A new climate for the EU's sustainability transition

ETUI conference cycle: The social-ecological transition

Date: 21 November 2014 Venue: Residence Palace, Brussels

Conference report

european trade union institute



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The third and final ETUI conference on the social-ecological transition brought together a host of distinguished speakers. **Philippe Pochet**, General Director of the ETUI, opened the event, highlighting the recent publication by ETUI entitled *Climate Change: Implications for employment*, which summarises the most pertinent findings of the recent Fifth Assessment Report (AR5) from the Intergovernmental Panel on Climate Change (IPCC) for workers and employment.

The state of climate change

Mr Pochet then introduced **Jean-Pascal van Ypersele**, professor at the Université catholique de Louvain and Vice-chair of the IPCC. Professor van Ypersele said he would set out the overall messages from the IPCC's AR5 and their implications for a climate deal in 2015, in particular those that are relevant "to the discussion today". He started by underlining the "strengths" of the IPCC report. That it is: produced by an intergovernmental panel; written by more than 800 lead authors, with another few hundred contributors; and reviewed by various organisations including NGOs and governments; and that more than 140,000 comments were taken on board in the review cycle. This is a "massive effort to assess the current state of knowledge and reflect it in the best manner and in a policy-relevant, but not policy-prescriptive, way," said Professor van Ypersele. This means that policymakers can see that some of the constraints are laid down by the "laws of climate science" and are "not recommendations out of the blue".



"Humanity has the means to limit climate change and build a more prosperous and sustainable future."

Jean-Pascal van Ypersele

The "report is very widely used," said Professor van Ypersele. "It is very important to get government buy-in. Governments are closely involved in the report and so they cannot walk away at the end and put it in a drawer when it has been published." In his view, "AR5 is probably the best ever" IPCC report. Professor van Ypersele outlined the history of the reports, noting that AR1 was published in 1990 and the last one two weeks ago in Copenhagen. He said the latest report was better than its predecessors in its coverage of mitigation and adaptation, with its improved risk management approach and the new scenarios it discusses, and the fact it contains regional information. "Sustainable development and equity efforts are also better handled," he added. Further, there is a "more comprehensive treatment of economic and cross-cutting" issues, and acidification of the oceans and other emerging issues are "better covered," as are "uncertainties," said Professor van Ypersele.

He then explained that the three main questions the IPCC answers in its report are: "what is happening, what are the risks and what can be done". Professor van Ypersele said that the "human influence on the climate system was clear" and that "the continued emissions of greenhouse gases will increase the likelihood of severe, pervasive and irreversible impacts". Climate change is a "threat to sustainable development," he said, but added that there were "many opportunities to integrate mitigation and adaptation, and meet other societal objectives". In short, "humanity has the means to limit climate change and build a more prosperous and sustainable future".

To those who still question whether climate change exists, Professor van Ypersele stressed that if you take a short period of 10-15 years, a high and a low point, it is "easy to manipulate data", and suggest that climate change is not happening. "But if you take a long period, it is very clear that there has been one degree of global average warming over the last 100 years," he said. He explained that this is happening because there has been a 40 per cent increase in the concentration of carbon dioxide in the atmosphere after levels had been stable for the last 10,000 years. Further, "if we stay on the present course, we are on our way to much higher values still" because humans are "disturbing the natural carbon cycle" with their use of oil, coal, and gas. "Carbon dioxide emissions were mostly from developed countries until relatively recently," commented Professor van Ypersele. Hence, "the bulk" of the increase in the concentration of carbon dioxide in the atmosphere is from "burning fossil fuels in developed countries". In terms of the origins of global carbon dioxide emissions, the report shows that in 2010, 35 per cent are from energy production, 25 per cent from agriculture and land use, 21 per cent from transport and 6 per cent from buildings.

There is no doubt that the climate is changing, said Professor van Ypersele. This is becoming "more visible with the frequency and intensity of extreme events," such as the increasing number of hot and very warm days" and heavy precipitation in the form of rain and snow. "It is not at all incompatible to have two metres of snow in New York and a warming climate," said Professor van Ypersele referring to the weather on the day of the conference. He explained how warmer oceans mean more water vapour in the atmosphere and therefore greater probability of intense rain or snow. Climate change is not a distant problem for the future; its impacts are "already underway from the tropics to the poles and on all continents," he emphasised. Professor van Ypersele cited how the oceans are being affected by climate change and ocean acidification, and how climate change is affecting rich and poor, though the latter are "more vulnerable in all countries".

What does the future have in reserve for us? This was the next part of Professor van Ypersele's presentation. To answer this question, he set out various scenarios looking at what different levels of carbon dioxide could mean. The IPCC report shows that carrying on with business as usual will mean concentrations of carbon dioxide reaching 2000 ppm, five times the current level, he said. Likewise, only in the scenario at which carbon dioxide concentration levels are stabilised at the lowest level considered, namely at around 400 parts per million (ppm) by the end of the century, will it be possible to stabilise global warming at the internationally agreed level of two degrees Celsius above the pre-industrial average. The various scenarios range from the lowest, at which the average global temperature would rise

by around one degree Celsius above the present temperature, and the top scenario, where the average global temperature would rise by around four degrees C (plus or minus one degree). The last time the average global temperature increased by four to five degrees was "when we left the last ice age," commented Professor van Ypersele, and this change took "about 3000, not 100 years".

Changes are already taking place because of climate change and some adaption measures have been implemented, he said, but added that adaptation "has its limits". If we limit global warming to an average of not more than two degrees Celsius then the risks are reduced "but not to zero" and the "potential for adaptation is significantly larger in a two degree warmer world than in a four degree warmer world," said Professor van Ypersele. He therefore concluded that: "substantial mitigation will be needed to stop warming going beyond two degrees," and ideally "many want to see the two degree target replaced by a 1.5 degree target". In all regions the "picture is the same," he continued. "Everywhere adaptation has potential but it has limits" because of the increasing risks of climate change, for example, to resources and health if emissions and temperatures continue to rise.

If the world wants to keep average global warming at below two degrees, as agreed in the UN climate talks in Copenhagen in 2009 and in Cancun in 2010, then the "global emissions scenario compatible with such an objective crosses the zero line well before the end of the century," said Professor van Ypersele. "If we want to get to zero and allow increased access to energy in other countries and want to allow sustainable development, this is a big challenge and the window for action is rapidly closing". But he reminded the audience of the IPCC's conclusion that decreasing emissions with more efficient use of energy, lower carbon energy, carbon sinks and behavioural change would only reduce economic growth by around 0.06% if the action is coordinated internationally and this low number does "not take into account the benefits of reducing climate change".

"An ambitious goal of global zero net emissions is needed way before the end of the century if humanity wants to limit warming to no more than 2°C," said Professor van Ypersele. He warned that "some warming has taken place" and that because of the "role of past emissions, even if emissions stopped, there would still be some climate warming" and so there is a "need for adaptation and mitigation". And he urged everybody to work together to the same end. The IPCC report shows that "international cooperation increases effectiveness and reduces the costs," concluded Professor van Ypersele.

The governance of sustainability and social justice

The next speaker was **Olivier De Schutter**, professor at the Université catholique de Louvain and at the College of Europe (Natolin), visiting professor at Columbia University, author of the report 'The EU's Fifth Project: Transitional Governance in the Service of Sustainable Societies' and former United Nations' special rapporteur on the right to food. Professor De Schutter said he would speak about the transition to a low carbon society, how this transition relates to governance in Europe, and then link this transition to social justice.



"We need to redefine models of social protection and to combine the ecological and social transition."

Olivier De Schutter

He then turned to the difficulties entailed in combined the social and the ecological transition. "Social protection" is an equally significant concern, he said, because of deindustrialisation and a shift from manufacturing to services, in conjunction with longer life expectancy and reduced fertility and "so we need to redefine models of social protection and to combine the ecological and social transition".

First, there needs to be "agreement that macro-economic policies, such as a constitutional treaty on governance, need to be made compatible with social transition," said Professor De Schutter. He noted "at least a broad agreement that macro-economic stability should be reconciled with welfare", he said. This, he noted, calls for a "shift to a different measure of success". Today however, "GDP per capita is still the primary motivator for policymakers when making choices", which lulls them into a false sense of security that "we don't have to think about lifestyle changes, about sharing the burden of sacrifice...and redistribution". In short, "it makes no sense to take GDP as a measure; it is not related to well-being or health". He said that the EU had taken a "few steps to define something else," but that the use of any other indicator except GDP remained "problematic" for decision-makers when applying it to shaping policies.

Second, "we need to put equality at the heart of social and economic policies," according to Professor De Schutter. He said that "more equal societies lessen the desire of people to match others in terms of consumption". This is important as most consumption is "not driven by need, but by the desire to be seen by others as part of the same class". This he called "conspicuous consumption", quoting Thorstein Veblen. "More equality" also brings "more poverty-reducing impacts" from growth, reducing the tension between the climate change mitigation and the social justice agendas. In contrast, when societies are more unequal, more growth is needed to improve the standard of living of the poorest groups of society, which in turn "means more environmental disruption," said Professor De Schutter. A "more equal society would make it easier to shift to the sober lifestyles we need," he added. In short, "behavioural changes are easier in more equal societies".

The third and "more controversial" shift called for by Mr De Schutter is to "link trade policies to social positions". In other words to "use trade policies for the

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Olivier De Schutter

social end of the ecological transition" and to stop thinking of trade, social and ecology as separate concepts. Indeed, he noted that there was an urgent need to better align the trade agenda with the climate change mitigation agenda. The EU currently produces much of this waste outside its borders. "Greenhouse gas emissions are one sub-category of waste and the only reason the EU can pretend to comply with the Kyoto Protocol is because it imports what is produced elsewhere with high levels of GHG," said Professor De Schutter. He explained that "Kyoto does not take into account the 'embedded carbon', resulting from the consumption of goods produced elsewhere".

None of these shifts will be easy to achieve because of the fast "pace of change" and the "huge diversity" of wealth and development across the EU, especially since enlargement. Professor De Schutter also highlighted the "limits of a top-down approach". He said that "in the past, governments used two tools - those of regulation and economic incentives," the latter guided by the need to ensure the "internationalisation of negative externalities". But he said that these approaches, useful though as they are, are limited in their ability to bring about long-term change. Referring to the 'self-determination theory' developed by social psychologists such as Edward Deci and Richard Ryan, he explained that such findings show that "people change their behaviour when they think that it is the right thing to do" - for example, to change the "image of themselves that they project to the outside world". Professor De Schutter called for a move therefore towards "bottom-up solutions that are tailored to local" needs and resources. "Our current models of governance are inappropriate and we still say there is one model that should be applied," said Professor De Schutter. But he countered that "there is no model, there is no blueprint". Instead, "we need to stimulate local experimentation" and look at how best to, for example, reconcile family and ecological life, reduce our footprint on the planet, disseminate best practice and remove obstacles to the realisation of good ideas.

This should be the basic way of thinking for a socio-ecological transition, said Professor De Schutter. This would mean broad freedom to explore ideas at the level of regions and cities, setting broad objectives and allowing sub-units to decide the details and learning collectively from projects that have best succeeded. He suggested that many may see this as a "theoretical and utopian view," but he insisted that this way of working was already happening "in streets and municipalities across the EU". He pointed to the example of Transition Townes such as Totnes in the UK, which launched this movement that is now spreading fast across Europe. "Social innovation like such movements been insufficiently recognised" as ways of bringing change, said Professor De Schutter.

The best way to move away from the current economic model is to support both the circular economy and a functional economy (prioritizing access to services rather than ownership of goods), which initiatives for a shared economy based on "collaborative modes of consumption" could support. This would mean that we can keep "lifestyles that are very comfortable and hardly different from now, but shared". To develop the tools to do this, we need to "put people in the driving seat," said Professor De Schutter, and allow them to "invent their own solutions" that "may be more lasting than top down technocratic approaches".

"Put people in the driving seat."

Olivier De Schutter

Further, he suggested that transition movements "allow people to change roles and to re-invent themselves". Professor De Schutter explained: "people can value each other differently than simply as consumers and producers". This, he said, reduces the focus on the consumer. It can even have a "gender dimension" he said as "many social innovations lead to people better valuing tasks generally performed by women, such as looking after the family and cooking, in which men often do not play a part and that therefore that tend to be under-valued". Professor De Schutter clarified that he was talking about "not just representative democracy and not just participatory democracy, but social innovation," whereby people take the situation into their "own hands and invent systems and ways" of, for example, recycling waste and feeding themselves better.

The next question, he said, was "how to relate this to the future of the EU". The debate in the EU was "stuck," he suggested "between an active minority saying that we need greater EU integration, hence a federal Europe", and a "very heterogeneous group of those who fear a super EU social state". He admitted that he was "very sympathetic" to the federalist view, "but in the current situation this does not have much traction". And he suggested that both the federalist and the eurosceptic view "have in common" that idea that the EU means a "more top down and more technocratic" approach -- more uniformity, less diversity, and the risks of homogenisation across Europe. Professor De Schutter argued instead that "re-inventing EU governance based on social innovations at a decentralised municipal or state level" was a better way of "addressing the challenges ahead".

Sustainability and social justice

The third keynote speaker of the day was **Eloi Laurent**, senior economist at OFCE, lecturer at Sciences Po, Paris and Stanford University and former visiting scholar at Columbia University and Harvard University. He opened his presentation saying that after working on the socio-ecological transition for the last five years, it was clear to him that "inequality matters". During his presentation, he would argue that inequality "matters a great deal" to understand un-sustainability and that, conversely, "ecological crises will aggravate inequality," he said.

Dr Laurent started by explaining that in his view, "social science and the humanities hold the key to problems raised by hard science". He explained that "we need hard science to understand the problem and social science to solve it. We need physicists to know that climate change is happening, but we need social scientists to do something about it". The issue now was that "huge progress" has been made regarding hard science, "but not so much on social science applied to ecological problems". We need therefore "to invest in social-ecological knowledge so we can reform our social systems framing attitudes and behaviours and preserve our natural support system" he said.

Dr Laurent warned that if changes were not made, "environmental science will just become disaster contemplation". Hence, "week after week we have new problems, but we have very few solutions". Therefore, articles in journals simply "spread anxiety," said Dr Laurent. There is thus a danger that citizens

"Ecological crises will aggravate inequality."

Eloi Laurent

will simply "hate environmental scientists as breakers of bad news with no solutions and stop listening to them".

For him, "the missing link in sustainable development is social-ecology". According to Dr Laurent, there has been progress "in linking the economic and the social and in linking the economic and the environment, but not in linking the environment and the social". This was, he said, a key insight in the 1987 Brundtland report and one that showed equality at the heart of sustainability. "We have to rediscover this message today," he said.

The paradox of the "environmental emergency" is that "environmental degradation is becoming more costly and more tangible" but action is still timid. He gave the example of the French news, which "almost every night reports about a flood", turning the evening weather forecast into "climate news". Hence, "people see this is really happening, it is not invisible for them" but according to Dr Laurent, since the 2008 recession and the failure of the Copenhagen climate talks in 2009, there has been a reluctance on the behalf of policymakers to bring the environmental and social issues together. "The recession has shortened collective horizons," said Dr Laurent. "We need to connect the inequality crisis with the environmental crisis."



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Eloi Laurent

Further, inequality "is a problem for everyone," said Dr Laurent, given that we will all "pay the price of the ecological crisis", even if this price will "not be shared equally among all members of society" with the "most vulnerable citizens" hardest hit. In short, "we are all in same boat, even if there is a different price for different members of society". Dr Laurent asked therefore: "how can we make the argument that inequality causes ecological damage?". He cited how thinkers such as US economist and sociologist Thorstein Veblen said that if "everyone was very rich, everyone would have an unsustainable lifestyle". Dr Laurent said the same was true for poverty. "Poverty is a huge polluter" which causes the "poor to degrade their natural capital, the only capital they have," he stated.

Looked at from a "macro-ecological approach" inequality increases environmentally-harmful growth and makes it "easier for the richer to transfer their harmful impacts onto poor" and the rich "will be driven to pollute even more if they are not made to pay," said Dr Laurent. He added that "inequality "The new generation of inequality is environmental inequality."

Eloi Laurent

"We have to move from a welfare state to a socioecological state."

Eloi Laurent

affects health" and that "inequality will destroy the capacity to build effective action" to protect the environment. He gave the example of the US, where he said "inequality is driving political polarisation and preventing environmental policy from happening". Because of this, "we will not have a legally-binding agreement in Paris as the US cannot guarantee two-thirds support in the Senate". Hence US inequality "has a global impact". It is therefore possible to "make a parallel between a peak in environmental legislation" during Nixon's time as US president, which Dr Laurent called a "golden decade," when "income inequality was lowest".

The "new generation of inequality is environmental inequality," said Dr Laurent, citing how the poorest and least educated in the world's cities are those most exposed to particulate matters in harmful air pollution. "It is a pure disgrace that children growing up in this city [Paris], one of richest cities on earth" are exposed to high levels of air pollution, he said. Dr Laurent added that research from the US shows that where a pregnant mother lives determines the health of her child and what he/she will achieve. Further, Dr Laurent denied the idea of "natural disasters". He said there was "natural risk," but that disasters were socio-ecological. To support his argument he cited the relationship between social disadvantage and those who died in France in the 2003 heatwave. Fifteen thousand people died during the heatwave and poorer people were shown to be more at risk. "We are not ready to deal with these risks," said Dr Laurent, calling for a move away from "social-ecological trade-offs to synergies that take into account environmental and social questions".

Bringing this back to the question of European trade unions, Dr Laurent said that their "historical mission had been to build the welfare state". To abandon this would be a "huge mistake as the whole world is converging towards the welfare state," he said. "We now have to defend it and integrate the social-ecological transition. We have to fight the inequality that is driving the ecological crisis, look at that state of ecological inequality and move from a welfare state to a socio-ecological state."

Philippe Pochet said he agreed that environmental arguments, in particular climate change, needed to be "better organised with social science", with people from the two sectors speaking more frequently to each other. "I participate in different groups and we are always the same 20 people talking together," he commented.

Comments and Q&A

The next member of the panel to speak was **Maria Joao Rodrigues**, Vice President of the S&D Group in the European Parliament. She drew attention to the fact that the EU was currently agreeing plans to invest in growth in the next stage of the 2020 package and suggested that sustainable development should be at its heart. For her, "sustainable development in its full meaning has ecological, economic and social dimensions". She agreed with the previous speakers that "so far" there has been some joined-up thinking regarding the links between the economic and the social, "but we have deficient political thinking regarding the social and the environmental dimensions".

"As a policymaker, I try to keep a holistic view and to see how we can we progress in all three dimensions," said Ms Rodrigues, though she insisted on the importance of "job creation" in the socio-ecological transition. "Job creation is the central priority to reduce social inequalities and keep welfare systems," she said. "If you want to have sustainability, you need to have more access to employment. This cannot be ignored."



"Job creation is the central priority to reduce social inequalities and keep welfare systems."

Maria Joao Rodrigues

For her, "another piece of the puzzle is the transition to the knowledge economy because this has implications for the ecological transition". For example, "IT can be used to manage our energy in different ways". Regarding the EU 2020 strategy, she said its goal should be "to improve well-being and reduce social inequality". Rather than measuring GDP per capita, she called for the use of "well-being makers" with the focus on "investment and job creation".

Benjamin Denis, advisor at ETUC, commented that as the fifth speaker of the day, most of what he had planned to say had already been said. He decided therefore to cast his notes aside and recount his experiences at last year's UN climate conference in Warsaw. "I arrived a few days after the conference had begun and the atmosphere in the trade union delegation was not positive," said Mr Denis. "There were lots of discussions and arguments, with one trade union wanting to organise a demonstration with coal miners [in support of them]". He said they managed eventually to persuade the organisers to cancel the demonstration and to agree a statement calling for a "just transition" and acknowledging that "climate policies can have negative social effects and that these effects must be taken into account".

Mr Denis then explained that during dinner with representatives of the Polish trade unions, he came to understand better Poland's situation. There are factors which explain why Poland would be "more exposed to the effects of decarbonisation" than other countries: the extreme dependence on coal, the high number of people employed in the sector, the high share of energy-intensive manufacturing activities in the Polish GDP. But what also came up in the discussion was the social context of the country and its historical background. The features of the polish economy combined with the social impact in some sectors of the transition from communism to a free economy and the poor level

of social protection in Poland explains "why some workers are reluctant to be involved in the transition to a low carbon economy and the need to understand the social context," said Mr Denis. "We need to deeper merge the social, climate and energy agendas," he insisted. "The climate debate is not taking place in a vacuum, but against a backdrop of widening social inequalities and lower wages."



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Benjamin Denis

The final discussant to comment the keynote speeches was **Nadine Gouzee** from the Belgian Federal Planning Bureau. She stressed that the triangle "economy, society and environment" proposed by Dr Laurent to support a definition of sustainable development identifies three deeply interlinked challenges: transforming our economy into an inclusive economy, transforming it into a green economy, and transforming our society into an ecological society. What is missing now is not so much scientific evidence on these interlinkages between economy, society and the environment, as tools and policies to grasp this interconnectedness. We need at each level (EU, national, local...) horizontally integrated public policies implementing these transformations.

She agreed with Olivier De Schutter on the advantage of diverse bottom-up societal innovations over top-down uniform solutions, as long as these approaches complement and do not substitute the search for universal intergovernmental agreements, including agreements on sustainable development.

She also shared the views of Jean-Pascal van Ypersele that: "an agreement on sustainable development perceived as fair has higher probability to be accepted by everybody". Dr Laurent said rightly that the key message of the 1987 Brundtland report (equality is at the heart of sustainability) has not yet been understood and that EU Members would make a mistake to run away from their families of welfare states systems. To measure our quality of life, she stressed that it is known since the eighties (agreed in Rio 1992) that using GDP to measure well-being is simply wrong. There is obviously a need of using other indicators, like the old Gini-coefficient of inequality or like new ecological indicators. But she warned about the risky practice, since the 2008 crisis, of all-sided "shooting at the GDP", including by those who govern. GDP is neither a well-being nor an equity indicator but it is an economic indicator playing a central role in the system of accounts linking economy to the financing of social and environmental protection and policies, including for health.



Nadine Gouzee warned about the risky practice of all-sided "shooting at the GDP".

Mr Pochet then opened up the floor for questions. These included support for a move away from GDP and the adoption of new indicators, and questions about how to create "political pressure for systemic change" when it is clear that the world is "on track for four to six degrees of warming" and therefore "business as usual can't continue," raising the need for "major governmental change".

More specifically, Fintan Farrell, Project and Fundraising Manager at the European Anti-Poverty Network, highlighted the general "lack of investment in social knowledge not just for social scientists, but also for social NGOs". He said that the EU 2020 strategy was the "tool we have and so we have to use it," but signalled its short-comings being "underpinned by a false growth strategy," which he described as a "difficulty that unless we overcome it...is a real challenge". Mr Farrell also underlined the importance of "bringing knowledge together," while at the same time ensuring that social thinking doesn't "gets too subsumed". Likewise, he supported a "bottom-up approach" as advocated by Professor De Schutter, but added the necessity of being "very careful not to undermine the right sort of regulation".

Mr Pochet then added his thoughts and questions to the mix. He called on the EU to think about the direction it wanted to go and the timing for any change of direction. He also questioned Dr Laurent's assumption that reducing inequality was necessarily good for the planet, suggesting that once people had more money they would adopt more environmentally-harmful behaviour such as buying a car and going on holiday by plane.

Olivier De Schutter was first to respond to the questions and comments put to the panel. In response to Mr Farrell's comments on the need for the right sort of regulation, Professor De Schutter said the "challenge is not to dismiss regulation, but to tap the potential of people's social imagination" while using regulation to, for example, put a cap on carbon and to stimulate social innovation. He said we have found a way, through IP and patents, to protect intellectual capital and now we need to find a way to address social ideas as well. For this to happen, we need to "build political will" and share "positive messages" about the socio-ecological transition. He also called for economic change to allow people to change, to "reinvent their lifestyles, not simply consume". He said at the moment they were bored: "all they can do is consume and produce".

In his answers, Dr Laurent focused on the need to move from GDP to "well-being and sustainability indicators". GDP had been with us for 70 years and we are "not going to get rid of it in a couple of years," he said. But he added that progress on this subject is "everywhere" and that it is "now widely accepted that we have to go beyond GDP in many circles". The "OECD for instance is shifting completely" and "many academic institutions" are now working on the subject. "In a sense, we now have too many indicators and we have to choose the right ones." Further, Dr Laurent suggested that the use of GDP was actually misguiding policy, pointing to the recent US mid-term elections where President Obama expected support because GDP had increased under his tenure while in reality household income had fallen by three per cent. "You need the right compass to win elections," said Dr Laurent, suggesting that GDP was not the right one.

Change was urgent given the threat of environmental conflict in countries like China and even closer to home, he said, citing the deaths in France during the 2003 heatwave. "There are signals that these conflicts are coming. They will be hugely costly. How do we change before they arrive?"

Finally, answering Mr Pochet's comments about whether reducing inequality would reduce greenhouse gas emissions, Dr Laurent answered in the affirmative, noting for instance the gains that would be made in terms of biodiversity and again the need for new indicators to measure such benefits.