QUESTIONS AND DISCUSSION

Don Atkinson, LWQS: From my point of view the challenge today was to find out how we attack these key weeds, hornwort and lagarosiphon in particular. We have not been able to eradicate them but what has been demonstrated is that the toolbox is significantly larger than we have been using. We have not got consent to use endothall here and yet we hear that it eradicates hornwort effectively in the South Island. Our tool box is pretty bare and we need to recognise that and work together on management plans that control these lake weeds properly.

Te Taru White, Pukahukiwi Kaokaoroa Inc: Kia ora, a question to Rohan and Paul around biocontrol and particularly the use of imported insects to fight the weed problem we have. We have heard about herbicides, weed harvesting and so on, but the revelations by Rohan about voracious insects gobbling up a specimen in a matter of minutes, or voracious imported insects roaming around the country, maybe a microscopic Godzilla eating its way through biomass. I know that is a script from movies but it is how a lay person will probably see it. What is NIWA's role in research in that particular area and what are the biosecurity constraints around the importation of non-native species insects to battle the problem we have?

Rohan Wells, NIWA: That will be a combination response from both Paul and me. In terms of funding it was some German scientists who were not even paid but interested in using our facilities, working down here in the off season, that came up with something completely new in the last couple of months and it is food for thought. They will continue working on it. It is interesting because the insect itself is a generalist feeder and if its preference food got down to low levels it could eradicate it because it would still be present in high numbers and be able to move on to other species.

Paul Champion, NIWA: The second part of that question should be addressed to Quentin but I will answer for him. There are really stringent measures needed to show that the species targeted by these imported insects for bio-control are really specific. If there is any damage to native species then it will not get across the border. I mentioned the EPA as the way of bringing in new plants into the country. Landcare Research have managed to bring in a number of bio-control agents for terrestrial species using that EPA system but there are a lot of checks and balances before something can get into the country.

*John Green, LWQS: C*an I describe the situation for spraying of weeds in the Rotorua Lakes and then ask your opinion without getting you into trouble with the authorities? At present we have LINZ, through Boffa Miskell, with a budget of around $100,000 targeting amenity values. With Lake Rotoehu a nutrient budget approach is targeted for stripping nutrients out and that forms part of the Lake Restoration Funding Programme.

We are obviously getting the nutrients down and the Rotorua Te Arawa Lakes Strategy Group is doing a fantastic job on that. Do you think a conflict of funding may cause our Rotorua Lakes to have a problem? Max, were you suggesting that if you have an increase in macrophytes and weed growth, in other words, not dealing with the weeds at the right time, we run the risk of getting an increased load of nitrogen and phosphorus, as with your Horowhenua example. That is, could we actually end up having nitrogen or phosphorus issues in our lakes because we did not spray early enough or at the right time. How do we release funding for spraying? I do not see us having an adequate weed spray plan like John referred to this morning.

I have really enjoyed today because it has shown us that you can plan for weed eradication and that there may be different ways of organising, managing and funding the spraying of weeds. Do you have a view on that?

Rohan Wells, NIWA: If I had had more time to speak the success stories just continue. I discussed with John that I would have liked to include a commentary on management approaches and use Lake Wanaka as an example. How you could have a weed that was wide spread and almost habitat saturated and divide it up into sections and target say the far end for eradication and then have different zones with a buffer zone where you might use a weed spray to reduce it. Gradually over time it would be eradicated. It may be a goal that might not be achievable but you can certainly get it down to a low level presence of weed.

There are quite different management programmes and they require different levels of funding. You need the expertise and knowledge of people who have worked in these kinds of programmes and understand the systems. I will perhaps leave it at that and let Max comment more on the nutrients?

Max Gibbs, NIWA: As I tried to demonstrate with the Horowhenua situation you need to understand the goal to achieve and the consequences of doing it. If you spray hornwort and get endothall as a way of treating the entire lake to eradicate hornwort with several applications, obviously there would be a nutrient release from the plants that occurred at that particular time.

To answer your question – is phosphorus going to come out? You will release phosphorus from the plants, as the plants die and synthesize on the sediment they will cause anoxia and phosphorus will be released from the sediments for one year. The next year those hornwort plants will not come back but we have demonstrated with the weed regeneration of natives will. Once the natives live on the bottom they stop the re-suspension of the sediment and hold the oxygen down low in the water column. The water column is not being smothered by a large canopy of decaying or growing weed which reduces the oxygen in the weed root zones. It is a time phase; either do it in stages or as one foul swoop and know that there will be a cyanobacterial bloom. Make sure you are not in the lake this coming year because all those nutrients will be released.

We need to understand the problem and the mechanisms. You do not go in and spray a whole lake without understanding that there are consequences in doing so. But I think we have demonstrated that it is possible to manage these things with the new toolbox.

Merehira Savage, Te Arawa Lakes Trust: May I commend all of the speakers for a very informative day. It is fitting for this session to move forward. I wanted to take the comment from Hon Dr Smith speaking about collaborative partnerships and finding a collective solution. Rohan you voiced that there is no one best method. We have listened to the speakers all individually saying this is the best recommendation, best method or approach with this specific weed or collective weeds. I am not sure who is going to comment on this and I agree with you Rohan, all management agencies should be on the same page. Could it be that all the speakers today sit in one room and look at a collective management plan simultaneously? I am aware it is going to take a lot of mechanical planning and structure to achieve, but your individual projects would be completed in time and that would assist you all collectively, kia ora.

Paul Scholes, BOPRC: That is a great idea and what this forum is for. The Hon Dr Smith mentioned with the National Policy Statement for Fresh Water that these conversations

are starting to happen. Council is going out to the communities asking what they want and bringing in experts to say what our best approach is and what tools we need in the toolbox. It is starting to happen collectively across New Zealand and has been a long time coming. As the Minister said, it has been sitting on central government's agenda for a couple of decades, but I think progress will be made. The aquatic weed situation has been at the bottom of the agenda so it is just a matter of getting it up there in high lights. Hopefully forums like this will do that.