DR J.M. WOOLLARD (Alfred Cove) [3.44 pm]: I was pleased to see this bill put on the table. I have a personal interest in this bill, as members will hear in the next few minutes. I listened very carefully to the member for Nedlands, who always does her homework, although I do not necessarily agree with all her statements. I look forward to the Attorney General’s response to some of her questions when we move into consideration in detail stage.

The main area that I am interested in is corporations. I have been approached by many community groups who feel that, under the current climate, members and volunteers of those groups are being gagged by large corporations. I cannot cite their instances. This issue is very dear to me, because I received a letter, as a member of Parliament, from a corporation; namely, Alcoa World Alumina Australia. It reads -

Dear Dr Woollard

MELVILLE TIMES COMMUNITY ARTICLE

It has come to my attention that the 5 July 2005 edition of the Melville Times Community published an article entitled, “Alcoa refinery decision slammed as irresponsible.”

This article reports that you said, “Dr Edwards had ignored the fact that the liquor burner was shut down in 2002 because staff and ex-workers were experiencing chronic and acute health problems.”

The statement attributed to you is false and defamatory.

It is an uncontroversial fact that Alcoa voluntarily turned off its Kwinana liquor burner in 2002 even though extensive independent analysis of air quality had shown that workplace emissions from the facility were at least 100 times better than standards required for occupational health. The voluntary closure was decided upon because unsubstantiated and inaccurate claims about cancer impacts were causing public alarm and Alcoa places great importance on ensuring local communities have confidence in our operations.

I will refer to some newspaper articles. Concerns were raised. I have been assisting the Alumina Widows and Workers Action Group. One of its members, who is also
one of my constituents, approached me in 2002. Her husband, who had worked for
Alcoa for, I think, 20 years, had died of cancer. When he was undergoing his
treatment she met other people who had worked for Alcoa and who were
undergoing similar treatment. They compiled a list, which they made public. In the
past three years, the group has put together a register of 60 people who have worked
at Alcoa and have contracted cancer. Twenty of those people have since died. The
group has submitted petitions to the upper house asking that before Alcoa is
allowed to recommission the liquor burner, a thorough investigation is undertaken
of the effect of the liquor burner on the people who work at Alcoa.

It is interesting to look at some of the headlines in the newspapers over the past few
years. An article in The West Australian of November 2001 is headed “Probe into
Wagerup health fears”. Another article in The West Australian of November 2001
is headed “Alcoa admits health link”.

Mr A.D. McRae: Is it the truth or are you quoting from The West Australian?

Dr J.M. WOOLLARD: I am giving the member for Riverton some facts. I am not
sure why the member is jumping in to defend Alcoa. This large group of people
wanted a proper medical survey to be conducted. Twenty of these people have since
died. These people had loved ones and families who were dependent upon them.
This group was urging the government to hold off on recommissioning the liquor
burner until a proper investigation had been conducted.

I am outlining the concerns at the Alcoa refineries. An article in The West
Australian of December 2001 is headed “Experts stumped by a cocktail of
chemicals”. An article in the Sound Telegraph of December 2001 is headed
“Refinery agrees to medical tests”. An article in The West Australian of December
2001 by Michael Southwell and headed “Alcoa action sought” states -

Liberal MLA John Bradshaw has called on the State Government to force
aluminium giant Alcoa to shut pollution-producing liquor-burning plants at its
Kwinana and Wagerup refineries.

An article in The Weekend Australian of December 2001 is headed “Alcoa refinery
breaches health code, says union”. An article in the Sunday Times of December
2001 is headed “Report blames refinery for illnesses”. An article in the Sound
Telegraph of December 2001 is headed “Man takes on Alcoa” and states -

Former Alcoa Kwinana refinery foreman David Thompson has been fighting for a
disability payment to avoid losing his house after illness put him out of work in
1998.

An article in the Coastal Districts Times of December 2001 is headed “Alcoa
committed to act on health issues”. An article in The West Australian of February
2002 is headed “Legal doubt on Alcoa breaches”. An article in The West Australian
of March 2002 is headed “We will look after sick: Alcoa” and states -

Alcoa has admitted it has not done enough to help employees who claim to have
contracted serious illnesses while working at its Wagerup refinery.

Another article in The West Australian of March 2002 by Michael Southwell and
headed “Alcoa warned by consultants” states-
Environmental consultants told Alcoa four years ago that toxic and cancer-causing emissions from the liquor burner at its Wagerup alumina plant would have faced stringent regulation in the United States.

An article in The West Australian of April 2002 headed “Worker blames fumes for asthma” states that “Alcoa gave office worker a breathing mask for emissions”. It goes on to say -

A former public relations officer for Alcoa’s Wagerup alumina refinery says the company gave her a breathing mask to wear at her desk after she complained that fumes from the plant made her ill.

An article in The West Australian of May 2002 headed “Alcoa in $3m payout” states -

Nine workers who claim their health was ruined by working at Alcoa’s Wagerup alumina plant say the company has offered to pay them a total of $3 million in compensation.

An article in The Australian of May 2002 headed “Alcoa refines” states -

The real situation in a less sensational but more interesting case study of what happens when a large organisation fails to address people’s genuine concerns in a human way, rather than in the largely technical manner we mistakenly emphasised.

An article in The West Australian of May 2002 by Michael Southwell is headed “Alcoa told of health issues” and states -

A leaked internal memo shows Alcoa knew in January 1998 that emissions from its Kwinana and Wagerup alumina refineries appeared to be harming workers.

[Quorum formed.]

Dr J.M. WOOLLARD: For the sake of those members who have just come into the house, I indicate that I have been quoting the headlines of some newspaper articles. I turn now to a letter that I received from Alcoa World Alumina Australia in July 2005. The letter was in response to a statement that I had made in an article that -

Dr Edwards had ignored the fact the liquor burner was shut down in 2002 because staff and ex-workers were experiencing chronic and acute health problems.

Alcoa said in its letter to me -

The statement attributed to you is false and defamatory.

The letter goes on to say -

The voluntary closure was decided upon because unsubstantiated and inaccurate claims about cancer impacts were causing public alarm . . .

Many of these people are now very concerned that if they speak out publicly against a large corporation such as Alcoa, they will receive a similar letter stating that their comments are defamatory. We are living in an adversarial system. Many of these people are concerned that the big corporations will bring in the big guns and all they
will be left with is the legal payments.
An article in The West Australian of June 2002 headed “Worsley liquor-burner shut” states -

Worsley Alumina has shut the liquor-burning plant at its Collie refinery, admitting that emissions appear to be harming workers and affecting nearby residents.

An article in The West Australian of June 2002 headed “Alcoa cancer rate shock” states -

A study of the health of Alcoa workers has found they have significantly increased rates of some cancers.

The following article in the Sound Telegraph in July 2002 was headed “Health fears prompt contractor walk off”, and it states -

Concerns about health fears prompted hundreds of contractors to walk off Alcoa alumina refineries in Kwinana, Pinjarra and Wagerup on Friday.

Another article in the Sunday Times in July 2002 under the heading, “Impartial study call for Alcoa” states -

A leading union has called for an independent ombudsman to be appointed to deal with complaints made by Alcoa workers.

An article in The West Australian in August 2002 under the heading “Alcoa offers staff free health checks” states -

Alcoa will pay for past and present workers to have health checks after a study found a higher incidence of cancer among employees than in the general community.

The reason I am reading these articles is that while working on this issue I have met many members of this group of people who are either seriously ill or have lost their loved ones. My statement was said to be defamatory, yet all these articles are saying much the same thing. Fortunately, I was able to respond to the letter I received from the company without recourse to the legal system. However, a lot of people in the community would be very concerned if they received a similar letter from a large corporation. That is the reason that this bill is very important. In many ways it is a shame that it was not introduced some years ago.

I will read out a few more of these articles to illustrate my point. In August 2002, an article headed “K58 Death List - Workers document health fears” and written by Carmelo Amalfi and Michael Southwell reads -

Workers at the Alcoa Kwinana alumina refinery have compiled a list of colleagues who have died or become ill after working in an area known as department K58.

It listed 10 Alcoa workers. As I said, that number has since increased.
This article in the Sound Telegraph in January 2003 under the heading “Alcoa emissions falsely recorded” states -
The Department of Environmental Protection has defended its stance on industry self-monitoring, despite the admission by Alcoa that an employee had faked dust emission details.

In March 2003 an article in The West Australian under the heading “Former Alcoa worker wins illness compo” reads -

Former Alcoa worker Dave Thompson has won a four-year compensation battle in which he lost his job, house and health.

I refer to another article in The West Australian in March 2003 which is headed “Judge accuses Alcoa”. Could I ask for an extension of time, Madam Deputy Speaker?
[Leave granted for the member’s time to be extended.]

Dr J.M. WOOLLARD: The article states -

A Supreme Court judge has criticised Alcoa for misusing WA’s court system just weeks before the alumina company was due to go to trial to resolve a contractual dispute involving a workers compensation settlement.

In May 2003 there was an article headed “Widow links sinus cancer to refinery”. An article in The West Australian in June 2003 under the heading, “Tests point to high cancer risk” states -

Blood tests on six former Alcoa workers exposed to fumes from the Wagerup refinery liquor burner reveal they will probably get cancer.

In The West Australian in June 2003, an article headed “Residents air fears over Alcoa - Ministers promise to maintain services in Yarloop” states -

Too little too late was the consensus of 120 people who packed Yarloop Town Hall last night to air their concerns about the health, environmental, social and economic impacts of the emissions from Alcoa’s Wagerup refinery.

The following article headed “Probe into deaths of Alcoa workers” appeared in The West Australian in June 2003 and states -

The WA Health Department has launched a special investigation into cancer deaths and illnesses among past and present workers at the Alcoa refinery in Kwinana.

An article in the Weekend Courier in July 2003 under the heading “Alcoa Environmental licence downgraded” states -

The Department of Environment (DOE) has downgraded Alcoa World Alumina’s Kwinana Refinery’s Best Practice Environmental Licence status. The department removed the best-practice status after its investigations into Alcoa’s findings that one of its staff had altered dust-monitoring results for the residue lakes.
In August 2003 under the heading “Anger over Alcoa ruling”, an article in the press states:

The State Government’s decision to not take legal action against Alcoa over doctored results from its Kwinana refinery has outraged local residents.

Again, in August 2003, an article in The West Australian under the heading “Alcoa lobby wants new study”, states:

Workers at the Alcoa Kwinana refinery have a higher risk of lung, colon, rectum and prostate cancer than the general WA population, according to former workers and workplace health campaigners.

In the Southern Times in October 2003, an article headed “SW town seeks action on Alcoa” states:

A small south-west community is poised to launch a multimillion-dollar class action against industrial giant Alcoa.

About 40 Yarloop residents met lawyers and financiers at the town bowling club on Friday.

Another article in May 2004 in The West Australian headed “More cases included in Alcoa study” states:

Medical experts investigating cancer rates at Alcoa’s Kwinana refinery have agreed to include in the study a further 11 cases of cancer among past and present workers from the same area of the plant.

It goes on to state:

“We are going to chase this down,” the department’s executive director of population health, Michael Jackson, said after the workshop.

These are some of the articles that I put together after I received a letter from Alcoa in case the issue ended up in court. I sent Alcoa a letter stating that I had read numerous media stories in The West Australian and local community newspapers on this issue and the evidence given under oath to the various sittings of the parliamentary Standing Committee on Environmental and Public Affairs when it investigated Alcoa’s activities at its Kwinana and Wagerup refineries. I pointed out that workers from the Alcoa and Kwinana refineries publicly raised concerns about the liquor burner at the site in the years leading up to and including 2002. Alcoa decommissioned the liquor burner in 2002. I also pointed out that it is not unreasonable to conclude that Alcoa would have given consideration to the staff health concerns when it made the decision to decommission the Kwinana liquor burner.

This bill is very relevant to me in my role as a member of Parliament and I believe it is relevant to every member of Parliament. We all have constituents who bring their concerns to us. We do not necessarily run with every concern that comes into our office but when it is backed up with evidence - in this instance, I have met these
people who are seriously ill and who would like to see the government undertake a proper study before more people die.

At the moment 20 of the 60 people who have been identified have died. In the next few years that list may include the names of more people who have died and left behind their families and loved ones. As the member for Nedlands said, the minister has identified this bill as a national bill. Some modifications may be made to this legislation in Western Australia or in South Australia to do with judges and juries, but our first priority is Western Australia, and it is important to bring in legislation at a state level. From what the member for Nedlands said, if this bill is not put on the table soon in a majority of the states the federal government will introduce legislation itself. We are in this Parliament as legislators to legislate for Western Australia. If it is likely that this legislation will be taken out of the control of Western Australia and given to the federal government, we should be acting sooner rather than later. This bill will provide protection for hardworking community groups, which often have volunteers, those who work for the Wilderness Society or the Conservation Council of Western Australia, and other community environmental groups that are pursuing local issues. We should provide protection for those groups and I believe that this bill will give that protection. The process will move from an adversarial one to more of an alternative dispute resolution approach. I support this legislation, but I will seek clarification from the Attorney General about some of the clauses. Like the member for Nedlands, I also wonder why the number was set at 10 employees in corporations, but I am sure the Attorney General will respond to that.

This may not be the best legislation, but it is an improvement on what is in place at the moment. The sooner we implement this legislation, the safer many people in the community will feel about making comments, based on their knowledge and awareness, against small and large corporations.

DR G.G. JACOBS (Roe) [4.13 pm]: I support the Defamation Bill 2005. I am not a lawyer and I have found some of the complexities of this legislation difficult to understand, but I speak as a concerned individual and participating member of Parliament. I thank the member for Nedlands for providing some of the background on a complex bill for people, such as myself, who are not lawyers. I make the observation that there are some good things about this bill. The maintenance of the clause about truth and the truth alone as a defence in Western Australia is a good move.

Mr J.A. McGearty: I agree with you. To my way of thinking, that would have been a deal breaker if states such as New South Wales and Queensland had insisted on watering down “truth”, because I do not think you can defame someone if what you are saying is the truth. It is as simple as that. It is pleasing to see that now becoming nationally uniform.

The rest of the conversation turned to the topic of Defamation totally off topic as we would exspect the conversation to go. Read full storie at above link.
3-14-2001

Moving Beyond Gloomy Environmental Policy

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### Slaughter Steers, Ch. 204, 1100-1300 lb
- Omaha, cwt: $70.68 $77.92 $82.01
- Dodge City, KS, cwt: 93.07 92.58 96.89
- Nebraska Auction Wght. Avg: 96.67 95.51 99.45

### Carcass Price, Ch. 1-3, 550-700 lb
- Cent. US. Equiv. Index Value, cwt: 110.44 118.04 125.06
- Hogs, US 1-2, 220-230 lb: 40.88 45.50
- Feeder Pigs, US 1-2, 40-45 lb: 57.50 49.34
- Sioux Falls, SD, hd: 70.68
- Sioux Falls, SD, cwt: 110.44

### Feedlot and Products, Average Prices for Week Ending
- Pork Loins, Wholesale, 13-19 lb, 1/4 Trim, Cent. US, cwt: 107.60 108.60 109.70

### Slaughter Lambs, Ch. 1-3, 115-125 lb
- Sioux Falls, SD, cwt: 82.50

### FOB Midwest, cwt: 170.00 162.50 171.00

### Crops, Cash Truck Prices for Date Shown
- Wheat, No. 1, H.W.: 2.87 3.15 3.27
- Corn, No. 2, Yellow: 2.00 1.87 1.97
- Soybeans, No. 1, Yellow: 4.84 4.33 4.42
- Grain Sorghum, No. 2, Yellow: 3.45 3.54 3.66
- Oats, No. 2, Heavy: 1.32 1.27 1.30
- Sioux City, IA, bu: 1.32 1.27 1.30

* No market.

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### Moving Beyond Gloomy Environmental Policy

The wide-array of books and materials (both textbooks and supplementary reading) now available for helping students in our universities understand the arena of environmental and ecological policy economics is staggering and impressive, while at the same time disturbing. The books are impressive in their comprehensiveness and sophistication of analysis; students can be well prepared, indeed. Yet the same books are disturbing, for while some project doom (e.g., Hackett, 1998) and others seem to have an air of surrealistic cornucopia (e.g., Anderson and Leal, 1991), both lead to a rather gloomy set of environmental policy recommendations.

Now, having better tools and machinery with which to help students think about environmental policy, even though oft times giving different outcomes, is important. Some of these students, afterall, will go on to build the foundations and structure of policy in the future, and good tools are important to good construction. Also, the newest books summarize and represent the latest thinking coming out of research in the universities, so students are exposed to it, even though it is rather unsettled. There are two approaches for our attention, both leading to a kind of gloomy outlook for ever finding a suitable environmental policy. This is no more apparent than in conservation and environmental, agricultural and food system policy.

Perhaps one of the best books, due to it at least recognizing the problem, is that by Chapman (2000, p. xi), who argues the "...healthy tension between environmental economics and ecological economics..." even inviting the presidents of the respective professional associations (Association of Environmental and Resource Economists and the International Society for Ecological Economics) to contribute parts to the book. While both presidents try to assure us that all is well, we do not feel it, especially when we continually see the two approaches clashing on almost a daily basis in the legislative, administrative, judicial and...
market forums in which policy is formulated, implemented, litigated and experienced, as well as in the media that reports the goings-on. This feels more like stress, leading to anxiety and gloom, than to health.

So, we might ask: what are the main features of these two approaches, or schools of thought? What kinds of gloomy policies are the outcomes of each? Is there hope?

First, we are told in books like that of Anderson and Leal (1991) that the task is simply one of getting the prices right in a world of abundance, i.e., no biophysical limits, as depicted by Simon (1981). That is, if only we would quit distorting prices with government interventions (e.g., Conservation Reserve Program payments, subsidies tied to conservation plans), then all will be well. Resource and environmental scarcity is created by the government messing with the system that is best left to individuals in their pursuit of self-interest. As Anderson and Leal (1991, p. 3) say it, “At the heart of free market environmentalism is a system of well-specified property rights to natural resources.” So, in two words, privatize and market.

Second, we are told in books like Hackett (1998) and Daly and Cobb (1990) that the task is simply one of getting the norms right in a world of real biophysical limits. Scarcity is real, and when the private sectormesseswith the ecological system by using markets, it is threatening our very survival. Markets distort the true values that are better expressed through community and government-based organizations. It is best to leave resource and environmental economy to the pursuit of a common others-interest. As cited in Kasun (1999, p. 94), Daly and Cobb (1990, p. 376) see the problem as overpopulation and the need for a smaller number of humans to get in synch with the “community of other things” in the spirit of a kind of “deep ecology.” So, in two words, legislate and mandate.

The result is a bipolar kind of environmental policy, both paths gloomy in their implementation and results. First, under free market environmentalism and the environmental economics model, nothing is sacred to the community. Everything is for sale. We must buy and sell air, water, energy, birds, fish, natural beauty, perhaps even a beautiful sunset over the Western Plains... as though this is the only way to be free. Second, the ecological economics model leads to nothing being for sale. It is as though individual values are not to count at all, unless shared with someone else in some kind of a lock step to a common end. So, even an air pollutant market and a water market, both proven to lead to environmental improvements (i.e., cleaner air and conserved water), are not deemed viable ways. Freedom of choice is not valued. And, perhaps most significantly, these two polar extremes cannot be reconciled, so we face insurmountable conflict, tension and stress in the policy forums. Gloomy, indeed.

The third way is hardly ever considered. This third way recognizes that we humans are really far more complex entities who are motivated jointly by the self-interest and the others-interest in a kind of symbiotic balancing act. We hug trees and we cut the same tree down. We provide habitat for wildlife and then go hunt to keep populations in control. We look out for ourselves at the same time we look out for families, friends, neighbors, busines-partners and traders, community and society, and, yes, even other living things beyond the human community. We know, then, that neither the environmental economics nor the ecological economics model has gotten it right. We can see beyond their gloom. It has become clear that we need a new kind of metaeconomic (“meta”meaning “going beyond” and “transcending”) model for environmental policy.

Fortunately, the new idea of “cap and trade” is headed in this direction. The idea is that a community of individuals, meaning individuals who share a commonly evolved set of values, would set the “cap”, e.g., how much irrigation water is to be made available on the market, and then help individuals “trade.” The market will be used to allocate and reallocate the water. As another example, we, the community of people, set carbon emission limits in consort with our fossil fuel burning electric utility plants, which then creates the potential that a carbon storage commodity (i.e., carbon stored in agricultural land) could be bought and sold on a market. Such “cap and trade” approaches to policy move us beyond that arising from both the books and the environmental policy circles of our day. It sees the reality that we are both self and others-interested, which helps us see the light by moving beyond the gloom of it all.


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Moving beyond evidence-free environmental policy

Jeremy Russell-Smith1,2, David Lindenmayer2,3, Ida Kubiszewski4, Peter Green2,5, Robert Costanza4, and Andrew Campbell1

Despite universal recognition that environmental policy should be informed by robust scientific evidence, this is frequently (and perhaps increasingly) not the case, even in wealthy countries such as Australia. How can the scientific community respond to this fundamental problem? While acknowledging that many constructive actions can be taken, and that scientists have a direct responsibility to inform the policy-making process and advocate for sound policy positions, we contend that such responses are insufficient unless the wider community is better informed and engaged. We agree with those who believe that a broader democratization of the policy-making process is essential to improving this situation, and that an expanded application of scenario planning, augmented with targeted public-opinion surveys, has considerable potential. Used in this way, scenario planning can help scientists engage with and inform citizens about the kind of world they want to live in, while incorporating the best science about possible futures.

It seems obvious that the development and implementation of environmental policy should be based on the best available scientific evidence. However, such evidence is often highly uncertain and inherently contestable. Balancing diverse scientific information input poses serious challenges to policy makers even where broad scientific consensus has been reached, for example where multilateral governance agreements address complex issues such as global climate change (UNFCCC 1998) or sustainable harvesting of marine resources (Neubauer et al. 2013). The nature of evidence itself is often contested, especially in situations where policy debates involve different or competing value systems (Oreskes 2004; Pielke 2007; Adams and Sandbrook 2013). How scientists should properly and effectively engage with such debates – for instance, to either independently advise policy makers or publicly advocate for certain policies and political outcomes – are matters addressed in the literature of many disciplines (eg biodiversity conservation, health, and international development).

In a nutshell:

* There is a growing tendency for policy makers to dismiss or ignore scientific advice when making environmental decisions – how should the scientific community respond to this challenge?
* While there are many constructive actions that could be taken, we suggest that in democratic societies the wider community needs to be better informed and empowered if decision-making on difficult environmental issues is to improved
* Here, we focus on engaging the broader community in expanded scenario planning exercises, including testing community preferences in targeted public surveys
* This approach is being tested at date but offers considerable promise for informing the environmental policy development process

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We would argue that the typical science advocacy responses are necessary but insufficient unless the broader community is better informed and engaged. We describe two examples of recurring Australian development myths, and consider how to inform and empower communities to influence participatory, evidence-based decision-making processes – illustrated here with reference to application of expanded scenario-planning tools augmented with public-opinion surveys.

**Australian environmental policy that ignores scientific evidence**

Australia is well-positioned to tackle environmental problems effectively. It enjoys a rich environmental science expertise (Harrison 2006), mature institutional capability, high relative wealth and corruption-free governance, and a public sector with the capacity and willingness to incorporate scientific input into evidence-based policy formulation (Australian Government 2012). Yet denial of scientific evidence is abundantly apparent in Australia, exemplified here by two contemporary examples (Figure 1) with far-reaching development implications.

**Northern development**

Both the conservative and progressive sides of Australian politics have developed policies that pledge to “develop the north”, and specifically to develop “the northern food bowl”, a recurring aspiration since the early days of European settlement in the 1800s. There is a political perception that because the savanna landscapes of northern Australia are extensive (~2 million km²) and sparsely populated (0.3 persons km⁻²), and contain seasonally plentiful water near the coast, the region is ripe for development (Australian Government 2015). Such claims are usually accompanied by points about the burgeoning demand for protein from the growing middle class of Asian countries, and suggestions that agricultural production in the established food-growing regions of southeastern Australia is constrained by water scarcity, a limitation that is being amplified by climate change.

However, there is ample scientific evidence to suggest that the potential for agricultural development in northern Australia is severely limited. Evaporation generally exceeds annual rainfall, and the flat topography prevents...
water storage. As much as 90% of the northern savannas are used ostensibly for beef cattle pastoralism – largely under extensive (as opposed to intensive, irrigated, or grain-fed) production systems (Figure 2a). Industry reports show that most northern pastoral enterprises are neither economically viable nor sustainable (McLean et al. 2014) due to low-fertility soils, seasonal access restrictions, limited infrastructure, high labor and input costs, and distant and volatile markets. Mining and energy extraction industries are major contributors to the regional economy, but are limited to restricted onshore and offshore development sites, and exhibit "boom-bust" cycles driven by volatile global commodity markets and fluctuating prices.

Aspirations for a "northern food bowl" and associated agricultural development were first comprehensively debunked by Bruce Davidson (1965) in his critical economic analysis, The northern myth. More recently, authoritative assessments have reinforced the view that the potential for large-scale irrigable agriculture is very limited (Figure 2b). The Northern Australia Land and Water Taskforce (NALWT 2009) estimated that the potential for growth in irrigable land is only two or three times the area currently under production – with a maximum of 40,000 ha. There is also some relatively small potential for "mosaic irrigation", based on localized groundwater resources (Petheram et al. 2013a, 2013b). In comparison, the total agricultural area irrigated in Australia's Murray–Darling Basin in 2010–2011 was 1.2 million ha (Australian Bureau of Statistics 2013). Furthermore, large irrigation projects in the north would require enormous, non-redeemable public expenditure on infrastructure, and might be more viable if used for non-food crops that do not require refrigeration, such as cotton, sugarcane, and sandalwood (NALWT 2009; Petheram et al. 2013a, 2013b).

Such development options have little support among many of the Indigenous (Aboriginal) residents who comprise the majority of the non-urban, regional population and who own much of the land under either freehold title or non-exclusive title arrangements, yet are mostly impoverished. Although some Indigenous savanna residents, particularly those with educational and training qualifications, may take up mainstream employment opportunities (eg in the mining, tourism, health, education, defense, and pastoral sectors), many others, particularly in remote communities, fulfill other priorities, including cultural responsibilities for "looking after [the] country" (Altman and Kerins 2012).

The northern savannas are highly fire-prone, providing options for both rural Indigenous residents and pastoralists to develop diversified "carbon farming" enterprises, especially through improved fire management activities (Figure 2c; Russell-Smith et al. 2013; Walsh et al. 2014). However, given the apparent fixation of Australian governments on pursuing limited visions of northern agricultural development, opportunities for north Australia's rural residents to engage in decision-
making processes that might deliver more culturally and environmentally appropriate forms of development are limited and dwindling.

**Alpine and mountain ash forest logging in Victoria**

The tall eucalypt mountain ash (Eucalyptus regnans) and alpine ash (Eucalyptus delegatensis) forests of Victoria are some of the world’s most spectacular forests, with old-growth stands containing some of the tallest flowering plants on Earth. These ecosystems provide much of the water for the city of Melbourne (Viggers et al. 2013), are some of the most carbon-dense forests worldwide (Keith et al. 2009), and support habitat for endangered species such as Leadbeater’s possum (Gymnobelideus leadbeateri; Figure 3; Lindenmayer et al. 2013).

These mountain ash and alpine ash forests are among the most extensively studied ecosystems, both in Australia and globally (Lindenmayer 2009). However, the scientific knowledge accumulated through these studies is not reflected in regional forest management policies, particularly those concerning biodiversity conservation and fire policy and management.

For instance, it has been well established for more than 20 years that widespread clearcut logging operations in mountain ash forests substantially degrade the suitability of forest habitats for Leadbeater’s possum and up to 40 other species of vertebrates that are dependent on large, old, cavity-bearing trees (Figure 4; Lindenmayer 1994). Moreover, since the 2009 wildfires – which destroyed ~43% of habitat for Leadbeater’s possum – controls on logging have been loosened rather than strengthened (Lindenmayer and Possingham 2013). Government policies purportedly attempting to conserve the possum have failed to incorporate recommendations for improved management based on three decades of science (Lindenmayer et al. 2014), and are likely to have negative impacts on the species.

A further example relates to relationships between logging and wildfire. The mountain ash and alpine ash forests in Victoria are subject to rare but catastrophic high-severity fires, the intensity of which is strongly linked to weather. Recent analyses indicate that fire severity is also related to logging history and is greatly elevated in stands of forest 7–40 years after logging (Taylor et al. 2014). This means that the ~47100 ha of forest that has been clearcut and regenerated in the past four decades is at risk from high-severity fire. Moreover, a further 17655 ha of forest is scheduled to be clearcut in the coming 5 years under the Victorian Government’s Timber Release Plan (Government of Victoria 2011). Large areas of fire-prone young forest are close to towns and settlements, which are therefore at risk from high-severity wildfire. Yet, to date, there has been no attempt by the Government of Victoria to mitigate fire risks in regional towns by curtailing clearcutting in nearby forested areas.

Finally, despite the large areas of mountain ash and alpine ash forest logged in the past four decades and the extensive areas of forest burned in the 2009 fires (Burns et al. 2014), the Government of Victoria has made only limited attempts to reduce the amount of harvesting pressure on the forest estate. This means that the rate of cutting of the smaller remaining areas of unburned “green” forest has actually increased. It is not possible to claim that these problems are unknown or poorly understood. The status of mountain ash forests following the 2009 wildfires is well documented, as is the biology and ecology of the organisms of conservation concern inhabiting these forests. Stands of trees old enough to be sawlogs (felled tree trunks, suitable for timber) may well be exhausted within the coming 10–15 years, leading to the possible removal of the sawlog industry from the Central Highlands region. Despite this, the policy position of the Victorian Government is set to “lock in” 20-year guaranteed wood supplies from public forests to the forest industry (Victorian Department of Primary Industries 2011), even though there may be insufficient timber resources to do this.

The likely result of “locking in” pulpwood and timber supplies will be to ensure the extinction of iconic species such as Leadbeater’s possum, as well as the sawlog sector of the forest industry, and compromise other “new century industries” such as managing native forests for carbon stores (Keith et al. 2014) and for the provision of other ecosystem services such as water supply and recreation. Thus, policy and management do not match either the conservation scien
Figure 4. The various stages of clearcutting in montane ash forests: (a) sellable trees are cut, leaving dead stems and debris; (b) debris is burned in a high-intensity regeneration fire; (c) the burned site is then artificially regenerated with the new crop of trees.

ence or the resource (ie ecosystem services, including wood supply) science. The wider community needs to be both better informed about development options and more empowered to contribute to the decision-making process.

How can scientists contribute to improved environmental decision making?

Clearly, scientists can and should continue to build the weight of evidence on issues through their core activity of undertaking rigorous, high-quality research, and publishing in peer-reviewed academic journals. Researchers should also continue to make scientific evidence and its interpretation more accessible to all stakeholders, scientists and non-scientists alike. This already happens in many different ways, but considerable progress could still be made on two fronts. First, the assembly of policy-neutral, systematic reviews of evidence should be expanded, perhaps along similar lines to those of the Cochrane Collaboration in the healthcare sector (see Bilotta et al. 2014). Reviews such as these are already being made publicly available through organizations like the Collaboration for Environmental Evidence (www.environmentalevidence.org), the US’s Union of Concerned Scientists (www.ucsusa.org), and the European Network of Scientists for Social and Environmental Responsibility (www.essr.org). Second, there are growing calls for scientists to collaborate with knowledge brokers to transform scientific narratives into community dialogues as a way of effectively communicating knowledge and influencing public policy (Maiz et al. 2012). Citizen-science initiatives potentially expand the participation base and the audience for such community dialogues.

These and other, similar ideas are not novel, but they have yet to be systematically applied to the process of assembling and assessing scientific evidence for complex public-policy challenges. We recognize that scientific advice is just one kind of input to policy formulation (Head 2008), and can be trumped by ideology and vested interests (WebTable 1). Other approaches are needed that permit, encourage, and sustain broader, informed community engagement and consensus building.

Enhanced scenario planning with public-opinion surveys as part of the solution

Solving complex problems requires an adequate understanding of both how the system in question works and a vision of shared goals for the system among stakeholders (Costanza 2001). The lack of a shared vision and goals is one important reason why scientific evidence may be ignored in management and policy. Goals such as promoting the “northern food bowl”, or continuing past harvesting practices in Victoria while maintaining minimal environmental and social impacts, are not consistent with possibilities for the region or the ideas of other important stakeholders. Such policies are inherently unsustainable and, more importantly, ignore or discount competing views for alternative futures for these distinctive regions and do not adequately engage the public in the process of goal creation.

We argue that a broadly shared vision about the world we want to live in, informed by the best available science, provides a better platform for sound policy development. In essence, this is what democratic governance should do.
Unfortunately, current versions of democracy give too much weight to powerful special-interest groups (Gillen and Page 2014) whose visions and goals are not consistent with those of the broader public, including the scientific community. One of the consequences of the anti-climate science movement – particularly in the English-speaking world – is to paint science as just another interest group, with a vested interest in exaggerating problems to increase research budgets.

Scenario planning (Ringland and Schwartz 1998; Peterson et al. 2003) is one tool that can help to build a shared vision. Scenario planning differs from forecasts, projections, and predictions in that it explores plausible rather than probable futures (Peterson et al. 2003). Although aspects of the depicted futures may come to exist, these futures are best viewed as caricatures of reality, which we can use to learn from and to build consensus.

Scenario planning is based on four assumptions: that (1) the future is unlike the past, and is extensively shaped by human choice and action; (2) the future cannot be foreseen, but exploring possible futures can inform present decisions; (3) there are many possible futures, and so scenarios lie within a “possibility space”; and (4) scenario development involves both rational analysis and creative thinking (TFP 2003).

Scenarios are best suited to exploring situations of high uncertainty and low controllability (Peterson et al. 2003). For example, climate change and global governance are largely beyond the control of a particular region. In these situations, scenarios can help to illuminate the consequences of these uncontrollable forces and to formulate robust local responses. Importantly, scenarios can help to reveal policy and value changes that may be required, and identify critical decision points where such changes can most strongly affect outcomes (Gallopín 2002).

How could scenario planning be applied to northern development and the clearing of ash forests in Victoria in ways that will help to build a shared vision that engages the public? Scenario planning itself is certainly not new, but using scenarios as the basis for broad public-opinion surveys and discussion has not been done before. As in most scenario-planning exercises, representatives of major stakeholder groups should collaborate to envision plausible futures for these areas. The resulting scenarios would cover the full range of options, from business-as-usual development to more sustainable approaches. In all cases, the scenarios must be “plausible”, meaning that they should take scientific evidence into account and combine rational analysis and creative thinking.

Scenario planning, even in contentious situations, can bring stakeholders together to consider options for the whole system (Kahane 2004). It allows participants to step out of their special-interest mode and begin to develop shared ideas. Scenario planning is now embedded in the strategic thinking of some of the world’s most influential institutions, including the World Bank and United Nations Environment Programme. This approach was also used in the Millennium Ecosystem Assessment to chart possible trajectories for the global community, based on the rate and extent of ecological change and interactions with management policies (MA 2005). Scenario planning need not be static; scenarios can be revisited and reworked as part of a long-term formal process; for example, the iterative application of scenario planning to guide water management in the Netherlands since the 1950s (Haasnoot and Middelkoop 2012).

Once a range of scenarios is created, a consensus often emerges among participants as to which options are most desirable, given underlying uncertainties about the future. For example, a scenario-planning process in South Africa involving all political parties developed four scenarios for the country’s transition out of apartheid (Kahane 2004). The “flight of the flamingos” scenario, which imagines both black and white South Africans rising up together, emerged as the clear consensus and led to the Truth and Reconciliation Committee and other strategies that allowed a relatively peaceful and cooperative transition in a situation that might have otherwise become even more violent and repressive. The development of an evidence-based understanding of how the world works, combined with a shared vision of how people want it to work, are powerful tools to address even the most complex and recalcitrant of problems.

Another example of a strategic scenario-planning exercise focused on the future of the food system and was undertaken by Chatham House (2008), an independent policy institute. This policy research project explored the effects of global trends on the networks that supply wheat and dairy products to the UK market. The exercise drew from a core panel of stakeholders representing a wide cross-section of different sectors within the food system, informed by researchers from many institutions across the UK. It identified critical variables associated with oil prices, food stocks, and prevailing economic conditions, and developed four very different but internally coherent scenarios for the evolution of the British food supply system. The highly participatory nature of the exercise – from the cabinet strategy office to industry leaders and representatives of leading NGOs and consumer organizations – meant that the research was informing public and private policy development well before it was finally published. Policy development on this complex, long-term issue was seen to be necessary a shared enterprise between government, industry, and civil society.

However, to move beyond the environmental policymaking problems discussed above requires that scenarios developed by “expert” stakeholder representatives be shared and used in a much broader context, to meaningfully engage the public in the debate.
Building on scenario planning to identify preferred futures

To take the process of empowerment to its logical conclusion, we contend that scenarios should be used as the basis for broad public-opinion surveys (Costanza 2000; Costanza et al. 2015). Although such sampling of public opinion around future scenarios — as far as we are aware — has been limited, an instructive example is provided by the designers of an online scenario game for exploring futures in New Zealand (LRSWG 2007). Several hundred game participants provided feedback on the scenario situation they considered New Zealand to be in now, where they would like the country to be in 50 years, and where they thought the country was actually heading. While most respondents sought a future characterized by greater environmental sustainability and social cohesion, they perceived the country to be heading in the opposite direction.

The inexorable spread of the internet and rising familiarity with online survey instruments and engagement tools have created a basis for developing new approaches to informing, engaging, and consulting the community in developing more sustainable approaches to environmental management and making difficult resource-allocation decisions. Such approaches could combine strategic scenario-planning exercises with online sharing of data and analyses. Subsequent well-targeted surveys would inform citizens about complex and contested issues, and improve the chances of policy decisions being based on sound scientific evidence.

Conclusion

We have attempted to identify useful approaches for scientists to engage with the policy development process, particularly in instances where compelling evidence continues to be ignored due to differing ideologies or vested interests. While science advocacy is both useful and necessary (Kassen 2011), we concur with arguments advanced by Pielke (2007) and Adams and Sandbrook (2013) that the "honest broker" role of scientists in complex political debates (even where the science may seem straightforward) should be to inform, guide, and expand the options available to policy makers, rather than to advocate for specific, prescriptive solutions. Given inherent long-term potential for scientists to be perceived as yet another interest group in support of certain lines of evidence (and research funding), we advocate for a broader democratization of the policy-making process. To do this requires much more active public engagement in the process of coming to consensus about the future we all want and overcoming special-interest biases. Scenario-planning exercises augmented with well-constructed and targeted public-opinion surveys of those scenarios have considerable, but untapped, potential for helping us to make more prudent decisions about our collective future.

This approach can incorporate the best scientific evidence in a way the public can understand and could help to build the shared vision necessary to truly serve the public interest.

References


The Hon. Colin Barnett MLA
Premier; Minister for State Development
1 Parliament Place
WEST PERTH WA 6005

31st May 2016

Dear Premier

A FUTURE FOR YARLOOP 2030: VISION AND BACKGROUND

Thank you for receiving this proposal about a sustainable and exciting way forward for the town of Yarloop after the devastating bushfires in January. Your presence and support to the Yarloop community at the time was greatly appreciated.

The document contains an executive summary of the proposal and an initial outline of the new town strategy. It also provides further details of the background events, which set the context and the main argument for why the town needs to be re-built on a different location.

We would be open to a conversation with you at your earliest convenience and thank you for your time in looking at and considering this proposal.

Yours sincerely,

Vince Puccio  Merv McDonald, AFSM
Co-Chairs: Community Alliance for Positive Solutions Inc.

Proudly supported by:

Cc: Hon. Donna Faragher MLC, Western Australian Planning Commission
A FUTURE FOR YARLOOP 2030: VISION AND BACKGROUND

Executive Summary

On 7 January 2016 a bushfire, which had started several days previous and considerable distance from the town, raged through Yarloop. There were two fatalities and extensive loss of property including 180 homes, the historic steam workshops, workers' cottages, churches, shops, fire station, town hall, hospital and much of the school; approximately 80 houses now remain in the town. Recovery and restoration were delayed due to asbestos contamination in the town and the fact that displaced residents, many of them tenants, had dispersed.

The remaining residents of Yarloop and the owners of properties which have been destroyed now live in limbo, as a question mark was put over the future of the town in early media statements by government officials. Further, recent interviews by the government of Yarloop residents sought their views on the future for Yarloop, yet while well intentioned, it must be understood it was a very onerous position to place residents in at a time their circumstances were uncertain.

The context and history of Yarloop in recent years has been strongly shaped by impacts from the neighbouring industrial complex (see Background section later in proposal). This seems to be causing a lack of commitment to re-building the town. Alcoa World Alumina, Wagerup is a key stakeholder in the area and has profoundly influenced the demographics and property ownership mix in Yarloop, which in the main have not benefited Yarloop. It is apparent that Alcoa is not intending to respond in a compassionate and philanthropic manner with the announcement that they will not re-build the houses they own. In fact, the fire has unwittingly solved what the company has long regarded an incompatibility of land use. This is a tremendous loss of households and social capital to the town going forward. The value of the now vacant land and remaining houses, already affected by the reputation of Yarloop as unsafe and unhealthy due to Alcoa's operations and impacts, would decline further under threats ofthe establishment of a de facto refinery buffer and from the future expansion of the Wagerup facility.

However, this fire that all but destroyed the historic town of Yarloop, has provided a once in a lifetime opportunity. A most unwelcome circumstance of significant and multi-layered loss needs a significant and courageous vision so the losses do not continue into the future. The opportunity is to design and build a new town with the current locality of Yarloop also being recovered for those residents who wish to re-build their properties. A proposal for a new
town, West Yarloop, is outlined and the many benefits for all stakeholder groups are noted. Further, the January disaster has highlighted—in addition to the public health threat the refinery poses—another vulnerability Yarloop faces, namely its exposure to bushfires in the context of a drying climate. This in itself begs the question whether a rebuilt of the town in its current location is prudent and offers an opportunity to engage in discussions about the future of Yarloop without needing to focus on the acrimonious industry-community relations concerning the Wagerup refinery. In fact, it offers a fresh start.

**West Yarloop: A vision for the future of a community**

**Key Principles**

The CAPS vision for the Yarloop community is summarised by these four principles:

- People moved out of harm’s way
- A formal 10km buffer zone established around the Wagerup alumina refinery
- A new town (West Yarloop) built on a site 20 kms from the existing town on a (now burnt out) pine plantation on crown land.
- Landowners’ equity protected for the life of the refinery regardless of when and if they decide to relocate from Yarloop to West Yarloop or another town.

The vision outlined here involves the state government allocating an area of crown land for the development of a new town on Forrest Highway, bounded north and south by Johnston and Riverdale Roads respectively, roughly mid-way between the coastal communities of Preston Beach and Myalup. The state government makes a commitment to build the necessary infrastructure for a town of 1000-2000 people, possibly established as a demonstration of sustainable living in terms of power, water, urban design, housing design, transport and localised food production. The state government recoups its investment from Alcoa and enters into an arrangement with Doral and Iluka for the royalties and other payments from these companies undertaking mineral sands mining on what is currently the Yarloop Townsite. Restoration of memorials and historic sites within the town could be delayed until rehabilitation of the townsites is underway.

The construction of a new town, West Yarloop will initially provide those in the community of Yarloop, who wish to do so, the opportunity to start anew on a like-for-like basis without cost, by exchanging their land in Yarloop, with the same area in West Yarloop.

**Key stakeholders**

The key stakeholders for the implementation of this vision would be:

- landowners and residents of Yarloop;
- local, state and federal governments;
- Alcoa World Alumina;
- landowners and residents of communities neighbouring Yarloop and the proposed West Yarloop; and
• mineral sands mining companies which have expressed an interest in mining the Yarloop townsit.

Requirements

There is no doubt this is a bold vision, which would require at the very least:

• buy-in from all relevant stakeholder groups;
• genuineness and goodwill on the part of all stakeholders;
• multi-party political support;
• expert legal and financial knowledge to create a framework (and possible legislative changes) in relation to:
  o land-swaps,
  o compensation,
  o mining royalties,
  o government infrastructure grants (such as Royalties for Regions),
  o management of pending class actions, and
  o accountability frameworks for environmental monitoring and site rehabilitation of the Wagerup refinery taking account of air quality, surface and groundwater quality and biodiversity.
• skilled leadership and facilitation of stakeholder groups to keep them at the table; and
• a proactive, justice-oriented approach to the current situation facing the people of Yarloop.

The vision: Outcomes for Yarloop residents

Specifically, the following outcomes could be achieved for Yarloop residents:

• Those who lost their homes to the fire could use their insurance payment to rebuild in the new town on land to which they have been granted freehold title, in exchange for their previous holdings, which now form part of the required Alcoa buffer zone.

• Those who still have homes in Yarloop would be compensated by the government and/or Alcoa based on the current Area A arrangement of unaffected value + 35% + moving costs. This would enable people to purchase away from Yarloop, or to purchase freehold land and build in West Yarloop.

• Different compensation and relocation packages would be required for farms and businesses. The offers should be made to include whole properties, which are currently part in and part out of the buffer and those close to the buffer boundary which are adversely affected; a common sense attitude needs to ensure no one is disadvantaged by any technicality.

• The option to move would be left open for some time to give all those who are wary or unsure, time to decide when and if they want to leave Yarloop and their preferred relocation destination. This would apply to property owners within the to-be-created formal Alcoa buffer zone. As is currently the case, those who wish to remain should be able to do so; if and when they wish to leave they would have the same exit strategy/options open to them as they do now, i.e. for the life of the refinery.
As the Alcoa operation expands, this new town will provide a place for others who may become affected by the refinery in the future, have somewhere to move to.

The benefits: Jobs and wealth creation

- West Yarloop, can become a showcase of enterprise and innovation in sustainable living, using the latest technology in renewable energy, water conservation, construction techniques and information technology such as the NBN. The state government and Alcoa can claim credit and acclaim for turning a disaster into something positive.

- A number of blocks in the new development can be allocated for public housing and others sold to incoming private buyers, generating income for the state government.

- Mining the large deposits of Ilmenite and Rare Earth Metals would create jobs for residents of West Yarloop and neighbouring towns. Once mined, areas outside the rebuilt historic conservation zone could be revegetated to improve Alcoa's buffer zone and to attract carbon credits in the emerging new economy.

- Parts of the depopulated area outside the Yarloop buffer zone, and land around West Yarloop, could be developed for food production, replacing the Food Bowl lost in recent years, creating more jobs on the land and keeping young people in the region.

- The initial construction of West Yarloop will provide jobs in construction trades and as the town grows, ongoing service jobs for the community.

- West Yarloop could be planned as a major service and retail centre for the neighbouring coastal communities of Myalup and Preston Beach which face social and economic sustainability issues in the longer term. A school, childcare facilities and aged care facilities, hospital/emergency centre, 24/7 police station could be opened to also service these coastal communities. Creating West Yarloop with these goals in mind would generate investment, job creation and therefore job opportunities for young people, tree-changers and older people who would be encouraged to settle in the town.

- A Regional Visitor Centre would direct people travelling the Forrest Highway to the wide range of tourist attractions in the region such as Logue Brook Dam as well as to the historic tourist precinct of Old Yarloop when it is rebuilt.

- The construction of a multi-purpose events arena would enable the town to continue hosting events such as it has in the past, from regular farmer's markets to the Yarloop Classic British America Swap Meet & Show & Shine Motorcycles held in the town in 2013. These events would boost tourism, attract new expenditure and build social capital in the region.

- Located half way between Mandurah and Bunbury, the construction of a Regional Heath and Emergency Services Hub would be a logical project, as would a 24hr services area on both sides of the Forrest Highway, providing a range of job opportunities for young people in particular.
• Future projects could include an extension of the rail line parallel to the Forrest Highway from Perth via Mandurah to Bunbury and beyond to provide a new route for and expansion of The Australind train service and create related tourism and commuter residential opportunities for the South West. West Yarloop could become a location for a stop and terminus for buses to link Waroona and Harvey with the trains. Transport planning could include a new North-South freight service route on the line to ease road congestion. The current inland line (which passes through Old Yarloop) will become further congested with increased rail movements to and from the Bunbury Port by Alcoa increasing its production, other mining companies coming on line, and the need to service the proposed mineral sands / rare earth mining operations in Yarloop.

Why a New Town is Needed

The next section of the proposal explains why the vision of a new town and addressing the recovery of Yarloop for residents who wish to continue living in the old town is so crucial. The historical account provided below shows a long and troubled relationship between the surrounding towns and the Alcoa Wagerup refinery. Much of the lack of confidence in rebuilding of Yarloop arises from pre-existing issues and ongoing uncertainty around people’s health and safety and property values which have resulted from the impacts of Alcoa’s operations and poor public relations.

CAPS and others have long raised concerns that emissions from the refinery have contributed to the onset of health issues for residents in the community. In many cases, these health issues are of significant concern, and the increasing list of illnesses and cancers occurring in the community highlights the need for action to be considered sooner rather than later. In addition, CAPS maintains its view, that given the long latency periods for the long-term effects of health issues, the magnitude of the impact to the community will be enormous in the longer term.

Given the potential for legal liability exposure in the event of proven links between health impacts and emissions, CAPS considers it would be prudent for all stakeholders to find a near term solution to this problem. In addition, the aforementioned increase of vulnerability to wild fires not only compounds the situation locally but also offers an opportunity to change the nature of the debate about getting people out of harm’s way. While a new town was needed before the fire and is even more urgent now, and the socially just and economically sound course of action is required.

Background

The town of Yarloop, located within the Shire of Harvey in WA, immediately adjacent to the South Western Highway, was developed primarily as a mill town during the mid-1900s. However, the Aboriginal and European history of the region predates the town by several thousand years and several decades respectively. The Aboriginal history is recognised in the naming of Yarloop (Yalup or Yalloup) and the neighbouring area of Wagerup (Waigerup or Waigeerup).

In 1984, the National Trust declared large sections of Yarloop a conservation area, in recognition of the high conservation value of the town centre which included restored timber workers’ cottages and steam workshops comprising original restored buildings, working
steam locomotives, information displays and a heritage trail. There is a Yarloop Conservation Plan (1998) for the precinct, administered by the Heritage Council of WA.

Around the time the conservation value of Yarloop was being formally acknowledged, the Wagerup Alumina Refinery, owned and operated by Alcoa World Alumina Australia, began mining and processing bauxite ore from the jarrah forests in the region. The refinery, established four kilometres north of Yarloop in the neighbouring Shire of Waroona, did not have an easy beginning. Protests against mining in the jarrah forests and the construction and operation of the refinery had started in the mid-1970s, coordinated by the Campaign to Save Native Forests and the South West Forests Defence Foundation, and supported by local, state and national environmental protection groups. Local people had supported these campaigns by painting protest murals on farm buildings.

In the mid-1990s, some residents in Yarloop and surrounding communities began reporting a range of health problems attributed to pollution emanating from the refinery, specifically nausea, headaches, burning eyes, throat and skin, prolonged nosebleeds and multiple chemical sensitivities. These complaints coincided with the installation of a so-called liquor burner at the Wagerup refinery; there was a view that the burner had been poorly planned, and plumes from the burner were being deposited on Yarloop as a result of the height of the burner and the direction of prevailing winds. Alcoa long denied the existence of any problems but eventually responded to community complaints by developing a land management strategy. This plan effectively divided the town into designated land management areas (Areas A, B and another one designated under the Supplementary Property Purchase Programme, SPPP) with differential arrangements made by Alcoa to purchase properties to form a noise abatement zone. Specifically, the Wagerup Land Management Plan (LMP) identified:

- Area A: the noise attenuation zone which is a contour recognising the noise coming from the refinery (but not pollution); Alcoa owns approximately 90% of Area A. Under the LMP, houses were bought by Alcoa at unaffected Market Value based on the Waroona Harvey Index + 35% + $7000 relocation costs.
- Area B: the townsit, where Alcoa used the Harvey-Waroona index to fix on a price, purchase houses and then on-sell them, reducing the housing price by 10-15% to attract buyers. Properties were devalued further as time went on.
- An area outside of the town site (Area B) which was covered by the Supplement Property Purchase Plan (SPPP); this pays replacement/like for like value for the property.

The Wagerup (Alcoa) Land Management Plan created a range of unintended consequences, specifically:

- social problems in the town through a rapid influx of people seeking cheap housing
- division and fragmentation amongst residents based on where they owned property and who was benefiting and who was losing from the LMP;

1 The Harvey-Waroona Index was created because it was impossible to identify a valuation of the properties in Yarloop as so few had changed hands over the preceding decades. Yarloop has been a town of inter-generational residents, many European immigrants and their descendants. Prices in the neighbouring towns of Harvey and Waroona were used to determine valuations for Yarloop using the H-W Index.
• perceptions of disloyalty to Alcoa, which still employed a few people from the town;
• concern that any criticism of Alcoa or complaints about health damaged the town’s reputation and property values even further.

Alcoa responded to these community concerns in 2002 by funding a research project which would ‘enable dialogue between the company and the community’ on issues emanating from the land management strategy (Brueckner & Ross, 2010, p. 12). Over a two-year period, there were many meetings between local residents and Alcoa to address the community’s concerns and to arrive at solutions to the problems for the whole community, not just individuals. Many people joined community groups such as the local Yarloop Progress Group, Yarloop Districts and Concerned Residents Committee (YDCRC), Wagerup Community Health Awareness Group (WCHAG) and the Community Alliance for Positive Solutions (CAPS). CAPS members never campaigned for the closure of the refinery, but instead their goal was to keep Alcoa at the table long enough for some positive solutions to be developed and agreed upon (e.g. relocating the town; Alcoa creating a formal buffer zone; equity for people needing or wanting to sell properties). Key issues in the conflict between the company (Alcoa) and the residents were the numerous issues of public health, loss of amenity (as shops and services closed), the social impact of division and tension in the town and the impact of the land management strategy itself. These concerns featured prominently during the inquiry by the Standing Committee on Environment and Public Affairs (2004), which concluded that “Alcoa failed to adequately recognise and respond to the complaints it received from … the local community” (p. 370) and to offer a comprehensive response to the range of serious and complex issues developing at the Wagerup refinery, which resulted in a breakdown of trust between the company and the local community.

Around the time of funding the 2002 study, Alcoa applied for permission from the Western Australian state government to expand the output of the refinery from 2.35 million tonnes per year to 4.7 million tonnes per year. The required Environmental Review and Management Programme (ERMP) for the expansion proposal was conducted by the WA Environmental Protection Agency (WA EPA) in 2005. The EPA took submissions from the WA Department of Health which contained criticisms of Alcoa’s plan to expand the mine, including that of members of the Wagerup Medical Practitioners’ Forum (2005) who concluded in their submission:

In summary, we do not support the proposal to expand the Wagerup refinery in the existing circumstance of an inadequate buffer zone. Our judgment is that, in the face of much uncertainty, the problematic history of the relationship between the refinery and the local community is the most reliable guide to what the future would hold if the refinery was to expand. On this basis we consider that the risk of further compromising the health and social functioning of the local community to be too high; and the trade-off of this risk against the broader economic benefits to be unjust.

As Brueckner and Ross (2010) have noted:

Scores of local submissions to the EPA against the expansion referred to loss of social amenity, harm from fear and the effects of pollution, as well as concern for devalued assets and loss of family and friends from the area. (p. 24)

Despite these concerns and recommendations not to approve (EPA, 2006) as well as the findings of the parliamentary inquiry (Standing Committee on Environment and Public
Affairs, 2004) and the issues raised by an ABC *Four Corners* documentary (McDermott, 2005), the West Australian State Labor Government approved in 2006 a doubling of production to 4.7 million tonnes per annum (up from 2.35 mtpa) with an approval to then proceed to 6 mtpa. While there are 42 conditions which have to be addressed before Alcoa can get works approval for the expansion, based on the findings of the Standing Committee on Environment and Public Affairs (2004) CAPS maintain that Alcoa cannot possibly meet air quality and toxic dust management issues, including dealing with water usage and groundwater contamination from the mud lakes. It also bears noting that the Yarloop population declined from 874 residents in 2001, to 545 residents in 2006 and at the 2011 Census it was recorded as 482. Also, at the time of the 2011 Census, 50% of the houses in Yarloop were rentals, with Alcoa as the principal landlord.

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Paper prepared by Community Alliance for Positive Solutions Inc. (CAPS)

CHANGE.ORG PETITION

Letter to
CEO Alcoa Inc Klaus Kleinfeld
Alcoa Director Michael G. Morris (Alcoa Director)
Alcoa Director Kathryn S. Fuller (Alcoa Director)
Alcoa Director James W. Owens (Alcoa Director)
Alcoa James Maury
Director of Corporate Affairs, Alcoa Monica Orbe
Alcoa Director Carol L. Roberts
VP, Chief Communications Officer Alcoa Inc Libby Archell
Chief Legal Officer Alcoa Inc. Audrey Strauss
Alcoa Director Arthur D. Collins, Jr
Alcoa Director Ernesto Zedillo
Alcoa Inc. Director Sir Martin Sorell
VP General Counsel Alcoa Max Laun
Alcoa Director Ratan Tata (Alcoa Director)

We are troubled by the fact that for several decades now Alcoa has managed one of the richest bauxite mines in the world that is located in Guinea, a West African country that has remained impoverished despite its immense mineral wealth. It is also unfortunate to note that Guinea’s share of this mine, that has generated over $400 billion in aluminum content, is limited to a mere 1.2%.

Furthermore, we are disappointed to learn that Alcoa has persistently excluded local Guineans from the business opportunities offered by their own mine. Such segregation has clearly contributed to a poverty level that leaves the country unable to even protect itself against the horrifying consequences of the Ebola epidemic.

It is our belief that a corporate social stance marginally more humane, on the part of Alcoa, would actually provide scores of Guineans access to simple amenities (descent food, shelter, clean water, vaccines, sanitation services, access to preventive medical care) that could save many lives.

Please note that we are happy to join the current campaign to urge Alcoa to:

1. Immediately honour all the provisions of the mining Convention it entered into with Guinea, particularly Article 9 that was unmistakably designed to increase local Guinean participation in labour, subcontracting and transport.

2. Immediately implement a sincere and effective plan to increase the participation of Guinean companies and entrepreneurs in the opportunities generated by this rich mine.

3. Immediately fund social programs (in health care, education, youth recreation and infrastructure development) to improve the quality of life of the populations in the areas surrounding the mines.

4. Quickly develop the industrialization plan it initially promised, so as to allow the citizens
of Guinea to equitably benefit from the fruits of their own mines.

Barring any immediate concrete actions on the part of Alcoa, we hereby pledge to undertake a series of peaceful actions to encourage the leadership of your company to become more socially responsible towards the people of Guinea. For instance, at the next shareholders’ meetings of Alcoa, we intend to voice our concern for the fact that, at a time when America’s image is being challenged in business and political circles around the world, Alcoa’s comportment is not only detrimental to defenceless and impoverished populations but also a peril to America’s image around the world.