Observer Daily Summary, Monday May 2, 2005

Global concerns
Morning, Monday, 2nd May 2005

Globalisation and Development: French Public Opinion

Moderator: Olivier Chaduteau, Managing Partner, Day One France

Panel: Brice Teinturier, Deputy Director-General, TNS Sofres

Though the French are known to appreciate the good life, they are remarkably pessimistic about their chances of achieving it through globalisation. This was a key message from the OECD Forum's first session Monday which served as a prelude to the main opening session. **Brice Teinturier**, deputy director-general of French polling group TNS Sofres, argued that the French are currently world champions in pessimism.

"The French generally consider that they are living better than their parents did," Mr Teinturier said, "but that their children will do worse than them." Drawing on a Sofres study carried out in 2005, Mr Teinturier said that 52% of respondents believe the French public's circumstances will worsen in the coming year. Only 4% believe they will improve.

The public's greatest source of anxiety is the country's stubborn unemployment, which has risen above 10%. "The French used to believe that politics and politicians could control unemployment, and if you remember, François Mitterrand won the 1981 election on that assumption," Mr Teinturier continued. "He claimed there would never be more than a million unemployed people nationally - and we all know what happened next." Latest figures from the French statistics agency INSEE show there are now 2.8 million unemployed, according to Mr Teinturier.

Other issues worrying the French when it comes to globalisation include declining purchasing power, pension security in light of reforms, the strains on the public health system and social inequalities. According to Mr Teinturier, the French believe globalisation will only make these problems worse: 75% of them say they fear the effects of globalisation. Only 23% of respondents said they aren't afraid. Most of these are young people, those with the highest level of education and the wealthiest.

"The French perceive globalisation as a force that reduces regulations," Mr Teinturier said, adding that the French would favour a more regulated globalisation, with mediation and arbitration, as they see it as a way of reining in some of the negative aspects of globalisation. This is particularly evident in the case of the environment, since 80% of respondents felt more environmental regulation is needed.

Moderator **Olivier Chaduteau** raised the issue of public trust, noting that politicians and the media score the lowest in that regard. Only 28% of respondents said they trusted members of parliament and only a quarter say they trusted the media. "Does this suggest we are living in a society of doubt, where elites are perceived as conniving together?" Mr Chaduteau asked.

Trust in public institutions is being eroded, Mr Teinturier emphasised, noting that at the same time, there has been a rise in trust towards citizens' groups, non governmental and consumer organisations all over the world. "And that's why the French are asking for more regulations," he said, as they believe that rules contribute to a more secure society. "Law is a consequence of fear", he said, quoting British philosopher Thomas Hobbes. "And that means we need the common bonds, the set of common rules that allow society to function."

Mr Chaduteau noted that rule-setting organisations such as the OECD could have an impact in this area and asked how they could regain public confidence. Mr Teinturier considered that the United Nations enjoys a good reputation in France because it is perceived as being respectful of the rule of law. However, groups such as the OECD and the International Monetary Fund do

not enjoy the same level of trust. Some see the OECD has being involved in "removing regulation".

As a result, "the French are not exactly sure what these organisations do," he said, noting that the public doesn't quite know if these groups are working for, or against, globalisation. These institutions could start by doing a better job of explaining that they are working towards ensuring more effective international regulations, Mr Chaduteau suggested.

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Energy truths

OECD Forum: Opening session

Morning, Monday 2 May 2005
Fuelling the future
Security, stability, development

Moderator: Lord Alan Watson of Richmond, Chairman Europe, Burson-Marsteller

Panel: Mona Sahlin, Minister for Sustainable Development, Sweden

Donald J. Johnston, OECD Secretary-General

Energy was the dominant theme of Monday`s opening session of the sixth annual OECD Forum. The three lead speakers set the proceedings off to a firm start by issuing clarion calls for urgent action on the world energy front.

Several points were emphasised:

The world faced a spiralling demand for energy, largely because of the increasing requirements of China and India, while at the same time the rich nations of OECD should increase their development aid to meet internationally-agreed aid targets and help countries currently trapped in poverty;
Increased use of energy resources raised environmental dangers, such as climate change, which meant that new energy resources needed to be efficient and also renewable - a recurring theme at this year's OECD Forum, for although some countries could count on increased supplies of nuclear energy, for others this was not an option;
OECD had a serious responsibility to help developing nations and should make a major contribution today in the same way that 45 years ago member countries emerging from the Second World War had started to draw benefit from Marshall aid provided by the United States. A similar capacity-building exercise could be seen today in OECD support for the NEPAD programme (New Partnership for Africa's Development).

Opening the session, **Lord Alan Watson** said the energy situation presented three points of major importance. First, demand for primary energy was rising sharply and was set to expand by almost 60% between 2002 and 2030, largely because of the needs of China. Second, investments to find and exploit the energy resources required would cost a massive $16 trillion. And thirdly, it was clear that the linked problems of dealing with energy needs and global poverty meant that China and India should be invited to join the G8 group of leading nations. He reminded a packed audience at the International Conference Centre in Paris that "understanding is the prelude to action and only if we are together can we understand and act".

OECD Secretary-General **Donald J. Johnston** said developing nations needed help with institution-building, and in responding to a question from an African journalist who asked about a Marshall Plan for Africa, he said the NEPAD project, in which OECD played a strong role, was helping to encourage the creation of "good solid government institutions". But he reminded the audience that globally 1.6 billion people still had no access to energy supplies. Mr Johnston said there was a need for research and development to find more renewable sources of energy. Climate change is firmly under way, he warned, so countries must come up with alternative fuel supplies, such as nuclear. The OECD chief said that globalisation was bringing about structural changes with widespread implications for the environment, culture, organised crime and employment.

Swedish Minister **Mona Sahlin** said the world faced urgent, tough challenges. First, how could one ensure that the benefits of globalisation were shared by all, and how could one respond to the demand for energy as well as tackling climate change? "Time is running out and we need to take action," she stressed. Sweden was phasing out its nuclear programme and Ms Sahlin strongly believed that renewable energy sources are the only way to protect future generations. "If we make the right decisions we can have a low carbon-dependent future," she said, pointing out that each country needs to take responsibility for its own energy use first, with more aid being directed towards the energy sector.

In questions from the floor, a Greenpeace representative asked how OECD countries (some of which back nuclear energy) would deal with nuclear proliferation concerning countries like North Korea and Iran. The panel agreed that this was a key challenge, particularly as nuclear energy was likely to grow in use. However, Ms Sahlin reminded the audience that Sweden was closing down a nuclear power station in May as part of its phase-out programme. Different countries had different approaches to nuclear energy, but for Sweden it was energy efficiency that counted most, whatever the source.

Nonetheless, nuclear power was attracting worldwide attention again in part because of climate change and would figure strongly throughout this Forum. But neither was nuclear a magic solution to the energy challenge, for as Lord Alan Watson remarked "we have to solve the problem of waste before we waste any more".

Another questioner asked about renewable energy, and in particular the effect on populations of building large dams for hydroelectricity. Ms Sahlin pointed out that while renewable energy seemed attractive in itself, it did carry costs, which people did not want to see in their own backyard. Governments have to explain the effects of different solutions. Secretary-General Johnston noted that recent studies had shown that even hydroelectric dams emit CO2 from rotting vegetation over many years.

This prompted Lord Watson to wrap up with a remark that it was an essentially middle class assumption that renewable energy would be clean, silent and odourless. Alas, it was not so. Lord Watson's message summed up the session: we face serious challenges, and the solutions might not be as palatable or painless as we would all like.

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Drugs for development
Morning, Monday, 2 May 2005

Health and Development

Moderator: Lisa Bryant, Journalist, Voice of America

Panel: Harry Jeene, Director of Programme Development, African Development, African Medical and Research Foundation;

Karim Laouabdia, Director, Access to Essential Medecines Campaign, Medecin Sans Frontières;

Mary Malete, President, Federation of Unions of South Africa;

Julian Morris, Director, International Policy Network, UK;

Per Wold-Olsen, President, Human Health – Europe, Middle East And Africa, Merck & Co, Inc

Just as a healthy workforce is essential for economic and social progress, ill-health is a primary cause of underdevelopment. That is why three of the seven Millennium Development Goals are efforts to improve health in developing countries. The UN aims to halt and reverse the spread of HIV/AIDS and malaria as well as cut infant mortality rates by two thirds and maternity mortality rates by three quarters–all by 2015. But, as the MDGs will be subject to their first five year review next September - the so-called United Nations Millennium Summit +5, it is clear that reaching these goals by 2015 will be an uphill struggle.

This was the broad consensus reached by the panel on Health and Development at this lively Monday morning session. Although the participants agreed on the enormity of the task of providing poorer countries with adequate medical care, they differed on the causes, and the solutions. But a common thread was access, or how to overcome barriers to more and better medicines.

A major point of discussion was whether or not the pharmaceutical industry is doing enough to help developing countries gain affordable access to essential drugs and vaccines. **Karim Laouabdia** called for a "paradigm shift" as it is "unacceptable that the majority of the world's population has no access to medical advances". **Per Wold-Olsen** defended the industry, citing a number of recent efforts by his company and others in his industry. He mentioned Mectizan, a treatment to prevent river blindness, which Merck & Co has distributed free of charge to 40 million people in 34 countries, as well as the sale of two HIV medicines, Crizivan and Stocrin, which it sells at non-profit prices to poor regions and those hardest hit by the disease.

Part of the criticism against the pharmaceutical industry is that only a fraction of its revenue is pumped back in R&D, some argued, and that laboratories focus their research on innovations that have the biggest revenue potential. Mr Laouabdia argued that the trade related aspects of intellectual property rights that set out "minimum standards" of protection, particularly patents, simply stopped patients in poor countries from accessing life saving medicines. He added that this in turn, curtails R&D investment into diseases that do not offer a profitable market. Global rules that affect access and R&D should be driven by health needs, rather than by commercial considerations, he argued.

HIV/AIDS drugs are a central focus of the debate on the effect of patents, with Indian companies providing generic drugs at a fraction of the price of some pharmaceutical companies in OECD countries.

Mr Wold-Olsen highlighted that it takes enormous investment over a long period of time to get new drugs to market, with as much as 10 years before the real-life benefits of a patent can actually be seen. He mentioned recent efforts by Merck and two other large pharmaceuticals

which had co-operated on the development of a so-called fixed dose combination drug which combined three substances in one pill – a drug which was seen as crucial in the fight against HIV/AIDS. But the drug recently failed stability testing. He also highlighted the dangers of sending poor quality drugs to Africa, as these can cause resistance.

Julian Morris responded to the debate by saying that "it is not constructive to harp on about patents … we need to talk about improving infrastructure … and getting access to medicines".

His sentiment regarding the need for further development of healthcare infrastructure and increased government intervention was echoed by the other members of the panel. For **Harry Jeene**, "we need to enable Africa to take charge of their own health".

Mr Morris agreed with this view, though warned that simply boosting wealth will not necessarily lead to wider access to adequate healthcare in developing countries, in part because of bribes, quantity controls, counterfeiting and so on. There was a need for a proper system, and for trained doctors and nurses to deliver the right care and treatment. But for **Mary Malete** this pointed to another problem with improving healthcare infrastructure in developing countries: the "brain drain" as educated doctors and nurses leave for more lucrative labour markets. She proposed that a form of "tariff" should be imposed on the country that receives the trained professionals that would help fund care in the country of origin.

There was a unified recognition on the panel that much of the increased spending on healthcare in developing countries tends to accumulate in urban areas, leaving many remote, rural parts short in medical aid.

The MDGs revealed other problems. Mr Jeene acknowledged that while the international community had "finally decided on some measures of progress", most African countries were failing them badly. He believed the problem was not being helped by a focus by some governments on realising the "easy to reach targets". As Mr Morris put it, "just because they target an MDG, doesn't mean they do good."

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Towards an energy road map
Morning, Monday, 2 May 2005

Roundtable on Investment and Energy

Moderator : Peter Kemp, Editor, Petroleum Intelligence Weekly

Panel: Donald J. Johnston, Secretary General, OECD;

Thierry Desmarest, Chairman and CEO, Total;

Mona Sahlin, Minister for Sustainable Development, Sweden

Roundtable Participants: Mohammad Al Sabban, Senior Economic Advisor to the Minister of Petroleum and Mineral Resources, Saudi Arabia; **George R. M. Anderson**, Deputy Minister, Natural Resources, Canada; **Bertrand Barré**, President, European Nuclear Society; **Salvador Beltrán del Rio**, Director General for International Affairs, Ministry of Energy, Mexico; **Jagdish Bhagwati**, Professor of Economics, Columbia University, United States; **Emmanuel de Corte**, Deputy Director, Ministry of Energy, Belgium; **Padma Desai**, Director, Center for Transitional Economies, Columbia University, United States; **Harry Duynhoven**, Associate Minister of Energy, New Zealand; **Michel Gabrysiak**, CEO, Finance Foundation; **Eystein Gjelsvik**, Deputy Head, Economic & Social Affairs Department, Norwegian Confederation of Trade Unions; **Jeremy Hobbs**, Executive Director, Oxfam International; **Emmanuel Lechypre**, Associate Editor, L'Expansion, France; **Giandomenico Magliano**, Director General for Multilateral Economic and Financial Co-operation, Ministry of Foreign Affairs, Italy; **Sergei Mikhaylov**, Department Deputy Director, Ministry of Industry and Energy, Russian Federation; **Thorvald Moe**, Deputy Secretary-General, Ministry of Finance, Norway; **Salih Pasaoglu**, Deputy Undersecretary, Ministry of Energy and Natural Resources, Turkey; **Clyde V. Prestowitz**, President, Economic Strategy Institute, United States; **Eivind Reiten**, President and CEO, Hydro; **Christian Stoffaës**, Chairman, Centre for Future Studies and International Information, France; **Sir Crispin Tickell**, Chancellor, Kent University, United Kingdom; **Noé Van Hulst**, Director, Long-Term Co-operation and Policy Analysis Office, International Energy Agency; **Lord Alan Watson of Richmond**, Chairman Europe, Burson-Marsteller; **Jeremy Webb**, Editor, New Scientist, United Kingdom

With global energy demand rising on a steady curve and environmental pressures building, the next decades promise to see governments and the private sector struggling to keep pace with the world's energy needs. How to fuel our power-thirsty future, especially in light of new major players joining the ranks of major economies? Should we invest in new technologies? Or try to reduce demand? Work on improving efficiency? Should we resolve to exploit costly hidden hydrocarbon reserves? Should more countries go nuclear?

The questions are as many as backgrounds and expertise of the stakeholders at Monday morning's panel on Investment and Energy. But their discussion made one clear message: there is no single solution, source, or remedy and only a multi-faceted approach to solving the world's energy demands can hope to succeed. The trouble is, who to draw up that approach?

The magnitude of the increase in demand forecast for the next 25 years is indeed remarkable. To such an extent that even **Thierry Desmarest**, Chairman and CEO of Total, was not convinced that oil supply will be able to keep up with consumption during this period, new technology and reserve discoveries notwithstanding. With figures from the International Energy Agency (IEA), a sister organisation of the OECD, pointing to a 1.7% per annum increase in global energy consumption, demand for oil, driven by global economic growth propelled ever faster by Chinese and Indian dynamos, may indeed soon pass petroleum's approaching production peak.

Mr Desmarest's conclusion was common sense: we must look for alternative energies while improving the efficiency of those we have. "We have to diversify the sources of primary energy through a larger reliance on renewable sources, such as solar, wind, bio-energies, and also a greater recourse to nuclear energy," he said.

Swedish Minister of Sustainable Development **Mona Sahlin**, a firm believer in the potential of renewable resources over the medium term, added that efforts to adapt need to be underscored by new relationships of trust between government and industry, with the former behaving in a more rational, consistent, and market-based, non-distorting manner with the latter. Both speakers agreed that greenhouse gas emissions were a major issue to be addressed, and Ms Sahlin stressed that climate change should be seen as not only an environment issue, but an economic one based on "investments, infrastructure, and impact costs."

Another unifying message was that investment should keep energy production in step with global demand if we are to avoid huge, growth-choking price increases. As much as $16 trillion may have to be invested by 2030, the session was told, because finding new sources of fossil fuels and developing the technology to exploit them tends to be capital intensive, particularly when the approach is daring, innovative, and successful. Such is the case of Canada's Oil Sands project. However, even Deputy Minister for Natural Resources **George R.M. Anderson** admitted that the approximate $10 billion price tag makes his country's project "an ambitious goal, a contribution, but not a solution to such a large scale problem." High prices drove the transformation of the energy economy in the 1970s, he said, and this once again will pull governments together to find solutions.

Production increases, such as those envisioned by Saudi Arabia, play a part in a new global energy strategy. Earlier Mr Desmarest had mentioned the urgency of opening Middle East reserves; **Mohammad Al Sabban**, Saudi Arabia's senior economic advisor to the Minister of Petroleum and Mineral Resources pledged a production increase of $4 million barrels over the next four years. But he also stressed the necessity of coherent discourse and policy on the demand side– and recognition of the costs of nuclear power, coal subsidies, and oil taxation in OECD countries. When moderator **Peter Kemp** of *Petroleum Intelligence Weekly* called attention to the fact that "OECD governments make more money at the petrol pump than the producing countries do", OECD Secretary General **Donald J. Johnston** reminded the audience that he considered taxation as a force that can moderate consumption. He pointed to a common critique of US energy policy, whereby its high consumption of petroleum products can partly be explained by low taxes at the pump.

Lord Alan Watson of Richmond, Chairman of Europe, Burson Marsteller noted that public opinion was an important dimension to the debate. He said there was a long way to go in preparing public opinion for new energy policies, and avoiding the current dilemma whereby rising prices can lead to public opinion pinning the blame on a potential victim, such as oil companies, or developing countries such as China or India.

Sir Crispin Tickell, Chancellor of Kent University, agreed that public opinion was key, and urged drawing attention to successful programmes, such as one to achieve energy-efficiency based on new technology and public/private partnerships in the UK Borough of Woking. (Note: According to one source, the Woking project cut energy consumption by a fifth in five years and resulted in savings to the borough council of nearly £4 million over nine years– see www.chpa.co.uk/alajon.doc). Airing such examples could become persuasive tools in encouraging governments and the public to adopt working models on greenhouse gas emissions reduction.

As **Eivind Reiten**, president and CEO of Hydro stated, "failure is not an option," so communicating the scope and magnitude of the changes societies must go through is a priority.

As reflected in the roundtable discussion, a consensus is growing on the need to diversify energy sources – a transformation that implies a substantial reassessment of the role nuclear energy might play. As **Bertrand Barré**, president of the European Nuclear Society, put it, "Nuclear energy alone might not be a solution, but there is no solution without nuclear power." Rapid shifts in national energy sources are possible, as noted **Christian Stoffaës**, Chairman of France's Centre for Future Studies and International Information, who said he was happy to see the nuclear option reappear in US energy debates after years of absence. France and the UK transformed their primary energy sources to nuclear and gas, respectively, in just around 15 years, he said, asserting that swift diversification is more than possible.

The gravity of the world's energy challenge, and the huge investment that will be required by 2030 to keep up with demand, will require fundamental changes in the way societies view the issue. **Noé Van Hulst** of the IEA warned of the danger of letting the topic drift from the public eye. In this case, the NIMBY attitude (Not In My Backyard) risks degenerating into a spirit he qualified as BANANA (Build Absolutely Nothing Anywhere Near Anybody).

With climate change bubbling to the top of international agendas, and some experts such as **Jeremy Webb** of New Scientist seeing it as the number one problem of the 21st century, the idea that environmentally friendly energy solutions are to be had on the cheap can be no more. Wrapping up the panel's discussion, Mr Webb implored governments to agree upon an international roadmap with concrete goals for the years ahead. Do that, he said, and the private sector would surely follow.

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Book launch
Data you can use
Lunchtime, Monday, 2 May 2005

The OECD Factbook

"Without data all you are is just another person with an opinion." **Enrico Giovannini**, Chief statistician and Director, Statistics Directorate, presented the first edition of the *OECD Factbook* which aims to respond to the strong demand for high quality statistical data about the performance of countries.

But data alone was not enough either, it had to be understood, put in context and in a proper perspective. As Mr Giovanni explained, the *OECD Factbook* is not just a book, nor is it just another bunch of statistics. It is the start of a project, aiming to make statistics more accessible and useful for decision-making. Readers can navigate through a maze of statistical data to access information interactively, by country for instance.

More than 100 indicators covering 10 thematic areas, including population and migration, macroeconomic trends, but also environment, education and quality of life are included in this first OECD statistics compendium. Each theme has a two-page spread containing text, tables and graphs highlighting trends that go back 10 years. Data was explained, as well as put in context, so enabling the reader to make informed decisions.

The launch edition includes a special focus on energy, which is a central theme of this year's OECD Forum. It also contains the new *OECD StatLink* technology which connects the pages to excel spreadsheets behind the data which readers can download for free and manipulate for their own needs.

The *OECD Factbook* is available in print and online. The online version has several links to excel files, charts, books and other databases. Data from the *OECD Factbook* are also used to prepare individual Country Statistical Profiles available in the new "country pages" of the OECD Web site.

To download the online version of the OECD Factbook :

www.oecd.org/publications/factbook
Order it at www.oecdbookshop.org

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Globalisation: friend or foe?
Early afternoon, Monday, 2 May 2005

Sharing the benefits of globalisation

Moderator: Philippe Manière, Director General, Institut Montaigne, Paris

Panel: Lionel Fontagné, Director, Centre for Future Studies and International Information, France;
Irma A. Gómez Cavazos, Assistant Minister for Economic Relations and International Co-operation, Ministry of Foreign Affairs, Mexico;

Jeremy Hobbs, Executive Director, Oxfam International;

Clyde V. Prestowitz, President, Economic Strategy Institute, US

Globalisation has been around for a long time, but is today's accelerated version, with its expanding wealth but widening inequalities and social and environmental strains, sustainable? Do the benefits outweigh the costs? Can the widening gaps between rich and poor be reduced? How can development programmes be kept on course, and what is the right mix of economic and social policies to ensure that benefits are both generated and shared? These were the headline concerns of this panel kicking off the first afternoon of the 2005 OECD Forum.

According to **Clyde V. Prestowitz**, president of the US-based Economic Strategy Institute, one major issue currently dominates all the questions relating to globalisation. "In today's worldwide economy there is just one net buyer, the US, and all other parts of the world, Asia in particular, are sellers," said Mr Prestowitz. This meant that the continuation of global growth depended on the fortunes of the US economy, at a moment when borrowing in that country was ballooning against a background of rising inflation, particularly energy prices and a real estate bubble.

"At the same time Asia is paradoxically saving too much and suppressing consumption in order to boost export led growth, especially exports to the US," Mr Prestowitz continued. At the same time Asian countries were lending massively to the US to ensure that it could continue importing from them. This situation is unsustainable, Mr Prestowitz suggested. It had led to a scenario involving a managed dollar and a lack of fiscal responsibility on a global scale, beside which all concerns over free trade and tariff barriers were marginal.

Irma A. Gómez Cavazos, assistant minister for economic relations and international co-operation in Mexico, suggested that her own country's experience demonstrated that globalisation could fuel growth, but that it could not on its own ensure equitable development. Appropriate social policies and cooperation with other countries were also important to address social issues and exclusion. "We still have a long way to go but we are on the right path," she said, pointing out that following the opening up of the Mexican economy in the late 1980s and the country's accession to NAFTA, Mexican exports had increased some 400%, while export activities accounted for 1.8 million jobs and foreign direct investment for a further 2.1 million.

Replying to a question from the floor, Ms Gómez Cavazos admitted that although many new jobs had been created, some sectors such as agriculture had been left behind and the gap between rich and poor was widening. "Government social policies are helping," she said, but since the government took only 12% of GDP in taxes, this imposed a limit on what could be achieved. In her remarks she also stressed that "no country can face the challenges by itself." In this context she pointed to the efforts that Mexico was making to cooperate on social policy issues with other countries in the region at a similar or lower level of development, including an initiative in central America called the Puebla Panama Plan.

Looking at development and aid issues in a global perspective, **Jeremy Hobbs**, Executive Director of Oxfam International suggested that globalisation had created at least as many losers as winners. Moreover, urgent action was needed if poverty reduction goals were to be achieved by 2015. "Poverty kills more people each week than the Asian tsunami, and the $50 billion promised in development aid is half what rich country protectionist policies cost the developing world," he claimed. He stressed the importance of eliminating export subsidies and of continued reform of the EU's common agricultural policy, and saw some hopeful signs, such as renewed cross party support in the UK for boosting aid and development programmes.

"Do you believe that we can really talk of losers in the globalisation process, or is it just that some have gained more than others," queried the session moderator, **Philippe Manière**, Director General of the Institut Montaigne in Paris. In reply, Mr Hobbs said that "the human costs are too high," pointing by way of example to the loss of income by farmers following the introduction of NAFTA, a free trade agreement in North America, and a 40% decline in agricultural incomes in Haiti caused by competition with subsidised US rice. "It is difficult to ask for further trade concessions from developing countries when developed ones are reluctant to make concessions themselves", he added.

Lionel Fontagné, Director of the France-based Centre for Future Studies and International Information (CEPII), remarked that many Europeans were alarmed over the possible effects of globalisation and more specifically international outsourcing on job security and social security provision. Economists on the other hand took a less alarmist view, seeing both costs and gains. Cost differentials do matter, as does the capacity to adjust, Mr Fontagné suggested. There was no hope of competing with emerging economy countries on wages or taxes alone. "It is better to promote the knowledge economy and promote institutional reforms in international fora."

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Globalisation and culture: just entertainment?
Early afternoon, Monday, 2 May 2005

Creative Societies, Dynamic Economies

Moderator: Alan Riding, Journalist, *New York Times*

Panel: Anne Garrigue, Deputy Secretary-General, Asia Presse Club, France;

Harold Hyman, Foreign Policy Expert, Radio Classique, France;

Susan Napier, Mitsubishi Professor of Japanese Studies, University of Texas, USA;

Tsutomu Sugiura, Director, Marubeni Research Institute, Japan.

Can a new "cultural globalisation" save struggling capitalist economies? The Creative Societies, Dynamic Economies panel seemed to think so, at least if Japan's recent record is a reference. **Tsutomu Sugiura** led the discussion, describing Japan as a successful example of how a country can boost its economy by investing in creative resources and exporting its cultural output.

"Capital power is not enough for us to compete successfully in the globalised world," stated Mr Sugiura. "The most important resources for our society today are ideas and the creativity of workers." He stressed the importance of culture and creativity as driving forces of today's global economy, which he says is "moving towards a post-industrial, ageing, service oriented society and also towards a more and more globalised and information-based society."

For Mr Sugiura, this is more than some idealistic rhetoric. Despite a decade-long recession, the export of Japan's contemporary popular culture has tripled, becoming a global dynamic force. Culture-related products were booming, he said. Even the pharmaceutical sector had a cultural orientation which helped explain its high profits, he claimed, emphasising a correlation between cultural proclivity and market returns.

Of course, one of the most important elements in Japanese exports of late has been the global popularity of its animation, not just video games, but relatively new forms like *anime* and manga. "About half of Japanese film and cinema studio's output is animated, comprising a far wider range of works than conventional animation culture in the West," said **Susan Napier**, adding that not all of these are made for children, either. "*Anime* offers something different from Hollywood cinema," she says.

Harold Hyman remarked that the Japanese had set up a mini-boom by overcoming what he saw as an earlier lack of creativity, alluding no doubt to Japan's post-war industrial expansion. Playing devil's advocate, Mr Hyman wondered what concrete proposals could emerge from the discussion. He asked his fellow panelists whether they would favour appointing a Minister of Manga, for instance.

Anne Garrigue pointed out that it was not only an export of Japanese animation, but a spreading of Asian culture. "There are signs of this everywhere," she said, referring to the current banality of formerly exotic imports such as Feng Shui, yoga, acupuncture and sushi. "Ten years ago no one knew what shiatzu was!" Ms Garrigue argues that globalisation has resulted in a cross-breeding of cultures where we pick and choose the bits that we like and adapting them. Zen is now a mass phenomenon, used in a way that's not used in Japan, such as a Zen Guide to Cleaning Your Closet.

Mr Sugiura referred to a government report published last month called Japan's 21st Century Vision, which suggested that his country could become the "creative 'cool' country of culture" by 2030, based on tradition, creative power and technology. According to Ms Napier, until

recently they were embarrassed by the anime and manga culture until they realised the economic force they represented. “Now it’s considered as culture”.

Beyond profits, Mr Sugiura believes this new culture can benefit the economy, such as through tourism, citing the influx of visitors to Paris thanks to the *Da Vinci Code*, or the record numbers of Japanese visitors to Chuncheon City in Korea, which has been made popular by a TV drama, *Winter Sonata*. Tourists interested in learning more about a culture are more likely to visit the country, learn the language and buy their products, he concludes.

At times there seemed to be some confusion in the discussion between culture and entertainment, just as between expression and business. “We have to define what culture is, “ says Mr Sugiura. “Anything that enriches human life is culture.” According to Mr Sugiura, every country has an equal chance to become a leading actor in the culturalism world. “There are no superpowers when it comes to culture,” he says, explaining that the new society of culturalism will supercede capitalism with the increasing importance of talented people, of appealing to people’s attention, and of knowledge or creativity.

The panel seemed to agree that creativity could become a driving force in global economies and societies, not least in business, but at times the discussion left the dividing lines between entertainment business and cultural development of the 21st century rather blurred. While the popularity of Japanese culture might partially be a counter-reaction to American cultural domination, or as Ms Garrigue put it, “an interest in older cultures that have historic depth,” moderator **Alan Riding** raised the concern that Japan’s anime and manga could themselves be seen as simply another cultural imperialism, with all the same trappings of mass consumption and popular mania. Ms Garrigue confirmed that this seemed to be the view in China, where mangas are not always available on the open market.

A final concern from the floor pointed to the danger of a “creative divide” since the technology needed for animation and creativity was not available to everyone, eventually resulting in the bulk of creative output on the market coming from large corporations in wealthy countries. Ms Napier replied that the social adhesion of the anime and manga fan base alone would bring people together and encourage a mix of cultures. Those in the room that felt that today’s expanding global culture could not be explained satisfactorily by a fascination with Japanese entertainment exports remained unconvinced.

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Back to the energy future
Early afternoon, Monday, 2 May 2005

Unlocking the World's Energy Potential

Moderator: Emmanuel Lechypre, Associate Editor**,** *L'Expansion*, France

Panel: David L. Aaron, Director, Centre for Middle East Public Policy, Rand Corp; **Padma Desai**, Director, Center for Transitional Economies, Columbia University, United States;
Dulat Kuanyshev, Ambassador of Kazakhstan to France;

Eivind Reiten, President and CEO, Hydro

The messages in this session echoed those of the energy roundtable of the OECD Forum, though drawing particular attention to the rapidly evolving business environment, including that for traditional fuels. With world energy demand expected to jump 60% by 2030 and the limits of fossil fuel reserves starting to make themselves felt in the marketplace, the world energy industry faces a testing future. The industry has no choice but to come up with new solutions on the one hand, and improve the sustainability of current energy sources on the other. Competition for resources is intensifying, while suppliers are themselves becoming more demanding. What concrete steps can be taken?

Padma Desai, Director of the Center for Transitional Economies at Columbia University, beyond China and India, said she expected "demand to continue to creep higher in the coming years."

In addition, the business environment is evolving. "So oil companies just can't operate the way they did in the old days," said Ms Desai.

She mentioned Venezuela, for instance, which was adapting its negotiation position to include social and educational clauses in oil contracts. Indian and Chinese oil purchasing companies, run by state agencies, "are ready to cater for new strategies like these" said Ms Desai, but more traditional oil companies simply are not used to this kind of agreement.

Eivind Reiten, President and CEO of Norwegian energy company Hydro agreed that a new modus operandi needs to emerge within the oil and gas industry, with a focus on technological innovation. "We stand at a unique and critical moment in time," Mr Reiten said. Demand is increasing, the energy is becoming more difficult to discover and environmental constraints are getting more challenging. To illustrate his point, Mr Reiten referred to the giant Ormen Lange gas field, located 120 km from Norway's North coast. The field is about a kilometre deep, in sub-zero temperatures and in the middle of strong currents. Despite the extreme conditions, Hydro hopes to make this field profitable. When full production is reached, it's expected to meet 20% of British demand.

"Only 10 years ago, it would have been inconceivable to deliver gas in this way," Mr Reiten said, arguing that oil companies have to make vast new investments in technology to ensure the supply of the future. "Some people have said the world isn't running out of oil; but the world is running out of patience with oil companies," he said, adding that with prices and energy company profits at a record high, the industry has no excuse not to invest in new drilling and extraction technologies.

Dulat Kuanyshev, ambassador of Kazakhstan to France, presented the point of view of a relatively new, but active player in the energy industry. In 2004, less than 15 years after the breakdown of the Soviet Union, Kazakhstan gas exports exceeded one million barrels per day, but that figure is expected to triple by 2015. "Today it's Kazakhstan's turn to answer to the challenge of those who find oil,"

Mr Kuanyshev said, insisting that by diversifying the economy, they could overcome the oil curse that so often afflicts countries because the discovery and development of a natural resource can crowd out other local industries, making them less competitive as the value of the local currency rises.

One task is to develop upstream and downstream activities in an effort to become more than just a supplier of raw materials. Since the country is landlocked, Kazakhstan has been working to develop new ways of getting its oil and gas to customers. The BTC pipeline, which links Baku, Tbilisi and Ceyhan, is in discussion. A southern option that could pass through Iran, is also being considered, Mr Kuanyshev said, and a pipeline to Western China "should be finished by the end of 2005."

David Aaron, the Director of the Centre for Middle East Public Policy at the Rand Corporation, a US think tank, focused on the security and stability issues that cloud the industry's outlook. "We are significantly dependent on the part of the world that is the most unstable at the current time," he said, and the Venezuela example shows that even stable sources may want to renegotiate their contracts.

That is business, perhaps, though uncertainties are not limited to the supply side. High demand from countries such as China and India will intensify the market competion for resources. The United States has virtually "discarded" its energy conservation policy, Mr Aaron warned, by favouring tax breaks for Sports Utility Vehicles over electric cars. For Mr Aaron, nuclear energy represents an essential source in a diversified energy policy and is key to developing other, "greener" technologies such as fuel cells. "But environmentalists still need to be convinced that nuclear energy can make positive contribution to the environment," Mr Aaron said. Nor did present solutions to dealing with waste seem entirely satisfactory: "On the issue of nuclear waste, we need to have a technological breakthrough and that remains a major problem."

In the end, the world's countries are all in the same boat when it comes to energy. That means we need to develop coordinated and concrete stategies to deal with issues like waste and proliferation, and "not fight over the deck chairs," Mr Aaron said.

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Re-energising Europe
Afternoon, Monday,2 May 2005

Europe's Economy: Which Way to Lisbon?

Moderator: Pierre Rousselin, Vice-Director, Editorial Department for International Affairs, *Le Figaro* , France

Panel: Jean-Philippe Cotis, Chief Economist, OECD;

Stefan Löfven, Deputy President, The Swedish Metalworkers' Union;

Hamish McRae, Associate Editor, The Independent, United Kingdom;

John Monks, General Secretary, European Trade Union Confederation;

Maria Joao Rodrigues, President, European Commission's Advisory Group for Social Sciences;
Jan-Host Schmidt, Director, Directorate for Economic and Financial Affairs, European Commission

Five years ago, at a European Council meeting in Lisbon, the EU launched an ambitious plan to become the most competitive and dynamic economy in the world by 2010. The goal, no less, was to overtake the US economy as the world's leading "knowledge-based" based economy. Now in mid-route, the EU seems to have lost its way, posited the moderator, **Pierre Rousselin**, from the French daily, *Le Figaro*. Is there still time to recover the lost ground?

OECD chief economist, **Jean-Philipe Cotis**, recalled the mood of confidence pervading Europe in the wake the successful launch of the euro in 1999 and the Lisbon Agenda in 2000, and how that confidence has now given way to disenchantment, even despair. That said, he distinguishes clearly between developments in the main economies of continental Europe, and those of the Anglo Saxon world and Scandinavia. He identifies Europe's low rate of labour participation, caused in large part by costly policies to encourage early retirement, as one of the region's main economic problems. He sees these schemes as an "implicit tax" on sustaining labour activity and productivity: "they didn't work and will never work. [Early retirement policies] were one of Europe's major errors".

Mr Cotis warned that Europeans have now little room for policy manoeuvre in the event of an exchange rate or oil price shock. He also warned that disenchantment is now so firmly installed that several European governments are now tempted to "throw out the baby with the bath water", alluding to growing opposition to European integration and globalisation.

Faced with this situation, Mr Cotis proposes a "new code of conduct" for Europe, based on two main principles. First, Europe must avoid grandiose objectives, which create unrealistic expectations and ultimately generate disappointment. And second, national governments must assume political responsibility for the reform process outlined in Lisbon–which they after all signed up to–and stop hiding behind Brussels. The principle of services liberalisation must also be reaffirmed, Mr Cotis said, as well as more emphasis placed on measures to stimulate demand .

Stefan Löfven, deputy president of the Swedish Metal Workers Union, agreed that Europe needs higher growth, but that growth should not be an end in itself. For Mr Löfven, the objectives of the Lisbon strategy remain valid, but can only be attained if we acknowledge that growth and social cohesion are mutually dependent. He highlighted the rapid changes affecting the world economy, and the need for Europe to both reposition itself and upgrade existing economic activities. The Swedish Metal Workers Unions accepts change, says Mr Löfven, but it wants to participate in the decision-making processes behind accompany it. Governments

must guarantee core labour rights on a global basis, and must ensure that the gains from future growth are fairly distributed. Mr Löfven defended the right of workers to work less, but in exchange for renouncing wage increases.

Hamish McRae of The *Independent* was optimistic about the capacity of Europeans, but pessimistic about the Lisbon process, which, he bleakly states "has failed". The whole process, he argued, has been too top-down, marked by too much official rhetoric about investment in research and development and human capital, and too few initiatives to dismantle barriers to entrepreneurs or to explore the potential of new tax regimes (such as those established in Ireland with its competitive corporate tax regime or the flat tax in the Baltic states).

In Mr McRae's opinion, Europe has two options. One, it can ignore the Lisbon agenda, refocus policies on more concrete objectives, and stimulate demand: it can "tell people to loosen up and spend more". Or two, the EU can try to become an enabling and promoting organisation, particularly in a very few key technology areas and higher education. Mr McRae provocatively suggested that the EU should consider abandoning efforts to boost coordination between universities, and promote competition instead. To resolve its education problems, the EU must first understand them. And to do this, it must identify the reasons why so many educated Europeans now emigrate to Anglo Saxon countries, where they are making a vital contribution to the dynamism and success of these economies. "What would the UK economy do without talented European graduates? They're better than us."

John Monks warned that it was not only trade unions that opposed unfettered economic liberalisation, but also ordinary people and democracy itself. Mr Monks acknowledged that growth is too slow, but argued that reform must take "the high road", and focus on promoting innovation, creativity and, most importantly, investment. He called for better employment services, good social benefits, and measures to address the negative demographic trends affecting Europe. He also stressed the limited countercyclical capacity of Europe's Growth and Stability Pact which he now qualifies as "obsolete". He called for measures to boost confidence and demand, including "maybe a little more inflation". He also pointed out that the premature retirement of workers has its origins in the labour culture of the 1970s, and the desire by employers to replace old workers, but admits that this culture must now change.

Maria João Rodrigues, president of the European Commission's Advisory Group for Social Sciences, strongly defended the Lisbon Agenda, although she acknowledged that "bottlenecks" had appeared. This was mainly a problem at national level which, she was confident, would soon be resolved. In October, national parliaments will begin debating domestic programmes to implement, and hopefully revitalise, the Lisbon strategy. In the next phase, she called for the creation of "partnerships for change" at national level. The emphasis must be put on fostering innovation, life-long learning and increasing total employment.

Jan-Host Schmidt, director, Directorate for Economic and Financial Affairs, European Commission, said people should not despair, but outlined a rather gloomy future if Europe failed to address reforms to tackle its problems of growth and jobs: "If there is no reform, we cannot sustain our welfare state". According to Mr Schmidt, that means increasing the number of people in the labour market and extending working life. Nordic countries accepted this reality. Mr Schmidt also highlighted the lack of "ownership" as a major weakness of the Lisbon agenda, but expected this to be addressed by national reform programmes.

Several questions from the floor sought to draw attention to a perceived lack of any real progress in liberalising European economies. Ann Mettler, of the Lisbon Council, spoke of a division between policymakers and real entrepreneurs. According to Ms Mettler, the EU has no partners for change; it is discussing reform with firms and agents with vested interests. "How can there be progress without people who want change? It is no wonder, she said, that over 400,000 European science and technology graduates are now working in the US.

Finally, **Mario Baldassari**, Italy's deputy minister of the economy and finance, suggested that the conference session should have been entitled "Europe's economy: No Way to Lisbon". Mr Baldassari claimed that everyone agreed on the need for innovation, high technology and structural reforms, but that we should not have to undertake these reforms with inappropriate macroeconomic policy.

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Not just a matter of aid
Afternoon, Monday 2 May 2005

Financing for Development

Moderator: Richard Manning, Chair, OECD Development Assistance Committee (DAC)

Panel: Ahman Mohamed Ali, President, Islamic Development Bank*;

Jagdish Bhagwati, Professor Of Economics, Columbia University, United States**;**

Ruth Jacoby, Director-General For International Development Co-Operation, Ministry Of Foreign Affairs, Sweden;

Masahiro Kawai, Professor Of Economics, Institute Of Social Science, University Of Tokyo, Japan*;

Gunvor Kronman, Chairperson, Development Policy Committee, Finland*

"Spring is in the air for aid". **Professor Jagdish Bhagwati** started with an upbeat note in his address as part of the 2005 OECD Forum panel on Financing for Development.

It was the sole note of cheery optimism there was, though it was deliberately weighted to make a point. Though aid is rising and global efforts to focus on the needs of developing countries are unprecedented, the number of people surviving on less than $1 a day is also rising. Hardly encouraging, 10 years out from the deadline for the Millennium Development Goals. Development policies have not yet worked and might continue not to work if aid is the only way to finance them. More trade, stronger institutions and more effort by rich nations to invest on behalf of development were all needed.

Gunvor Kronman made the point that only some 70% of all aid which is pledged actually comes through. She added that despite official development assistance (ODA) reaching record highs of not far short of $80 billion last year, an additional $50 billion will be needed per year from here on in if we are to reach the projected MDGs by 2015.

"Freedom from want, freedom from fear and freedom to live in dignity". ** **Ruth Jacoby** quoted three UN's cornerstones for global development as time ticked down to the UN summit to review the MDGs this September. Ms Jakoby noted that achieving the MDGs is a shared responsibility–between developed and developing countries.

She reiterated the Monterrey Consensus of March 2002, calling for the resources to meet the MDGs and the conditions that will enable freer trade, more foreign investment, debt relief and efficient government.

But she agreed that although aid is important, it is not the only vehicle for development. **Ms Kronman** raised the issue of debt relief. She called for faster and deeper debt relief to improve the current system where current aid only serves to offset debts. She suggested that: "full cancellation of the debt of poor countries is now politically feasible, economically necessary and socially responsible".

Ms. Kronman went on to say that to stand a chance of getting near to the projected targets by 2015, ODAs needed to be backed up by new initiatives. She pointed to three sources of financing which included the International Finance Facility put forward by the UK; various international taxes including the much debated Tobin tax on speculative international capital flows; and global premium bonds that act as a high-rate savings bond whose proceeds could be channelled to an MDG-related global fund.

With just a decade to go until 2015, Africa is badly lagging behind in achieving the MDGs. Some progress has been made in some areas, though for **Ahmad Mohamed Ali**, health was

not one of them. " Ploughing money into developing vaccines as an alternative way of meeting part of development goals", he suggested, an approach which would also help ease the burden that having too much aid can pose for countries that do not have the capacity or institutions to handle it.

He went on to cite the initiatives that the Islamic Development Bank had implemented to help its members work towards achieving their MDGs; 23 of the bank's 55 members being among the world's least developed countries. Dr Mohamed Ali stated however that despite certain achievements they were far from being able to deliver on all seven goals. Greater collective involvement was needed, and he stressed that the eradication of poverty would require the full participation and coordination of the international community.

Masahiro Kawai also felt that better coordination was needed among donors. Too many small-scale donors were causing considerable difficulties for recipient countries, particularly in terms of the cost of handling and managing projects. Collective participation would greatly reduce the time, efforts and duplication. He mentioned that lessons could be learnt from the recent progress in the Mekong area where they had opened up to trade and investment particularly with their neighbours; "beefed up"' their infrastructures; and taken responsibility for their own development.

Many panelists cited capacity building, particularly through training, as a way of unlocking local potential and ensuring developing countries share the responsibility for using aid efficiently. But Dr Mohamed Ali warned that this should not be seen as a panacea to all ills, as the brain drain still exists in these countries as elsewhere.

Other clear messages that came to the fore include the need for not tying aid to contracts or suppliers from donor countries, which was seen to be more beneficial for recipients than tied aid; better policy coherence not just within their own governments but internationally; and greater coordination within the international community and between donors.

*Speech available at www.oecd.org/forum2005

**See UN (2005), In Larger Freedom: Towards Development, Security and Human Rights for All, Report of the Secretary-General, available at www.un.org

For more on Africa's economy and Prof Jagdish Bhagwati on aid, see www.oecdobserver.org

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Nuclear energy: a serious option?
Afternoon, Monday 2 May 2005

Global Energy Mix

Moderator: Jeremy Webb , Editor, New Scientist, United Kingdom

Panel: Pierre Gadonneix, Chairman and CEO, EDF, France;

Donald J. Johnston, Secretary-General, OECD;

Anne Lauvergeon, Chair of the Executive Board, AREVA;

Bruno Rebelle, International Programme Director, Greenpeace International;

Sir Crispin Tickell, Chancellor, Kent University, United Kingdom.

"We have a major problem over energy," warned **Sir Crispin Tickell**, Chancellor of Kent University, so setting the tone of the debate on this critical topic. "Even though I welcome the rising gas and oil prices, there is an ever-increasing need for fossil fuel alternatives as we see the rising world population." He alluded to nuclear power as a shadow in debates so far at the 2005 OECD Forum on the theme of "Fuelling the Future".

But this lively panel debate involving several important personalities in the global energy industry put nuclear energy centre stage, addressing its strong and weak points, and above all attempting to clarify the role of nuclear power in the global energy mix. Even though polarised sides of the debate were represented, from nuclear power companies to Greenpeace, the panelists collectively advocated a strong need to hunt and implement alternative energies, especially renewable ones.

Sir Crispin briefly summed up some of the major arguments for and against nuclear power. Positives include no carbon emissions, safer management, and new technologies that have emerged within the nuclear industry. More familiar perhaps are the arguments against it, which include radioactive waste disposal, decommissioning of old plants, safety issues, proliferation, and also uranium supply. And there was the justification, often in the face of public opposition, of spending so much on a nuclear project instead of something else.

The main gap Sir Crispin identified lies in having a realistic idea of what energies cost. He called for a critical costing exercise to establish exactly how much different sources really cost.

"Nuclear energy is not a panacea," agreed **Anne Lauvergeon** of AREVA, but ruling out nuclear energy is certainly not an option either. She said that even though the question of how to use nuclear energy well is a multi-pronged problem, in the face of growing global population, climate change and growth in the developing world, nuclear power must play a role in the global energy mix.

Waste was a problem, Ms Lauvergeon recognised, but "significant progress has been made on dealing with it." A serious debate was due to be held this year in France on the issue. "Yes, waste has built up in France, but only a small amount." She pointed to Finland where stakeholders have agreed on a waste storage solution in an area of dense, stable granite where waste will be held and monitored over time, so allowing nuclear energy to continue.

Along with the economically competitive nuclear power source, "we need cleaner transport, electric energy, hybrid cars, fuel cells, clean coal, etc", and Ms Lauvergeon called for a centralised model to find the right balance of energies for the world.

Bruno Rebelle, International Programme Director of Greenpeace International, was less convinced. He cautioned that even if there is not much nuclear waste, there is still too much of it.

Mr Rebelle insisted that nuclear energy brings only marginal gains on carbon emissions, that it is a costly form of energy. Countering Ms Lauvergeon's claim that there are plenty of uranium sources to be tapped, Mr Rebelle pointed to resource depletion over the next 70 years. He advocated large investments in renewable resources instead of continuing to invest in fossil fuels or nuclear options.

Developing new technologies is the key, according to **Pierre Gadonneix** of EDF, especially as rising prices of energy sources that are low on reserves can only help make alternative energies even more worthwhile. Electricity in particular is attractive to producers because it provides them with choices, Mr Gadonneix said. It can be produced from various sources, it can tie into sun, water, or wind, for example. As for nuclear sources, he confirmed that the prices are competitive with those of fossil fuels. But above all, there is one way forward. "Our first resource should be our capacity of innovation," Mr Gadonneix said.

Growing up in an era of "Atoms for Peace", **Donald J. Johnston**, Secretary-General of the OECD, warned that we will soon hit a ceiling with the amount of carbon dioxide particles in the air. This will lead to an inevitable change in the environment. Our only hope is to slow it down, Mr Johnston said, and nuclear energy has a role to play as a bridging technology, Mr Johnston said. But it is also a "proven technology" and it was time to put public fears about it to rest.

"What kind of international regulatory framework can we have, which tackles proliferation, while running the plants correctly and safely?" he asked. Mr Johnston agreed with Sir Crispin that climate change was one of our greatest challenges today. Considering what he called the "minimalist solutions" proposed by the Kyoto treaty for slowing carbon dioxide emissions, he asked Sir Crispin: "Are we too late?"

Sir Crispin replied by saying we need to put the problem into perspective, and suggested tongue-in-cheek to offer a special super-prize to reward those who found answers to the disposal of nuclear waste. "We need to opt for technology," he said.

While most agreed that the global energy mix depends on circumstances, Mr Rebelle insisted that non-proliferation was a primary issue which demanded strict rules and safety guidelines to be adopted by those countries wishing to operate a plant.

In summary, the panel moderator, Jeremy Webb of New Scientist magazine concluded that though nuclear energy was important, even those panelists in favour of nuclear energy had admitted it was not a total solution. There is a need for rational tests and democratic debate to engage the public and bring people on board, as "that is the only way nuclear power will become widely acceptable," he said. In the meantime, Mr Webb recommended heavy investment in research into alternatives as a critical step.

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