
QUESTIONS

Andy Bruere, BOPRC: I have a question for Hannah Mueller around the valuation of Lake Rotorua. You say it is worth about \$122 million annually. The cost for recovery is just under \$100 million being spent on the lake. My first question is does that sound like good value and are we spending enough do you think?

The second question is what is the value of water quality restoration in other catchments where lakes are not receiving water at the bottom of the catchment; it is just a river catchment or a farming catchment?

Hannah Mueller: Thanks Andy. Is it worth spending money on restoring the lake? Yes it is definitely worth spending money. I think that I have shown that. There is economic benefit associated with improving an ecosystem, not only a cost associated with the degradation but also a gain in value associated with restoring an ecosystem. While we do not usually incorporate those kinds of values in our management decisions, neither do we look at it that way, and it is definitely worth exploring those values and incorporating them into our equation.

The second question was what are the values of other receiving water bodies that are not lakes and different kinds of catchments? Was that the question?

Andy Bruere: Yes, probably more along the lines – if you have a lake at the end as a receiving catchment, what happens if there is no lake? What is the value of restoration there and how do you account for that?

Hannah Mueller: If there is something else other than a lake ... an estuary or ?

Andy Bruere: There is no lake, just a farming catchment and then it goes to an ocean.

Hannah Mueller: That is a really good question. It is not something that I have thought about before but in terms of ecosystem values, even though there may not be a lake at the end of a catchment, there are still other ecosystems worth protecting, whether it be forested land or something else that provides ecosystem services. I certainly have not looked at any other examples but it is definitely worth studying for other catchments as well.

Paul White, GNS: For my sins, I have done resource and economic valuation work with Basil Sharp at the University of Auckland so I have a comment to your question Andy and also a question for you Hannah.

Andy, the value of the Waikato River for industrial production alone is \$2 billion capital value, so it can be done, and the numbers are big. I would recommend you look at the total economic valuation, Hannah, because firstly it gives bigger numbers and makes our work look much more impressive. You do that by capitalising your annual costs or benefits.

My question to you Hannah is how did you get the profit figures for farmers in your catchment study?

Hannah Mueller: Thanks for that. I have looked at total economic value before and am certainly familiar with the concept but this was just a very brief snapshot of what I have worked through in the last year.

The profit figures for farmers were based on a representative value taken from a couple of studies done throughout the Rotorua Region. They were an average value looking at productivity values of the dairy, dry stock and forestry land use so they are not really a land value as such. They are not the sale value but an averaged value of how much profit can be taken.

Paul White: Okay, did that include interest and tax?

Hannah Mueller: No, not in that figure.

Warren Webber, LWQS: A question for Jan. You were not here yesterday afternoon when we looked at figures on funding for weed control and my recollection is around \$1.8 million per year is provided by LINZ for weed control in lakes throughout New Zealand, is that correct?

Jan Hania, NEXT Foundation: \$1.9 million

Warren Webber: \$1.9million. There you go, pretty small. We have some exciting technology coming through with endothall. As I see it, we will struggle to implement what we need with that sort of funding. Is this the sort of thing, as a national or even a regional programme that the NEXT Foundation might be interested in?

Jan Hania: Unless it is going to change the system across the country, probably not. I think we would look for things that are going to be sustained in the long term. I could not say straight off but that is in my thinking at the moment.

Paul Champion, NIWA: One of yesterday's talks was the restoration of native vegetation and if that could be achieved then that would be equivalent to the terrestrial examples that you were talking about.