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Episode 22: Geopolitics of Climate Change

Geopolitics of Climate Change

VOICEOVER

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SIAN PRIOR

Hello and welcome to Up Close, coming to you from Melbourne University, Australia. I!|m Sian Prior. Earlier this year two and a half thousand of the world!|s leading climate scientists got together and concluded that human activities are causing dangerous climate change, and that if we continue the way we!|re going, we could see global average temperatures rising by up to 6 degrees Celsius within the next century. Went the IPCC or Intergovernmental Panel on Climate Change delivered that very bad news to the global community, expectations were raised that governments of the world would respond with urgency to this looming environmental crisis, but as our guest today in Melbourne University Up Close will explain, finding effective and equitable solutions to the problem of climate change is no easy task. Dr Peter Christoff is a political scientist who coordinates environmental studies in the School of Social and Environmental Enquiry here at the University of Melbourne, Australia. His research focuses on climate change policy in Australia, Europe and Asia. For the past three years he!|s also been vice-president of the Australian Conservation Foundation, Australia!|s largest national non-government environmental organization. Dr. Christoff believes that whilst we may have the technological capacity to reduce our carbon emissions, the institutional challenges facing us are immense. Peter, welcome to Melbourne University Up Close.

PETER CHRISTOFF

Hello Sian.

SIAN PRIOR

Now there is almost universal scientific consensus on the predictions for climate change and the pressure is on to find solutions. And we have made a start haven!|t

we? I mean way back in 1992 when the UN Framework Convention on Climate Change was set up, that was a start, followed by the 1997 Kyoto Protocol to implement that convention. Will the Kyoto Protocol save us from the threats posed by dangerous climate change?

PETER CHRISTOFF

Well first of all the threats are very, very substantial indeed. You're right to say that we're facing a very difficult and very dire situation, all the data show at the moment that we are tracking at the upper end of the Intergovernmental Panel on Climate Change's predictions, so we are heading towards the four to six degrees increase in temperature by the end of this century, that's the bad news. The Kyoto protocol was established in '97 as the instrument to put the treaty on climate change into operation. And it's just about to enter its first commitment period. So, the 38 industrialised, mainly European countries, that've committed to reduce their emissions have agreed to reduce their emissions by only 5% by the end of 2012. In real terms, that's perhaps going to lead to no major increase in emissions over that period globally. The result is completely inadequate to what we really need. On the other hand, it's only the first commitment period and at this point in time we're seeing negotiations about how the Kyoto protocol second commitment period from 2013 to 18 might be implemented and whether and what sort of targets we might be aiming for, and hopefully those'll be much more substantial.

SIAN PRIOR

The USA and Australia, two of the world's greatest per capita contributors of carbon emissions have so far refused to sign up to the Kyoto protocol. Why?

PETER CHRISTOFF

Both the US and Australia have played a very obstructive role and it's been to the dismay both of all the other developed countries that have been taking their part in reducing their emissions and also the developing countries which have been keen to see everyone play their part. The United States I think been very reluctant to take a part for two reasons, firstly because there has been this very strong belief that the issue of climate change is not as important or not as vital as everyone now agrees it is, and so for the most of the period of certainly the Bush administration, there's been real reluctance to actually accept climate change as a major issue. Underlying that has been another geopolitical concern and that is that the United States has believed that by adopting measures to reduce its reliance on fossil fuels, it would slow its economic growth and that would allow China, which is the next major competitor to actually get a foot ahead and so the geopolitical game has been one between the United States and China as to who's going to have global dominance, or how they will apportion their power planet-wide. Australia's been playing a very sort of meek and supportive role to the United States in 'V in this circumstance.

SIAN PRIOR

But what's in it for Australia to join the USA in boycotting the 'V the Kyoto Protocol.

PETER CHRISTOFF

Well, I think primarily one can say that Australia's economy is very heavily dependent on the export of fossil fuels, a very substantial proportion of our exporting come !V now comes from sending coal overseas. We are the world's biggest coal exporter, we provide a third of the world's export coal, we're exporting natural gas, a substantial amount of which goes to the Chinese market. So, Australia has a great deal to gain materially from slowing down the implementation of substantial targets. There are also alliance related issues. Australia is in alliance with the United States and lastly I think that there's also !V one can't discount the fact that our Prime Minister, John Howard, has been a very strong climate sceptic at least up until recent times, and therefore hasn't accepted the need to actually move in this direction.

SIAN PRIOR

Does it matter? I mean what's the !V what's the practical effect of Australia and the US not signing up to a particular international protocol? I mean theoretically those two countries can still set their own targets for carbon emission reduction.

PETER CHRISTOFF

I think it matters a great deal for two reasons. Firstly the United States up until very recently, was the world's biggest producer of greenhouse gas emissions with some 25% of emissions, Australia with 1.5% of global emissions has been the 13th biggest producer. So between them that's a substantial proportion of global emissions. Secondly, by providing this obstacle to genuine unified international response to this issue, other countries have been less prepared to sort of move hard on their own targets. They're going, !!!O Well, why should we do all the heavy lifting? Why should we do all the hard work if this biggest, up until recently, the biggest emitter has really not been playing its role?!!L
So, I think the United States and Australia have slowed global progress in this issue quite substantially.

SIAN PRIOR

Well, Peter, the US and Australia may be big per capita emitters of greenhouse gases, but surely we should be more worried about the rapidly developing economies such as India and China, given their huge populations. If everyone in those nations aspires to the same level of materialism that we enjoy here in Australia, surely we're heading for even deeper water.

PETER CHRISTOFF

I'm not sure that worried is the right term. China, unexpectedly, a decade earlier than everyone predicted, because the world's biggest aggregate or total emitter of greenhouse gas emissions this year. It's now producing somewhere in the vicinity of 25% of global emissions. India I think is somewhere up around the !V the 5 or 6% mark. With populations heading towards 1.5 billion in each country and increasing per capita or personal demand for energy, there certainly is a major issue there. But the problem is this, both China and India are developing countries, and when you look at the individual per capita demand for energy in those countries, it's about !V oh I think it's about a fifth of what we use in Australia or in the United States. It's interesting to know that until China entered the global economy, most houses in rural

China didn't even have one electric light bulb, they now have three. We're talking about basic needs for fundamental development, so I think there's a big difference between what China and India need and what say United States and Australia or the European Union countries need. What we need to see is a levelling out of demand for energy and also very importantly, a shift to renewable energy sources so that we won't have the emissions as energy demand increases. In that sense I think the real game is to assist China and India and Brazil and Indonesia for example to continue to develop, but to use renewable and not polluting fossil fuels.

SIAN PRIOR

These are the 1V the countries which you've described as the MEE's, the major emergent emitters aren't they, China, India, Brazil?

PETER CHRISTOFF

And they provide a class all of their own. They're in the top 20 of 1V of the planet's aggregate emitters or total emitters and they have a very substantial influence on the future of this planet, as great as the United States.

SIAN PRIOR

Peter, there's been a lot of talk about so called technology transfer from developed to developing nations as a possible way around this problem. Can you explain what that would involve and I guess how likely it is to happen. Is this what you mean when you talk about the importance of renewable energy technologies, that they are the things that need to be taken up by the developing nations.

PETER CHRISTOFF

Well let me use China as an example. There are two reasons for it developing as fast as it is and for its massive increase in energy demand. The first is in fact that much of western production manufacturing has been relocated to China, so in fact the great increase in Chinese emissions is because of western demand and the export of goods made there back to the west!K

SIAN PRIOR

So we're exporting our carbon emissions!K

PETER CHRISTOFF

Absolutely. And then blaming the Chinese for them which I think is a little unfair. The second reason of course is the growth in affluence as a result within China and the growth for energy demand domestically. Now there are two ways of going. At the moment, the Chinese are having to meet that demand. They're building new coal fired power stations, gas fired power stations, hydro, some nuclear, a whole range of different technologies. The trouble is that their reliance on coal and even gas, locks them into a high greenhouse emissions trajectory. That's what we have to basically break. To do that I think the west has got a responsibility, it has the responsibility to actually pay for the emissions that it is causing to be emitted in China. And to do that I think we need to export very substantially renewable technologies, solar and wind for example, and to pay for that export, to actually pay for the construction of an alternative energy source in China, to meet our needs as much as Chinese needs.

SIAN PRIOR

I'm Sian Prior and my guest today in Melbourne University Up Close is Dr Peter Christoff, a political scientist who coordinates environment studies in the school of Social and Environmental Enquiry here at the University of Melbourne, Australia. And we're discussing the geo politics of climate change. Peter we've talked about the major emergent emitters and their potential energy needs and indeed energy consumption is the biggest driver of 1/3 of carbon emissions globally and our energy consumption has been rising rapidly. What are the predictions for the future of global energy use.

PETER CHRISTOFF

Well the predictions indicate that we're probably going to double global energy use within the next 50 years. So, if that means that we are going to use coal, in particular, and oil, our global greenhouse gas emissions will rise accordingly and we will certainly go over the edge of what the IPCC has been predicting. It's a very, very dire prospect both ecologically and also social and economically. The alternative of course is to accept that we are going to have those energy needs and to find alternative sources. That's where I think that cooperation 1/3 international cooperation is important and the setting of emissions reductions targets which will force the pace of technological change.

SIAN PRIOR

There is some good news. I mean there are certain places in the globe where serious emission reduction targets have been set and in some cases are actually being achieved. If we can talk for a moment about the European union. I mean there are some nations within the EEU such as Germany who've responded very effectively to carbon emission reduction targets, haven't there.

PETER CHRISTOFF

Not only Germany. In fact, you can also look at Spain and Portugal. But Germany's a stand out example; it's the biggest economy in the European union; it's set itself some very steep targets, reducing its emissions by 20% effectively from the 1990 base ... by the end of this first Kyoto commitment period. In other words by 2012 and it's going to achieve, in fact, I think it's almost achieved that target now, even before their whole Kyoto Protocol business commitment period kicks in. It's done so by putting in place a regulatory framework, which requires industry and consumers to buy renewable energy and encourage the establishment, in particular of solar and wind generation facilities. It's set very strict targets and very stringent targets for the development of 1/3 the feed in of renewable energy, and I think the target now is 20% by 2020 I think in terms of electricity generation, and it's going to meet those. The other thing that's really interesting about the European example is the Europeans have realised that you don't have one single power source that's going to solve all your needs. Solar won't do it, of course the sun doesn't shine at night; wind won't do it, the wind doesn't always blow but if you combine solar and wind and geothermal and hydropower and wave power, tidal power, and you put it into a very large grid which includes countries like Spain and Portugal and Italy and Germany,

and you move all of these technologies to really supply that grid, then your chances of becoming very substantial or entirely dependent on renewable power, is very high indeed. And that's where Europe is heading at the moment.

SIAN PRIOR

So, as you say, there are places in the European Union where it's where great gains are being made, are those economies suffering economically as a result of getting very serious about it about trying to prevent climate change? Because, of course, this has been one of the arguments by governments in places like Australia and the United States that we can't take major steps to change the way our economies work, the way our energy is consumed, because it will harm our economic bottom line.

PETER CHRISTOFF

Look the answer is no. On the one hand, you've seen the creation of very substantial numbers of jobs in the new energy sectors, generally industry in Europe has decided to go for green by which it means green equals money, not green equals the environment. They've recognised there's a very substantial economic benefit in heading that way down that particular path. Secondly as energy prices have risen, and they have increased, we found a very simple and very effective result has been the shift in industry towards much more energy efficient, and much more energy conservation oriented approaches, not only industry but also amongst private consumers. So that's

SIAN PRIOR

Energy efficiency presumably saves your power bills.

PETER CHRISTOFF

Well, it does do that. And in fact, that's where the biggest savings are to be gained. And that's again one of the ... I think the other big message I suppose for the major emerging emitters, the developing world, is but in fact a great deal can be done initially to save energy by making productive processes much more efficient. Then you put in the new technologies. And the Europeans have done very well out of that.

SIAN PRIOR

The Europeans, many of them though have nuclear power stations. Is that part of the mix in the solution in terms of energy requirements.

PETER CHRISTOFF

No, it's not. And I think that if you look at where the nuclear industry is going, despite the sort of apparent interest in its development it's for example in China, the Chinese have accepted that they will have to increase their reliance on nuclear power a little bit. Total energy input is going to be about 4%. And the reason to be extraordinarily cautious about nuclear power I think is very simple. Firstly in the developed world, and I think in the developing world as well, people knowing that this technology has got limitations and liabilities and dangers and risks associated with it, people are just unhappy about the idea of living next to a nuclear reactor, so there's a social reaction. Economically it's not an economical industry if you factor in the

costs of waste disposal, decommissioning reactors overall, it doesn't compete with even coal let alone the renewable sector. Thirdly there is the problem of waste disposal itself. We've had the industry around for 60 years, we now have quarter of a billion tonnes of radioactive waste, still waiting to be safely disposed of, and the solutions haven't been found. And about 2% of that, about 30 or 40 thousand tonnes is highly radioactive and will be for the next ten to 50,000 years.

SIAN PRIOR

But Peter, maybe those are problems which pale into insignificance compared to the problems facing us ecologically, socially, politically from dangerous climate change, surely that is a price that needs to be paid.

PETER CHRISTOFF

But here is the crunch then. It will cost you about a billion dollars to develop a nuclear reactor, it will take you about ten years to fifteen years to build one. If you spent that billion dollars on wind power and solar power now you would save hundreds of millions of tonnes of greenhouse gases each year before that nuclear reactor came on line and for which there isn't sufficient uranium. If the world tried to go nuclear globally, there wouldn't be enough uranium to even keep that reactor going for 20 years, it is not an option.

SIAN PRIOR

One of the options that has been considered and in some places put in place is putting a price on carbon, putting a price on polluting emissions. Can we talk about the role of carbon trading schemes. Have they worked well anywhere in the world?

PETER CHRISTOFF

It is a little early to make conclusive comments about that. The biggest scheme, the European Union's Carbon Trading Scheme has only been in operation for three years and it is one of the critical mechanisms under the Kyoto Protocol. It has had its teething problems. There was an over commitment of carbon and as a result the prices fluctuated enormously. But the idea behind the scheme is that you have a limited amount of carbon, it is capped, this is the amount that permits will be emitted for, the permits are then sold to industry preferably. Industry, if it has bought a permit you know the idea is to then emit less than the amount that you have got a permit for and then sell what is the surplus emissions amount to someone else. So, there is an incentive, a market incentive, for industries to become more efficient and then to sell on their permits. And this cap is reduced over time. It is very clear in the European case, even over 3 years that this carbon trading, emissions trading market has had a substantial influence on reducing emissions. It has helped the Europeans achieve their targets. And, I think what is really important at this stage is, on the one hand, to see those markets emerge in places like China and India which will have very significant power generation markets to work with and also of course bring in the United States. And, I think the billions of dollars, about a hundred billion dollars, I think, now traded, is a major incentive for the United States to also buy into this particular market, and they can't do so unless it ratifies Kyoto.

SIAN PRIOR PRIOR

I'm Sian Prior and you're listening to Melbourne University Up Close, where today we're discussing the geopolitics of climate change with Dr. Peter Christoff. Peter, here in Australia, as we discussed earlier, we're the biggest per capita emitters of greenhouse gases and we're currently extremely reliant on fossil fuels like coal to provide our energy resources. How hard is it going to be for Australians to be responsible global citizens and make a serious dent in our carbon emissions in the future?

PETER CHRISTOFF

It's going to be a difficult call and one of the reasons for that is that I think we have had a government over the last ten years which has really not paid any serious attention to emissions reduction in Australia and has allowed the domestic power industry to continue to build itself around coal and now more recently to a lesser degree gas. So we've actually wasted ten years when the European countries like Germany and the United Kingdom have headed in the other direction, substantially reduced their emissions. Australia for a whole range of reasons has actually not had to do anything at all. This leaves us well behind other countries and for us to wind back our position to actually move away from coal and gas given where we've been heading in investment over the last ten years and intend to for the next ten years as well, will be very difficult indeed.

SIAN PRIOR

Are there any potential benefits for the Australian economy in the local and the global response to climate change. For example we have been in the past world leaders in the development of solar power technologies haven't we?

PETER CHRISTOFF

It's a tragic record. We have produced very fine solar technology, and as a result of the lack of take up in Australia because we haven't had targets, we haven't had markets as a result, to develop that technology further. Much of our technology has actually gone overseas. It's gone to the United States, to Germany, the biggest solar producer in China in fact is using Australian technology and a Chinese fellow who actually developed his cells and - and technology in Australia, took it back to China. Similarly, in other areas like wind power, it's been astonishing to see countries like Denmark for example become world leaders. We had the technological capacity to do much better than we have done. At this stage, I think we have put ourselves well behind other centres of production and so I think that we've done ourselves a disservice economically.

SIAN PRIOR

Peter I have very strong memories of attending a United Nations conference on the Montreal Protocol back in 1990, this is the protocol to prevent the destruction of the ozone layer by man-made chemicals. And the most depressing aspect of that conference was I guess the endless stalemates caused by the developing world's expectation that the developed world would find equitable solutions to this problem.

In other words, you know, the rich nations would pay for the poorer nations to get rid of these chemicals, and the developed nations!| resistance to that pressure, !!!OWhy should we have to pay?!!L Is the desire for an equitable solution to the threat of of climate change likely to derail any global negotiations on this?

PETER CHRISTOFF

It certainly is the sticking point at this stage. If you look at the negotiations over the next part of the Kyoto Protocol it!|s very clear that the United States is refusing to talk about targets because, in particular, of China. The developing nations, led by China, the G77 Block is also refusing to participate because the climate treaty - the United Nations framework convention on climate change, and the protocol very clearly say that it!|s the developed world that has historical responsibility for the problem and has to do the first and hardest task. And also, the developing countries have got very legitimate reasons for continuing to develop. Theirs is not a case of luxury emissions, their!|s is a case of emissions based on need. So at this stage, we do have a stalemate. Having said that, some of the developing countries are well aware of the problem. The Chinese for example have done very substantial work with their 11th national plan, with their National Climate Change plan and legislation on renewables. Domestically, they!|re well aware that unfortunately there!|s the poorest countries and the developing world which will be most substantially affected by the !V the terrible outcomes of global warming. So, they!|re not actually standing still. My guess is that the log jam will be broken but it will only be broken effectively and quickly if the developed world say they will pay substantial amounts of money and transfer wealth and technology to the developing world and deal with the issue of equity.

SIAN PRIOR

So this is how we get beyond the impasse do you think?

PETER CHRISTOFF

Well I !V I think that there are a number of things that really could be done. The first is this, the Kyoto Protocol at the moment depends on an annexe which has got the developed countries in it. I think actually we now need another annexe for the major emerging emitters; China, India, Indonesia and Brazil. And they should be given special rights and special conditions. The special rights would be a massive transfer of technology and money to countries which between them have somewhere in the vicinity of about half the world!|s population. So, when we!|re talking about equity, it should be a substantial equitable outcome as well as a good climate outcome. But the deal would be that they would have to accept emissions targets. Initially, a reduction in growth, but then after that, a reduction in total emissions as well. On the basis of massive transfers of wealth I think this is not too big an ask.

SIAN PRIOR

So finally, Peter Christoff, what are the prospects that the USA will join the club, will take the prospect of dangerous climate change very, very seriously indeed and help the rest of the world to !V to tackle this solution?

PETER CHRISTOFF

I think this is a critical issue Sian. On the one hand I think a lot of people are waiting for the next presidential election in the hope that when we get a new president of the United States he or she will be much more enlightened about the issue. It's very clear that Congress has shifted, not only because it's a Democrat-led Congress but there has been a very substantial sea change in its views about climate change and a much greater preparedness to deal with the issues and to recognise there are economic benefits, not just losses. And thirdly, I think that if you look at America, America is a very diverse and very complicated political landscape. At the sub national, at the state level you have some very powerful examples. For example California has promulgated legislation, is moving very, very fast to reduce its emissions and !V

SIAN PRIOR

80% reduction target!K

PETER CHRISTOFF

80% reduction targets which are quite extraordinary by 2050, and I think the dynamism in the American scene is probably not well reflected in its current negotiating position. I'm modestly hopeful that this'll change.

SIAN PRIOR

We'll modestly hopeful, we'll all keep our fingers crossed. Many thanks for joining us today Peter.

PETER CHRISTOFF

Thanks Sian.

SIAN PRIOR

I'm Sian Prior and my guest today in Melbourne University Up Close has been Dr. Peter Christoff, a political scientist who coordinates environment studies in the School of Social and Environmental Enquiry, here at the University of Melbourne, Australia.

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