

The Art Of Catchment Defence.

Ross Scott¹

SUMMARY: All of us who live within a river catchment have responsibilities as caretakers of the environment. We have a duty to future generations to maintain, and if possible improve, the environment within our catchment. This commitment involves constant observation, continuous education, and above all, an alertness to the effect of "economic rationalism" on the diverse environment entrusted to our care. In particular there is a need to monitor streams, as the arteries of the catchment, to ensure that flora and fauna are not endangered by commercial operations. Such industries as forestry and farming create enormous stresses on the environment, and require careful, co-operative, integrated management strategies. We need to ensure that our local, state and federal leaders are not making decisions about our environment without constant community consultation. We must ensure that all decisions are made openly. Our catchment is our responsibility, not that of leaders living in capital cities well away from the lands and the rivers.

THE MAIN POINTS OF THIS PAPER

- Recognise that others may be more effective at environmental demolition than you are at rehabilitation.
- Identify the impacting groups and monitor and quantify the effects of their operations.
- Liaise, co-operate, communicate and network to engage the whole community in decision making.



Our challenge is to give to future generations, the rivers our grandparents enjoyed

1. INTRODUCTION.

This paper is mostly based on personal experience, and by necessity there are more stories than statistics, but there is little literature to refer to. Maybe the reason for this is that it is extremely dangerous in the current

economic rationalist driven atmosphere for senior personnel within authorities, or Government, to air concerns and make comment on how political decisions are destroying well prepared departmental recommendations and strategic planning.

¹ Lake Wellington Rivers Authority, PO Box 1374 Traralgon 3844

It follows, that as there is little to no noise on many of the following matters, there is no problem. That assumption is far from correct.

In 1996, as General Manager of Lake Wellington River Management Authority in Victoria, I became aware that if the condition of the environment were to be maintained, and hopefully improved, it was necessary to tackle the interests that were impacting adversely on the environment.

The Lake Wellington River Authority's work crews were arguably the best in Victoria, well trained, well equipped, and dedicated. It was painful to realise that whilst our crews, along with Landcare and the community, were effectively rehabilitating, Forestry and Agriculture were more effectively destroying.

It was obvious that the interests pursuing the clearing of native vegetation and the deposition of wastes into the waterways, had to be identified, the impact quantified, and the effects on the environment monitored.

The results of these investigations then had to be communicated to the wider community.

Obviously there will be no net environmental gain, unless the rate of environmental demolition is greatly reduced.

2. ENVIRONMENTAL FLOWS.

"Environmental flows" is a placatory term currently used to confuse the community. It usually refers to negotiated low flows, or passing flows, which rarely cater adequately for the environmental needs of a stream and its ecosystems.

In Victoria, environmental flows are managed by the Irrigation Industry, as indeed are dams on waterways, and licensing of works on waterways.

Many streams are being used as irrigation conduits with flow levels and temperatures a seasonal reverse, and flow regimes spiked and erratic to facilitate user demand.

Bulk Water Entitlement Agreements are locking into law, the entitlements of the farmer, and the environmental flow entitlements are negotiated down to enhance the security of the user, to the detriment of stream health.

There is a reluctance to incorporate adequate controls and penalties into Bulk Water Agreements. On the Thomson and Macalister rivers, monitoring stations are negotiated in the upper reaches of the stream, with neither controls nor records on extractions downstream.

Melbourne Water releases flows from its Thomson Dam to the heritage river section of the Thomson and assures a total environmental flow on average of 200 M.L. a day at the Cowwarr Weir, the start of the irrigation district. At this point 75 M.L. per day is diverted into an irrigation drain and the remaining 125 M.L. per day is now classed as the environmental flow. This value applies for a reach of some 50 kilometres to a gauging station. After this station there are no controls.

The decision on the allocation of water from the Thomson for both irrigation and the environment will be made at a political and industrial level. Catchment Managers, E.P.A., Gippsland Coastal Board, wetland groups and recreational fishing groups are advisory groups with but a small input in the process.

In an effort to have a credible environmental voice heard in the bulk water process, the Cooperative Research Centre (C.R.C), for fresh water ecology has been retained to carry out a rapid assessment on the Lower Thomson and Macalister rivers using an expert scientific project team.

The lower reach of the Thompson is a stream rich in wooded debris, riparian vegetation, and buffered by wetlands. The stream ecosystem is under threat by low, hot, de-oxygenated flows.

3. NUTRIENT LOADS.

Nutrients are studied at great length by researchers who operate in isolation and communicate in units quite incomprehensible to managers and laymen. The studies are rarely quantitative, and give no indication of the actual loads passing along a river or depositing into a lake.

Why is it that in 1998 we are not monitoring our waste discharges into streams sufficiently to give managers the management tools they require? Why do we not have records of the loads as they increase down the stream reaches?

In 1996 the Lake Wellington Rivers Authority established two continuous water quality monitoring stations in the Latrobe River at existing flow gauge stations upstream and downstream of irrigation main drains. The object was to capture flood events, and with continuous sampling, triggered by the change in stream level, produce load statistics.

We became aware of a large disparity between the test results produced by a registered laboratory and our Authority's laboratory. Our concern was to improve our test procedures. Work with a retired chemist in Water Watch and a local research farm working on nutrients, confirmed our test results to be of an acceptable order. Over the next six months, samples

were split between laboratories. These showed the National Association Testing Authorities (NATA) registered laboratory to be producing phosphorus results in the order of 300% less than actual for irrigation discharges.

A chemist from a NATA registered laboratory in Melbourne was retained to carry out an audit on testing of low concentration of phosphorus from the Lake Wellington Catchment. Under his supervision a large sample was taken from a river downstream of irrigation discharges. This sample was split into multiple containers, and half were incorrectly labelled to indicate a sample site upstream of the irrigation district. A pair of the samples was then delivered to a series of NATA registered laboratories for testing.

The results of this audit are listed in figure 1. The great variability between laboratories is alarming, but as should be expected demonstrate a good repeatability, except laboratory No 1.

In October 1998, the C.S.I.R.O. Gippsland Lakes Audit for the Gippsland Coastal Board, listed as priority under the heading "Actions for the Future":-

- Overall nutrient loads to the Gippsland Lakes need to be reduced significantly (50%)
- A thorough analysis of flow and loads into the system.
- Examine the sources and transport of nutrient through the system.
- The existing water quality monitoring programs should be evaluated.

There is concern that the C.S.I.R.O. is calling for the reduction of nutrient loads that may in fact be grossly understated.

There has never been a comprehensive water quality monitoring program in place to enable accurate estimating of nutrient loads.

Managers must have reliable data on which to base management actions, and the results of Figure 1 demonstrate the danger of relying on a single laboratory.

It would appear that to combat this problem, managers should employ tertiary institutions to regularly check the credibility of their testing.

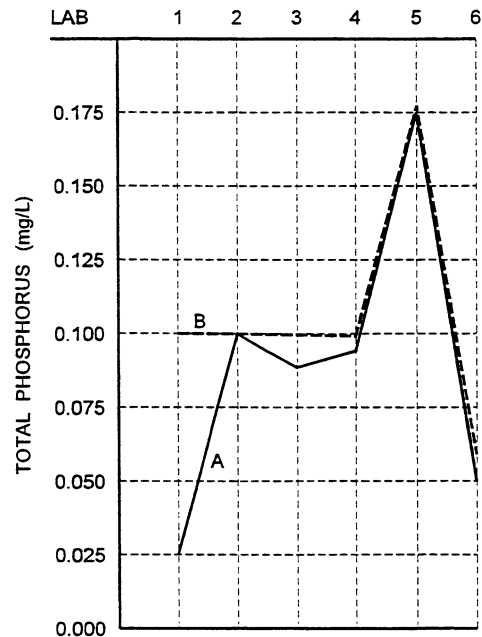


FIGURE 1

Reported Total Phosphorous levels for the same sample split and sent to six (6) different Testing Laboratories.

Sample A - River sample taken Downstream of Irrigation Discharge. (correctly labled)

Sample B - Same sample as "A" but incorrectly labled to indicate a site Upstream of the Irrigation District

4. FRAGMENTATION

"Fragmentation" is the modern equivalent of the old term "Divide and Conquer".

A particular outcome is required for a matter in hand. It could be the restructuring of existing Authorities to facilitate the transfer of state responsibilities and associated costs to the community, or it could be to allow commercial interests access to old growth remnant rainforests in a water supply catchment.

The basic moves with fragmentation are simple. Take a problem and fragment it. The more pieces created the better. Address each piece in isolation and without concern for the impact on the balance of the problem. Give the illusion of democracy, consult widely, and take community concerns on board. Draw the process into the peak group, which will consist of representatives of the industry concerned, a gaggle of bureaucrats and a representative from Treasury.

Having now established an audit trail for the credible decision making process, make public the well considered judgement.

A recent Gippsland experience is worth noting. In January 1996 Australian Paper Plantation (A.P.P. – a subsidiary of Amcor) applied for permits to clear 2000 hectares of native vegetation on its land in Gippsland to establish plantation forest for paper production.

- Applications were made to five shires to clear areas of private land.
- A flora and fauna assessment had been carried out by the Department of Natural Resources and Environment, which supported the application.
- Approximately 220 objections from the community were lodged with the shires.
- The Planning Minister “called the planning process in”, and established an expert panel to hear the objections, inspect the sites, and report to him.
- In September 1996 the panel recommended that the Minister disallow the application and not grant any permits.
- The Minister overrode the panel’s recommendations and issued permits to clear.

The Minister’s overruling of his expert panel’s recommendation was greeted with disbelief by the Gippsland community. The panel had been critical of the Department of Natural Resources and Environment’s flora and fauna assessments of the areas proposed to be cleared, and shared my concern that some of the area contained highly dispersible and erodible soils.

The more extreme green groups reacted by immediately commencing to organize a street march and a community gathering in a local park.

The Lake Wellington Rivers Authority approved my recommendation that we use a political lobbyist to assist the Authority to find the middle ground between the forest industry and the greens.

Within ten days (and as many sleepless nights), an eight point agreement was signed in the Authority’s office, between the Australian Paper Plantation, and the Friends of the Gippsland Bush, (F.O.G.B.- a green group with great knowledge and care for the environment).

The eight point agreement set out agreed points that would be worked out by a joint working group chaired

by myself and covered such things as detailed flora and fauna studies of each individual block by an agreed consultant, assessment of soils / slope, increased buffer strip widths etc.

This process has been in place for some 21 months and is now approaching finalization. Meetings have been held about every six weeks, and run in a very laid back manner, there have been minutes kept, but decisions have been reached by discussion, by searching for the middle ground, by a very real attempt by each party to understand the view and the position of the other.

It is anticipated that in the order of 75% of the 2000 hectares will be retired and saved from clear felling. This result clearly supports the panel’s recommendations.

The real value of the agreement however, appears to be that jointly Gippsland industry and greens have developed a format and procedure that can facilitate seeking out the middle ground in environmental conflict situations.

5. CLEARING OF INDIGENOUS VEGETATION.

The clearing of indigenous vegetation on crown and private land continues, despite native vegetation protection controls. The drive to increase farm production, and to extend plantation forest, has led to farm and timber organizations requesting relaxation of controls on the clearing of native vegetation.

In Gippsland, crown land previously managed by the Forestry Department, and now by Victorian Plantations Corporation, (V.P.C.), is being sold off to overseas commercial interests. The vegetation is being sold and the land is leased for 99 years. Indigenous vegetation is being conveniently classified as plantation to facilitate the sale. The classification “rainforest” is discouraged from use in reports. Flora and fauna surveys are not completed and it now appears that if current moves eventuate, the industry will be self monitoring.

Not only are the Strzelecki Ranges home to a wide range of flora and fauna; they accommodate a limited number of koalas with a diverse bloodline that could be crucial to the survival of the species, yet their habitat is being cleared.

The effect on the watershed, the supply of water from the Agnes and the Franklin catchments have similarly been ignored.

The clearing of old growth indigenous vegetation on farmlands in Gippsland is now common. This practice is often associated with spray and flood irrigation, and is driven by the financial advantages obtained by changes in land usage. (Figure 2).

There is an array of authorities, which are responsible for the protection of native vegetation. These include Local Government, Conservation and Natural Resources, E.P.A. Catchment Management Authorities.

When a determined individual flaunts the law, and clears vegetation without authority there is normally little or no action taken against the offender.

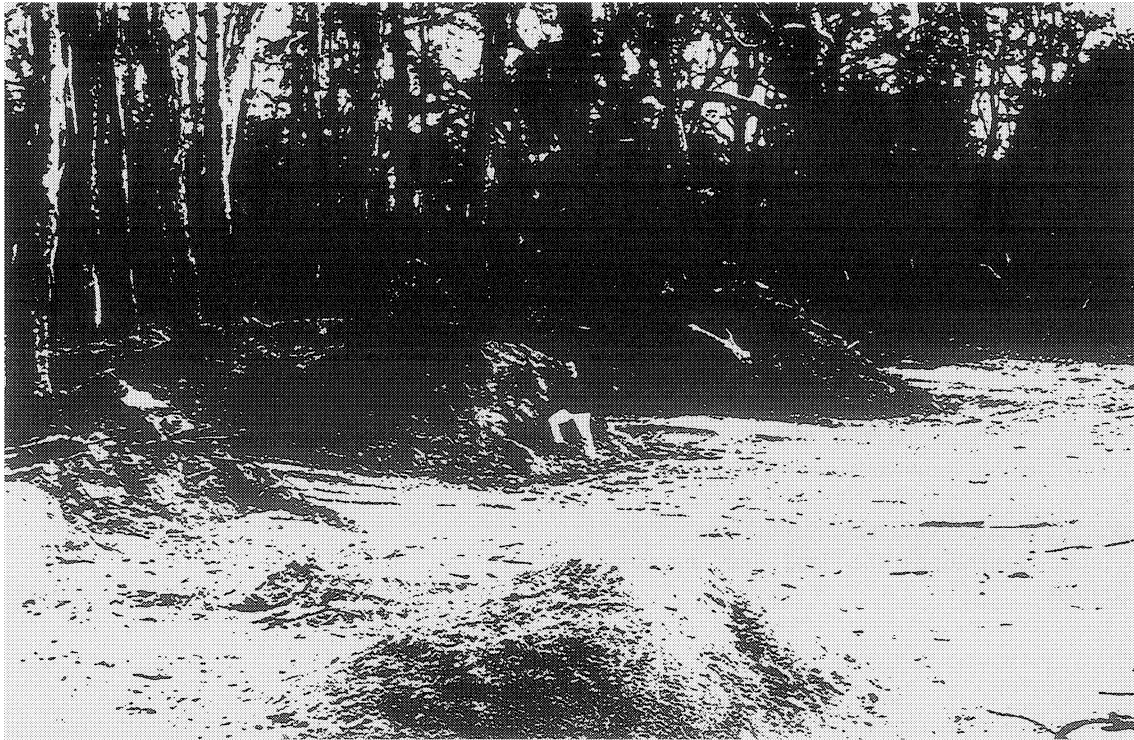


Figure 2: Illegal Clearing of Riparian Vegetation and Excavation of topsoil (Thompson River, Sale 1998)

The current increase in illegal clearing of native vegetation has resulted in Gippsland Authorities networking much more closely than in the past to address problems and best use the blanket of regulations available.

Pressure is being applied to Local Government to better use existing Planning Controls by utilizing indigenous vegetation overlays and initiating rural environmental zoning.

6. DEFENCE STRATEGIES

Educate the Minister

- Educate the Minister and Politicians that overriding decisions developed by expert groups is counter productive.
- Publicise such events, and support bureaucrats who feel they have to compromise their professional integrity because of industry pressure.

Network and communicate.

- Develop strong links with Landcare, Water Watch, recreational fishing groups, and any other green groups and individuals with similar objectives and concerns to your own.
- Network and communicate matters of concern to the wider community. Share your information within your networks and support each other's efforts.
- Don't accept what appears to be happening. Find out what is actually happening. Build a media network to help you gather information, and to communicate that information.

Investigate and Monitor.

- Address issues that are impacting detrimentally on the environment.
- Establish a field network through work, community and recreational groups.

- Liaise with Local Government and Planning Authorities to ensure that indigenous vegetation is adequately protected with appropriate zoning.

Representation on decision making groups.

- Ensure that your Association, Management Group, or Authority is represented in matters impacting on your catchment. Do not settle on a consultative role when your group should be among the decision makers.

7. CONCLUSION.

There can be no progress in environmental defence and restoration, if there is not awareness of, and action against destructive interests.

Awareness must be followed by monitoring and quantification of these interests and this must be supported by credible community owned research.

If we take care of our environment responsibly, we pass on to future generations the land our ancestors entrusted to us.

8. REFERENCES

Gibson H., Rooke Ray, and Semmens, P. Report of Panel Hearing on Applications by Amcor Plantations Pty Ltd. September 1996. 64 pages.

Harris, G., Batley, G., Webster, I., Molloy, R., Fox, D., C.S.I.R.O. Gippsland Lakes Audit. Review of Water Quality and Status of the Aquatic Ecosystems of the Gippsland Lakes. October 1998. 34 pages.

Sargeant, I., Report on the Capacity of the Land Owned by Australian Paper Plantations. September 1997. 13 Pages.