

Time for an honest acceptance of our integrated climate, energy and sustainability challenges

An interview with Ian Dunlop, Chairman of Safe Climate Australia, Deputy Convenor of the Australian Association for the Study of Peak Oil and Member of the Club of Rome



Ian Dunlop is a former senior executive of Royal Dutch Shell. He has worked in oil, gas and coal exploration and production, as well as scenario and long-term energy planning. He chaired the Australian Coal Association 1987-88, and the Australian Greenhouse Office Experts Group on Emissions Trading 1998-2000. He was CEO of the Australian Institute of Company Directors 1997-2001. He currently holds several positions including as a Fellow of the Centre for Policy Development, Chairman of Safe Climate Australia, Deputy Convenor of the Australian Association for the Study of Peak Oil, a Member of the Club of Rome and advises on governance and sustainability.

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Interviewer: Taegen Edwards

Taegen Edwards: To begin, could you tell us about where you have been putting your energy in recent months in terms of your work on climate change?

Ian Dunlop: My work has been focused for a long time on the integrated problem of climate, energy and other major sustainability issues, such as food and water security, because you have to look at them as an integrated package. You cannot treat climate change in isolation, so I look for integrated solutions and encourage policy makers to do the same. There is a tendency in Australia to treat each of these major issues in separate silos without understanding that they are inextricably linked. Policy based on this type of thinking can lead to disastrous results. A case in point is the recent Draft Energy White Paper issued by the Federal Government, which is virtually a blueprint for the continuation of our high-carbon economy, without any apparent understanding of the urgency of addressing climate change by moving rapidly to low-carbon lifestyles. Major strategic errors of this kind will prove extremely costly for the Australian community, both economically and socially.

TE: And, what comes to mind for you in describing the current state of play in relation to climate change politics and policy internationally? Could you describe how you see that scene at the moment?

ID: Globally, there is still almost total denial on the real size of the climate challenge. The acceptance of climate change varies widely. There is certainly much more awareness in Europe than in Australia and more recognition that we have to take action urgently, even if the action does not match the rhetoric!

In the US, that understanding is totally missing at the federal level. However, in the states in the US, there is much more acceptance of both the challenge and the need for action, with several states cooperating to

introduce cap-and-trade emission systems. In Asia, it is most encouraging that several nations seem to have a far better grasp of both challenges and the opportunities it offers than we do, and are taking action, particularly China and South Korea

But if you honestly accept what the latest science is telling us, the level of reform that is going to be required to avoid dangerous climate change is far greater than is catered for in current global climate policies. In Australia, we are way behind the rest of the world. Despite the sound and fury from our two main political parties about carbon “taxes” and emissions trading, neither of them are seriously thinking about the real climate challenge; the debate is little more than posturing in the lead up to the next election. Documents like the Draft Energy White Paper only confirm this view.

The Australian Government’s Clean Energy Futures Package is a small first step to a much bigger task. We should give credit to the government and the Greens in persevering to get the legislation passed. However, it is most unfortunate that what started out as sensible policy has been largely emasculated by the horse-trading necessary to satisfy various vested interests. So emissions trading, as a mechanism for example, is severely compromised by the level of compensation that’s been given and the escape clauses built into it allowing permits to be purchased offshore. In reality, while the two major political parties pay lip service to the need to take rapid action on climate change, neither of them are serious about it. The Opposition just do not believe it is a problem but feel the electorate want something done. That something is their ‘Direct Action’ policy, which is quite unrealistic. The government itself, having got its Clean Energy Futures Package up, and I accept that they have worked long and hard on it, have ticked climate change and said, ‘Well, we’ve done that so we’ll move on”. But evidence around the world is now making it abundantly clear that the changes we face are infinitely greater than are capable of being handled through that package.

Rapid ice melt in the Arctic, extreme drought in the US and continuing escalation of extreme weather events around the world this summer, coming on top of a history of increasingly extreme events in recent years, suggests that both the speed and extent of climate change is happening far faster than expected scientifically, and certainly politically. We must completely change the way we think about solutions. A major difficulty, of course, is that both main political parties have dug themselves a hole by denying the real problem, from which they will have great difficulty in extricating themselves!

TE: You’ve talked a bit about the fairly dire situation, especially here with the political situation in Australia. Just thinking about where there’s probably been a bit more success and there has been movement on climate change and renewable energy policy in recent years, what sorts of things do you think have been important lessons? What sorts of things could we learn from?

ID: The first thing is to get a sensible price on carbon and, unfortunately, nobody has yet done that properly. The European scheme set out with the best of intentions but it was designed centrally by the EU, and then implemented regionally by national governments within the European Community. Whilst the central design had merit, implementation by the nation states, meant that everybody tried to gain advantage by issuing far too many carbon permits, the result being that the carbon price slumped, a problem which has still not been fully sorted out. So there has to be a far more disciplined political process in introducing carbon pricing. On the other hand, there have been very successful renewable energy and efficiency initiatives in countries like Germany, which has made big progress in terms of feed-in tariffs and increased solar and wind. It’s the same in Holland, Denmark and other Scandinavian countries.

This progress has been overshadowed by the current European financial crisis which people tend to look at as a separate issue, but in fact it’s part of the same climate and energy problem. The original 2008 global

financial crisis was triggered in part by resource shortages, particularly oil, as the oil price increased to US\$147 per barrel, causing consumers to default on sub-prime mortgages in the US. The crisis then spread around the world. In response, in Europe, the US and Australia, money was spent on stimulus packages in trying to kick-start economies back onto the 20th Century growth path, in effect to recreate the situation which caused the crisis in the first place. Thus we used up our financial flexibility, which should have been applied to introduce low-carbon technologies. Some countries got it right, for example South Korea and China, who put much of their stimulus into low-carbon innovation.

The Western economies now have a real difficulty, in that they have to move to a completely new, low-carbon, development path, abandoning growth in the conventional sense – in short a new 21st Century economic and social model. That is not at all understood or accepted in the corridors of power right now! And it will have to be done at a time when many countries have already used up their financial flexibility in dealing with the unfolding crises.

TE: Given that – the scale of the gap between what’s needed and what’s happening (and the growing nature of that gap) – how do you respond to the view that the action that we need is just not possible or that perhaps whatever we do, it’s just going to be too late? How do you respond to that sort of question?

ID: We are running out of both time and options because we are not being honest about what has to be done. The solutions exist, but unless you are honest about the problem, they will never be adopted.

However, that is about to change as the speed and impact of climate change accelerates. Whether it will be in the next six months or in the next six years, is hard to tell, but I suspect it will be sooner rather than later. Unfortunately the trigger may have to be further natural disasters, and you can see the sequence of events already unfolding. We had the European heatwave in 2003 - that shook people a bit but it wasn’t enough to change perceptions. Subsequently, we had a sequence of events around the world, including the floods in Australia in 2010 and last year. Those floods cost us over \$30 billion in hard-nosed economic terms, but we still tend to say, “It’s got nothing to do with climate change. This is a rough, tough country, those things happen. You’ve got to be prepared to put up with it.” - the frontier spirit, which is a form of total denial.

But in the US food bowl states right now, we are seeing the worst drought in living memory. That is going to lead to a big increase in food prices around the world over the next few months, as the impact on the soybean and corn crop has been disastrous. There have also been a lot of other extremes in the US, not just heat, but storms on the East Coast, extreme rainfall in Florida and so on.

This is changing attitudes, with even the extreme right media starting to think this might have something to do with climate change. Food price increases are not going away, and they have impact. In fact, food shortages and price increases were some of the main reasons for the Arab Spring conflicts, which nobody talks about very much. The Mediterranean has also been experiencing unusual drought for several years now and dictatorial regimes in the Middle East have found it harder and harder to maintain essential food supplies. Hence social and political pressure for change – it is certainly a factor in Syria at the moment.

If you look at the cost of these events to the US, probably in the hundreds of billions of dollars, when they are already financially strapped because of global commitments and economic problems, you can’t keep ignoring the fact that climate has something to do with it.

TE: So you’re talking about connecting the dots, really, in many different ways. Have you seen any good examples of where that is being made clear to people, where there’s been breakthroughs on things

like connecting food price trends to climate change or connecting natural disasters to climate change? Are there any examples of where you feel that's being communicated well?

ID: I think it is just starting to happen. Many scientists are now becoming far more blunt about the speed of climate change and its implications. For example, John Schellnhuber, Director of the Potsdam Institute, has been very frank on the implications of a 4° C temperature increase, which is where we are currently heading – it is a world of 1 billion people rather than the 7 billion we have today. Many people may be reluctant to talk in those terms, but we need to be honest if we are serious about taking action. In the end, we may choose not to do anything, but if so, we should be fully aware of the implications.

I did not really answer your earlier question - is it too late to actually do anything seriously? No, it is not too late, but it's not going to happen with the conventional political and corporate reform processes that we have used through the latter part of the 20th century. It is not possible for adversarial politics to achieve the type of change we now need in the time required. In this country, emissions must reduce, ideally, by around 50% by 2020 and by 100% no later than 2050. Using the Potsdam budgetary approach to carbon reduction, our budget runs out in about four or five years' time.

If you talk to government ministers and corporate leaders, they think this is far too extreme and completely unrealistic. But that depends on your view of realism. If you think realism is the way the world worked in the 20th century, the China boom and a high-carbon economy, then this may seem a bit extreme. But if you think, as I do, that we are in the midst of a major global discontinuity in transitioning to a low-carbon world, and that its implications are far greater than the economic concerns currently preoccupying our leaders, there will come a point, as climate change and other resource scarcities bite, that the change process suddenly gains momentum.

It will not happen conventionally. Given the speed of change required, we will have to move to a war-footing approach, akin to the manner in which economies were restructured in the lead up to WWII.

TE: **Could you elaborate on one or two characteristics of that sort of approach, what we might see happen? What sorts of critical decisions will need to be made really urgently and how might that come about?**

ID: Let's start with the Arctic. The speed of change this year is much greater than previously expected. The sea ice is probably going to be gone in summer by 2015, and by 2030 all year, if these trends continue. That will not change sea level much, as the sea ice is already floating but it will lead to a non-linear increase in ocean warming because the ice is no longer there to reflect solar radiation back into space. Similarly with the Greenland ice sheet, we've seen some quite remarkable evidence in the last few weeks, of unprecedented melting, which if it continues, will increase sea-level rise substantially over time. These type of events will force a complete re-calibration of the way in which we approach climate change

There is no silver bullet to solve this – the solutions are many and varied. One of the most important is to change the concept of economic growth in the Western world, as it is not going to be possible to continue growing in conventional terms given the need to reduce emissions and contend with other resource shortages.

There is a sound argument for the developing world to continue growing, in order to raise standards of living and alleviate poverty, but the size of the climate challenge may mean that the flexibility to do so disappears. The developing countries will have to evolve in a very different way from ourselves – introducing new technologies rapidly and leapfrogging the West. The West itself will have to cut back on its growth

expectations, and on consumption, introducing a wide range of low-carbon solutions. For example, energy efficiency and conservation, which has to be top priority because it is the cheapest and the most extensive option. Then you have the whole suite of renewable energies, the costs of which are rapidly reducing. Carbon pricing is essential – but it's not the \$23 per tonne carbon price we are agonising over today. That is far too low - it will have to increase to \$150 - 200 per tonne to be effective. Certainly it has to be increased in a way which does not decimate the economy in the short term, but we must accept that is where we are headed.

Then there is nuclear energy. I think nuclear cannot be ignored - the degree of change is so great that we need to consider all possible solutions. Nuclear research must continue but it's not going to be a major contributor to our energy needs very quickly.

There are then the supposed “official” solutions to climate change, such as carbon capture and storage and clean coal. Unfortunately, none of those are working, Carbon capture and storage is not rocket science. It has been used in the oil industry for many years, storing carbon dioxide in depleted oil and gas reservoirs. But those reservoirs are in limited supply and it is not going to work on the scale now required to sequester global carbon emissions. To sequester even 20% of current world emissions, you need an industry which is about 70% bigger than the world oil industry. It is technically much harder to store CO₂ in reservoirs that are not depleted oil and gas reservoirs, for example water aquifers and salt domes. It is also very costly. The other clean coal technologies are not delivering much, either.

So we have to be realistic about our options to sequester carbon to maintain fossil fuel consumption. The IEA [International Energy Agency] estimates that we need around 3,000 major carbon capture storage projects by 2035 or thereabouts. Today only one project is working on a conventional power station, and many trials have been mothballed for various reasons. In the absence of a viable carbon sequestration technology, the coal industry is going to have to wind back, as is the gas industry. Gas replacing coal may be a temporary bridge to a genuine low-carbon world, but it's not going to be the panacea often suggested, and it's not a solution to climate change. In fact, gas may actually be worse than using more coal when account is taken of direct methane leakage to atmosphere during the collection process.

As many people have said, the climate – energy dilemma is a diabolical problem, and it will take all our technological and societal skills to handle it in the time available. But the starting point has to be honesty about the challenge we face.

TE: You've mentioned quite a few of the sorts of barriers that there are but do you want to briefly summarise what you think the key sources of opposition to action on climate change have been?

ID: At the top of the list are the vested interests, individuals or organisations, who have succeeded under our conventional, high-carbon economic system, most of whom are in positions of power.

If humanity is to continue evolving with improving quality of life, we have to fundamentally change the social and economic systems under which we operate, moving away from conventional economic growth. Many of these vested interests will not retain their influence in such a world, and therefore resistance to change is inevitable.

Currently there is little acceptance at national level of the changes that are coming. However, the major supranational organisations around the world, such as the IEA, the OECD, the UN, the World Bank, the IMF, are now continually putting out reports emphasising the need for such change, and the form that might take. Political leaders, who supposedly govern those organisations, are essentially ignoring that advice. A case in point is the recent Australian Draft Energy White Paper which, in effectively advocating a continuation of our

high-carbon economy, is totally at variance with the advice of the IEA in their annual World Energy Outlook reports. That is also happening in other parts of the world, and the supranational organisations are getting increasingly concerned about the lack of action.

Major business organisations around the world are also well aware of the real climate challenge - they have skills, the expertise and the resources to really understand it. I believe that there are increasing numbers of people at the top of those organisations who, whilst understanding it, do not want to be the first to articulate solutions publicly. They're looking for an umbrella under which they can collectively come to grips with the challenge.

TE: So do you see that as an opportunity for overcoming that sort of barrier? How do you see that playing out?

ID: It is difficult. Our political system is not capable of providing an umbrella because it is so tied up in short-termism and adversarial infighting that it is incapable of addressing anything of a long-term nature. Nor is the corporate world, albeit for different reasons. The NGO climate change movement, which should be leading activism in this arena with one or two notable exceptions has made a major strategic mistake, being overly concerned about being in the government tent talking about the government's solutions. That means that you have to talk on the government's terms, rather than holding out for the real solutions. The net result is that NGOs end up supporting initiatives like the Clean Energy Futures package, which is a long way from what is required. They are then rewarded with funding to support implementation of the package. By so doing they lose the ability to address the real problem and its solutions.

Behind it all, the major barrier to action is the incentive system under which the corporate world operates. Bonus incentives have become the dominant form of remuneration since their introduction in the early-1990s from the US, based predominantly on short-term performance. Previously you had organisations who were seriously prepared to look at the long-term and to take decisions accordingly. You had statesmen who considered not just the next six months' financial performance but what might happen in 20 to 30 years' time. There are still big organisations who claim to do that but, in fact, the day-to-day performance of those groups almost totally dominates decision-making. Short-term pressure also comes from the financial markets and superannuation funds, all of whom are paid the same way, and all of whom are looking for instant gratification in terms of financial returns.

So the focus of the business world has moved from one which took a balanced view of the short and long-term, to one which, whatever is said publicly on websites, sustainability reports and the like, is almost entirely short-term focused. That attitude also spread to the political world and the politicisation of the public service. The result is that our institutions are ill-equipped to handle the long-term issues such as climate change, which are now our major challenges.

So the pressure for change will have to build from the community, forcing perverse incentives to be changed and demanding leadership that is prepared to take a longer-term view. That pressure will start building as the escalation of extreme weather events continues.

TE: So it's only when the community starts to really feel the impacts that we'll be seeing the push-back and the opportunity to change some fundamental parts of the system? That's what you're saying?

ID: Probably that will be the case. It would be nice to think we had the maturity to take proactive steps before those events materialised, but there is little evidence of that happening so far.

Changing incentives is one of the most fundamental steps that must be taken. Without that, it's hard to see solutions, but there are signs that change might be in the wind. The Chairman of Rio Tinto, Jan du Plessis, gave a speech in London recently to the Royal Institute for International Affairs in which he asked how business could recreate trust with the community in light of the scandals which triggered the GFC, and which are still continuing notwithstanding the massive bail out of banks. He stated that the escalation of executive remuneration, which has occurred over recent years, cannot continue. It's a long time since we heard such sentiments from a senior business figure. But the issue is much more deep-seated than stopping the escalation in remuneration. These incentives threaten the very foundations of democratic society, as they prevent long term issues from being addressed. So not only must the escalation be stopped, but the quantum of remuneration reduced to more realistic levels, otherwise it's just going to be another bit of window-dressing. We have seen similar statements before, for example in 2010 from Marius Kloppers, CEO of BHP. He made strong statements about the need to address climate change but little has happened in the way that BHP as an organisation operates, pushing to increase coal exports, oil and gas production at a time when we can ill afford to burn even our proven fossil-fuel reserves if dangerous climate change is to be avoided.

TE: **Now, with the Post Carbon Pathways work, as you know we've been looking at large-scale post carbon economy transition plans – so, the articulated strategies for transitions. I want to ask you about the best examples you know of, or which examples of these strategies you think have provided the most useful models and templates? And what do you think are the key strengths and weaknesses of articulating transition strategies like that?**

ID: It is difficult to pick one that stands out given that they all have good points to them. The ones I tend to focus on, as I said before, are those that take an integrated approach to sustainability, encompassing climate, energy, food, water etc. For example, Beyond Zero Emissions have been doing good work. They started off looking at stationary energy and they're now going on to analyse a range of other sectors with a very motivated team. In due course they will encompass the whole field, but it takes time to do that.

Some of the Danish work, for example by Katherine Richardson's team, has an excellent integrated approach. The Chinese five year plans are very interesting, as a process of initiating major change in a complex system. Paul Gilding's "Great Disruption" and "One Degree War Plan" initiatives are good in that they recognise the real extent of change we have to encompass, and the speed with which it must occur. Others assume you have the luxury of spreading change over a longer period of time.

Each of these plans has good components and a lot of good work is going into thinking through overall transition plans. Unfortunately so far it has not reached a critical mass, largely because the funding and resources have not been available to do the work comprehensively. The amount of money spent on lobbying to maintain our high-carbon economy is enormous. In comparison, the amount available to design the real changes required, is miniscule. That resourcing imbalance has to change. Ideally there should be a coordinated approach between governments and the private sector but that will not happen until we break through the denial barrier.

Denial is interesting, politically and corporately, because the moment you accept that you have a problem, and the seriousness of it, then you have to do something about it.

For example, directors have a fiduciary responsibility to objectively assess the critical risks to which their companies are exposed, and take action to ensure these risks are adequately managed. But if they acknowledge climate change as a serious risk, they are bound to act, which requires a radical redirection of

Australian business away from our addiction to high-carbon coal and gas, our most powerful vested interests losing out in the process. Better then to stick to absolute denial, irrespective of the consequences.

This flows through to politicians, NGOs and the bureaucracy, who are subjected to immense pressure from the corporate sector not to rock the “business-as-usual” boat. The pressure to overcome this barrier will have to come from the community.

TE: The next question is an imaginative one, so can I ask you to put on, I guess, a fairly optimistic hat and think into the future about the world in about 2040 or 2050 and imagine that we have actually succeeded in averting the worst of climate change and preventing runaway climate change. What are the key things that must have happened leading up to that time? What sorts of transformations must have occurred?

ID: The first pre-requisite is a form of supranational governance. Not government, but a global organisation charged apolitically with addressing the integrated sustainability challenge, covering climate, energy, water, food etc., the premise being that there will be, by 2050, a range of issues that have to be managed globally for the common good. For example, by then we will probably have major shortages of oil because of the peaking of global oil supply which, despite the current hype around unconventional oil, is likely to be problem. So oil will become a matter of equitable allocation around the world, as occurred in the 1970s when the International Energy Agency was formed.

National governments will work within that supranational framework in implementing policy at the local level. Solutions will vary from country to country depending on your particular circumstances, but will all conform with a global framework. Scientific and technological advisory groups will develop the best possible solutions, based on an honest definition of the challenge we face, with proactive support from governments and business, rather than change being white-anted by vested interests in an attempt to maintain the status quo.

Business incentives will no longer be based on bonus-type payments, and the quantum under which senior executives are paid will be wound back to more realistic levels, with corporate objectives focused on long-term sustainability.

The coal industry will be in major decline long before then. It will be winding down constructively, with transfer mechanisms in place to relocate and retrain the workforce for a range of low-carbon industries. Iron ore will be much the same, as different ways of producing steel will have emerged. We will have a major financial stimulus coming from investment in green technologies and we will have recreated Australian manufacturing to enable us to be a major player, given our extensive renewable energy resource base..

Rural and urban society will be redesigned in much more sustainable forms. On the one hand, agriculture will be brought into the cities and on the other hand we will move away from traditional farming practices which have been seriously degrading soils. Soil carbon will be a major activity with significant benefits for carbon sequestration and agricultural productivity, albeit it may not be as extensive a solution as some would hope.

Priorities will also have to be re-thought in the light of increasing temperatures. For example the interaction between coal seam gas and arable land. We will need arable land as a top priority for food security, and gas is not going to be a long-term energy solution. We have to move away from both coal and gas.

For transportation, we will move from the internal combustion engine to far greater use of public transport, built around renewable energy-powered rail systems, with cities designed accordingly. Rural transport will receive priority from limited liquid fuel supply.

TE: On the “how” side again, could you say how you think all of those things could be put into place? How quickly would things need to change and who are the main players in making those changes? You mentioned the community before, so...

ID: The trigger is going to be some sort of natural disaster that wakes people up and we’re already seeing that happening, in that we’re probably locked into irreversible change in the Arctic with the disappearance of the sea-ice. That will bring very big changes to the global climate. Before long the community will wake up to what is occurring and demand action, along the lines that: “We have been looking at the problem for 30 years and done virtually nothing. Now we have to really start moving”. The pressure will then come on the business and political worlds for real action.

It will require different leadership from anything we’ve seen before, as we will have to move to the war-footing I mentioned earlier. Probably that will develop into a government of national unity at the nation state level, with supranational governance bodies globally handling the overall sustainability strategy.

TE: Just one final question. I know you’re someone who’s been in the same room and had a lot of discussions with key decision-makers and political leaders, both here and overseas. You may have already had a chance to practice your elevator pitch, if you like, but when you have that opportunity or if you did have one in the future, to communicate just one cut-through message to the most influential decision-makers in the world, how would you state that? The necessity and possibility of taking action to address climate and energy, the whole problem together, how would you state that to a key decision-maker if you ran into one today?

ID: Be honest about the climate and sustainability challenge we really face. Once you cross that threshold, then the solutions fall into place.

TE: Great. Thanks so much for your time, Ian. Is there anything else you wanted to add?

ID: Yes. It is very easy to become pessimistic about the changes we are talking about, and whether they can be achieved in the limited time required. We do, as a species, tend to leave things until the last possible minute, particularly major changes of the kind ahead. But on the positive side, having woken up and accepted the need for change, we are capable of moving extremely fast.

The low-carbon world we are entering does not mean our quality of life deteriorates; on the contrary it will continue to improve if we are proactive about change. Certainly we have to re-think our values and consumption patterns, but we have to do that anyway as our current way-of-life is not sustainable.

What the climate challenge has given us is the great opportunity to establish a genuinely sustainable world. It now needs the community to develop the pressure to make it happen.

TE: Thanks again for contributing.

ID: My pleasure.