

## DEBAT

### **Donald Johnston, président de la Fondation McCall MacBain**

I am glad we heard from India's spokesman. I have been worried about reports over the last two weeks concerning increased coal production, licensing, etc., in India. One city were putting in regulations for pollution control, which they changed because people were out of work, and when you have this conflict between economic growth and jobs it is easily understood and we have to be sympathetic to it, but it is one of the dilemmas that India is facing which is really tough. All I can say is what I said at the outset, in the words of Lewis Mumford, I am still optimistic about the possibilities, but I am very pessimistic about the probabilities of coming to any consensus.

### **Anil Razdan, ancien ministre de l'Energie de l'Inde**

You are right; there is a lot of debate on easing the pollution norms, particularly in coal mining areas. The last government introduced what they called a Comprehensive Environmental Pollution Index for the entire area, and in that you were not allowed to expand existing mining from within the licensed mining areas. The coal mining industry asked why they were stopped from expanding their mining, and that the government should go after all the people who were exceeding their own pollution norms, that as long as they were within their norms they should not be obstructed from increasing coal mining. The Government has agreed to that.

Increased coal production in the coming years is long overdue, and in fact coal production in India grew by only 3% over the last eight years, whereas energy grew by 6% to 7%, so we had to import 20% of our coal from Indonesia and other countries, which was putting a burden on the prices and also on the transportation network, because port capacities had to be developed for handling and transporting coal from those locations to the hinterland. There had been a suggestion for quite some time, which is now being implemented, that power stations using imported coal should be located on the coast and not in the hinterland.

### **Marie-Roger Biloa, présidente, Africa International Media Group**

I have a question for Professor Seung-Hoon. I do not know if I understood you correctly, but you mentioned equal emissions and mentioned something in connection with developing countries. Do you mean that, in order to reduce pollution and carbon emissions, developing countries will at some point have to restrain themselves as far as industrialisation is concerned? You know that there is an issue about that, that they feel it is too early for them to reduce everything connected with industry, because they are not the ones polluting the world right now, and they still need to develop their own economic and production systems. Do you mean that at some point everybody should reduce to the same level of emissions even though the level of development is not the same?

The second question is about nuclear energy, which was accepted as a normal energy source. Is it accepted that there are no questions to ask about it?

### **Lee Seung-Hoon, professeur émérite, Seoul University**

My proposal is actually very schematic. I know that developing economies need more energy to drive their economic development, and that means they may not be able to reduce their emissions, but at least they have to adopt the technologies and means to reduce in the future. Reducing emissions is not something that can be done on the spot,

but should be undertaken over time, so what I am saying is this. No one can insist on equal rights for every individual from the beginning; I do not think that will be accepted by the Americans, Europeans, Japanese or other developed economies. If the big emitters do not agree with the principle, the principle is useless, so we should consider the situation of those big emitters so as to minimise the shock to them, on the basis of the equal reduction principle.

However, equal reduction may mean that even developing economies must reduce their emission of greenhouse gases. But perhaps you may be able to trade off your future obligation against present needs, so that you may now emit more than is allowed under equal reduction, and in total, after ten or 20 years, your emission quota is fulfilled. That is what I was saying. Therefore, according to my scheme, if it is adopted, then it is most likely that developing economies will sell their rights to develop their economies, and that money is a very useful resource for developing countries with which to buy advanced green technologies, so you can continue your economic development by greening your energy consumption. That is what I am saying.

#### **Anil Razdan, ancien ministre de l'Énergie de l'Inde**

I just want to comment on these two observations. When we talk about emissions quotas, it necessarily brings out the concept of per capita emissions, and if you use that as a base, you have to understand that the developing world needs to increase its per capita limits. It has to be within reasonable limits, and I agree that you cannot go in for an unbridled growth strategy on fossil fuels. However, if there are cleaner technologies, there are issues on IPR, and this must be funded directly, and not through a CDA mechanism alone. There was a CDA mechanism in place, but at the moment it has collapsed owing to the carbon price. That mechanism, in the view of many developing countries, provided a mechanism for only the developed countries to increase their own industrial output, and a market in the developing countries for sure, without really understanding a universal obligation to make cleaner technology available worldwide. Just as in the case of combatting tuberculosis or any other scourge, there is international funding for that. You do not ask the afflicted country to pay the price if there is an epidemic.

Therefore, we do need clean technology in the future, and it is a burden that must be shared equally by all, because there is a difference between what you can afford today and the next higher price for clean technology. The case for a country like India, at least, is that we will not want the entire technology for free, but that the difference between the two has to be borne by those countries who have a higher per-capita emissions share, so that there is equity in the whole structure.

#### **Richard Cooper, professeur d'économie à l'université d'Harvard**

The second question was on nuclear power. Do you want to comment on that?

#### **Anil Razdan, ancien ministre de l'Énergie de l'Inde**

Regarding nuclear power, safety is a major issue, particularly after what happened in Fukushima, and in fact in India we had to substantially delay the commissioning of one of our nuclear plants because there was local agitation, and the very clear signal given to them was that, even if they had to delay it by a year or two, they had to make sure they took the public into their confidence and double-check that all the systems were in order. The fast breeder reactor in fact was also slowed down a bit, but we believe in safety first, and of course nuclear is an option which we believe is there for India, because we want to get to our stage three, which is the utilisation of thorium, which we have in plenty. We are committed to that and I think we are moving towards that.

**Marie-Roger Biloa, présidente, Africa International Media Group**

What about the waste?

**Anil Razdan, ancien ministre de l'Énergie de l'Inde**

Regarding the waste, we believe in recycling. We believe that the waste issue is more to be found in countries which do not believe in recycling, because you have to recycle and get the best you can out of it. There are of course some very obstinate compounds and elements that need to be stored safely - research has been done for a long time on this - and we believe in vitrification of the waste and then safe storage, not just storage without vitrification.

**Richard Cooper, professeur d'économie à l'université d'Harvard**

Adding to that, waste disposal is largely a phoney issue, that we just got off on the wrong track, and I agree with what is implicit in what Anil said, which is that we want to store this stuff where we can see it, and we want to vitrify it. There is still a lot of unused energy in the waste, and there is no doubt in my mind that, a generation or two from now, the waste of this generation will become the resource of the next generation. We have seen that cycle again and again with other natural resources.

I will not try to sum up. I will introduce Marie Claire, who is our rapporteur, and we will discover tomorrow morning in a coherent form what we have been talking about this morning. She has the challenge of putting together a brief report on our findings. However, I cannot resist saying one thing as an economist, which is that the only way to reach all of the decision-makers when it comes to using energy is through the price system, and if you think about it there are about a billion of them. All the households and firms in the world are the real decision-makers. The only way to reach them is through the price system, and that leads naturally to the suggestion, as we heard from our friends from Total, that we should put a price on carbon. That has the great advantage of generating revenue, and if the revenues are used wisely, it can be shown that cutting back on greenhouse gas emissions is growth enhancing, not growth retarding, but the key is to use the revenues in growth-promoting ways.

That is just a thought to leave with you. I think the COP is on completely the wrong track, as I said earlier, when it comes to a global arrangement on climate. It is possible, but only if we reformulate the task. Let me thank you all, particularly the speakers, for a very stimulating session.