

Discussion of Session 4

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John Gartside commenced the discussion by asking David Baker what he would expect to find if he applied his contingent valuation method to the commercial sector as well. He observed that the evaluation didn't include the opportunity costs that the commercial sector are foregoing, arguing that they have a direct market value. David Baker thought that, in this case, the market value was a good indicator. He believed that it was picking up the opportunity costs because most of the commercial fishers in South Australia were involved in the fishery for other reasons than simply making a profit.

John Gartside responded that logically you should also value the number of fish caught by the recreational sector using exactly the same measure, i.e. the market value. He was also concerned that contingent valuation has some very alarming findings, with people making judgements about things that they don't immediately have to pay for.

Lindsay Harwood asked Paul McLeod what is the value, or if there is a value component for the commercial fishery 'lifestyle'. When you actually look at reallocating the resource financially, do you consider the lifestyle value of the fishery? Paul McLeod replied that it was in a way a \$64 question

but he regarded two things as important. First, if you are going to be consistent and chase the marginal valuations of the activity, then you need to take some account of the lifestyle valuations of commercial fishers. However, you have to disentangle from that whether or not the lower rate of return they are accepting for being in the industry in a commercial sense is already fully accounted for in the lifestyle adjustments that they have made. But he thought that it came back to his original point, the need for management frameworks. In terms of getting a framework which will work, he thought it inconceivable that you could easily manage allocations without putting some weight on the lifestyle choices of the fishers, particularly when you have things like grandfather clauses, because they would be willing to pay something in order to maintain their lifestyle.

As an aside to the previous question about contingent valuation and commercial fishing, Paul McLeod suggested that you could apply survey-based approaches to commercial fisheries to get some idea of the value they placed on their lifestyle separately from their commercial valuation. He commented that there was a risk that there is always going to be a temptation for people who have a lifestyle to say that its value is

super high, e.g. there is no price whatsoever which would cause me to vacate my beach or vacate my licence. That is certainly not going to be true but the difficulty is how do you actually factor in the lifestyle component in a sensible working arrangement on allocation.

Albert Caton commented that in the discussion on resource allocation there was an aspect of compensation that had not been covered. For instance, if you have a group that fishes down a stock (whether it is a recreational group or commercial group) and, following allocation between the two groups, payment is sought for that allocation, there is a question of loss and the payment for that prior loss. He also suggested that it need not just be fishers responsible. For example consider a marina development. If habitat is degraded by the building of the marina then both the recreational and commercial fishers might be expected to pay each other for the diminished resource, whereas the developer gains from the value of the land and sales from that investment and yet pays nothing. How are you going to take this into account?

Paul McLeod gave two answers. First, the straightforward answer is that those who have actually lost the resources should be compensated. From a legal point of view, however, lawyers would probably argue about the legal rights of fishers and whether those rights were in perpetuity. It does put the onus on fishery managers to consider the concept of what the licence really implies. What is it? Is it an annual licence? If it is a licence in perpetuity, then that should be compensated.

Secondly, from an economist's point of view, in the case of a marina developer, for example, provided the externality costs are

taken into account when the marina was developed, then we can say they have paid for it. Where they haven't paid for it, this is in fact a classic example where we find overdevelopment. The developers do not pay for the actual cost of their activities.

Rob Day felt that decisions on allocation are going to be influenced and the assigned values are going to be continually influenced by the amount of information that is present. It seemed to him that the process is incomplete unless you can actually value the information that is needed and create a market for that information.

Paul McLeod responded that he thought this was right but not necessarily a major problem. The characteristics of markets is one of the reasons that economists extract market solutions for most problems that they come across. Markets have this great capacity to handle the dynamics of a situation as more information becomes available. Consider the mining sector, for example, where there are continuously new discoveries, new technologies for mining. There are many things that change continuously and new information is something that markets assimilate very well. What he was suggesting was exactly that sort of process being replicated in terms of allocation of resources. You can't ever expect to be able to say we have all the information and therefore the allocation we've made is the correct one for the future. However, he was uncertain as to whether or not it was worth going down the full market track completely, by establishing, for example, tradeable property rights, rather than trying to emulate it to some extent through a management framework. *Information needs are an important part of that process.*

Rob Day didn't share this faith in markets and argued that they seldom provide information ahead of time. Barry Kaufmann agreed that markets are not perfect but what are the options? If you forced him to compare a market to perfection, perfection is going to win every time. However, a commanding control situation is far from perfect as well; governments making allocation decisions worry him a lot. So clearly markets are not perfect but they may be the best alternative.

Paul McLeod stated that he wasn't trying to suggest that you should use markets because they are perfect but agreed with Barry Kaufmann's point that markets are very powerful instruments for sending out appropriate signals to get people to do certain things. It doesn't necessarily mean that every allocation decision has to be a market but, he reiterated, it has to try to pick up and emulate the sort of forces that a market would create. He disagreed with Rob Day's point about markets and information. We tend to say that markets don't worry about the future or markets don't seek out information but in fact one of the great things that markets do is they stimulate a whole lot of research and development. They often identify what needs to be done for the future and they elicit the sort of responses that make it happen. Some industries operate with exceptionally long time frames.

Charles Barnham asked Paul McLeod about the costs of communicating frequent changes and enforcing the result of those changes. Paul McLeod replied that it depended on the processes in place. With a fairly robust market structure, for example, a fisheries department participates by buying back some tradeable quota and just

storing it. Or if you decided that the available harvest could be increased you could auction some quota. These are fairly commonly used practices in the water industry where you have tradeable quotas. If you don't have this situation but an allocation based more on direct intervention then there is a major problem in terms of communicating information. First, on things that have to be changed and second, on actually going about changing them. If you are not going to go down the route of trying to create markets because, say, of the high transactions costs you have to put in place a management structure. A process which is ongoing, can elicit information and make the appropriate adjustments, and communicate it. He did not have the answers as to how this is best done but thought that it was an important challenge. He also added that one of the things that is quite important in the WA salmon committee is that it is recognised that in a lot of cases the information that exists between the people who are competing for the resource is asymmetrical. Each of them has a quite different knowledge about the fishery and one of the prime requisites for having a sensible outcome is for both sides of the equation to understand the basic information about the fishery. One of the things that has emerged is that education is a particularly important component of any allocation issue.

Laurie Gwynne stated that he thought David Baker had overlooked one significant user group, Aboriginal Traditional Fishers and asked him if he had any thoughts on the value that they might put on the resource? David Baker responded that at the time of his survey he didn't take them into account and was still not quite sure whether they actually played a major

part in the Lower Murray. However, you definitely need to take this group into account. There is no doubt that there is a value which can be acknowledged by resource managers but to put a dollar value on it is very difficult at the moment.

Steve Malvestuto pointed out that although the orientation here was primarily to deal with allocation issues, in terms of recreational fishery management in the United States there were more basic issues that the recreational fishery managers were trying to deal with. These are simply trying to understand how the economic value of a specific resource changes in relation to biological changes and in response to management strategies. He suggested that one of the challenges for economists is to interact with fishery managers and come up with some key economic response variables. These could be incorporated into a typical creel survey interview in order to track and monitor economic change simultaneously together with a number of other biological and perhaps socio-demographic factors. This is a big issue in the United States now because it is hard for biologists, economists and sociologists to communicate mainly because of different terminologies. He continued that it is not difficult to put a question in an interview schedule that asks anglers what they spent for the trip and a willingness to pay for that trip over and above expenditures. If it is done in a statistically sound manner those values can be expanded fairly easily at least for the users of that particular resource. It is also important to understand this so that governments can evaluate the importance of the fishery relative to other economic enterprises in a state or a region. To get legislatures to allocate more money for fisheries management and research, you have to go in and lay

dollar signs down on the table. It doesn't help much to go in and say we have 90 000 angler hours and we have 100 000 kilos of fish harvested from this system so please give us some more money for management and research.

Paul McLeod stated that the contingent valuation survey of the salmon and herring fisheries in Western Australia is actually being incorporated into the creel surveys. The way it is being done is that a sub-sample of the creel survey will be taken into the contingent valuation survey to check on these valuations. These will then be statistically related, it is hoped, with some of the variables from the creel survey. However, it takes a fairly long time to get through that process. Steve Malvestuto agreed, but thought that if biologists just knew how to incorporate some of this into their standard repertoire there would be a tremendous amount of information generated in a relatively short period of time.

Padma Lal commented that she thought a long term objective for recreational fishery managers would be to gain this information, adding that the commercial sector is already moving along those lines, trying to get annual economic indicators. Although the recreational sector still has a long way to go she acknowledged that we need to start somewhere. However, she cautioned that it is not just a case of putting in a question or two about how much people are willing to pay to go fishing. It has to be done very carefully to avoid producing numbers which are outrageously large and do not have much meaning. There is importance and value in including such questions but they need to be very exact. For example, what value are you actually deriving? Is it the recreational fishery? Is it

the value of fish? Is it the whole total experience of recreational fishing? Knowing exactly what value you are deriving for the appropriate use you want to put that information to is important.

Padma Lal commented on David Baker's presentation saying that she enjoyed this example of putting the theory into practice. It was the first time she had actually seen some bottom lines, the actual numbers. She was, however, a little concerned about the figures used to expand the survey results to cover the entire population. She wondered if this was valid, i.e. would all South Australians be willing to pay \$43 per person. She was also surprised that the recreational fishers in South Australia who didn't fish in the Murray River had exactly the same willingness-to-pay figure as the non-consumptive user.

David Baker responded to the second comment first by saying that although not significantly different, those recreational fishers who did not fish the Murray were, in fact, willing to pay less. There was less of an environmental awareness by some recreational fishers than there was by people who never fished there or never even went there. The non-consumptive users actually expressed more interest (generalised from the people he interviewed).

With regard to the first comment, David Baker continued that he applied the results to all of South Australia because basically the majority of the State's population is in Adelaide. Rivers are an integral part of South Australia's life-line, so he thought it was reasonable to assume that everyone knows what the river is; how important it is to South Australia. That was the rationale for applying it to all of the population over the age of 15 and having the money

to pay for it. It is important to remember that the situation which was proposed was quite an extreme one. It was about the complete loss of the river, and the feedback from the people interviewed was that they perceived that if there were no native fish in the river that was just the start. Therefore in \$43 they were also talking to some extent about the environmental state of the river as a whole. The analysis also excluded people in NSW who are over the State border but put a value on the fishery, as well as the rest of the country. At an extreme level, people overseas may also value the resource. For example there are people in Australia, who put money into conservation groups who are trying to save the Amazon or save the pandas, or whatever. To some extent he believed he was being conservative concerning the group the figures were applied to.

Padma Lal replied that this point illustrated something that we all need to be aware of, particularly with contingent evaluation techniques. What is the population that is relevant? Here, the recreational fishers came up with a certain value, whereas the community came up with a much larger total value. A very similar example was what happened recently in Kakadu National Park where similar kinds of values were derived. It emphasises that what we have to look at is what value is being considered. In the case of recreational fishers they are concerned about the fish they will lose (in terms of catching them) whereas the community is talking about the value of the environment. Is this the same product we are actually valuing? Are we deriving a measure for the fish from the River Murray or are we actually deriving a measure for the value of that environment? This is very critical when you are trying to use

contingent valuation techniques to measure the non-market values. One has to be aware of it and, in designing questionnaires, take into account what is the product that you value.

Martine Kinloch directed a question to Paul McLeod concerning the increasing cost of fish to consumers that results from an allocation from the commercial to the recreational sector. Because the value of the commercial fishery is not only to the commercial fishers but also to consumers, how do you arrive at a stable situation?

Paul McLeod replied that fish in commercial use are not just valued in terms of commercial fishers but you try to value them in terms of their economic value to the community. This has to encompass what is called the consumers surplus associated with consuming those fish in whatever consumption patterns occur. The value of fish to the consumers is, therefore, part of the exercise. This point is really the challenge. When we talk about resource allocation we often talk about it as if it has to be an allocation or reallocation that once done cannot be undone. This is not necessarily undesirable but it is not unusual in markets to have continuous allocation and reallocation of resources according to the pattern of demand and supply. For example, if you have competing uses for a particular resource in the mining industry and one of those uses experiences an increased demand for their product they end up bidding higher prices for that resource. The result is it goes in that direction and not into another use. Unless you are operating with complete uncertainty, you would not expect to make initial reallocations that are far too large or far too small. He reiterated the need for a management structure which can handle

that sort of problem. It is a dynamic process and you can't guarantee that what you have done today is right for tomorrow.