Author/s:
Kompas, T

Title:
Comment 2 on ‘Natural resource management’ by Pannell, Doole and Cheung

Date:
2016-10-01

Citation:
Kompas, T. (2016). Comment 2 on ‘Natural resource management’ by Pannell, Doole and Cheung. Australian Journal of Agricultural and Resource Economics, 60 (4), pp.670-671. https://doi.org/10.1111/1467-8489.12191.

Persistent Link:
https://hdl.handle.net/11343/291804

Article Type: Comments

Corresponding author mail id: tom.kompas@anu.edu.au

Comment 2 on 'Natural Resource Management' by Pannell, Doole and Cheung:

Tom Kompas

There can be no doubt that economists have made a substantial contribution to the management of natural resources in Australia and New Zealand. Pannell et al. (2016) provide an expert assessment of this contribution across water, agriculture and marine resource management in particular. Nevertheless, as Pannell et al. also highlight, economics has not been as influential as it could have been. I want to focus on this point in my brief commentary, and the role economics has played, and should continue to play, in conservation.

One reason for the lack of influence of economics on natural resource management advanced by Pannell et al. is that "conservation-minded stakeholders are actively opposed to the consideration of economics in decision making". There is a good deal of truth in this. Indeed, sceptical individuals invariably argue that commercial interests and conservation are always at odds; yet those who are looking for profits from natural resource management argue that conservation goals always come at the expense of economic returns. Typical examples are setting aside forests, prime pasture, and sections of the ocean for non-commercial use. Commercial concerns will argue that such closures simply limit economic activity and close off not only profitability, but also vital employment opportunities. Conservationists, on the other hand, claim that such measures are only a small part of the effort

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/1467-8489.12191

needed to protect the environment, regardless of the loss to profitability.

But must this always be the case? Are profits and conservation always in conflict? The answer is no. There are clear examples where the use of conservation zones in fact enhances profitability. A recent strong case comes from the use of a marine protected area (MPA) in ocean fisheries (Grafton, et al. 2009). An MPA generates a resilience effect, not only biologically, but also economically. It acts as a buffer stock, where spillover effects in fish stocks from a nearby MPA can compensate for a negative shock to a fishery. This buffer stock effect can be substantial, leading not only to higher catches over time, but both a quicker return to profitability and higher sustainable profits. The more negative shocks that occur and the greater their frequency (e.g., think of climate change and its effect on weather patterns in a fishery), the larger will be the benefits of an MPA. Only in cases where there are no negative shocks to the fishery, or when they happen very infrequently, will an MPA result in a fall in profits. Pannell et al. capture this effect, at least to some extent, but there are many more examples of how economics and conservation can work together that could be emphasised.

A further and good example of this is the use of economics in the establishment of a fishery catch target; it makes my point even more keenly. It is not the introduction of Individual Transferrable Quotas that should be lauded as Pannell et al. suggest -- we are far from using them extensively or even correctly in fisheries management in Australia (i.e., quotas are often not binding) -- but the establishment of 'maximum economic yield' (MEY) as a harvest target.

The essential point with MEY is that the catch target that maximises profits also ensures that stocks are larger than at the traditional value of 'maximum sustainable yield'. Put simply, thicker stocks are more profitable since the cost of fishing per unit of catch is lower. No practical discount rate or high price

for fish can offset this effect (Grafton et al. 2007). This makes economics a 'friend' not only of industry, but of conservation as well. Profitability and conservation, indeed, can go hand-in-hand and it made the case for MEY so much more compelling as a result. The target is now in widespread use in Australia.

Economists must continue to find ways like this to establish our role in conservation, and in ways that ensure proper resource management along the way. There are difficulties in doing so, as Pannell et al. nicely explain, particularly "with respect to the development of objectives for management, the assessment of benefits and costs, and delineating the impacts of management", but this is where we must work going forward.

References

Grafton, R.Q., Kompas, T. and Hilborn, R. (2007). The Economics of Overexploitation Revisited, *Science* 318(7), December, 1601.

Grafton, R.Q., Kompas, T., and Ha, P.V. (2009). Cod today and none tomorrow: the economic value of a marine reserve, *Land Economics* 85, 454–469.

Pannell, D., Doole, G. and Cheung, J. (2016). Natural Resource Management, *Australian Journal of Agricultural and Resource Economics,* this issue.