have understood this, but for the application of this sound idea they are dependent on the activities of statisticians and other careful observers of reality. Now it so happens that measuring environmental damage at the macro-level—in order to use it for judging economic policies—is very difficult; it is much more difficult than the measurement of the 'old' economic entities such as production, prices, incomes, trade, and so on.

But measurement of environmental matters has been started. As a good example I may quote the activities of my countryman Dr R. Hueting, now in charge of a special group within the Netherlands Central Bureau of Statistics, which collects quantitative evidence on environmental phenomena—along lines set out first in his book 'New Scarcity and Economic Growth' (1974).

Another interesting activity that is going on in my country is a research project concerning the ecological aspects of increasing world agricultural production. This project is an attempt to combine ecological evidence with an estimate of agronomists about the Earth's food production potential around the year 2000 or 2010, mentioned in a recent report to the Club of Rome (Hoogh *et al.*, 1976).

The message which I want to bring to environmentalists is that they should unite in an attempt to *measure* the dangerous phenomena with which they are so familiar. As I have recently pointed out elsewhere (Tinbergen, in press), the kind of question which we need to answer is: what is the absolute maximum food production of the world? Buringh *et al.* (1975), on the basis of quality of soil, climate, and availability of water, estimated it to be about thirty times the food production of 1970, but now the questions to be asked of ecologists are: how much too high is this estimate, and because of what ecological and other factors and foreseeable threats?

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