

Tilburg University

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Published in:
Environment and Development Economics

Publication date:
2008

[Link to publication in Tilburg University Research Portal](#)

Citation for published version (APA):
de Zeeuw, A. J. (2008). Key issues for attention from ecological economists: A comment. *Environment and Development Economics*, 13(1), 21-24.

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‘Key issues for attention from ecological economists’: a comment

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Paul Ehrlich has written a wonderful article with the purpose to convince economists to switch their research interests to what he calls ecological economics. His argument is twofold. If our intellectual capacity is not geared towards these issues, humanity may be heading for a big disaster. Secondly, it gives tremendous opportunities for economists: the ones who switch will end up in the centre of the profession, because society will be in big need of their expertise.

The question is why ecological economics is not central in the economics profession yet and whether Paul Ehrlich’s plea is convincing enough to make it happen. One can argue that ecological economics is as old as economics itself. The use of land was an important issue for first generation economists, because the economy was basically an agricultural economy. Changes in the structure of the economy, however, switched attention to man-made capital and labour. Resource theory became a separate strand, studying the optimal extraction of natural resources, but otherwise most economists did not consider resources and pollution as pressing problems. In 1972, the Club of Rome put out a warning that the very fast extraction of resources could lead to a disruption of the economy, but most economists argued that price mechanisms and substitution would take care of the problem. Indeed, more than 30 years later we have to conclude that the doom scenario of the Club of Rome has not occurred. However, we now understand that the real problem is a different one and Paul Ehrlich’s article is very convincing in showing this. Some resources, such as water and air, cannot be substituted and life-support systems are threatened. Pollution now exceeds the natural assimilation capacity and threshold effects may disrupt the functioning of ecological and social systems. We become more and more aware of many feedback effects on health and resource availability. Has the economics profession reacted to this? Yes, but Paul Ehrlich is right: not enough yet. We need articles such as this one to stimulate the switch, but I also have some concern that this article may not fully serve its purpose.

If you want to convince economists to switch, you have to be precise in the description of the situation. Paul Ehrlich can of course not be blamed for not being fully accurate on the economics profession, because he is an ecologist and he admits in his article that he may not be precise. This may, however, cause some economists to turn away from the message. Consider, for example, his remarks on the social discount rate. Paul Ehrlich writes that economists like Stern *automatically* assume that the discount rate must be positive but this is not true. In fact, the *Stern Review* carefully argues that the parameters for the social discount rate are subject to choice and, indeed, that if the growth rate is negative, the social discount rate may turn out to be negative as well. The results are calculated with a positive (but small) discount rate, but this is because the growth rate is expected to be positive. Moreover, additions to the *Stern Review* perform a sensitivity analysis on the chosen values of the parameters. I will discuss some other examples later, but I would first like to draw attention to something completely different.

Paul Ehrlich starts his introduction by saying that he considers environmental and resource economists, on the one hand, and ecological economists, on the other hand, to be an identical group, but this is not true. You may say ‘what is in the name?’, but in this case, unfortunately, it happens to be that these groups are different and separated. The first group is organized in associations of environmental and resource economists (the main ones are AERE in North America and EAERE in Europe) and the second group is organized in the International Society for Ecological Economics (ISEE) with branches in different areas of the world. Environmental and resource economics can be seen as a sub-field in economics, but ecological economics originates from a strong disappointment with the economics profession. Both these groups emphasize that the economic system cannot be separated from the natural environment. At least inflow of resources and outflow of waste have to be taken into account. The difference is that environmental economists want to close this circle and focus on the resulting system, whereas ecological economists see the economic system as a very small part of a large context. In relation to this, environmental economics basically remains an economic discipline, whereas ecological economics is more geared towards interdisciplinary research and action. It is not clear which group Paul Ehrlich is primarily addressing. When he calls the economic discipline the ‘queen’ of social sciences, he seems to be addressing ecological economists in trying to convince this group that economics has a huge potential. Indeed, economics is the profession of scarcity and trade-offs, and also externalities and free-rider behaviour. It should therefore have a huge potential to understand and solve the issues at stake. On the other hand, Paul Ehrlich is critical of economics as it stands and he seems to be inviting (environmental) economists to break away from some of the rusty topics and to fully focus on the real problems that we are facing. In any case, it is clear that Paul Ehrlich thinks that economics has a lot to offer, but that the focus of economics should change, and in that sense I fully agree with him.

I would like to return to the examples where environmental or ecological economics, according to the article, is paying proper attention and where it

is not. Paul Ehrlich starts by saying that the theory of resource management is well developed but valuation of ecosystem services needs more effort, and rightly so. By the way, valuation is a very important topic because especially environmental economists have to develop tools to determine values that are not (directly) determined on markets. The only other area, besides resource management, that Paul Ehrlich explicitly mentions as getting proper attention from environmental economists is international trade. It is clear that free trade without constraints is bad for the environment because of the negative environmental effects of transport, but it is not so clear that an analysis that takes these effects into account would lead to no trade at all. Paul Ehrlich could be more precise on what he wants to argue here. More importantly, however, it seems that he argues that all other areas have not been paid any attention. It is clear that in general more attention is needed because the problems are far from solved, but his position is not fair to the work that has been done, and it may in some instances even be misleading. Consider the issue of growth, for example. It is just too simple to say that growth must stop because we would otherwise exceed the Earth's carrying capacity. Of course, this statement is true if all growth paths destroy life on Earth, but this is not necessarily the case. Note first that new activities do not necessarily burden the environment to the same extent as before, and some new activities such as restoring and protecting the environment may even be beneficial in this respect. If growth is based on technological development, this development can be steered by proper environmental policies, so that the burden is reduced. More importantly, however, constraints to growth can be hard constraints (when life support systems are at stake) but often are soft constraints by which I mean that they are based on preferences. Personally, I side with Paul Ehrlich in a preference for high levels of environmental quality but other people may be willing to trade some deterioration of the environment for more material welfare, as long as the life support systems are not destroyed. We may want to convince them to think otherwise, but the economics profession must include feasible growth paths under different preferences. It is clear, however, that growth theory without constraints is not acceptable anymore, but the economics profession has already developed in the right direction.

There are a few other issues in the article where I think that Paul Ehrlich is not fully fair to economics and in this way he is running the risk that his important message is not coming across. For example, I agree that 'there needs to be wider recognition that utility depends on much more than simply one's own consumption' but I hope he is not suggesting that economics has not paid attention to this issue in the past, because a large literature exists on this. Furthermore, Paul Ehrlich writes that 'it is not clear that households (or nations) have the requisite information to make informed choices'. This is true but again I hope he is not suggesting that economics has not paid attention to the issue of how to handle uncertainty and lack of information. I would say on the contrary, but much of this work has to be directed towards environmental problems.

Having said all this, I can otherwise only applaud Paul Ehrlich. His article should draw attention. He has the courage to enter fields that are

not his own and he proves to be very knowledgeable. I also side with him in his strong plea to pay attention to Partha Dasgupta's work on the connections with poverty. Paul Ehrlich presented this article to the 2007 EAERE meeting in Thessaloniki in Greece. It triggered a fierce but open and constructive debate at the dinner table and also later during the conference. This is what science needs, besides all the hard and tedious detailed work. It makes me optimistic, despite all the warnings in Paul Ehrlich's article.