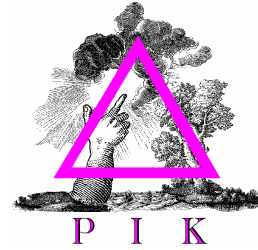




**ACTION FOR
A GLOBAL CLIMATE
COMMUNITY**



High-Level India-Europe Conference

Potsdam, 27-29 May 2008

*Organised by
the Potsdam Institute for Climate Impact Research
& Action for a Global Climate Community*

*With the support of
the European Environment Agency
the Heinrich Böll Foundation
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Chandrashekar Dasgupta, Professor Margaret Kamar (Vice Chancellor, University of Nairobi).

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For research papers and presentations for the seminar and details of follow-up work, please visit the organisers' websites:

Action for a Global Climate Community
www.climatecommunity.org

Potsdam Institute for Climate Impact Research
www.pik-potsdam.de

Introduction and summary of key points

The Potsdam Seminar brought together 71 distinguished Indians and Europeans to discuss cooperation on Climate Change and Sustainable Development between 27th and 29th May 2008. The event was jointly organised by the Potsdam Institute for Climate Research (PIK) and Action for a Global Climate Community (AGCC) with support from the European Environment Agency and the Heinrich Böll Foundation.

The event began with a meeting of EU Commission President Barroso and his Advisory Group on Energy and Climate Change with members of Prime Minister Manmohan Singh's high level advisory group on climate change.

President Barroso opened the Seminar with an overview of EU action on climate change and the substantial common ground between Indian and EU positions. Both parties are working together through the EU-India Initiative on Clean Development and Climate Change and a new EU-India Energy, Climate change and Clean Development Work Programme, agreed at the 2007 EU-India Summit.

Contributions from Professors Carlo Rubbia, John Schellnhuber and Rajendra Pachauri presented the overwhelming scientific evidence for the immense dangers of climate change and the limited time we have to avoid them.

Chris Layton, chair of AGCC, set out a vision and practical steps for India and Europe to lead the world in sustainable development and climate change through a 'community of the willing' based on equity, drawing on the experience of the European Community in creating an international legal framework for resolving conflicts and sharing resources between rich and poor countries.

The seminar explored issues of equity, emissions trading, financing development and institutional arrangements under Chatham House rules, enabling a free-ranging discussion, summarised in reports on each session. Recurrent themes include:

- a) The overwhelming need for economic development to help the 700 million Indians living in poverty, without electricity;
- b) The responsibility of Europe and other industrial countries to cut CO₂ emissions and finance clean development and adaptation in India and other developing countries;
- c) The importance of equity, justice and practical solutions as the basis for cooperation;
- d) The need for stories and accessible ways of involving people from all sections of society in tackling climate change.

In the final session, the ongoing co-chairs discussed a statement of key points for deeper cooperation between India and Europe (see page 26). It was agreed to

- a) Communicate the substance of these discussions to the relevant European Institutions and Ministers of the EU and India;
- b) Create a joint Indo-European Working Party to explore a joint and equitable approach to the challenges of climate change and development;
- c) Develop specific proposals for the India-Europe summit in September and a further Euro India meeting in Delhi early in 2009.

We look forward to closer cooperation between India and Europe to tackle climate change through sustainable development.

27th May 2008

Opening statement and welcome by the President of the European Commission

Let me begin by thanking the joint organisers, the Potsdam Research Institute for Climate Change Impacts and "Action for a Global Climate Community". These two organisations are complementary with one looking at the impacts of climate change and the other one trying to find ways to reach a global agreement to combat climate change. We need you both, and I am delighted this ambitious event is taking off.

I'm on my way to Bonn for the UN Conference on Biodiversity, where I shall be opening the conference with Chancellor Merkel.

I have just come from a very interesting and rewarding joint meeting between my Advisory Group on energy and climate change, and their Indian counterparts, the first – I hope – of many such exchanges.

I wanted to take the opportunity to set out where I think we are in the international negotiations, in the run up to the Copenhagen conference.

Our shared starting point, I am sure, is that the compelling scientific evidence, the concerns of our citizens and the potential implications of climate change demand nothing less than an urgent and determined global response.

The most efficient way to avoid the most damaging effects of a changing climate is to reduce global greenhouse gas emissions steeply and rapidly. Our objective is to limit global warming to at most 2 degrees Celsius. This means halving global emissions by 2050 compared to 1990. This effort is a huge task, but it is technically and economically do-able.

Of course, it is clear, that with a rapidly diminishing share of 14% of global emissions, the EU cannot act alone. So, this evening, I want to briefly set out what the EU is doing to meet the challenge and to encourage others to act.

Last year, EU leaders committed to a 20% reduction of greenhouse gas emissions by 2020, and an even greater reduction by 30% if an international climate change agreement is reached. They also agreed to a 20% improvement in energy efficiency and a 20% share of energy from renewables by 2020.

In addition the shift to a low-carbon economy should spur a wave of innovation and job creation in clean energy and high-efficiency technologies. And it will do so at a manageable overall economic cost in the EU of some 0.45% of GDP in 2020, which is far less than the cost of simply letting climate change happen.

All of you here know more than enough about the details of our climate change package. Instead, I would like to focus on the contribution our proposals should make to strengthening climate action globally. The package contains four important elements in this regard.

Firstly, the proposals are structured so that the required level of greenhouse gas reductions increases automatically when the EU ratifies a global and comprehensive post-2012 agreement, so we are ready to take deeper cuts as soon as others come on board.

Secondly, when the EU ratifies a new post 2012 agreement, both Member States and companies in the EU emissions trading scheme will be allowed to use significantly more international emissions credits, for example from the Clean Development

Mechanism, or CDM, but only from countries which are also ratifying the agreement. This creates an incentive in particular for developing countries to engage.

Thirdly, our approach to effort-sharing between different countries is intended to be based on fairness: distribution of the effort among economically diverse countries allowing poorer countries to continue to grow. We are, in fact, giving practical effect in the EU to the United Nations principle of "common but differentiated responsibilities and respective capabilities."

My fourth and final point concerns the EU's emissions trading scheme. Emissions trading, embracing market principles, is the key tool for achieving emission reductions at the lowest cost. For us there is no question that the global carbon market must play a central role in a post-2012 climate agreement in order to limit the costs of the deep emission reductions that will need to be made globally.

The EU and India have more in common in their positions on climate change than one might imagine. We agreed in Bali on the need for all countries to take action, and on the need for developed countries to take the lead. We both accept the fundamental principle of common but differentiated responsibilities. We recognise the need for greater flows of technology and financing from the developed to the developing world to help tackle climate change. We both believe energy efficiency is important. We are both clear about the need to help those who are most vulnerable adapt to the inevitable impacts of climate change. And we are clear that we do not believe Kyoto-style targets should be asked of India in the immediate post-2012 period.

However, I believe that we do need to find ways to ensure that the economic development of India, which is an entirely legitimate objective, is as sustainable – in every sense – as possible, and benefits from avoiding the carbon-intensive growth that has been the prevailing pattern in OECD countries.

India is the Clean Development Mechanism (CDM) host country with the highest number of projects. The EU and India have benefited greatly from the link between the EU ETS and the CDM. However, let me be clear: there is still room for improvement. We need to work together to improve the functioning of the CDM as well as to develop new, innovative instruments going beyond the project-by-project approach of the current CDM. This could include for example sector-based approaches. The EU-India Initiative on Clean Development and Climate Change, established in 2005, is the perfect forum in which to do this. We are also looking forward to the agreement of a new EU-India Energy, Climate change and Clean Development Work Programme, as agreed at last year's EU-India Summit.

My feeling is that this meeting will definitely contribute to a closer bilateral collaboration between the EU and India, within the scope of the United Nations and in other fora to tackle the global challenge of climate change together.

I wish you a very successful work over the next two days and a pleasant stay in the beautiful town of Potsdam.

José Manuel Durão Barroso
President of the European Commission

Seminar programme

27th May

Reception & Welcome Address

José Manuel Barroso President of the Commission of the European Union

Prof. Carlo Rubbia, CERN, Nobel Laureate 1984

28th May

Welcome

Prof. John Schellhuber CBE, Director, Potsdam Institute for Climate Impact Research (PIK)

Sir Crispin Tickell, Director of the Policy Foresight Programme in the James Martin Institute, Oxford University

Joint Chairs

Nitin Desai, former UN Under-Secretary General for Economic and Social Affairs

Peter Sutherland, Chairman BP; Chairman Goldman Sachs International

Introductory Speeches

Christopher Layton, Chair, Action for a Global Climate Community, Hon Director General, The European Commission:

“Building a joint India – Europe response to Climate Change and Sustainable Development”

Response – **Suresh Prabhu MP**, former Environment and Energy Minister, India

Session I

Fairness and Burden-Sharing

***Dr. Prodipto Ghosh, Dr. Jacqueline McGlade, Prof. Jyoti Parikh, Pavan Sukhdev, Nicole Wilke**

Session II

Market Mechanisms, Financing & Development

Ambassador Chandrashekhar Dasgupta, Dr Kirit Parikh, Claudia Kemfert

Session III

Institutional Considerations

***Prof. Viriato Soromenho-Marques**

Keynote Speakers

***Prof. John Schellhuber CBE**, Director, Potsdam Institute for Climate Impact Research (PIK)

Dr. Rajendra Pachauri, Chair, the Intergovernmental Panel on Climate Change; Director, The Energy and Resources Institute (TERI)

29th May

Session IV

Discussion of reports of the rapporteurs and agreement on next steps

*Communications **Raj Chengappa**

* Presentation on AGCC website www.climatecommunity.org/PotsdamSeminar.html

Towards ten billion human beings on Earth?

by Professor Carlo Rubbia, CERN (Geneva), Nobel Laureate 1984 (Physics)

The population of the planet grows every second, with three new human beings being born, mostly in the developing countries. Two hundred and sixty thousand every day and 90 million every year. Every 200 days a new population as large as the one of Italy is born, grows and makes use of the planet's resources.

Such an impressive growth and development of the human population is one of the most extraordinary evolutions of planet Earth and will definitely modify the future of mankind and of every other animal and vegetal species. During the 4,300 million years of the solar system, the appearing of *homo sapiens* and the development of speech, languages and fire all occurred less than one million years ago, namely in the last 20 seconds of the 'day' of the solar system.

How many human beings were alive a million years ago? The answer is very simple: about 100 000. At the time of the last glaciation, when the passage between Asia and America was open to walking, the human population was between one and five million. About 7,000 years ago, when the population was between one and five million, the fast growth of the level of the seas of over 120 meters has probably been the cause of a fast catastrophic event (the universal deluge), of which traces are retained in most of the mythologies and in the Bible – probably the poetic message of a real event, perhaps the break-up of the isthmus of the Bosphorus and the flooding of the Black Sea. From this moment, the level of the sea, and more generally the climate, reached the absolute stability that has been the first cause of the extraordinary subsequent development of the human species, a stability which unfortunately today man may destroy in a short time to come.

Initially, most probably from Africa, man progressively invaded the rest of planet Earth, taking advantage of climate changes and of glaciations recently so well described by Cavalli Sforza, with the help of results based on DNA. The role of Neanderthal man, who appeared mostly in southern Europe, remains a mystery, very similar to Cro Magnon man who was mysteriously extinguished about 20,000 years ago. It is not clear if the Neanderthals could have merged with our ancestors, or if they were a completely different race, without the possibility of fertilization with Cro Magnon. We do not know whether it was because of a war/extermination by the Cro Magnons or an illness that Neanderthal man so abruptly disappeared. In a few years such a mystery may be perhaps resolved with the help of the DNA.

At the times of the Neolithics, of Mesopotamia, of Egypt, of the written language and of the first agriculture, the population on Earth was about 10-15 million. At the beginning of the Christian era we were between 100 and 250 million. Around 1500, well after the time of the fall of Rome, the first Universities, the geographic discoveries and printing were all created by a population of 400 to 500 million individuals. We must wait for the Industrial Revolution, modern medicine and so on to arrive to the first billion people in 1850. For the second billion we must wait for the year 1930, which incidentally is around the time I was born; for the third billion the year 1960; for the fourth the year 1970. Today we are approaching the 6.5 billion mark. During the short period of my own life, the population has multiplied by a factor of four and the energy consumption by a factor of 16.

Today the population grows at the rate of about one billion units every decade. Never before has anything similar occurred. The total number of individuals who have lived in the whole history of our planet is estimated at between 80 and 150 billion. Today there are around six to nine per cent of human beings who ever existed on Earth.

Food represents the most elementary amongst all needs of every animal species, evidently including man. Agriculture nourishes, more or less correctly, six and a half billion human beings. More or less correctly, since it does not prevent 850 million amongst them suffering from hunger. But in which way will it be possible to respond to the increase in demand represented by the nine billion people who will be around by 2050, and maybe the 12 billion by 2100? This is a problem which churns the international community. Less, however, than those of global warming and lack of water, although strictly connected to them. But it represents, just like these, a challenge of planetary dimensions that will represent an additional impending threat for humankind in the near future.

Some alarming signals have already begun to appear. The world's reserves of cereals have substantially diminished during recent years. After having represented for decades a reserve of at least six months of global need, they are today approaching less than three months. The price of food commodities, which for a long time represented a tendency toward a decrease, is now undergoing a strong pressure towards a rise. The demand grows faster than the supply. The price of rice, which is a main supply for about half of the world's population, has increased by a factor of three.

But what is the problem? Agriculture has coped well with an increase in the population of four billion people during the XX century: why can we not manage with equal success an additional growth of several billion people in the next forty years, in order to reach the year 2050? In reality the situation for the future is very different from the one of the past, when we have done easily more with the help of additional resources: more land, more mechanisation, more chemistry, all with cheap and abundant energy. Tomorrow, instead, we will have to do more with less.

Land: Between 1945 and 2000 man has put into production more land than during the XVIII and XIX centuries together. But today, the physical limits of the planet are approaching. Even if virgin lands still exist in the Amazon, in Africa and in tropical Asia, they cannot be conquered without destroying forests, essential to the ecological balance of the planet and without creating enormous environmental problems, for instance accelerating global warming. Furthermore, from the other side, agricultural land is disappearing under the impact of urbanisation, erosion and the presence of salt waters.

Water: During 1950, each human being had the availability of 16,800 cubic metres of soft water. In 2025 there will be only 4,800. Agriculture has been able to increase productivity strongly, with the help of the massive irrigation of 200 million hectares created during the XX century. But these times are over. The existing dams have been those that were the easiest and less costly to build. In the future they will be much more complicated and more expensive. The underground sources of the globe are solicited in a free-fall mode. Climate change, reducing the extent of the glaciers, reduces the summer flow of rivers. During the XXI century we shall be able to irrigate at the most 400 million supplementary hectares. And electricity, also in fast growth, is a massive consumer of water, with 5 litres for each kWatt produced.

Chemistry: During the XX century chemistry has provided a 'miracle' solution, with nitrogenised fertilisers, much more efficient than animal or bird excrement previously used. But an equivalent miracle solution does not exist for the XXI century.

Biology: We must look for other solutions, a possible way being biology, maybe a miracle solution of the XXI century capable of preserving the environment and at the same time improving efficiency. Chemistry made the production artificial, supporting it with many man-made products such as fertilisers and pesticides. Biology has instead, as a task, the role of returning to nature, searching the basic functions of plants and making them more efficient, soliciting and accelerating natural

mechanisms. But the use of genetically modified organisms (OGM) encounters major opposition, in Europe strongly supported by the media.

On a more general level, the biologic revolution represents today more of a promise than a reality, requiring a huge amount of research in order to give the full dimension of the potentials, and on a very short timescale in order to enable the required changes. It is not easy to imagine how Governments and local communities will be able to organise themselves, and the market adapt itself to such a change, in such a short time.

As in the cases of energy and food there are enormous differences between the advanced and the developing countries. But improvement factors are also possible in this field, with increases in efficiency, modifying the quantity and types of food in order to create space for the newcomers. The most important is represented by animal breeding which uses much more calories than it produces. The ratio is four to one for chicken and pork and it rises to 11 to one for ram or ox. One kilogram of grain requires on average 1,100 litres of water; a kilogram of ox requires 13,500.

And these values are in continuous growth. For instance during the Fifties the French were using annually far less meat than today: 44 against the 88 for meat, 10 against 25 for fish and five against 18 for cheese, compensating the reductions in bread (112 against 60) and potatoes (153 against 65) with animal products.

Today China produces slightly more milk than France (29 against 25 billion litres), notwithstanding a population twenty times larger. But what would happen instead if countries in full development like China and India and so on, traditionally poor of breeding and consuming animals, would progressively approach the kind of food supply of the US for instance, with a powerful multiplying factor due to consuming more meat?

Contrary to what is generally believed in advanced countries, the food supply is not only a problem of the past, but one of the main uncertainties of the future. This is the situation even when – so far too often – we look around us and the general concern seems not to go to the question of how we are going to nourish all people of the world but to the one of making most of us lose weight!

No doubt, the most influential politicians must not neglect the best information specific to those with the highest competence and deepest experience in these fields. Without these contributions, the political arena may become void of real content. As well said by Macchiavelli in *The Principe*, true political power is based on the capacity to predict the main events of the future well before they are visible to all, since by then, in the very moment when everybody sees them, there may no longer exist any possible solution.

28th May 2008

Introductory Speeches

Cecilienhof in Potsdam is the place where the political geography of Europe was decided after the war in 1945. The political geography was redrawn again in 1989 when the Berlin wall came down. We now need a new exercise to redesign the geography of the world to address climate change and sustainable development.

The Potsdam Institute was started soon after 1989 and plays a leading role in the science of climate change and advising German Chancellor Angela Merkel.

Climate destabilisation is triggering many other problems, such as resource displacement, waste disposal, water, sea level rise and species destruction. We also need to address issues of energy, a different model of development and growth, and stronger global institutions to address these problems.

There is no bigger issue before the world than climate, and no country can tackle it on its own.

“Building a joint India - Europe response to Climate Change and Sustainable Development”

Christopher Layton, Chair, Action for a Global Climate Community; Hon Director General, European Union:

The purpose of this conference is to catalyse a new and positive relationship between India and Europe which enables us to address together the existential challenges of development and climate change.

For half a century, the most important moral and practical task of statesmen has been to lift the world's majority out of poverty. The conventional solution, East and West, is to pursue economic growth on the lines initiated by the European and industrial revolutions and extend this to the rest of the world. Now, just as Asia emerges to take back the global economic leadership which it briefly lost to Europe some four hundred years ago, and India comes of age as a rising superpower with a real prospect of lifting a majority of its population out of poverty within one generation, climate change threatens to bar the way. Climate change shocks us with the brutal realisation that we have one planet and one atmosphere, not six, and that the unchecked use of fossil fuels is suicidal. We need to find new ways of sharing the world's wealth and skills so that we all can adapt to the harsh climate change that is already under way and find new forms of sustainable development to bring right livelihood for all the world's citizens in the post carbon age.

The bulletins from the front line of science are shocking:

- a) That carbon in the atmosphere, though essential to life on earth, has, through human action, rocketed up in two short centuries to a level not experienced for at least half a million years;
- b) That in consequence average global temperatures have already risen by over 0.6 degrees Celsius and will almost certainly exceed a 2 degree increase during this century even if we achieve political miracles - and could rise to 4 or even a horrifying 6 degree increase if we fail to change and act;
- c) That harsh facts have outpaced climate predictions throughout the last twenty years;

- d) That the poorest and least privileged are already suffering most from the changes unleashed initially by the fossil fuel burning of the rich north;
- e) That India's grim share of the burden is already being felt through melting Himalayan snows and glaciers, floods, disturbed monsoons, drought and disrupted food production with risk of worse to come.

Beneath the cautious forecasts of the Intergovernmental Panel on Climate Change are growing signs of more ominous chain reactions: weakening carbon sinks, rising methane emissions from seabed and tundra, movement of the great Greenland and Antarctic ice sheets whose melting could raise sea levels threatening London, Holland and New York as well as Mumbai, Shanghai and Alexandria and the world's densely populated coastal plains.

Yet despite these warnings, emissions of greenhouse gases continue to rise faster than ever. The countries of the developed world have collectively failed in their Kyoto pledge to cut back emissions below the 1990 level and emissions from developing countries are soaring up.

Six months ago a group of Nobel prize winners met in Potsdam and declared:

"Humanity is faced with the major challenge of making a drastic reduction in Greenhouse Gas (GHG) emissions, which will require transforming lifestyles in rich countries, while meeting urgent development and growth needs in the poorer countries, the home of the vast majority of humanity who have the right to development. Ensuring that an estimated nine billion people can live a decent life requires, above all, access to affordable, sustainable and reliable energy services, which are currently based almost exclusively on fossil fuel resources and unsustainable use of traditional fuels. The issue of "carbon justice" and the urgency of the matter at hand require unprecedented cooperation and timeliness in response.

Is there a way of addressing both environmental destabilization and persistent underdevelopment? Yes, there is, but it has to bring about rapidly and ubiquitously a thorough re-invention of our industrial metabolism – a Great Transformation. This is an awesome challenge, tempered only by the fact that we have at our disposal a unique array of human skills and knowledge, ready to be mobilised, had we the collective wisdom and political skills."

All of us must hope that the post Bali process within the UNFCCC will succeed in initiating that great transformation. But so far at least four key elements have not been addressed:

- a) No targets for limiting carbon concentrations and cutting global emissions have been agreed, even though the science suggests that a tough target say of cutting concentrations to no more than 450 parts per million of CO₂ equivalent is needed to avoid catastrophic change;
- b) The principle of equity, at the heart of the UN Convention, has not been effectively addressed;
- c) The rich North has not taken real action to help developing countries with technology and money to fulfil their right to sustainable development and adapt to climate change;
- d) We lack an institutional framework that can bind and unite partners from the North and South of the world in a framework of solidarity and shared responsibility.

As organisers of the conference, we dare to dream that Indians and Europeans might together examine and address these issues and, in due course, by joint action lead the way to an effective world response. This might be through the post-Bali process

but, despite the welcome evolution of American opinion, that ponderous intergovernmental process may not move far or fast enough to meet the urgent need. In this case, we suggest that willing partners from north and south might lead the way in what I have called a 'Community of the Willing', a vanguard group within the UNFCCC to create such momentum that all will ultimately join.

Why India and Europe? India because, as the world's largest democracy, a leader in the developing world and now emerging in a spectacular way as a global power, it has the ideas and the capacity to share in leading the way into the post carbon age. India also has the political strength to ensure that the North meets its historic responsibility to help developing countries adapt to climate change and transform to a sustainable, new development path. In a challenging and cogent speech last month to Indian Business, Special Envoy Shri Shyam Saran spoke of India's civilizational legacy which places high value on ecological balance and environmental preservation. We all need to learn from that philosophy, but we also need India's ingenuity in creating wealth and well-being in new ways.

Why Europe? Because, for all our shortcomings, we took the lead at Kyoto and are making a serious and committed collective attempt to cut back emissions, thanks to half a century's experience of building multilateral institutions that apply the rule of law. The EU's Emission Trading System was, at first, a learning process but it is now on track to meet Kyoto targets. I am hopeful that, thanks to the leadership provided by heads of Government, notably Chancellor Merkel, and by the Commission, the EU will succeed in meeting its first target of a 20 per cent emissions cut by 2020. Several key European governments, moreover, are ready to accept the basic Indian vision that in due course equity should be applied through the broad principle of equal emission rights for all the world's citizens. It is time to talk.

The phrase 'Community of the Willing' is meaningful. It is not tainted by recent experience like the phrase coalition of the willing, nor temporary as that phrase implies; it means a determined and enduring partnership of equals based on mutual respect and a shared sense of solidarity and co-responsibility.

We have, in Europe, experienced that positive meaning. In the years after the 1945 war, the catastrophic culmination of the imperial idea of domination, it was at last recognised, at first by only six countries, that it was necessary for victors and vanquished, north and south, industrial and rural Europe, to come together in a framework of equal partnership in which the more advanced industrial parts helped the less developed, notably through common financial resources.

The north south world community which we hope for now also has a dark past, the past of colonial imperialism, which still leaves traces in the membership of the Security Council and the dominance of donors in the world's financial institutions. The principles of a global climate community must move on from that, for without justice and a real political equality between north and south of the world there can be no committed joint endeavour. That equality, and not hegemony, must be the cornerstone of a new community, the just condition which all new members must embrace.

What would this mean in practice?

- a) First, establishing a common target for global carbon concentrations based on the latest scientific advice and with procedures for adjustment as new evidence comes in;
- b) Agreeing the principles of equity which would establish each partner's commitment either to reduce emissions to meet the global target or, differentially, to limit their eventual growth. The principle of equal per capita emission rights is one key but when and how to apply this are crucial;

- c) Establishing a common emission trading scheme which can sustain an appropriate carbon price with appropriate institutions to manage it;
- d) Structures for sharing and jointly developing and applying new technology;
- e) Clear guidelines and commitments that express the historical responsibility of developed countries to help developing partners with funds for adaptation and technology and funds for the transition to the post carbon society. There is a need, beyond an expanded CDM, to mobilise financial resources in a way which avoids its central flaw: that developed countries can buy their way out of necessary emission cuts;
- f) A forest strategy that rewards those who preserve old forests, as well as new;
- g) Institutions to take decisions, enforce commitments, manage the emissions market and apply democratic accountability and the rule of law;
- h) A framework for associating and bringing in new partners from north and south.

This conference can hardly be expected to agree this ambitious project now, but crucial questions for discussion are raised by these principles. Even if the principle of equal per capita emissions rights is agreed, India and some other developing countries understandably suggest that developed countries should first make the cuts required of them, while others, with lower per capita emissions should join the process later. This is one version of what is called the multistage approach. The drawback is that late participation in commitments by developing countries may mean late commitment by developed countries to transfer financial resources to help them. By contrast early commitment to a binding framework such as contraction and convergence¹ or the proposal by Professor Wicke for Carbon Certificates could mean automatic transfer of resources to developing countries through sale of surplus emission entitlements or auctioning of entitlements in the carbon market. And of course, there is the key question of the date when equal emission entitlements apply.

Another crucial question around long term commitment concerns the carbon price. It is tempting for governments to try to agree a limited next step, but in India and Europe and indeed throughout the world a high long-term carbon price – probably over 40 Euros per ton - is needed now to drive investment in new energy, from carbon capture to solar or hydrogen power.

Such key issues require us first to listen to each other and seek out, not just a common view but the best way forward. If we find our discussions fruitful, I hope we can decide to continue the work together, perhaps through the creation of a joint Working Party which will work together and prepare joint proposals to put to a further conference in Delhi. At that stage, or even before, we may have some ideas to put to Governments.

A first practical phase of bilateral Euro Indian collaboration, without formal treaties might then follow, including:

- a) Technology and support for development, for instance: Practical collaboration on electrification of Indian villages, notably through local solar power, and inclusion of India in the European scheme to develop a number of pilot carbon capture schemes for coal fired power stations; adaptation projects;
- b) The inclusion of India in the EU ETS in some way, if possible at this stage;

¹ Source: Contraction and Convergence™ (C&C) is the science-based, global climate policy framework proposed to the UN since 1990 by the Global Commons Institute: - (GCI). www.gci.org.uk/briefings/ICE.pdf

- c) Exchange of key officials (like the important exchanges and meetings of officials which happened in Europe through the Franco-German Treaty)
- d) An ad hoc assembly bringing together members of parliaments from both partners.

This bilateral cooperation would have value in itself and would enhance and deepen the existing India - EU partnership. But this would also be the time to explore, at the level of governments and the EU institutions, the fundamental issues raised by a longer term solution such as a global community for climate protection and development. If the principles of this can be agreed and global negotiations are still faltering, the way might then be open to invite other willing countries, developing and developed, to negotiate a treaty by a fast track procedure.

Such a treaty would create a nucleus or bubble within the UNFCCC, open to all partners who are willing to commit to its key principles, a driving force for the Great Transformation called for by the Nobel Prize winners a few months ago. I invite you to respond to these suggestions in a spirit of critical openness, bringing forward your own creative ideas in the hope that India and Europe may find common ground in meeting the great challenge of our time.

Discussion

Everyone agrees about the problem, which is probably much worse than the IPCC says. What we need is innovation in technology to deal with it, particularly solar power: 1 sq km of land receives the equivalent of 1.5 barrels of oil per sq metre. Saudi Arabia could collect more from solar energy than oil, but there is not enough courage or innovation to achieve it. There is a lot of money swirling around looking for the right technology to invest in, but it needs a clear political framework.

We have not yet grasped the scale of the adaptation problems created by climate change – for example, sewage systems need to be replaced, displaced populations will create environmental refugees, etc. We need to radically rethink the current strategies to decarbonise completely by 2100.

We need cooperation between Indian and Europe on practical issues, and to change the patronising attitudes on the part of the North. We should not be talking about them and us, because India has 200m people who are well off and many companies which compete on a world scale.

However, if all countries had the same per capita emissions as India there would be no problem. Cooperation between India and Europe must recognise the difference in starting points.

Per capita parity is essential, because the blunt truth is people in India want growth. Chancellor Merkel's statement that by 2050 each person will have an entitlement of 2 tonnes CO₂ per person is therefore a step in the right direction.

This is the start of a conversation. We need to be aware of the risks and the costs associated with them, as stated in the Stern report.

Reports from the sessions

Each session opened with one or more presentations, followed by discussion. The following reports aim to convey key points from presentations and discussions, written by the conference rapporteurs team.

SESSION 1: FAIRNESS AND BURDEN-SHARING

Chair

Nitin Desai, former UN Under-Secretary General for Economic and Social Affairs

Summary

The theme of this session was fairness, equity and carbon justice. The presentations looked at India's need for sustainable development. Investment is needed in both mitigation and adaptation. The session explored biocapacity, embedded water, demographic change North and South, and the strong basis for cooperation between India and the EU. The debate needs to be democratised and the issues communicated through stories as well as statistics.

Introduction

After two decades in the process, we need to operate from the basis of principle. Otherwise, the negotiating process is just a bazaar, in which participants haggle over commitments, as happened at Kyoto.

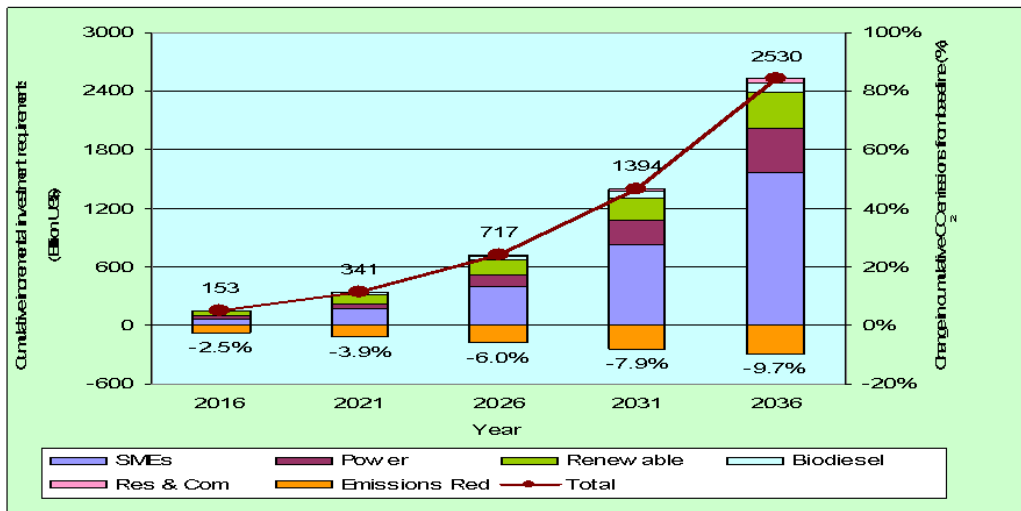
Presentations

Up to 700 million Indians live without electricity. 75% of household energy is used for cooking, with traditional biomass as the primary fuel. This means a high proportion of India's energy is from renewable sources. Half the world's poor live in India, 35% of them live below \$1 a day. India needs 8% growth per year to fight this poverty. As Indira Gandhi said at the Stockholm Environment Conference in 1972, "Poverty is the greatest polluter".

Using the MARKAL model², cumulative CO₂ emissions from various sources in India will rise by over 80% by 2036 from the 1990 baseline. (see graph). The investment needed to reduce GHG emissions by 9.75% below this level by 2036 is \$2.53 trillion. The world has to recognise what this would cost in terms of forgone schools, poverty reduction, etc. Adaptation alone cost just under 2% of India's GDP between 1997 and 2007. This is a higher percentage of government expenditure than defence. India has a vigorous recycling industry, with the very poor recycling up to 70% of household waste. Its railway system carries more passengers every day than the airlines do in a year.

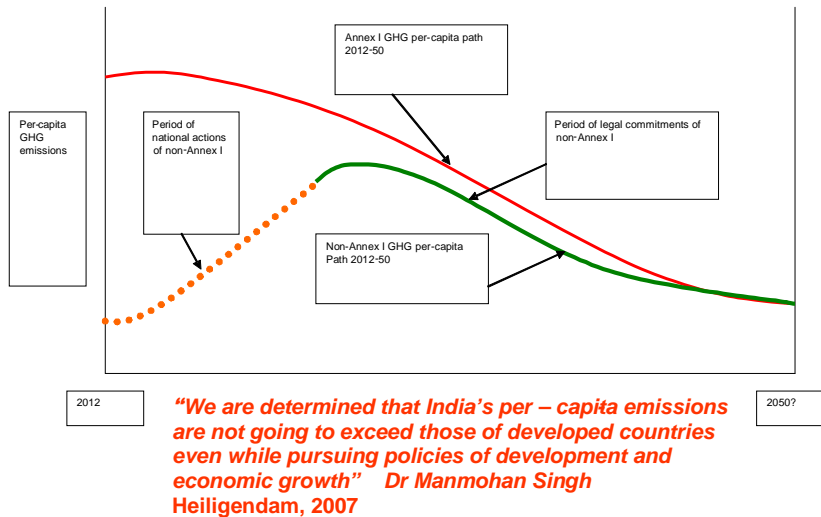
² [MARKAL](http://www.etsap.org/markal/main.html) is a generic model tailored by the input data to represent the evolution over a period, usually 40 to 50 years of a specific energy system at the national, regional, state or province, or community level. See: www.etsap.org/markal/main.html

Starting Point 1: MARKAL model estimates of costs of GHG abatement Cumulative incremental investment requirements in India: 2001-2036



Equal per capita allocations cannot be faulted in principle, but could be difficult to make operational. Prime Minister Manmohan Singh promised that India will not exceed Annex 1 per capita emissions in the process of convergence to equal per capita, stating that convergence towards equal per capita emissions is central to the process of achieving common agreement.

An interpretation of PM Manmohan Singh's statement at Heiligendam June 2007



Attention was drawn to the Stern Report's assertion that "climate change was the greatest ever market failure". Loss of ecosystems and biodiversity is happening now, with bigger effects on the South. Loss of forests, grazing fields, fishing, etc could lead to a complete loss of income. There are large losses of land from nature to other uses. We need to find a way of capturing value, not just measuring it. Attention was drawn to various conservation schemes. An Indo-European institutional framework could take these issues forward. There was a case for a sustainable climate institute involving India and Europe.

Bio-capacity is a key issue. The European eco-footprint has doubled in 40 years, and similar patterns are emerging in China, India and elsewhere. Demography has to be taken into account. Europe is ageing fast. The ratio of four people working to support one retired person is now falling to 2:1. The problem in Africa is potentially even more serious.

There is growing concern about the validity of schemes like CDM in terms of their ability to stabilise or even reduce emissions. We need effective resource accounting, better environmental compliance and enforcement. The concept of 'embodied water' in production is a useful way of determining how best to use scarce water available.

Cities have potential to be powerful engines of change. We need to find time to address the institutional issues that would transform cities especially when looking at transport.

Whilst there is agreement on a lot of things around mitigation, we also need to address adaptation. India needs investment in infrastructure, such as embankments, better shelters and stronger houses. 70% of deaths from the Tsunami in 2004 were women. We need capacity building and help in developing skills. We must practice risk management to reduce risk and share responsibility for responding to disasters, providing safety nets, crop insurance, etc. The idea of sustainable cities and sharing knowledge about how to deal with both mitigation and adaptation was endorsed. India is taking action on renewable energy, waste reduction, solid waste management, reforestation, etc.

We have a good chance of achieving an international agreement following Bali, and Indian-European partnership will do a great deal to pave the way. A successful outcome at Copenhagen must be driven by science, with a commitment to a global figure such as 2 degree temperature rise or 60% emissions reductions. We have a differentiated but common responsibility to act. Europe has agreed a 20% target by 2020, and 30% with a global agreement.

Germany aims to reduce emissions by 40% by 2020, but there is a big challenge to get industry aboard. Germany has proposed 29 different measures, some of which are going through parliament at present. It is important to get the message across that climate and economic policy are not in conflict. Germany is combining energy and carbon policies. Developing countries should make agreements to measure reductions from business as usual, with financial support from industrial countries. New sources of funding for adaptation might include auctioning emission allowances, for example Germany is investing €120m a year in adaptation, in Germany and abroad. Protection of forests is another key issue. Technology cooperation is another key lubricating agent for the process. Money is only one of the obstacles, we need a global agreement to enable us to work together.

Discussion

In debate, the following points were made:

- a) We need to work on both science and politics, but the politics is crucial. Per capita equity is the only fair basis of getting agreement, and we need to look at the institutional links to make it happen. The danger is that the best we can do is limit global warming to 2.4 degrees Celsius;
- b) Fairness and burden sharing need to be built into the processes as well as being a goal to aim for: we need to share the efforts of transforming energy systems, which requires huge investment. This needs to be done on the basis of responsibility and capability, to shield the poor from the burden of climate change. We are responsible for the problem and for solving it;

- c) It is time to move beyond nice words: the graph (fig 1) shows the decline of per capita emissions required in rich countries while developing country emissions rise with living standards. We need a Working Group and models to look in detail at the trajectory of allocations for emissions rights between rich and poor countries;
- d) EU is looking at expanding its ETS to include other countries and schemes, such as California. Auctioning emissions permits could fund the enormous cost of adaptation, such as protection against high levels of sea rise;
- e) We should not just focus on carbon: we should focus much more on investing in the low carbon economy, than on the remaining carbon economy;
- f) Commitment to tackling climate is not necessarily accepted by everyone in India: the case still needs to be made;
- g) By not having a formal commitment, India will not have 'hot air' for emissions trading, but it can make reductions through CDM;
- h) Fairness is understood differently by different countries. There is a big question about how India can meet its 8% p.a. growth development goal unless its emissions rise;
- i) These are all interpretations of a statement which aims to project an image of India to an international audience. The debate in India needs to be democratised. There is a risk of losing people by starting from figures and graphs. India is a country where there are people willing to take a lead. India is doing many different projects, but there is not yet a national strategy. People are beginning to mobilise in cities, tackling issues of adaptation and mitigation;
- j) India's national climate change action plan is due to be published in June (see www.indianexpress.com/story/318373.html for details);
- k) The PM's statement was a major change. India has very low responsibility for climate emissions - 0.8 tonnes per capita. The Indian dream is for a proper house with water and electricity. But India suffers from a double whammy, with the need to end inequality of rich and poorer at the same time as being hit by climate change and the need to limit emissions. The onus on moving to post carbon society is on developed countries;
- l) Growth of cities is a major problem in India: 60% of the population wants to move from the countryside and India needs to create new kinds of cities;
- m) Chancellor Merkel made a serious commitment to equal per capita without grandfathering, but we need to operationalise it;
- n) You can have a complex issue and there is always a simple answer which is wrong. But complex solutions usually don't work either. To save the world we need some simple principles;
- o) Solar power in India is not as expensive as it seems and has no maintenance costs;
- p) Mitigation and adaptation are not the same.

The Chair stressed that fairness has to include future generations, so the limit of a 2 degree rise is fairer to future generations. What we are trying to do is give meaning to the word responsibility - first as accountability, and second as duty as a member of this community. We must use both senses. There is no problem in political saleability to the poorest who are affected. We need to focus more on opportunity. We need to look at liability, using the model of the Superfund. But for the first time we have something people at the political level are willing to discuss.

Conclusion

The Rapporteur noted that it had been an intelligent discussion around the variants of Contraction and Convergence³. Two secular states, India and the EU, appeared to be able to debate religious and ethical subjects such as Equity and Justice. Indian and European ideas had interpenetration over the last three hundred years. He reminded the Seminar that American insistence on a global deal involving China and India had not originally been a blocking tactic and recalled widespread interest in convergence to equal per capita emissions in the months before the Byrd-Hagel Resolution of the Senate ahead of the Kyoto Conference. He stressed the need for some 'early wins' with side benefits such as the issue of Black Carbon and the health benefits of cleaning up urban air quality. Politicians have a key role in turning statistics into stories that command democratic support.

³ Source: Contraction and Convergence™ (C&C) is the science-based, global climate policy framework proposed to the UN since 1990 by the Global Commons Institute: - (GCI). www.gci.org.uk/briefings/ICE.pdf

SESSION 2: MARKET MECHANISMS, FINANCING AND DEVELOPMENT

Chair

Peter Sutherland, Chairman BP, Chairman Goldman Sachs International

Summary

The session focussed on what India is doing nationally and what more could be done with international support. It was argued that emissions trading presumes ownership, so that it is first necessary to allocate the environmental space. Alternative options with and without a cap were explored and some tangible actions were proposed, such as establishing a network of research institutes for climate and adaptation, implementing off-grid lighting solutions; and 'no regrets' investment in cutting CO₂.

Presentations

The first speaker addressed adaptive capacity. The approach to adaptation is quite distinct for developed countries and developing countries. For developed countries, the main focus is mitigation, with adaptation added on. For developing countries however, adaptation is the top priority. Rapid development is synonymous with sustainable development, since it is the quickest way to build adaptive capacity. Anything that slows down development has an adverse impact on adaptive capacity. For the developed world, a trade off exists between higher mitigation effort now vs. higher adaptation effort later. The trade off is different for developing countries.

This view was questioned, by analogy with a bus careering towards a brick wall. Moving towards the back of the bus does not avert the crash. To avert a crash, it is necessary to use the brakes, which in this case means cutting emissions.

Three areas of focus were proposed, namely:

- a) Improving energy conservation;
- b) Improving energy security, and;
- c) Addressing health concerns such as clean air, with a significant co-benefit.

An important distinction was made between activities that would be carried out in a national context, and additional activities that could be carried out in the context of an international agreement. The distinction is between what is being done, and what could be done.

The second speaker explored the role of emissions trading. It is only possible to trade what you already own. It is therefore first necessary to allocate the environmental space. If equal per capita is used as the basis for allocation then there would be no need for any further assistance.

To deal with adaptation costs, new financing mechanisms are needed. This could be done using a Superfund. In 1990 Rajiv Gandhi had proposed a Planetary Protection Fund, funded from 0.1% of GDP. There would be problems if support was provided on the basis of additionality in view of the bureaucracy and micromanagement it would engender. A more simple mechanism is advocated.

India has made significant efforts to reduce its energy intensity, with the percentage increase in energy consumption per 1% increase in GDP having been reduced from 1.34% to 0.62%.

A way forward is to agree a greenhouse gas target (parts per million CO2 equivalents), accept equal per capita allocation of emission rights, and agree the requirement for deep cuts by developed countries.

A global principle with three tiers of obligation could be used, such as:

Level of emissions	Level of obligation
Below global average	No obligation
Somewhat above global average	A limited obligation
Well above average	A high obligation

India has made significant progress in mitigation, including being the first country in the world to have a Minister of Renewable Energy. Appropriately designed incentives are needed. Whilst India has had significant take up of its capital subsidies, an ongoing incentive to produce renewable energy is required, such as a feed-in tariff.

India needs a 15-20 year plan for mass transport corridors between small to medium cities, which are likely to grow rapidly.

The third speaker outlined three alternative scenarios, namely where there is a target, where there is no target, and an in-between scenario:

- a) If there were a cap and trade system based upon an equal per capita allocation, there would be huge financial flows from the high emitting countries to low emitting countries, something that the US would not welcome. A cap and trade system involving a few countries would be less efficient than a universal system. An EU-India scheme would not be a least cost measure, but it would still be beneficial;
- b) If there were no target, a bottom up approach is required, using technology transfer. For example, the EU could offer sustainable transport to India at least cost. Such an approach would only work with cooperation and needs to provide benefits for both sides. Firms need a stable long-term framework to be confident of investing in a low-carbon economy. Feed-in tariffs give security and encourage firms to participate;
- c) An in-between scenario might include the EU, Japan, Australia etc agreeing a target whilst countries such as India and China do not.

Discussion

The subsequent discussion was wide ranging, at times responding to ideas raised by the earlier speakers, but often raising new issues.

The CDM could be developed and used in a very different way from Kyoto, to involve new groups of countries and embrace sectors. For example, domestic plans to increase the percentage of energy produced from renewables in the power sector, could increase the proportion of energy produced from renewables through a sectoral CDM in power generation.

The European Commission has announced that if there is no agreement re post 2012, it will limit external reductions (via CDM) to 3%.

Markets and the use of public funds are complementary. The current CDM does not bring about an absolute reduction in emissions, and a sectoral cap is required.

There is the risk of significant sea level rise due to climate change and there is no upper limit in the IPCC sea level rise projections.

A network of research institutes should be established to look into climate change impacts and adaptation requirements.

The scope for micro-energy solutions was highlighted with the presentation of a 'light in a box' scheme, offering potential off-grid light to the rural poor.

China has redefined the term development as Harmonious Development. This reflects China's policy of three transformations, with the environment and the economy being given equal weight, to produce clean green growth. It was suggested that India needs to abandon its traditional concept of development, but others argued that it had already done so. Resource scarcity with regard to such vital elements of life as soil and fresh water needs to be properly addressed.

Finally the scope for 'no regrets' investment was emphasised. For example, the EU has taken many no regret opportunities and now saves 1% a year, compared with the USA, simply by driving cars with better fuel consumption.

SESSION 3: INSTITUTIONAL CONSIDERATIONS

Chair

Nitin Desai, former UN Under-Secretary General for Economic and Social Affairs

Summary

Effective global institutions are critical for managing the climate crisis. We need the kind of bold initiatives which created the Bretton Woods institutions or the EU. Our current institutions were formed in the aftermath of major wars, but we now need an effective and equitable response *before* the crisis becomes unmanageable. The session discussed several proposals, including a “World Environmental Agency”, strengthening current arrangements, a World Carbon Bank and mechanisms for technology transfer. There was agreement on the need for a network of research institutes to develop solutions to problems of climate, energy and agriculture; to seek a positive outcome at Copenhagen; and that India and the European Union are well-placed to take joint initiatives.

Presentation

The environmental crisis is of planetary proportions, with climate change as the major issue. This escalating crisis requires a response based on a “strategy of trust” which recognises three principles:

- a) Common but differentiated responsibilities;
- b) Acceptance that the earth works according to natural laws, so that institutions and funding mechanisms to take into account the “despotic” character of the earth;
- c) Justice across generations.

Climate change is an “ontological debt” to be paid by succeeding generations, which requires us to take into account fairness and available ecological space. The possibility of war between generations should be borne in mind.

The greatest challenge is political. We need to develop a “common semantics” and an evolutionary process based on trust, with multi-layer and multi-sector institutions to include different groups in a goal-orientated approach to cooperation. We also need to learn from past experience, notably from the formation of European institutions. Here the overarching aim was to make future European wars impossible. The concept of “necessitas” - described by Jean Monnet - should impel the search for adequate institutions for climate governance. Sharing power means increasing power, which is why the most vocal Europeans are citizens of the smaller countries. If the Copenhagen process fails, we should continue a process based on trust to bring the United States on board.

Key points from the discussion

The environmental crisis is happening at the same time as economic power is moving from the West to the East. Politically, the world is also moving from hegemony to cooperation. Food riots are just the start of new upheavals which need to be addressed by healing North/South divisions. A “friendly catastrophe”, where

there is a visible cause and effect, could galvanise public opinion. Given that climate is a global commons, which affects everyone, an element of compulsory cooperation is inevitable.

In Europe, “compulsory cooperation” is created through the European Commission, as the Union’s Executive, with effective parliamentary oversight and judicial institutions to clarify agreed legal instruments and arbitrate on disagreements.

Several different kinds of institutions were proposed to deal with climate change:

- a) Since scientific research has a key role, a network of research institutions could make a major contribution to both mitigation and adaptation;
- b) Some argued that we need a single global body to handle all environmental issues, including climate change. The French had proposed a new World Environment Agency (WEA), similar to the World Health Organisation, to replace the current environmental institutions. UNEP is only a “programme” based on voluntary financial contributions. An Agency could become the depository for all international environmental agreements. Others felt that the clear focus of the UNFCCC would be lost in an organisation with broader responsibilities. A World Environment Organisation similar to, and working in parallel with, the World Trade Organisation, might fit the bill. Such an organisation could oversee international agreements and also push forward technology and research. African nations would strongly oppose moving UNEP from Nairobi to create a WEA. The United Nations is the only universal international institution and the UN Secretary-General has crucial roles to play, including speaking up for the victims of climate destabilisation.

A top-down approach should be avoided if possible. The current UN architecture does not have the capacity to engage civil society and citizens at a local and regional level. The new multilateralism cannot be created by governments alone: NGOs, industry, academics and others should be involved, bringing people together to influence real outcomes, in the form of government negotiations and also partnerships outside government arrangements. Local government had a crucial role to play;

- c) The current international institutional architecture is also inadequate to deal with energy.

The International Energy Agency is not fully international but an emanation of the OECD. We need a world organisation for energy with a formal structure. An Intergovernmental Panel, like the IPCC, could monitor and build a clear picture of the energy situation;

- d) Others argued that we do not need a new organisation but a “friendly umbrella-type organisation” to bring existing agencies together. There was much discussion about the respective roles of the UNFCCC Secretariat and of UNEP. There is a danger of proliferation of international institutions. The matter was urgent because recent rises in food prices had wiped out overnight more than a decade of progress. As a first step, the UNFCCC and IPCC secretariats should be strengthened;
- e) Another option is the appointment of a High Commissioner for the Environment, analogous to the High Commissioners for Refugees and Human Rights;
- f) Emissions trading and a World Carbon Bank could become the core of a new global architecture, more powerful than UNEP or UNFCCC, to drive forward the necessary investment for climate mitigation and adaptation.

Climate change requires many different technological innovations and transfers in agriculture, crop varieties and other topics, for which we need a network of different institutions, including an Adaptation Fund and a Technology Venture Capital Fund. A new technological alliance between North and South, comparable to European cooperation on Airbus or space, is needed for research into drought resistant crops. Agricultural research cooperation in food through the CGIAR system has not worked very well, although it has cost something like \$1bn. India and Europe should concentrate on what is achievable.

Three specific proposals for technology transfer were made:

- Under the CDM, public funds should be made available for the transfer of non-commercial technologies to poor people;
- A multi-national venture capital fund should be set up to support adaptive technologies, such as low-ash high-sulphur power generators, and;
- Compulsory licensing of essential technologies, as for pharmaceuticals, which has provided companies with regulated royalties and kept down the cost of HIV drugs in poor countries.

Current investment in the energy sector is \$10trillion. Just 1% would yield \$100m for investment in innovation. It is vital that funds were well used and monitored;

- g) The United States should be encouraged to play a full part in tackling climate change. The US has valuable experience, such as bottom-up action on climate change by 400 cities and state governors. It was still necessary, however, to make the case in the US that climate change is different from other international treaties which it has not signed;
- h) The UNFCCC process is critical for the period between 2012 and 2017. A strong and legitimate organisation is needed to implement the outcomes of Copenhagen. We should therefore think of what bold creations are necessary: after all, Bretton Woods and the EU were not incremental initiatives, but bold creations.

It is important to focus on a positive outcome from Copenhagen. If there is insufficient progress on technology transfer, development finance and institutions at Copenhagen, a smaller group of countries should push ahead. India and Europe, as heavyweights in the world, could draw in others. An Indian – European group could prepare the way for an eventual global compact.

India had announced an initiative on climate change; now it was time for Europe to seize the initiative and do the same. An immediate priority is to draw up benchmarks for progress at Copenhagen. A Working Group should tackle issues of trust, equity, technology, finance, presentation and information issues.

29th May 2008

SESSION 4: Communications and next steps

Chair

Sir Crispin Tickell

Summary

We need to find powerful narratives which engage people in climate change and focus on solutions rather than problems. The seminar then discussed a draft statement by the two continuing co-chairs and set up a joint Indo-European Working Group to take the process forward.

Key points from the discussion

India should play a leadership role in climate change and bring its capabilities to bear on this urgent global problem. A major shift in Government policy is under way, both in domestic policy and at the global level where Prime Minister Singh had made a public commitment about India's future per capita emissions not exceeding those of developed countries.

Indian citizens are well aware of climate change, since they experienced its damaging effects. They did not need general exhortation or explanation, but practical action with results they can see and experience: a solar light, a crop more resilient to erratic climate or weather, less pollution from a stove or vehicles. While it is always tempting to blame the party in power when things go wrong, like a recent shortage of onions, politicians also had a duty to explain to electors that, for example, the onion shortage was also related to climate change and draw out the lessons for action and policy.

A former Member of the European Parliament said politicians were well aware of climate change and their challenge was to convince electors of the need for change.

Communication about climate change has to find a powerful narrative which is relevant, new and gives examples of action. "A dud product never sells twice" and the lack of action following the Rio Summit and climate change conferences means people are switched off. People need to hear about solutions, things they can do to make a difference, or they will switch off. People are interested in people doing things, creating and inventing, like the solar powered lamp shown as a demonstration.

A joint Europe India website was suggested to disseminating information and the message of shared predicament, shared partnership.

This was then taken into a discussion of a draft statement by the two continuing co-chairs (see following).

**High Level India-Europe Seminar
on Climate Change and Sustainable Development
Cecilienhof, Potsdam, 27th – 29th May 2008**

Concluding statement

by ongoing Co-Chairs Nitin Desai and Sir Crispin Tickell

We start on the basis, now overwhelmingly supported by the science, that climate change is the greatest risk now facing humanity.

In his address to participants to the High Level India-Europe Seminar in Potsdam May 2008, President Barroso said that this event brought together diverse views seeking to converge on a common position. He referred to the compelling evidence of dangerous climate change, citizens' concerns and the need for a global response to bring about steep and rapid reductions in greenhouse gases: India and Europe had much in common which provided a basis for a constructive dialogue.

Our deliberations opened with reminders of the evidence of climate destabilisation as a result of accumulating carbon and other greenhouse gases in the atmosphere and of the consequences, particularly for the poorest.

In response to these challenges, we recognise that the prosperity enjoyed by the industrialised countries, including many within the European Union, was achieved historically by the use of energy derived from fossil fuels, and that it is just that they should bear an appropriate share of the cost of enabling poorer countries to harness energy from clean and renewable sources. We need to identify practical steps that will enable India and Europe to exercise the leadership required to ensure that long term development can be advanced without damage to the planet.

We believe that India and the EU are ideal partners for initiating this promising co-operation on the basis of fairness and equality. As a solidly-based democracy, based on the rule of law, India offers a range of skills and capacities which could be developed in partnerships with European enterprises, not only in industry but also in the green-related service economy. For its part, the EU has taken the lead in negotiating the Kyoto Protocol and moving towards the post carbon economy.

We believe that recognition of convergence towards equal per capita emissions is central to the process of achieving common agreement, as stated clearly by Prime Minister Dr. Manmohan Singh.

We note that clear principles are needed to achieve a democratic mandate and win political support for the scale of the transformation required.

We note that the EU and India are both challenged by climate destabilisation and the impact of possible tipping points, such rapid sea-level rise, sustained drought or black carbon reducing the albedo effect on the cryosphere, especially the Arctic and Himalayan glaciers with potentially dangerous results;

We should therefore resolve to accelerate progress on ambitious and effective climate mitigation and adaptation through interim flexible solutions and quick wins through Indian – European cooperation. Such new initiatives will support the Bali road map process within the UNFCCC framework and bring new impetus to tackle climate change while maintaining momentum towards sustainable economic development.

It was agreed that:

1. The substance of these discussions should be communicated to the European Institutions, Foreign Ministers and other relevant Ministers of the EU and India as a contribution to the EU-India Summit due to take place later this year.
2. An India-Europe Working Group should be set up to explore a joint and equitable approach to the challenges of climate change and development.
3. A further High Level Seminar should be organised in Delhi within eight months to consider proposals, based upon substantive research by the Working Group, into the following areas:
 - a) Processes and institutional arrangements
 - alternative time paths for equal per capita emissions by 2050, on the basis of equal per capita entitlements to the global atmosphere;
 - models to show how such a partnership might work, in both the short and long term, within the principle of equity;
 - the possibilities of linking India with the EU ETS and associated technical issues;
 - a road map to a global emissions trading system the political and economic institutions required to implement such proposals,
 - how an India-Europe partnership might in due course be enlarged to embrace other partners;
 - possible sets of minimum measures for effective action on climate change relevant and appropriate for the EU and India;
 - b) Research and development
 - the creation of a network of European and Indian research institutes on climate-related issues such as sustainable biomass, energy, black carbon, solar thermal, desalination, monsoon dynamics, health, economic impacts, and other issues;
 - c) Finance and technology
 - options for financing adaptation and sustainable development, including:
 - how an India-Europe partnership might promote sustainable investments in ecosystems and the services they provide, including further development of resource accounting and valuation techniques;
 - the scope for local and sectoral co-operation including technology transfer, eco-innovation and intellectual property rights issues;
 - information sharing to promote technologies which offer early success, including sustainable biomass, rural energy development, solar thermal and use of information technology;
 - ways of encouraging joint private sector partnerships to support adaptation and mitigation;

We look forward to a constructive response from Governments and European institutions in support of closer cooperation between India and Europe to bring about practical solutions that can tackle climate change within the context of sustainable development.

Nitin Desai and Sir Crispin Tickell
Cecilienhof, Potsdam, 29 May 2008

List of participants

Europe

European Commission

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Clara Martinez Alberola	Member of President Barroso's Cabinet
Matthew Baldwin	Member of President Barroso's Cabinet
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Claire Albus	Assistant, BEPA
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Members of the Barroso High-Level Advisory Committee

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Nicolas Hulot	Founder, Foundation Nicolas Hulot for Nature & Mankind, Paris
Prof. Claudia Kemfert	Deutsches Institut für Wirtschaftsforschung, Berlin
Prof. Alan Larsson	Former Swedish Minister; former Director-General of the European Commission, Stockholm
Claude Mandil	Former Executive Director, International Energy Agency (IEA) Paris
Prof. Malgorzata Pilawska	Cracow University of Technology, Cracow
Prof. Carlo Rubbia	CERN, (Geneva) Nobel Laureate 1984 (Physics)
Prof. John Schellnhuber	Director, Potsdam Institute for Climate Impact Research (PIK) Potsdam; Chief Scientific Advisor on Climate Change to the German Chancellor
Prof. Viriato Soromenho-Marques	Professor catedrático na Faculdade de Letras da Universidade de Lisboa
Peter Sutherland	Chairman BP, London; Chairman, Goldman Sachs International; Chair of LSE Council

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Peter Rösgen	Leiter Gruppe Infrastrukturpolitik, German Chancellery

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Prof. Jyoti Parikh	Executive Director of Integrated Research and Action for Development

Politics and Administration

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Sandeep Dikshit	Member of Parliament, Congress Party
Dr. Prodipto Ghosh	Former Secretary, Ministry of Environment and Forests; Distinguished Fellow, TERI

Baijayant 'Jay' Panda	Member of Parliament, BJP
Kirit Parikh	Member, Planning Commission, India Industry
Hon'ble Suresh Prabh	4 th term, Member of Parliament, Shiv Sena; former Industry Minister, Environment Minister and Energy Minister
Dr. K. V. Devi Prasad	Science and Technology Counsellor, Embassy of India, Berlin

Business & Industry

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Amit Chugh	Co-founder and Managing Director, Cosmos Ignite Innovations Ltd
Dr Arun Jaura	Chief Technical Officer, Mahindra & Mahindra Ltd
Pavan Sukhdev	Green Indian States Trust

NGOs and Institutes

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