

Submission from Derek Broadmore on National Freshwater Policy

Fresh water policy and land use are inextricably linked. The on line submission form focuses on aspects of fresh water policy such as stock exclusion when what is needed is a holistic approach that recognises that it is actually *land use* and the way we produce food that is a significant, and probably the main, contributor to the massive problem we currently face.

In his recent report on the state of fresh water in New Zealand Professor Gluckman notes that our rivers and lakes have been irreparably damaged. They have been pushed beyond the tipping point at which we can realistically expect restoration, at least in the next 50 years, and possibly forever. That is a damning assessment, one for which the architects of NZ land and water policy over at least the last 30 years must take responsibility.

The intensification of primary production, particularly over the last 20 years, is well documented and the link with water degradation should by now, I hope, be obvious to policy makers. The development of large scale irrigation projects and the unrestrained tapping of aquifers has been a deliberate and subsidised Government policy that has been ramped up over this period and has been the catalyst for farming intensification. It has always been a fundamentally flawed policy in that it ignores the requirements of the natural ecosystems serviced by rivers, lakes and wetlands and the capacity of the land to continually produce more.

Among the other direct consequences of irrigation and resulting farming intensification are the increased use of synthetic fertilisers to maintain soil fertility, the increased use of herbicides and pesticides to manage increased production and the forced adaptation of land to uses to which it is not naturally suited. While this submission is about water policy my point is that it cannot be looked at in isolation. The damage to our waterways is just one outcome of agricultural intensification, others are soil degradation including loss of topsoil, biodiversity and species loss, bee colony collapse recreational amenity loss...the list can go on.

So, water policy on its own will not fix waterways. It is land use policy that is the fundamental driver for improvement.

Maria-Helena Semedo the Food and Agriculture Organisation's (FAO) Deputy Director –General recently told a forum organised to mark World Soil Day that it takes 1,000 years to generate 3 centimetres of top soil and that if current rates of degradation continue, globally all of the World's top soil could be gone within 60 years. She also said:

“Unless new approaches are adopted, the global amount of arable and productive land per person in 2050 will be only a quarter of the level in 1960”.

The degradation she referred to is caused by the use of synthetic chemical fertilisers, pesticides and herbicides as well as over irrigation.

New Zealand has chosen a high input, high production system of agriculture that feeds into commodity markets. The costs inherent in such systems and the vagaries of international commodities markets mean that producers are trapped in a cycle that requires ever increasing production levels to service increasing costs including the borrowing necessary to finance that increased production.

On top of the effect on our waterways and soils, the consequential effects of our current land use systems on climate change, through the production of greenhouse gasses, must also be factored into the equation.

The best researched and most effective way of changing our food production model is to move to regenerative organic agriculture. Regenerative organic agriculture aims to operate a “closed” system of production i.e. external inputs (synthetic fertilisers, herbicides and pesticides) are minimised. Food production is matched to local climate and land type i.e. food is produced where it naturally thrives, and additional water use is minimized.

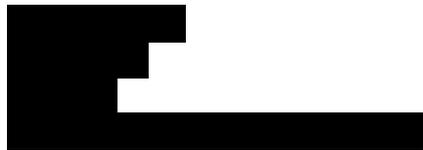
Organic systems produce significantly less nitrogen and phosphorous run off, build rather than deplete soil fertility and promote rather than destroy biodiversity. They are well suited to New Zealand pastoral system of animal farming as well as cropping and horticulture. There is also a strong business case for New Zealand to produce and export certified organic food products. Organic food and beverages are the fastest growing sector of the international food and beverage market averaging double digit year on year growth for at least the last 15 years. Consumer demand ensures that organic demands a premium price over conventional. The New Zealand experience in dairy,

kiwifruit and apples shows that net grower return per hectare for organic producers exceeds that for conventional growers.

This submission is not the place detail regenerative organic production practices or to set out a detailed business case for such systems although I am happy to provide the research that supports the statements I have made if required. My point is that we will not regenerate our waterways (or restore soil fertility and biodiversity) without a massive shift in the way we produce food.

To look at individual aspects of water degradation, such as stock exclusion, will not fix the problem. Only through a National change in our attitude to land use, and particularly land use for food production, can we hope to halt and perhaps, in time, reverse, the damage we are currently causing.

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[I was a lawyer in private practice in Wellington for 35 years, former Chair of : The Quota Appeal Authority, Organics Aotearoa New Zealand (OANZ), BioGro New Zealand. I was a certified organic farmer for 10 years and am currently a consultant for [REDACTED] working with organic producers to improve the organic supply chain.]