



When a Butterfly Flaps Its Wings: Acting Locally in the Face of National and Global Threats

Communities in Control Conference
Melbourne, 16 June, 2008

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**2008 Communities in Control Conference
convened by Our Community and Centacare Catholic Family Services**

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Our Community & Centacare Catholic Family Services, June 2008
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Thank you very much for that great introduction. Could I just say that I've been looking forward so much to coming here to this conference today. I don't get an opportunity to meet with and address groups like this very often. I tend to be working more and more with government and industry, none of which is as satisfying as coming and talking to groups like this – because you're the people who actually make the change.

I know in the audience there are people from groups who have written to me about sustainability and climate change. I just wanted to begin by thanking you all for your deep commitment to our society and making a better society in whatever capacity you do it.

I know there are sporting groups here, there are environmental groups, and a whole lot of other groups. But you are the cream of the cream. You're the people who get out there and commit time, energy and effort to making a difference. And that is a rare thing in our society, I think a tragically and increasingly rare thing.

Another reason I really wanted to speak to you today is we are at a time in history of really momentous change. That change represents in some ways a threat to some of the things that you are so deeply involved with, or a potential threat.

After all, as we talk about dealing with this climate crisis and we talk about taxing carbon, all of that adds cost. That means people have to pay more for life's necessities, for electricity, transport and so forth.

So unless that is done properly and carefully it can end up damaging our society as much as it will help address that issue. So there's a potential threat there that we have to be aware of and we have to deal with.

I should just say there is no real option but to increase those prices, otherwise people won't value the resource. It's like water. I've just come back from China where water is worth virtually nothing – it's wasted everywhere because no-one has to pay enough for it. The only way forward there is to get people to value the resource, but it needs to be done in a way that allows the most vulnerable in our society to cope with those changes. So that's one aspect.

The other thing is, of course, that it represents a great opportunity. We're moving into a new world, a world where there will be nine billion of us in 2050

globally. We're already facing a global food crisis, a global oil crisis and the climate crisis.

In all of that it is community groups like yours that can help start making a difference, and really start to shift things.

I just want to tell you a story about what I saw happen two years ago. I've been involved with climate change for a long time now. For most of that time it's the global oil and coal lobbies that have run the agenda. So whenever I spoke around the world up until about 2006 it was the lobbyists who would stand up or who would be there in the media telling people they didn't need to worry about it – that it wasn't a problem.

But then in about August or September 2006 a sort of miraculous shift happened. And it happened globally. I was in the US at the time. I remember hearing a shift in the media and in public sentiment. It was partly Al Gore's *An Inconvenient Truth* but it was a whole lot of other things. Somehow people recaptured the momentum.

All of a sudden we started to see a more scientifically based reporting of this issue and a global shift in sentiment. It only took about six weeks. It's an amazing testimony to the sort of society we live in that you would have these global changes happening in such a short period of time.

And of course that stayed. At the time it happened I remember some commentators saying, "This will be a flash in the pan. People will go back." But that understanding has remained in our society and it's formed a great basis now for us to move forward.

Groups all around the world have been moving forward from that base and doing wonderful things. In my view very few of them are of the quality of what's happening in Australia. If you look at just one example of community action here, Earth Hour, and see how powerful that has been, it's truly astonishing.

Two years ago when Earth Hour started, there was lots of criticism that this was just going to be a hippy thing, that they'd turn off the lights for an hour and forget about it, and only a few million people would do it. Well there were only a few million in that first year, but the next year Earth Hour went global and there were 150 million people worldwide who turned off their lights for an hour and thought about climate change and thought about their family and maybe enjoyed a candlelit dinner. It was a wonderful, wonderful change.

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This year the aim, with World Wildlife Fund and others, is to engage one billion people worldwide in Earth Hour, and not just people in Europe and North America and Australia, but people in China and India and developing parts of the world. It's a testimony of just what power you people who participated in that first hour really have. What an amazing achievement.

If we can do that sort of thing with some of the other issues that we're faced with in times of climate change we will prevail over this problem and we'll end up with a much better future.

I want to talk to you as well about the threat of climate change, because it's still widely misunderstood how serious this issue is. I can appreciate that. Climate is always variable. In Australia where we live we have a very variable climate, so it's easy to miss the long term trend.

It's also a very threatening process. As our soils die out and our dams dry and our rivers start drying, a lot of people find it easier to just ignore it or hope that it's part of a cycle, that it will come back.

The science is really clear on this, that this is not part of a natural cycle. It's been driven by the pollution that we're putting into the atmosphere. This atmosphere of ours is the ultimate global commons. We should be treating it as a very precious thing. After all, there are very few things that we do that are more intimate than just breathing, taking all of that air into our bodies, fuelling our internal fires and breathing it out. Within a few weeks of me talking to you the air I'm expelling now will be all over the southern hemisphere. Some of the molecules I breathe out now, two weeks from now might be in Chile helping a tree grow, or they might be over the Southern Ocean feeding plankton.

We live in this great global commons, this atmosphere we're absolutely dependent upon. It's not as big as it looks. If you look up into the sky and try to judge how big the atmosphere is you'll almost certainly be fooled into thinking it's very big. It looks big.

But in order to understand the real size of it you've got to carry out a bit of a thought experiment and imagine taking all of these gases in the atmosphere and compressing them down about a thousand times until they became a liquid. If you did that and then compared the atmosphere with the oceans, you could see that the atmosphere is 500 times smaller than the oceans.

What that means in terms of pollution is very important. We all know that if you put a bit of pollution into a little creek it's likely to have a bigger impact than if you put the same amount of pollution into a mighty river.

So the pollution we're putting into the atmosphere is much more potent, much more damaging to us, than what we're putting into the oceans, just because the oceans are big enough to be a little bit forgiving.

This global commons of ours, this atmosphere, is being grossly polluted. We're changing its composition, its gaseous composition, by a couple of parts per 10,000 with very, very potent gases that do have big effects. They trap heat close to the surface of our planet. They interrupt the water cycle. They make less water available to us. They heat our soils. They cause more extreme weather events. This is real. This is documentable by science. There's a good, firm scientific base for it.

A lot of the threats are closer than we think. I wonder how many people here know that last year one half of the Arctic ice was lost, melted away – one half. Some people are now saying that maybe this year, 2008, will be the first year in three million years where there will be no ice in summer at the Arctic as a result of that warming.

It may not happen this year, it may happen next year or the year after, but we're very close to the point where the planet will change in remarkable and threatening ways.

So it's no surprise that governments try to take action. As we move forward we see the Australian Federal Government for example introducing a carbon trading scheme in 2010. How are your constituents and your people and your community groups going to deal with this?

Well I must say I've been absolutely dismayed by the politics around this over the last few weeks. The majority of Australians supporting a reduction in the fuel levy to me is just madness. Why would you people, who've got the responsibility of helping the disadvantaged and poor, many of you, in our societies, why would you be supporting a tax decrease that gives exactly the same to the millionaires in our society as it gives to the poorest?

What sort of social justice is there in that? And what sort of future is there in that? After all, with the price of oil rising, that small gain will be lost in the very near future. We've got to get much smarter at starting to address this issue,

and address it in ways that help the people who really need the help, rather than these quick fixes.

Everyone wants some relief from high prices, that's true. But we've got to do it in smart ways rather than in ways that will just embed that disadvantage further and give no real advantage at a very, very large cost.

There are a few ways forward that some of you might want to think about. I don't know how many of your groups have motor transport or a vehicle fleet. Maybe it's worthwhile the government thinking about some sort of buy-back scheme so the oldest and least efficient of those vehicles can be bought back, allowing you to buy a more efficient vehicle with the money you get to give you a permanent advantage. After all, reducing the price of fuel by 5 cents a litre is a bit like giving someone a fish. Giving them a more efficient vehicle or helping them get a more efficient vehicle is like teaching them how to fish. It's the sort of thing that will give a long-term advantage.

The cost of those proposals to reduce the price of fuel was about \$2 billion a year – imagine if we had a buy-back scheme which invested \$2 billion a year to get the least efficient and most dangerous and oldest vehicles off the road? How many lives would we save? How many accidents would be avoided? How much pollution would be avoided?

We can just do so much if we think a little bit laterally about this and try to work through how we can deal with this problem in ways that really make sure that we end up with much more social coherence and address the problem at the same time.

I can see in 2010 that with fuel prices rising again due to this new government, it's basically a tax on carbon, an impost on carbon, and the price of electricity rising. One of the things that's going to be really crucial in determining success is how we deal with these issues of disadvantage – and it's you people who really have a say there.

Could I just say I don't think it's good enough to say no to rising electricity prices – we have to pay for our pollution. Equally we have to develop mechanisms that let the disadvantaged cope with those changes.

I was in South Australia advising the State Government on this a couple of years ago. I said to the Premier, "Why don't we offer a rebate to people, a means tested rebate on electricity costs, so you're protecting people a bit?" Instead of that, what did the Treasurer go and do? He gave a \$50 cheque to

every South Australian as an electricity rebate, whether you were a millionaire or not.

But that's what politicians do. They love to be popular. They love to give money to everyone. For people like you that's very bad news. We've got to focus our dollars much more critically I think than we've seen with these populist moves in advance of the sort of changes that we're going to have to live with in the future.

We've got very little time to deal with these problems. As I said, the science is that the changes are going to be occurring in the relatively near future. When I first wrote my book *The Weather Makers* I believed that the sort of dangerous changes to our world might happen in my grandchildren's time or my children's time, and that was worrying enough.

But I think the evidence now is that it's going to be happening in my time. I'll start seeing some very substantial changes. Those changes will put pressure on the world.

Let's take this food crisis that we're facing, for example – the way we've solved it, again, has been so silly. Using food to turn into transport fuel – it's crazy. Again, we've just got to get smarter.

That happened in the US because an industry lobby group, the corn lobby, won the debate. There weren't any community groups sufficiently strong or well informed in the United States to say, "No, this isn't the way to go. What we have to do is start producing transport fuel from non-edible materials. It might take a bit longer, but we need to start investing now because that is the only way forward in an increasingly constrained world."

Here in Australia we've got huge opportunities for that. I don't know how many rural groups are represented here. You go into Australia and you see the stresses that farming communities are under with less water, more chance of crop failure and so forth.

But what I see out there is a lot of opportunity as well. On the farm a farmer who's growing corn or wheat for example will take the edible part of the crop and sell it off to market and that's the end of their business. In the carbon constrained future, if we get this right, the nature of farming business might be really different. The farmers might harvest pretty much the whole plant and take that crop waste, put it into a machine called a pyrolysis machine, which is just a charcoal making machine basically – it generates a transport fuel

with that crop waste. It also makes charcoal, and charcoal is a form of carbon that doesn't rot away. Farmers can plough that back into their fields, help with soil moisture retention, put nutrients and minerals back into the soil and get a better crop the next year.

Furthermore, under a carbon trading scheme, he paid for that charcoal, he paid for the making of the charcoal and the putting back of it into the soil.

It's solutions like that that we've got to seek in the future. That one is so important because we get to feed the world and we get to generate electricity so we're dealing sustainably, not in a polluting way. We get to draw down some of the polluting carbon gas in the atmosphere, and we get to grow a better crop the next year – four-fold benefits.

It's those sorts of things that we're going to need as we go forward. The quick fixes are not going to work. We've got to start thinking much more seriously about how we address these issues. And I do ask you all in whatever capacity you have to think about your group. I know your time and resources are incredibly precious, but just spend a bit of time thinking about your group and what it might be doing in a much more energy constrained future.

Have you got efficient vehicles? Have you applied for a government grant to make sure that your electricity costs are minimised with efficiency, solar panels or solar hot water or whatever you can do that's relevant?

Sometimes I know these things are very daunting because you're probably going absolutely flat out trying to deal with your particular concern. But there is help out there. There are government departments and others who can advise you. There are even some businesses that can advise you.

When I was Director of the South Australian Museum we were shocking energy users, I can tell you. We didn't even have a meter. The Government told us how much electricity we used when I first arrived and I just about hit the roof. But we finally got a meter in.

Then we got a company called Origin Energy to come and help us out, working out how we could reduce our electricity needs. Now, we paid a little bit of money for that but they guaranteed that we'd make back in the first year everything that we'd paid them, and that's the way it worked out. So we had a permanent gain from then on.

So there are ways of reaching out for assistance, no matter how pressed for time you are. It's a matter really of thinking about the question, thinking about the world we'll enter in 2010 when this carbon trading scheme starts, and thinking about how you can position yourself to take the best advantage of that.

It's also, I think, very important that you let government know loud and clear what you need to start prospering in that environment, that more expensive environment that's going to be developing after 2010 – and not just knee jerk reactions but some real thought about how limited government money can be spent most effectively to assist you in doing the incredibly valuable work that you do.

Sometimes it feels as if we're all a bit helpless. How does the world change? It's the lobby groups, it's industry, it's big government that drives the whole agenda. You know that's so far from being true in my experience.

When I think about what I do and what you do, in the longer context of history you see just how important the commitment of individuals and a strong moral position is. If you go back to the 19th Century it was perfectly legal and acceptable to own another human being almost anywhere on the planet. There was nowhere where women had the vote. Child labour in British factories was appalling. Work conditions overall were appalling.

It was only a few good people who changed that, people like William Wilberforce who opposed slavery. Think about the environment he was working in where the banks, the shipping lines, the nobility were all making a fortune out of the institution of slavery. The average man in the street in London in 1800 probably didn't care, didn't know enough about it. It was distant.

And yet somehow, just by the pure moral force of the argument, Wilberforce and the abolitionists won that debate. We just take that for granted now don't we? None of us ever think we could have been living in a world where slavery was still happening if it wasn't for the moral strength of argument of those people and their commitment.

In the 20th Century things were different but equally dangerous. By then we'd developed technologies so powerful that we could have destroyed the entire planet at the push of a button. It was only a few good people who saw that danger and who built the institutions we needed to survive the 20th Century that made all the difference – the people who built the UN and brokered the

anti-ballistic missile treaties and development the European Union. Without those people and their effort we may not be here today.

Our responsibility in this 21st Century is to make sure that we forge a sustainable future for us and our children. You can think of the earth as a fishbowl and it's been a long time since anyone changed the water. There's more and more pollution going into the water. The situation is getting more critical. Parts of the planet are turning toxic. It's our job to turn that around.

It's not going to be easy. It's going to be a difficult long-term task. But it is so necessary because if we fail in carrying our responsibilities, the consequences will be every bit as grave as if those peacemakers in the 20th Century failed, or if the people who were concerned about social issues in the 19th Century had failed.

We've got no choice but to go on through this very, very difficult process and period of adjustment to make sure that we can create a better world. I really do believe that community groups are at the very heart and soul of that. It's change at this level, the grassroots level, that means everything in a democracy like Australia.

So I just want to commend you for your work so far and thank you for your engagement and wish you the very best in going forward into these I think more difficult times.

Thank you.