

Climate Change, Security and Sustainable Development



Report of the Conference **“From Bali to Poznan - New Issues, New Challenges”**

| Brussels 18th December 2007 |



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“From Bali to Poznan - New Issues, New Challenges”**

Brussels, 18 December 2007

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Climate Change, Security and Sustainable Development:

Report of the Conference "From Bali to Poznan - New Issues, New Challenges"

Brussels, 18 December 2007

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Cover photo Copyright © W.Ming -UNEP / Still Pictures: Sandstorm, China. Over-intensive farming and climate change have caused deserts in Asia and Africa to spread, directly affecting millions of the world's poorest people.

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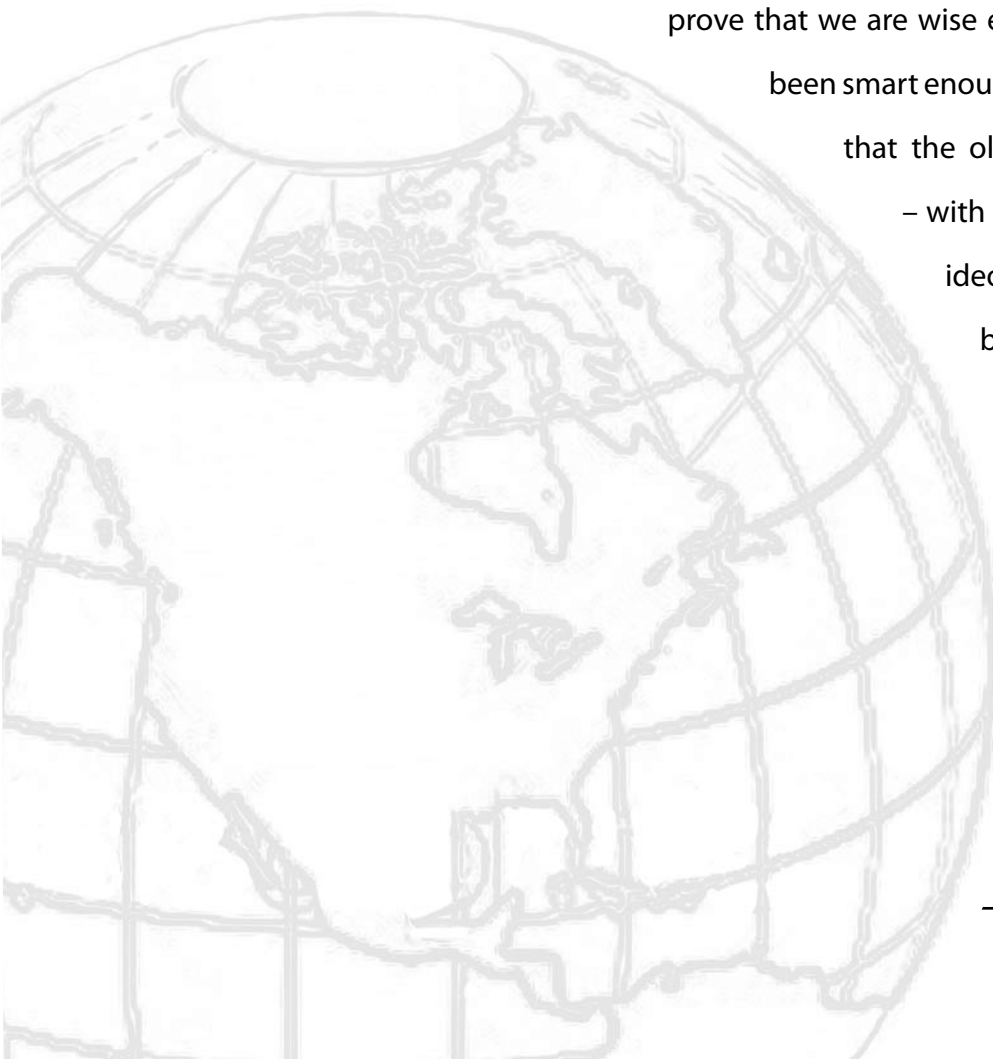
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“ We have an opportunity to forge and follow a new agenda for national and world security. First and foremost, our security is threatened by the global environmental crisis, which could render all our other progress meaningless, unless we deal with it successfully. ...As a world community, we must prove that we are wise enough to control what we have been smart enough to create. We must understand that the old conception of global security – with its focus almost solely on armies, ideologies, and geopolitics – has to be enlarged.”

Al Gore
The Assault on Reason - 2007



1. Introduction



Ronald A. Kingham
Director / Brussels Liaison, Institute for
Environmental Security

The effects of climate change are all too real, ranging from an increasing frequency and intensity of violent storms, floods, droughts, forest fires, water shortages to food crop damage, and are already being felt in both developing and developed countries around the world. Climate change is also having an impact on security – contributing to the creation or broadening of conflict, at least in some specific countries and regions. The case of the Sudan and the spill-over of tensions into Chad is an often cited example. Other potential threats include the consequences of mass migrations of people fleeing from rising seas or encroaching deserts. While the threats to security resulting from climate change may be in the minds of international negotiators, this issue is not seen as being addressed directly or resolutely by the players concerned.

Just before the United Nations Conference on Climate Change (UNCCC) in Bali, the Intergovernmental Panel on Climate Change (IPCC) released its most far-reaching report to date: “Climate Change 2007” - the IPCC Fourth Assessment Report (AR4). Referring to the report, UN Secretary-General Ban Ki-moon said that “We cannot afford to leave Bali without ... a breakthrough”. The potential consequences of quickening climate change are “so severe and so sweeping that only urgent global action will do,” he said.

According to press reports, the Bali climate talks were a success, with world leaders adopting the “Bali Action Plan” for negotiating a new global warming pact by 2009. Decisions also included the adoption of a rainforest protection plan, the launch of the Kyoto Protocol’s Adaptation Fund and the scaling up of the transfer of clean energy technologies from industrialised nations to the developing world. Some reports were more critical, however, pointing to the lack of progress on emissions targets and a perceived sublimation to the whim of the big powers – most notably the US.

Many are of the opinion that little real progress will be made by the international community in seriously addressing the threats of climate change until after the 2008 US elections. Therefore, there will be high expectations for the 15th meeting of the Conference of the Parties (COP15) at

the UNCCC in Copenhagen in 2009, at which time the successor to the Kyoto Protocol should be decided and set to become operational in 2013. In fact, the Bali roadmap calls for a continuing series of negotiations during the coming two years.

- What then can we expect to be achieved in the first year of new climate change negotiations in the lead up to, and during, COP 14, to be held in December 2008 in Poznan? How can the connection with security be seen as an additional driver for urgent action in the negotiations?
- What kind of leadership is needed from the EU and the US if the Bali Action Plan is to work successfully? And what courses of action are needed from China, India and other developing countries to agree on climate change stabilisation targets?
- What changes are needed in the international monetary, finance and trade systems to facilitate the climate change negotiations in the coming two years and the subsequent ten year implementation period?
- How will the latest debate over the economic and environmental costs and benefits of biofuels play out and why do other renewable energy sources (such as Concentrated Solar Power) offer so much promise?
- What role is there for the private sector in terms of investments and the development of new technologies? And what more can be done to alter consumption patterns to slow the pace, and lessen the impact, of climate change?
- What role is there for the military and for regional and international security organisations in climate change mitigation and adaptation?
- What are the implications for foreign policy? In particular, how can environment, security and sustainable development policies and practices – from the global to the local level – be better integrated to best address the complex challenges ahead?

The **Institute for Environmental Security** in association with **Global Legislators Organisation for a Balanced Environment** (GLOBE-EU and GLOBE-Europe) and **e-Parliament** convened the conference “From Bali to Poznan” to examine the new issues and new challenges listed above, which will need to be addressed in the coming 12 months.

This conference – the first such gathering to assess the results of the Bali negotiations - was held at that European Parliament in Brussels on 18 December 2007.

The conference included a number of participants who had taken part in, and just returned, from Bali, members of the European Parliament, members of national parliaments, as well as experts from the European Council, European Commission, and European Social and Economic Committee, EU Member States and other governments, the US military, UNDP, OSCE, CFSP, businesses, the Club of Rome and other prominent NGOs, think-tanks, and academic and research bodies. In all, over 100 experts took part, including 28 speakers, and another eighty persons expressed interest in being informed of the results and about follow-up activities.

The conference began with an overview of the events at Bali, followed by an examination of technological solutions, most notably solar power, to global energy requirements. An overview of the security implications of climate change was given along with a discussion of the foreign policy implications of the links between environment, security and sustainable development. The summation of the conference was provided by a panel of distinguished rapporteurs and closing speakers and included suggestions for the way forward to Poznan for Europe and the world. The principal points raised in the discussions are reflected in this report.

The organisers wish to thank Nicolas Frankcom for his excellent work in writing this report and his colleague at **Civitatis International**, Jan Mortier, for his facilitation. Together they also provide a very useful summary in the conclusion of the report.

We also wish to thank Fiona Hall, MEP, for kindly hosting the conference at the European Parliament and the Dutch Ministry of Foreign Affairs for its sponsorship in the context of the IES programme on *Environmental Security for Poverty Alleviation*.

Finally, we also wish to express our gratitude to the moderators and speakers for their enlightening contributions and for stimulating such a rich discussion among the participants. We hope the participants and other readers of this report will find it (and the collection of background materials available on-line) useful for a better appreciation of the linkages between climate change, security and sustainable development and a valuable source of inspiration for future policy action. ■

2. Welcome and Opening of the Conference



Moderator: Satu Hassi

MEP / Vice-Chair, Environment Committee,
European Parliament / Vice-President, GLOBE-EU
/ Member of the Board, Worldwatch Institute

Ms. Satu Hassi opened the conference with a brief introduction on climate change, stressing its increasing importance and changing meaning within global debate. She noted that this was particularly a result of an evolving understanding of the effect climate change has on security, but stressed that any debate must include sustainable development to be of relevance to the poorest people in the world. The tripartite synthesis of climate change, security and sustainable development would form the key challenges of the conference, she continued, and any strategies that are developed must allow for economic development that is environmentally sustainable. ■



Ton Boon von Ochssée

Ambassador for Sustainable Development,
Netherlands Ministry of Foreign Affairs

Ambassador Boon von Ochssée began by noting that the environmental agenda involves combating climate change to achieve sustainable development, and expressed his pleasure that the conference would be addressing some of the key issues in this debate. He highlighted the timely nature of the event following the publication of the Bali conference results, and expressed hope that the event would provide the opportunity to discuss how concrete results in time for next year's conference could be achieved. As well as allowing time to reflect on the results of Bali, he noted that the conference was also aimed at discussing the alternatives to fossil fuels, and the security implications of climate change. He continued that the aim of the conference was therefore to shed new light on the linkages between foreign policies, the environment, security and sustainable development policies, and hoped that agreements on recommendations could be reached to underline the urgency to take action, for the sake of both our immediate living environment and the security and

stability of the wider society. Climate change increases insecurity, which is a breeding ground for combat. All parties who are signatories to the Convention on Climate Change are united in their commitment to reduce greenhouse gases and to assist vulnerable countries to adapt to the impact of climate change. This is the global ambition agreed upon in Bali, and the Ambassador expressed his belief that this would bring about a conviction that unsustainable practices, attitudes and habits are applicable to every person in the world. He also stated his belief that this could create a level playing field for the market and raise the value of the environment, making it a 'hot commodity' to protect. A united stance for all countries, he noted, is the best confidence-building measure to preserve security.

The conference, he continued, would allow the participants to reflect on the results of Bali and, hopefully, to better understand the current situation and what is expected for agreement to be reached in Copenhagen in 2009. From a sustainability perspective, he noted, it is crucial to understand how the world aims to reduce greenhouse gas emissions, namely what has to happen now and how it will be achieved. Even before climate change became a global topic, it was already apparent that present consumption patterns were leading to the depletion of natural resources and the destruction of ecosystems. Waste and the polluting greed of humanity, he stated, were systematically reducing the chances of future generations to live their lives. Economies today are based on maximizing production for consumers determined to consume more, because more is considered better. Some multinational companies have shown positive signs of corporate social responsibility, he noted, but more is needed, particularly from the European Commission, which must guide its Member States to develop actions that make our way of life greener and more socially responsible. Our societies are feeling the irreversible impact of scarce resources, he stated, leading to tensions and their consequent security implications. Conflict also looms around the availability of fossil fuels, which are no longer a given. While security around the supply of these fuels is increasing as a result of their scarcity, alternative sources of energy are receiving more attention, he stated, noting the example of biofuels and their increasing profitability. However, if our need for new sources of energy is competing with the need for food in the world's poorest countries can this be the way forward, or is the palm oil business simply booming at the expense of biodiversity? For this reason, the speaker noted, he was pleased that the conference would be exploring other potential resources such as solar energy.

He went on to stress his interest in what conclusions the conference would reach on the inter-linkages between security, investment flows and sustainability, namely: sustainable development. Understanding short-term security risks, he noted, is vitally important within the context of a long-term framework. Conflicts are no longer purely the result of different interest groups with competing claims to natural resources, or indeed conflicting opinions on the needs of the poor, but rather a direct conflict between humanity and its own living space: the earth. The speaker expressed his desire that the conference would not only serve to bolster ambitions to set targets on emissions reductions and the Millennium Development Goals, but also that it would lead to a framework for interlinking climate change with other policies, including the prevention of conflicts. In other words, the establishment of a set of rules to ensure long-term sustainability while all stakeholders, including the private sector, have confidence in their role in establishing a climate-neutral society. In short, we urgently need to act today to protect our tomorrow.

Following this presentation, the moderator, Satu Hassi, added that the Netherlands has played a very important role in climate politics, and that the former environment minister of the Netherlands Mr. Jan Pronk, had led negotiations on the more detailed rules of the Kyoto Protocol that allowed the protocol to be ratified. Furthermore, he managed to achieve this following America's announcement of its withdrawal from negotiations and George Bush's announcement that the Kyoto Protocol was dead. The moderator also noted that the current head of the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat is also from The Netherlands, and that the country therefore deserves special credit for its contributions in this field. ■



Jan Tombinski
Ambassador Extraordinary and
Plenipotentiary, Polish Permanent
Representation to the European Union

Ambassador Tombinski began by outlying the evolving attitudes in his home country, Poland, towards the environment. Under communism the environment had been seen exclusively as an economic resource and its protection was therefore not an issue. In the mid-80s people began to examine how to use the environment to make people's living conditions better and less polluted, with this trend continuing in the 90s. Investments in modernising technology, he noted, have been one of the leading sources of investment in all the EU member states and have helped

to reduce emissions. Poland, for example, has reduced its carbon dioxide emissions by 32% in comparison to the reference year of the Kyoto Protocol.

The climate talks in Poznan, he continued, were intended to build on the results of Bali and to prepare more ambitious schemes for emissions reduction for all parties to the Kyoto Protocol. Furthermore, he stressed two issues that were particularly important for Poland: firstly, diversification of energy production and, secondly, better use of existing energy sources. The first is particularly important due to the highly specialised nature of energy production in Poland, which is almost exclusively reliant on coal, which in itself presents acute challenges. The second is a challenge to change consumption patterns, and the speaker highlighted Ambassador Boon von Ochssee's comments on 'greedy' consumption in this regard. He continued by noting his pleasant surprise at the conclusions of recent talks in Paris, which proposed very practical steps on tackling pollution by cutting household energy usage through very simple measures. Such a perspective, he remarked, would also feature in Poznan.

The speaker continued by noting the perception that Poland has been resistant to environmental measures proposed by the EU, but stressed that this missed the bigger picture, as Poland must maintain its economic growth while only having half the per capita energy consumption of the EU's 15 founding member states. It therefore had to increase its energy production to maintain growth, but preferably at as minimal a cost to the environment as possible. How to achieve such sustainable development will be another key issue of the Poznan talks. The speaker added that the Polish Prime Minister, Donald Tusk, on a recent trip to Brussels stressed Poland's desire not just to be a consumer, but also a co-sponsor of the European Union's environmental policy. In closing, the Ambassador reiterated his hope that the day's debates would provide structure for talks on fossil fuel consumption, the security and foreign policy implications of climate change, and would provide the first steps toward Poznan by assessing how the issues likely to be raised there should be tackled. ■



Olof Ehrenkrona

Ambassador, Senior Advisor to the Minister for Foreign Affairs, Sweden

Ms. Hassi introduced Ambassador Ehrenkrona by highlighting Sweden's pivotal role in the climate change debate by being the first to bring it onto the UN agenda. In fact, the first UN summit on the environment was held in Stockholm in 1972, which led to the establishment of the United Nations Environment Program (UNEP). Ms. Hassi also noted that due to Sweden holding the EU presidency in two years time, when the Copenhagen negotiations take place, Sweden would be integral to the development of the post-2012 climate change framework.

Ambassador Ehrenkrona began by noting that, for the last four or five years, one third of the world's economies experienced double-digit growth. This is the fifth year where global growth exceeds 4%, which is historically a dramatic increase and plays a huge role in any debate on climate change. This debate is further complicated by China and India entering the industrial era.

There should be relief at the achievements of Bali, he noted, including the roadmap, an action plan, and more specific agreements in areas such as the Adaptation Fund; many of these achievements are better than were expected. Consequently, the road to Poznan and Copenhagen will be somewhat easier than previously thought, but it is only now that the real negotiations begin and the task ahead is the most challenging yet faced by the global community. Nevertheless, the fact that we will all be affected means that leaders all over the world have an incentive to establish common interests.

However, it is also important to remember that while it may be easy to agree on the problem, the solutions are more complex. Therefore, he continued, the concept of an Adaptation Fund is a realistic and wise approach. Almost universal agreement on rising temperatures makes preparation for climate change logical. Irrespective of whether global warming is the result of carbon dioxide emission or activity on the solar surface, the speaker stressed, the changes must still be dealt with. Most experts, he continued, seem to agree that the process in the short term is irreversible, and that not even radical changes in lifestyle would stop global warming in the coming decades. The bad news is that as a result, an increase in temperature by at least a couple of degrees Celsius seems inevitable. The good news, however, is that many of these same experts believe this to be a manageable task for humanity, albeit

not without complications. One of these complications, he continued, is man himself, and his faith in centralised institutions and simple solutions.

The almost unanimous opinion regarding climate change and the necessity to reduce greenhouse gases and our dependence on fossil fuels is a great strength, noted the speaker, but there are also great risks. Old prejudices must be overcome and innovative solutions allowed, so we must strive for consistency and greater efficiency in the use of present resources.

Ambassador Ehrenkrona proceeded by giving an example of the tensions between new sources of energy and food, citing how an SUV with a full tank of ethanol contains the equivalent amount of maize to feed someone for an entire year. The Economist's Food Price Index is currently at its highest level since 1845, when it was introduced, he noted, with the price of wheat exceeding 10 Euros per bushel - the highest it has ever been. Therefore, he noted, it is both wise and appropriate to discuss other solutions, such as solar energy and fuel cells. If we want to be more efficient in our energy usage the key lies in electricity, which can be used for transport either through plugging-in or fuel cell support. He added that, alongside transport, there is one other big contributor to global warming today - deforestation. The fact that deforestation was addressed in Bali represents a great step forward, and it will continue to play a central role in the climate change debate in the future. He also cited technological developments in electricity production, such as heat coming from fuel pumps, and developments in consumer technology such as cell phones that use fuel cells instead of conventional electricity. Other examples include: electricity produced by renewable sources such as sun, wind and water, he noted, but also through nuclear power; electricity produced by hydrogen gas and more energy efficient batteries; and electricity both produced and consumed locally.

He concluded by saying that there are currently two strategic dimensions in climate change which both have great security implications. The first is the increasing competition for commodities and the second is the development and transfer of new technologies. Both these dimensions were addressed in Bali and will be addressed in the coming months and years. The speaker also expressed his belief in the importance that these issues be discussed on a global level within the global community. ■

3. Reviewing Bali: Reflections on the UNCCC – COP 13



Moderator: Wouter Veening
Chairman / President,
Institute for Environmental Security

Mr. Veening began by stressing that the environment is a *global public good* which affects everybody. To stabilise the climate therefore requires global cooperation, which cannot function if one large, energy-consuming and emissions-producing nation excludes itself. Therefore global consensus to prevent further destabilisation of the world's climate is essential, and a key step towards this was achieved in Bali, with the Bali Action Plan reflecting this consensus. India and China, particularly because China is one of the biggest greenhouse gas emitters, were reluctant to act without the involvement of the US, and vice versa, creating a catch-22 principle which Bali resolved. The European Union also played a huge role, and thanks to its elections, Australia brought forward a new prime minister in Kevin Rudd whose first act was to initiate the ratification of the Kyoto Protocol. This was an important development, remarked Mr. Veening, as it left the United States isolated as the only developed country that wasn't a signatory. Furthermore, the evidence for climate change given by the Intergovernmental Panel on Climate Change (IPCC), recipient of a Nobel Prize, was very compelling and left far fewer sceptics regarding both the warming of the planet and its anthropogenic nature. The speech by Al Gore on the 13th of December, prior to the last official negotiating day in Bali, also helped tremendously, the speaker noted, as did UN Secretary General Ban Ki-moon's sincere moral appeal to the attendees. The speaker stressed the importance of the Secretary General's strength on this issue and felt he deserved at least partial credit for the resulting consensus document.

However, he continued, the Bali Action Plan is late in comparison to the pressing need to combat climate change, and the text itself contains no binding, quantifiable targets. However, in his opinion, Mr. Veening felt that the text is strong and talks about 'deep cuts' in global emissions, as well as stressing the 'urgency' to do so and, as an important footnote, refers to the IPCC report and the figures contained therein. He went on to quote a few sentences from the plan:

With reference to developed countries: We need *"Measurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified emission limitations and reduction objectives by all developed country Parties."*

With reference to developing countries, we need: *"Nationally appropriate mitigation actions by developing country Parties, in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner."*

There is therefore still a notable difference between developed and developing countries, which brings to mind the concept of 'common but differentiated responsibilities', noted the speaker. However, this still requires effective action from developing countries, and it was made clear in Bali that those like India, dependent on the glaciers from the Himalayas, and China, with tremendous water shortages and being prone to drought, erosion and desertification, will be among the first victims of climate change. The agreement to both avoid deforestation and sustain forests with a tremendous carbon stock was also vital, he stated, as deforestation is responsible for between 18 and 25% of global greenhouse gas emissions. Forests are important for mitigation, he noted, but also play a key role in adaptation, as forests disrupt hurricanes and absorb excessive rains, whilst mangrove forests help protect coastlines against rising sea levels. Perhaps even more importantly they act as a 'sink', removing carbon dioxide from the atmosphere and thereby cooling the planet. As a summary of what had to be achieved, he quoted the president of Indonesia, who noted: *"What the world needs is less emissions and more sinks"*. Guyana, he continued, had offered all of its forests, which cover an area the size of England, as a sink to the world, which Mr. Veening felt demonstrated the positive atmosphere which existed in Bali. Furthermore, he highlighted the Adaptation Fund formed at Bali, and the World Bank's Forest Carbon Partnership Facility (FCPF), a financing mechanism to pay for reforestation and the conservation of existing forests.

Mr. Veening continued by noting that Bali hadn't paid much attention to the relationship between climate change and environmental degradation and security, which gave this post-Bali conference in Brussels even more importance. On the 17th of April, he continued, climate change was discussed at the Security Council in New York and a number of important reports from military-related think tanks in the US regarding the threat climate change posed to security were raised. This could occur in the form of droughts, floods, disease, compromised food security, and the threat that these may lead to increased fundamentalism and the stress this causes on countries. There is also the threat of mass migration, he said, noting that if the glaciers in the Tibetan plateau were to melt, 1.5 billion people would be left without a water source, with clear security implications that must be considered.

He added that there was also a lot of attention given to biofuels at Bali, but he cautioned against investing too much hope in these as they compete directly with food security. They also impact already rising food prices and compromise biological diversity which also plays a role in adaptation. (A bio-diverse forest is much more robust than a monoculture.) The speaker proposed that the Poznan discussions should further explore the link between climate change and security to increase the urgency of the situation and enhance the possibility of agreement on action in Copenhagen in 2009. He continued by noting that Poznan was an excellent place to do this due to its natural bridging of East and West Europe, its history of security challenges, and its relative proximity to Chernobyl. This last point is salient, he said, as nuclear energy was discussed in Bali as a form of non-greenhouse gas-emitting energy technology. Mr. Veening expressed his belief that this required a thorough examination of the security and proliferation issues surrounding this topic, and that any discussion thereof in Poznan should be within this 'security dimension'. ■



Avril Doyle

MEP, Member of Environment, Industry and Climate Change committees. Vice-Chairwoman of the Committee on Fisheries, Vice-Chairwoman for the EU Delegation for Relations with the Gulf States and Member of the EU Delegation for relations with China

Avril Doyle, MEP, began by noting that her visit to Bali as part of the EU delegation had filled her with optimism due to the eventual agreement that had been reached. This was in stark contrast to her previous experiences and had reinforced her faith in the potential for agreement on this most important of matters, as well as her trust in the existing 'COP' and 'MOP' discussion processes for achieving the goal of organising the 2013-2020 period. This was the first time since 1995, when the UN began organising these annual conferences on climate change, that everyone is 'inside the tent', she said, including the United States. Therefore, regardless of opinions on the strength of the final text produced, all the UN parties present are together and have agreed on the way forward, which she regarded as vitally important. Even the United States, she continued, through their chief negotiator Paula Dobriansky (whom she noted had been under considerable pressure from almost all the other attending nations), hailed the outcome of the climate change negotiations as "... opening a new chapter in climate diplomacy". Ms. Dobriansky also claimed that the US would work towards halving its own emissions by 2050, which Ms. Doyle cited as proof of a seismic shift in international opinion driven by the alarming scientific evidence presented by the IPCC in its fourth assessment. The Bali roadmap, she continued, accepts its finding that proof of the warming of the climate system is unequivocal and that

any delay in reducing emissions "...increases the risk of more climate impacts." The final text also recognizes that "...deep cuts in global emissions will be required."

Ms. Doyle noted that 187 UN member states have signed this document, including many who have taken rather differing opinions over the previous years. She stated that the willingness of China to participate, whose emissions, though enormous, are six times lower than that of the US on a per capita basis, had been heart warming. China is also actively engaged in the search for solutions and behaved like a "main player", despite the enormous social, economic and demographic problems they face. The most effective way, noted Ms. Doyle, to encourage China and the other major developing countries like India, Brazil, and the rest of South America as a whole to find more environmentally sustainable growth paths is for the developed countries to lead the way, most notably the US. Ms. Doyle also noted that the four main pillars that will form the agenda for the next two years have already been outlined and noted that financing in particular would prove extremely difficult and would require the developing nations to "put their money where their mouth is".

The speaker then moved on to give a flavour of the debates that had been at the fore in Bali. She noted that particular concern had been raised with the EU's decision to set a 10% target on the use of biofuels for energy production, and expressed her feeling that this issue, despite the best of intentions, would have to be revisited, particularly due to the question of sustainability. To emphasise this point she repeated the statistic cited by Ambassador Ehrenkrona that one fuel tank of ethanol could feed one human being for a year on the basis of the amount of maize it uses. She felt this was a frightening statistic given the dual challenges of poverty and starvation also faced, and expressed concern at the continuing subsidisation of ethanol imports to the EU despite its link to deforestation, particularly as these are then re-exported due to the surplus of ethanol products in Europe. The speaker noted that while this was not the main topic of the conference it was extremely damaging nonetheless and pleaded with Europe to stop leading the world on an unsustainable search despite the best of intentions.

The speaker went on to note that due to the lack of quantifiable actions on carbon efficiency and the desire of politicians to legislate in big sweeping gestures, simple methods to reduce carbon emissions often take a back-seat. She noted that if 188 million domestic appliances in the EU that are over 10 years old were changed to new over night, it would save the output of 5 power plants in carbon dioxide reductions due to their inefficiency. This is not a 'headline' story, she noted, but remains a simple, effective matter that people can understand.

Ms. Doyle continued by noting that no previous UN climate change summit had witnessed such high drama

and raw emotion as Bali, with one developing country after another lining up to denounce the American stance, impassioned pleas for an honourable compromise, reactions that swung from loud booing to rapturous applause and the sight of a top UN official breaking down in tears in public. This had never happened before and was outside the realms of conventional UN diplomacy.

The final plenary session in Bali, she noted, had it all, with tired and emotional delegates desperate for an agreement. Indonesia's president, who was affectionately referred to as SBY, came in to plead with the delegates to go the last mile of what had been up until then an exhausting marathon. Furthermore, UN Secretary General Ban Ki-moon flew back from a mission in East Timor to tell the delegates they simply had to strike a deal. Both men, the speaker continued, received brief but enthusiastic standing ovations, but the mood then changed within minutes when China accused the conference secretariat of deliberately organising a parallel meeting while the plenary session was underway in a supposed attempt to wrong-foot developing countries that were already feeling neglected. This was more than Ivo de Boer could take and the usually urbane Dutch Executive Secretary of the UN Framework Convention on Climate Change insisted that he was not aware that "...text was being negotiated elsewhere", at which point he covered his face with his hands to hide his tears and walked out. India, the speaker noted, then tabled an amendment to the text of the Bali roadmap. The amendment was designed to ensure that the differing capacities of the member countries, especially the poorest, would be taken into account during any new drive to cut greenhouse gas emissions. She recalled that the Portuguese environment secretary, Humberto Rosa, was given a standing ovation when he announced that the European Union would support India's amendment. However, the speaker continued, the US representative Paula Dobriansky was then booed when she made it clear that the world's only superpower would not support the revision. South Africa, Mali, Brazil, Indonesia, Tuvalu, Chile, Pakistan, Uganda and Tanzania all consequently spoke in favour of the Indian amendment. Ambassador Kevin Conrad of Papua New Guinea went much further, noting that if the US was not willing to provide leadership in tackling climate change it should - "*leave the rest of us and get out of the way.*" This blunt call from the developing countries, continued the speaker, drew a huge round of applause and appeared to be the straw that broke the camel's back. To the amazement and delight of the delegates present, Ms. Dobriansky declared that the US would "... *join consensus on this today.*" Ms. Dobriansky continued that, having listened carefully to appeals from countries as diverse as Bangladesh, Costa Rica, the Philippines, Mauritius, Turkey, the Maldives and even Saudi Arabia, the US' long-time ally in climate talks, the US would not block the roadmap, winning her rapturous applause. India then warmly thanked the EU for cooperating in the true spirit of accommodation, and noted that they'd all

come to Bali "... *to fight a bigger battle which we all have to win, otherwise we'll all be losers.*" It was not a question, the Indian ambassador said, of what you commit or what I commit, but what we together commit. Suddenly, noted the speaker, the deal that had taken so long to negotiate looked like it was in the bag, which indeed it was despite a last minute objection from Russia which wasn't pursued. Egypt felt they had been "... *watching a movie with a lot of plots.*" Pakistan said they would have "... *preferred more time to explore the beaches.*"

In conclusion, Ms. Doyle said, the road from Bali has set the agenda for two years of negotiations on ways to cut greenhouse gas emissions, but, whilst not specifying the range of reductions required to avert dangerous climate change, it does refer in a footnote to the scientific reports of the IPCC. The speaker noted that it had to be done this way to get certain doubters on board, but the footnote in this case is as important as the text. Due to conclude in 2009, the Bali roadmap should ensure that a new deal can enter into force by 2013 after the first commitment period of the Kyoto Protocol expires. It will also cover adaptations to the negative consequences of climate change and the funding for such projects in developing countries including the role of the Global Environmental Facility (GEF). Unfortunately though, Ms. Doyle noted, delegates in Bali couldn't agree on practical measures such as how to integrate adaptation into national policies. Important progress was however made with technology transfer, which was one of the key concerns of the developing countries. The Bali conference also reaffirmed the need to take meaningful action to reduce harmful emissions as a result of deforestation. The speaker noted that 20% of global emissions today are a result of the deforestation of tropical and sub-tropical forests, and a work-programme was initiated in this area, including afforestation and reforestation projects to be expanded under the scope of the Clean Development Mechanism (CDM). Furthermore, the CDM may for the first time be broadened to include carbon-capture and storage projects. Ms. Doyle concluded that with so many projects and initiatives underway, she remained optimistic.

The moderator thanked Ms. Doyle and further stressed the importance of the private sector in this process, noting that government money will have to be spent to produce the regulatory framework within which the private sector will invest their vast funds. It is only the private sector that can contribute this amount of money, he noted, but they require a regulatory framework. He also picked up on her mention of biofuels and noted that a side-event at Bali run by the IUCN had reached the conclusion that this issue had to be raised at the upcoming conference of the Parties of the Convention on Biological Diversity in Bonn in May and at the annual meeting of the Food and Agriculture Organisation (FAO) with regard to the food-security implications. Finally he concluded that the European Union should also revisit its directive on this issue. ■



Steen Gade
MP / Chairman, Environment Committee,
Danish Parliament / President GLOBE Europe

Mr. Gade MP began by expressing his agreement with Ms. Doyle's perception of the Bali conference talks as being highly unusual, particularly with regard to the dramatic performances witnessed there. Mr. Gade said that in a blog he produces for his constituency, he had stated that the whole event was like a drama that deserved to be on TV. However, he noted that his optimism was tempered by what had to occur between December 2007 and the Copenhagen talks, and by the decline in enthusiasm he had witnessed for this issue in the last ten years, especially in his own country but also notably in the US. Consequently, he expressed a slightly more pessimistic view. He noted that while the challenges to the environment have never been so global the political leaders seem unable to make strong decisions. He noted that the lack of eagerness to solve these problems is in stark contrast to the seriousness of the situation as stated in the reports. However, at least everyone both in and outside the Kyoto Protocol and the developing countries were now on board.

The speaker then focused on a number of key issues of the conference starting with the United States. They had been given a 'free ticket' for the road to Copenhagen by simply agreeing to discuss climate change, he noted, which was seen as an achievement due to precedent. Therefore he stated, despite the fact that we ourselves cannot vote, Europe and the business community had a big task running up to the US elections to influence opinion. Furthermore, we should do our best to influence legislators there before the elections to make progress on the quota system. He noted that the problems in the US lie with the decision-making system, making it almost impossible to decide on issues on the international agenda that haven't first been agreed upon at a national level.

The best thing about Bali, Mr. Gade felt, was the eagerness of the developing countries to take action, which he had not witnessed before. China, though not India, is on board and willing to do something, he said. He expressed his sympathy with their position that the US should also take action, but noted on the other hand that this hadn't blocked their willingness to enter agreements. As a result, he felt the EU should try its utmost to reach out and build bridges to countries such as South Africa and Brazil who are willing to take this action. These should be serious alliances that impact the whole of EU foreign policy. It was this coalition from the EU and developing countries, he noted, that had so successfully applied pressure on the US in Bali.

Moving on to some of the more concrete steps required, Mr. Gade began by discussing adaptation. He felt the creation of the adaptation fund was the most concrete sign of progress, and was a sign that things are moving in the right direction. He expressed his opinion, however, that the EU should ask itself whether it would really be willing to fund these adaptation projects in the developing world in addition to - rather than from - existing developing aid. While this was what had been agreed upon in the wording, the speaker noted that many similar agreements in previous years were not honoured. He gave the example of promises made in Montreal that money for debt relief would not be taken from existing development aid, but that only Norway had actually done this, leading to justifiable scepticism from the developing community.

Moving on to the issue of technology, he stressed the need for the developed world to deliver. He noted that it was important that we convince our governments and businesses that the developing world should receive the best technology - and receive it quickly - rather than protecting our patents. This is a core issue that must be delivered on, stressed Mr. Gade, and we must look at policies that can deliver on this promise.

Moving on to deforestation and forest degradation, he noted that again we have to deliver on so far non-existent policy. Carbon trading was failing, he noted, and real political strategies that reward good behaviour through monetary means have to be developed, requiring a lot of work in the next two years.

Finally, he noted, there had been much discussion at Bali regarding the inclusion of the IPCC report's three main conclusions: firstly, the need to reduce emissions by 50% by 2050; secondly, the conclusion that the peak point in this mission must be reached in 10-15 years, and thirdly; that prior to 2020 carbon dioxide emissions must be reduced by between 25 and 40%. The speaker noted that if this had been included in the text of the report, it would have gone a long way towards agreement on the severity of the problem. The fact that they were omitted from the main text, however, means the discussion on severity is still to come, and permits Japan, the US and others to question the seriousness of the situation and in turn, how quickly we must act. The speaker accepted that this is the reality of the situation but that it makes the task ahead much harder. In conclusion the speaker noted that drawing parallels between the environment and security would greatly strengthen the case. Mr. Gade furthermore noted that he has asked for a new IPCC report prior to Copenhagen which could add new momentum, but was told that it was unlikely given the time-frame. However, he called for other reports in this area to be put on the agenda to give the discussions impetus. ■



Derek Osborn

President, Sustainable Development Observatory,
European Economic and Social Committee (EESC)

Mr. Osborn began by remarking that he had a sense of déjà vu regarding some of the outcomes of the Bali talks. The enthusiasm surrounding this 'new beginning', he noted, is very similar to the enthusiasm felt at Rio fifteen years ago when the Climate Change Convention was signed with the Americans on board, but that this had not led to any great progress. Without trying to dampen the mood, Mr. Osborn noted as a reality check that every event of this kind had such a moment of drama when a breakthrough is achieved and participants felt a corner had been turned, before attentions inevitably turned elsewhere. Therefore he noted, what is needed is to go forward with the substantive issues achieved.

The main focus of his remarks would be on Europe, he continued, which is crucial in debates on climate change but is smaller in the world than it used to be. Despite its continuing importance, the growth of China and India means Europe is no longer one of the principal players and cannot throw its weight around in quite the same way. It can however lead by example, he remarked, but only if it delivers on the promises it has made. Although Europe has made some progress on its commitment to tackle climate change, it is not delivering on all its targets. This, Mr. Osborn felt, must be of primary importance over telling others like the Chinese and Americans what they should be doing. Having signed up to Kyoto, the EU has some way to go with some of its members states and, reiterating Mr. Gade's comments, he noted that Europe has failed to deliver on its promises to increase aid to the developing world. Having promised to increase aid and assist on technical transfer, Europe simply has not delivered overall, despite a few success stories. Therefore Mr. Osborn stated, "Europe's credibility is in question, and the best thing it can do to continue its influence in the continuing debates is to put its own house in order".

The speaker then moved on to the issue of America's role in the talks. He noted that, besides the unfortunate leadership of Ms. Dobriansky at the conference, there had been many American representatives in attendance who were making positive steps. Individual states, particularly on the East and West coasts he noted, are getting on with the task at hand and contain important businesses who are contributing. There consequently lies a danger of America outpacing the rest, as happened in Montreal on the issue of CFC's - America, having dragged its feet as a solution was sought, immediately invested in and made

a lot of money out of the successors to CFC's once they were discovered. The big companies in the US, he noted, are already investing heavily in the technologies tackling climate changes, such as carbon capture and storage, and solar panels. Once these have been cracked, the speaker warned, the Americans will be quick to act whilst the rest discuss the issues, so Europe must invest in its own industries now.

Moving on to the issue of biofuels, Mr. Osborn noted that the European Economic and Social Committee shared the concerns of the European Parliament on the rush into biofuels, and noted that more caution was needed regarding their usefulness and impact on the carbon field. However, the speaker noted, there had been good reasons to get involved in this sector, namely the difficulty the EU had with dealing with its own car industries in getting emissions standards down to the necessary levels. Europe is in danger of over-protecting an industry that is falling behind, he concluded. ■



Marinah Embiricos

President, Borneo Tropical Rainforest
Foundation (BTRF)

Ms. Embiricos began by discussing the role of her organisation, the Borneo Tropical Rainforest Foundation (BTRF). A quick reading of the IPCC's review discusses stabilising temperature increases at 2 to 2.4 degrees C, which would require emissions to be cut by 50-85% in the next 40 years. Deforestation, however, accounts for more than 20% of carbon emissions, which when added to this total, quickly adds up to 105%, posing a significant challenge. While her experience at Bali had been very good, she continued, with a lot of support given, pledges made and new projects being shown, it all remained relatively small scale. Her organisation's work as an NGO meant monitoring, but also facilitation, helping local governments develop projects. What they find imperative therefore is to bring investments into environmental assets and projects. Engaging with the corporate sector is fundamentally important, she noted, as a lack of money makes it very difficult to implement significant environmental solutions.

In Borneo, she said they had been working for three years with the local government there from both the top-down and bottom-up. They had been looking at large areas in Kalimantan province, where the initial stewardship agreements required them to oversee 10-20 million hectares, which would have required billions of dollars. The plan

is a mess she noted, and in 1997/98 they had five million hectares on fire, causing 1.7 to 2 gigatons of carbon emissions, and causing billions of dollars loss. Consequently, they had decided to focus on one small area in East Kalimantan, due to its huge biodiversity, large tracts of forest with huge carbon sink and water catchment value, and its role in the livelihoods of indigenous people. They have finally convinced investors to risk a lot of money to study and create voluntary pilot projects, she noted, but this is a long way from the carbon credits system as forests are not yet included in the carbon pool, although they have been put on the agenda. To do these assessments requires huge amounts of investment, she continued. Therefore, at their 'Environmental Renaissance' project in Bali, potential investors required proof of concept, early participation, and projects designed for longevity not just because they are cheaper and that they fit into the framework of the local people. They have now created a pilot project comprising 500,000 hectares of mainly forest sink and degraded areas on voluntary credits alone, and are in discussions with a large insurance organisation and banks that may be willing to take the risks. The market is there and agreements have been made with the local people and government she noted, but now policies are required to give incentives and allow the corporate sector to engage. The corporate sector has shareholders to whom they are accountable and it is therefore very difficult for them to take such a risk. She therefore implored the attendees to plead with their governments to take such a risk and get involved in this and similar voluntary credits projects. ■

- Discussion -

Harris Gleckman, IES representative in New York, began by asking why, when discussing developed and developing countries, the phrase 'sustainable development' was only mentioned with regard to the latter? His second question was with regard to the statement that 'all are now on board'. Are there efforts to get other parts of the international system like the World Trade Organisation (WTO), the IMF and the Bank for International Settlements involved in this process, given that each have operating rules and practices that provide obstacles to the implementation of a greenhouse gas-focused monetary, financing, or trade system?

In response to Mr. Gleckman's second question, one of the speakers noted that while this had not been discussed in Bali, there had been demands made on the International Maritime Organisation (IMO) to discuss emissions reductions from shipping in the coming years. There is also a discussion within the Association of Southeast Asian Nations (ASEAN) regarding emission reductions, and the WTO has had a meeting discussing the removal of tariffs on environmental equipment. However, the speaker noted that there needs to be a push for governments to get

involved and draw conclusions so they can put pressure on the processes.

Ms. Doyle added that there had been what is perceived to be a delay in the European Commission endorsing the International Transfer Log (ITL), which would allow carbon credits gained through the Clean Development Mechanism to be monitored. Furthermore she added, there is a lot of discussion between the EU and the UN as to who would monitor and police this. The UN would have to deal with the 27 member states as there are national carbon allocation plans, leading to excessive bureaucracy. Consequently there is a need to tidy this up and make carbon credits easier to deal with commercially. This is a commercial imperative, she noted, and unless the price of carbon goes close to 100 Euros a tonne it will lack the downward pressure it needs to work.

Margaret Brusasco-MacKenzie, a senior adviser at IES, asked the next question. She stated that all four presentations were fascinating, and in particular noted the 'euphoria affect' which, as noted by Mr. Osborn, was reminiscent of Rio. A very important factor in Rio she noted was the role of NGOs, which now have far greater expertise than at that time, and better publicity campaigns that reach young people in particular. Looking at car emissions, public demand would lead to more environmentally friendly cars, she stated, just as it had led to the introduction of unleaded petrol. She wondered what the speakers' views were on what had been the role of the NGOs at Bali.

In response to this, Mr. Osborn stated that he was in complete agreement with the fact that NGOs have grown in maturity and authority, and in the sophistication with which they put across their message. Therefore he felt that they could contribute in their capacity as monitors, but also in the efforts to convert civil society. This second point was particularly important, noted Mr. Osborn, as combating climate change is not just about what governments and businesses do, but also about what populations do. This notion of changing consumption patterns was overlooked in the Bali text, Mr. Osborn felt, and certain prodigal ways of living, including flying around the world at a moments notice and weekend holidays had to be looked at. NGOs can play a big role he noted in promoting a way of life which is more efficient with the resources of the world, and doesn't force us to solely rely on technological developments.

Michael Penders, from Environment Security International then commented that he was on a panel with John Gummer, MP, in 1998 dealing with the question of CFC enforcement which had been alluded to. Mr. Gummer had gone on, he said, to state that these convictions were worthless words on paper unless there were mechanisms to ensure enforcement and implementation in practice. As an example he noted that in meetings with Customs and

Excise in the United Kingdom they had refused to recognise this new area of ozone depleting substance as a priority for their law enforcement efforts. The European Union, he remarked, was in a position to be a leader in developing the mechanisms for monitoring and implementation of offset baselines and other forms of monitoring to establish the basis for support of the controls addressed in Bali. He noted that he would welcome the support of NGOs to move forward with the kinds of monitoring and the technical mechanisms mentioned.

Adding to the remarks of Ms. Embiricos, Mr. Veening felt the issue of private sector investment was very important. He noted that Indonesia is the third largest greenhouse gas emitter in the world due to deforestation and the burning of forests. Therefore this creative way of protecting the forest and engaging with the private sector was to be applauded.

In a final comment, Ton Boon von Ochssée noted that in terms of ownership, climate change and sustainable development is a process with no clear 'action owner'. Until now the responsibility lies with the environment ministers, who are not the strongest core in the government, he remarked. How to better centre the climate agenda at a national level to come to more effective results should therefore be a priority to make sure everyone is sharing in this discussion. Secondly, from a security perspective, he noted that climate change is already underway and cannot be stopped. Security issues are approaching quickly so we better start discussing them now rather than being hit with them later. Therefore, he suggested placing stability, security issues and mediation related to climate change firmly on the agenda. ■

4. New Issues for Poznan - I: Escaping from Fossil Fuels: The Case for Solar Power



Moderator: Tom Spencer
Vice-Chairman, IES / Senior Advisor,
e-Parliament / Executive Director,
European Centre for Public Affairs

Tom Spencer began by stating that there were only two years left to come up with solutions, so every suggestion and proposal for what can be done in those two years is crucial. Furthermore, he requested that the delegates go to the collection of background materials for this conference on the IES website - at www.envirosecurity.org/activities/diplomacy/gfsp/climate - and look at the extraordinary range of papers, documents and films assembled there. In particular he noted a short video from Dave Deppner of Trees for the Future which he described as a 'warm bath' of an experience.

Moving on to the conclusions of the first two sessions, Mr. Spencer stated that it was absolutely crucial to view the next two years as a process, rather than seeing Copenhagen as an event in isolation. The Danes are so good at their public relations, he continued, that there has been a tendency to see things as a path to Copenhagen, but he stressed that negotiations had already started, and that as much of the difficult technical and flanking work as possible should be done early if there is to be any chance of putting together a deal.

He stated that he was glad that a consensus had been reached regarding Bali's successes and failures in the previous sessions, but his concern lay with what creative ideas did the negotiations opened up to the delegates. Some of these, such as input into the MOP and COP processes, are obvious, he noted, but beyond that the general debate on climate change requires some complex planning to guide the next two years, particularly in Europe. As we begin this process, he noted, we should also ask ourselves what is the background to this kind of debate and negotiation, particularly with the possibility of a recession and the consequences of the credit crunch looming?

Furthermore, he questioned how this discussion could be located within the evolving perceptions of how globalisation is changing, and stressed the importance of framing the discussions within these changing macro-structures. The speaker recalled that in a recent discussion with Harris Gleckman, they had discussed what could be done in the flanking discussions while America was still paralysed by the presidential elections. One of them is blindingly obvious, he stated, namely the need to change the WTO and its rules on

climate change and climate-favourable products. This cannot be done after Copenhagen, he added. These discussions need to be starting now. A similar case can be made on the IMF countries' commitments to it, and whether the climate change commitments under this process are part of a developing exercise. Consequently there are far more subtleties to be considered than simply what should happen at Poznan and Copenhagen.

One observation from watching the three ambassadors this morning, Mr. Spencer noted, was the impression it gave that the EU needs to get its act together. The invitation to the Swedish representative was due not just to their experiences on the subject, but because they hold the EU Presidency during the Copenhagen conference. That conference however will come at the end of the unusual year of chaos when a new parliament and commission are chosen, as well as the election of a new council president if the Reform Treaty is passed. The Swedes, he remarked, therefore clearly need to be present, as do the French as they will have the presidency during Poznan. However, he noted, ways to include the Poles and the Danes should also be sought, as Europe has been given the unique opportunity of hosting two COPS in succession. This gives Europe more influence than is deserving of its weight which can be put to good use. Mr. Spencer continued by noting that this was typical of the kind of issues for which Europe now exists. This is a story about its place in the world, he stated, the interaction of foreign policy, energy security and climate change, and it is a story that can and indeed must be communicated to justify the treaty which Europe is pushing through.

Moving on to the issue of America, Mr. Spencer said that while he enjoyed booing America as much as everyone else, he would prefer to think of ways to enable the best of America to contribute in the next two years, and what impact the presidential elections will have. Poznan, he noted, will coincide with the gap between an election result and the new administration. Ways have to be thought of to ease America back into this process, as even with the most climate friendly president, time would be needed to turn the great iceberg of American policy around. With regard to the relationship between the US, India and China, Mr. Spencer noted that there are real geopolitical and security implications behind this relationship. Anecdotally, the speaker remarked that a military friend of his had pointed out that there could never be a satisfactory deal between the Americans and the Chinese as long as the Americans continued to regard them as a military threat and a rival superpower. Analysing this issue he felt was far more interesting than booing representatives of the current administration in public.

Mr. Spencer then proceeded to the main topic of this session - 'Escaping from Fossil Fuels: the Case for Solar Power'. Meeting emissions targets, he stated, would require a reduction in fossil fuel reliance and achieving this will be a mixture of 'stick and carrot'. He noted that despite being involved with Concentrated Solar Power for 15 years, he had only recently heard of large scale solar power imported from the deserts in North Africa. He also noted, as a warning, that the same was true of the two senators from California he had spoken to last year, even though concentrated solar power has existed and has been delivering energy in California for 20 years.

With regard to biofuels, he noted that warnings had been given by organisations like GLOBE about the choice between food and energy that this implied, but the European Parliament had done it anyway in response to the strength of agricultural lobbies. The same is true in the USA due to the strength of the corn lobby. The result of this, he noted, if we are not careful, is a climate policy decided by the relative strength of lobbies, rather than priorities. ■



Andrew Vincent Alder
Senior Fellow, IES, California/President,
The Southwest Connection, LLC

The speaker began by describing the term 'big solar' as Concentrated Solar Power (CSP): a proven technology that has been functional for 20 years. Furthermore, he noted, it can easily be expanded and represents a real opportunity for the replacement of a significant portion of the fossil fuels currently used to generate power. Previously known as Solar Thermal Electric Power, this is entirely different from photovoltaic and roof-top deployment methods of generating solar power, and are utility-scale projects - namely producing more than 50 MW. The basic technology, noted Mr. Alder, is a simple mechanical process whereby the heat from the sun

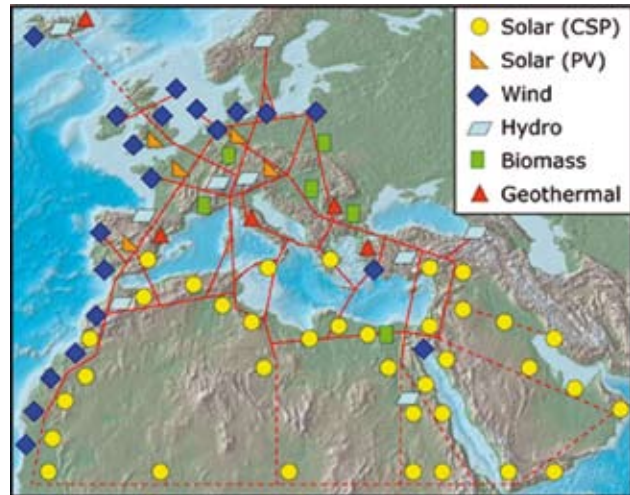


Diagram 1

is utilised by a heat engine to drive a steam turbine which in turn creates electricity. Furthermore, through the storage of energy through a molten salt system, the generators can turn out electricity continuously, even without sunlight. It is also important to understand, noted the speaker, that such systems require direct sunlight, not light generated from a diffuse blue sky. At this point the speaker presented the following map (Diagram 1), showing the potential distribution of alternate forms of energy in Europe and North Africa, with solar power by far the most dominant. The project behind this is the DESERTEC Concept for Energy, Water and Climate Security of the **Trans-Mediterranean Renewable Energy Cooperation (TREC)**, an initiative of the **Club of Rome** that was founded with the goal of developing clean power that would also have other ancillary benefits. He directed delegates to a full presentation of this topic which was recently given by His Royal Highness Prince El Hassan bin Talal of Jordan to European representatives, which can be found on the IES website among the background materials for this conference.

The speaker noted four basic systems to be understood, as shown in Diagram 2 below. It is important to understand, noted Mr. Alder, that the parabolic trough system is the most widely utilised system today, consisting of a series of parabolic mirrors that concentrate the sun's energy on a receiver tube. This tube is filled with either oil or water, which is then superheated, and the heat produced is used to drive a steam turbine. These, remarked Mr. Alder, are very sophisticated computer-controlled systems which track the sun as it moves across the sky to maximise the sun's energy on a focal point, in this case the receiving tube. The linear Fresnel system is very similar, he noted, and

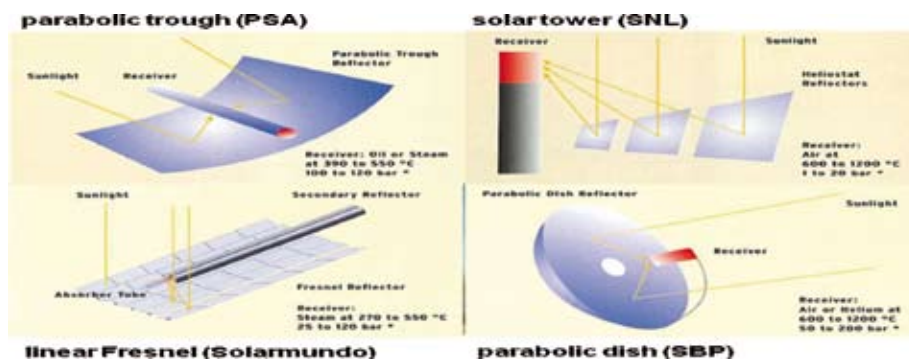


Diagram 2

contains a receiving tube, although for technical reasons it is deployed less frequently than the parabolic trough system. The solar tower system, he continued, is the most dramatic of all deployments, and was recently brought online outside of Sevwed as seen in the following photograph taken in California's Mojave Desert. (Diagram 3)



Diagram 3

This is a deployment known as 'Kramer Junction' and was the first big solar deployment in the world. It was started in 1987, and consists of nine plants which are all of parabolic trough design. However, he noted, Concentrated Solar Power has a chequered history in California. Established as a business over 20 years ago, the backers went bankrupt in the early 90s following a significant fall in oil and gas prices, making the power generated through CSP highly uncompetitive. This means, noted the speaker, that 15 years of technological development has essentially been lost. However, one advantage that was enabled by this delay was the advancements in technology which are now bearing fruit in newer deployments.

Mr. Alder continued by noting that there is currently a highly developed relationship in California between the state and emerging CSP technologies. Indeed, noted the speaker, California led by Governor Schwarzenegger, is really the driver behind this technology. In 2005, Governor Schwarzenegger signed a bill entitled Assembly Bill 32, or AB32 which is a watershed piece of legislation in both California and the US as a whole. It provides among other things for mandatory emissions caps, as well as a carbon trading market. The regulatory structure necessary to implement this legislation is currently under development, but over the next 20 years AB32 has as its goal a significant

reduction in California's carbon emissions. One of the things that enable this to occur in California, remarked Mr. Alder, is money, of which there is a great deal in Silicon Valley. A lot of the investors in Silicon Valley are putting money into CSP, and other related technologies such as biomass. Last November the founders of Google claimed that they would develop CSP resulting in energy cheaper than Coca Cola, regardless of the cost. Another point is that the structure for utility of power generation and utility in California, and indeed in many other places, dates back to the 1900s. It is well embedded in the states regulatory, statutory, and even constitutional structure, which will therefore require modification. The speaker cited the example of Pacific Gas and Electric, one of the state's two largest utility companies, which enjoys significant tax credits and other benefits for investment in the continued deployment of conventional power plants as a result of statutory/regulatory structures that were established decades ago. There is consequently a significant incentive to continue 'business as usual', which in turn is a significant barrier in terms of tax structures and subsidisation to the spreading of CSP technology.

The speaker continued by noting that he, and his colleagues at Southwest Connection LLC, are working with Palm Springs to get the city to reengineer itself as a desert city, with all that that implies. This, he stated, is an example of a paradigm shift which underlines this new technology, as it constitutes the devolution of power generation to local communities. Whilst traditionally power is imported from a far-off location, the exploration of solar power represents an opportunity to shift our way of thinking, and to see power generation in a different way. The speaker then presented the following map (Diagram 4), showing the distribution of high quality solar energy. There is, as can be seen, a great deal of such energy in Southern California, whereas Europe contains very little, and that it is dispersed in the Middle East and Africa. This in turn, noted the speaker, makes the development of transmission facilities necessary, converting the current transmitted in North Africa or elsewhere into Europe.

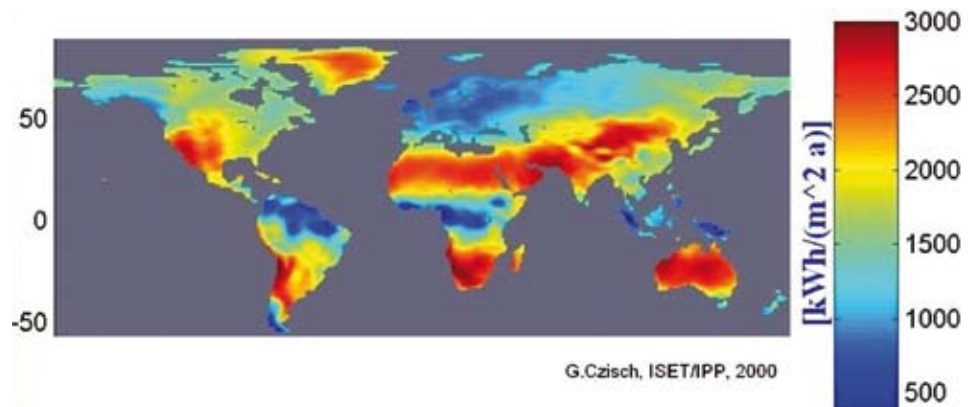


Diagram 4

The current profile of CSP developments, continued Mr. Alder, is very encouraging, with a lot of activity in California. Recently, he noted, Pacific Gas and Electric signed a contract with the Kramer Junction facility for the generation of 500 MW of power. Furthermore, there are deployments going online in Nevada, New Mexico, Utah and Florida. In Spain there has also been development, with the construction of the aforementioned 'Tower Power' near Seville, and there are further developments in North Africa. The speaker then showed the following slide. (Diagram 5)

Diagram 5 shows that by the year 2050, solar power could comprise a significant portion of the energy mix for the EU. The benefit of this is obvious - when solar power is combined with other sources, including biomass, geothermal and hydropower, as well as coal and nuclear, Europe can achieve significant reductions in its carbon dioxide emissions by 2050. The speaker reiterated that much time and opportunity has been lost over the last 15 years, due largely to low oil prices and economic disincentives in the investment into these kinds of technology. Such projects take a long time to design, he noted, and approximately two years to build. Politics also plays a role, noted Mr. Alder, which leaves the question: What is to be done? If we are talking about US politics, he noted, this entails dealing with the entrenched economic and political power of 'big coal' and 'big oil'. There is currently an enormous battle in the US congress pitching coal state senators and representatives against 'corn state' senators and representatives, he noted. As alluded to earlier, some of these choices are very important, as it could be very costly if technology that is not in our long-term interests is pursued due to political and economic lobby objectives, he noted, referring specifically to corn-based ethanol. Ethanol and coal companies are lobbying furiously for the government to subsidise the further development of carbon-capture and sequestration systems.

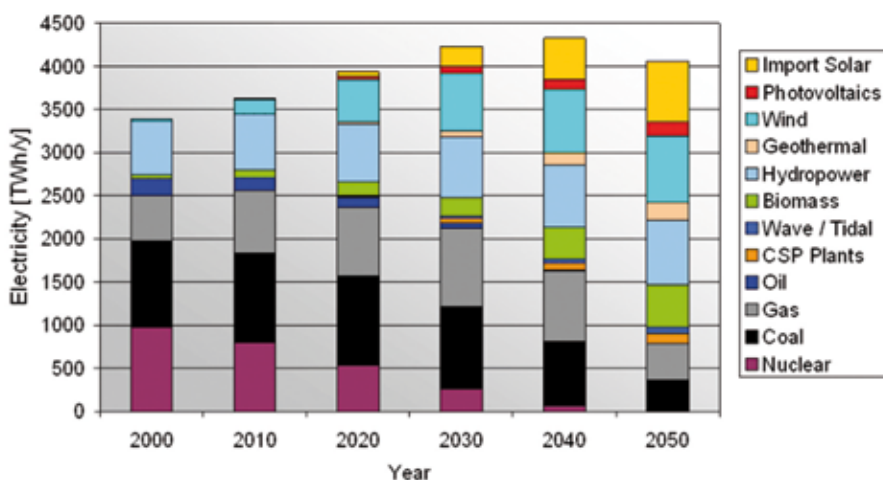


Diagram 5

Nuclear energy is also very involved of course. Oddly, noted the speaker, regardless of what was achieved in Bali, the next administration is likely to set firm targets for the reduction of US emissions, which in turn will act as a catalyst for the struggle between lobby groups for subsidisation and funding.

In the current US presidential nomination process energy security does seem to be an issue addressed by some of the candidates, but is not getting a lot of public attention. The old canards that will be dragged out against the further



Diagram 6

development of CSP, noted the speaker, are the options of 'safe' nuclear power and 'clean' coal, which will have to be overcome. In Europe meanwhile, political action will also be necessary, with the main issues likely to be the need to ensure investor confidence and the question of tariffs, rather than technological issues. This is a subject on which there can be good cooperation for outcomes in both the US and Europe, noted the speaker, which would be facilitated by a joint EU-US approach with respect to new technologies going to India and China. The speaker expressed his particular interest in the possibilities for CSP and other technologies to be deployed in Africa, and noted that during a conference a year ago in Nairobi he had encountered great hostility with respect to the African perceptions of Europeans paying

attention to their problems and issues. One of the big potentials, he continued, for the devolution of such technologies to local communities is the potential positive impact that this could give on health, education and economic development in Africa. The speaker then showed the following image (Diagram 6) of the 'Tower Power' facility outside Seville in Spain which went online earlier in 2007. This is an iconic image which shows both great hope and potential, not only for Europe and the US, but for people all over the world who can enjoy the positive aspects of further CSP development. ■



Alex Evans

Head of Climate Change and Global Public Goods, Centre on International Cooperation, New York University

Mr. Evans began by noting that regardless of what one thought about the outcome of Bali, it was in the end simply ‘talks about talks’. Rather than talk about Bali therefore, he said, he would focus instead on the content of the talks themselves, now that countries have decided to launch negotiations to Copenhagen and beyond. In particular, he would focus on what an endgame for limiting warming to two degrees Celsius, as Europe says it wants to, might look like.

He began by reminding the attendees of the yardstick that the Intergovernmental Panel on Climate Change has set for policy-makers in the Fourth Assessment Report’s synthesis paper, published just before the Bali conference. This stated that if we are serious about limiting warming to between 2 degrees Celsius (the EU’s stated goal) and 2.4 degrees Celsius, then:

1. Carbon dioxide levels need to be stabilised between 350 and 400 parts per million – they are currently at 370.

and

2. Carbon dioxide *equivalent* levels (for *all* greenhouse gases rather than just carbon dioxide), must be stabilised at between 445 and 490 parts per million. Current levels are 455.

This means that the challenge for targets on emissions is much more demanding than anyone is yet willing to let on, including Europe. Taking into account the most up-to-date ‘coupled’ computer models of the climate – which, unlike the older ‘uncoupled’ versions, take ocean sinks into account, resulting in greater accuracy, he noted, leads to the realisation that to keep concentrations within the IPCC concentration ranges just mentioned, we need to be looking at global emissions of close to zero by 2050. This is a far more ambitious target than the cut of around 50% by 2050 often cited by EU leaders, noted Mr. Evans, and would imply a global cut by 2020 of *at least* 40% – and much more than that for developed countries, assuming that the framework that is agreed is equitable.

In the post-Bali environment, we essentially have a new ‘Quad’ group of leading players, he noted, similar to the one that used to prevail on trade, but with a rather different membership. In the new ‘climate Quad’, the key constituencies are the US, Europe, China, and India. Despite what has

been discussed at Bali, the key issue has been left off the table. No-one is calling for a binding ceiling on greenhouse gas levels in the air, that then leads to the definition of a ‘safe global emissions budget’. This, he noted, is a rather surprising omission, given the goal of the 1992 UN Climate Convention – stabilising greenhouse gas concentrations at a safe level – requires the international community to *quantify* that safe level.

The reason for this strange consensus on no stabilisation target in the next commitment period is clear, noted Mr. Evans. If climate change is not an urgent problem, there is no need to raise the stakes by initiating discussion of a global emissions budget likely to result in targets much more exacting than those agreed under Kyoto. But for Europe, China and India he continued, the reason is more subtle, namely: you can’t discuss a stabilisation target without discussing binding targets for developing countries. Without this, he noted, no global emissions budget can be agreed. This is a fundamental problem, as whilst many EU policymakers privately believe developing country targets to be essential, they also judge that there is insufficient political space to allow such a discussion and hence remain silent. The same is true of China and India, for whom it is too hazardous to talk about binding targets without some upfront guarantees of equitable treatment that safeguards their right to develop. Otherwise, they fear, the risk is that they will be railroaded into a target that will prevent them from growing their economies and eliminating extreme poverty. That, summarised the speaker, is where we were before Bali, and that is also where we are now. Without unlocking the politics of developing country targets it will be impossible to stabilise greenhouse gas concentrations. Furthermore, he noted, this discussion is so politically toxic that the one Quad member calling for developing country targets is the US, apparently in a bid to try to stymie the negotiations thus creating an impasse.

However, noted the speaker, there is a way through this impasse – an opportunity that Angela Merkel has already identified and is running with. Over the past few months, Ms. Merkel has begun to speak regularly about the need for a global framework based on the concept of convergence towards equal per capita rights to the atmosphere. According to briefings to the media by German officials, this idea results from conversations between Merkel and Indian Prime Minister Manmohan Singh at the 2007 G8 summit in Heiligendamm, where Singh reportedly stated that convergence to per capita equity would be the price for Indian participation in a future deal. If this is the case, Mr. Evans noted, then this opens up the possibility of a real discussion between developed and developing countries about the principles that might underpin a future global “grand bargain” on climate change. Convergence, after all, is – at least on paper – a means of operationalising the long-discussed principle of ‘common but differentiated

responsibilities' within the scientifically sound context of a safe global emissions budget. Under a process of convergence, he remarked, countries' emission rights within a global emissions budget would move from their current shares – where emissions are proportionate to *wealth* – to a new allocation proportionate instead to *population*. This process would take place over a negotiated timescale of anything from one to a hundred years.

The speaker then discussed how this would apply to the political positions of the climate Quad countries following the Bali talks. For India, he noted, a global framework based on stabilisation and convergence makes sound sense. After all, Indian emissions in 2004 were 1.02 tonnes of carbon dioxide per person, while the global average was 4.18 tonnes. Even if Indian emissions grow rapidly, he noted, it will still be years before India's per capita emissions exceed the global average. Consequently, he concluded, a global emissions trading scheme based on convergence to equal per capita levels would be highly profitable for India. (The same basic dynamic is also true for Brazil, although to a slightly lesser extent.) For Europe meanwhile – assuming that member states and the Commission get behind Ms. Merkel's proposal – the approach could also be attractive, the speaker noted. This is because it matches up with Europe's analysis of the urgency of tackling climate change based on a stabilisation target. If Europe wants to deliver its proposed limit of 2 degrees of warming, this is one way of doing it. For the US meanwhile, convergence to equal per capita emission rights is unlikely to represent its preferred vision for future climate policy. If the US is now falling back to a position of binding targets for developing as well as developed countries, then the obvious question is, if not through convergence, then how should you operationalise the principle of common but differentiated responsibilities in the context of your call for binding targets for China and India?

Finally, he noted, this leaves China, where the political calculation is least clear-cut of all. China's 2004 carbon dioxide emissions were some 3.65 tonnes per person – much closer than India to the world per capita average (though still light years away from the American level of 19.73 tonnes per person). Furthermore, he noted, according to International Energy Agency estimates, China's per capita emissions level could exceed the global average as soon as 2008. When this change takes place, it will represent a major watershed in international climate policy. Whereas for India, participation in a global deal based on per capita convergence makes sense for reasons of profitability alone, the same will – from next year – not hold true for China. In this sense he continued, whether China should support a stabilisation ceiling and the targets for developing countries that it would inevitably entail, depends entirely on how urgent China perceives climate change to be, and how badly it wants the world to agree a solution to the problem.

If China thinks that climate-driven damages are likely to be sufficiently serious and detrimental to Chinese interests to warrant solving the problem sooner rather than later then that will necessitate the development of a Chinese view on how the resulting "global emissions budget" should be shared out.

This leads to four conclusions, remarked the speaker. Firstly, if Europe is serious about two degrees, then it has no time to waste in starting discussions about a stabilisation target. If it wants a stabilisation target, then it needs binding targets for developing countries, in the context of a global emissions budget. And convergence to equal per capita emission rights is the only approach so far proposed by any EU member state for sharing out such a global emissions budget. Secondly, Europe's most obvious ally in this enterprise would be India – assuming that Europe is willing to engage in discussions on per capita convergence (which is likely to benefit India). Thirdly, he noted, just because the US has called for binding targets for developing countries is not to say that it will welcome convergence, even given a Democratic administration: Senator John Kerry said as much in Bali. But if Europe calls for this approach, then it can at least maximise political momentum, and call America's bluff on the issue of developing country targets. Lastly this leaves China. Unlike India, Chinese support for a global framework based on a stabilisation target and per capita convergence does not make sense for reasons of profitability alone. Therefore Alex Evans noted, Europe should engage intensively with China and attempt to persuade it of the urgency of agreeing to a stabilisation target. ■

5. New Issues for Poznan - II: The Security Implications of Climate Change



Moderator: Cedric Janssens de Bisthoven
First Secretary of Embassy, Multilateral Affairs,
Ministry of Foreign Affairs of Belgium

The session began with the moderator introducing the topic – the security implications of climate change – by noting its increasing importance on the international agenda. In 2006, he noted, Margaret Beckett, the then British Foreign Secretary, was ringing the alarm bells by stating that failing climates would lead to more failed states. This was followed by the UK-led initiative to organise an open debate in April 2007 at the Security Council on climate security, the first time this issue had been discussed at such a high level. Some very interesting and focused reports on this topic have since been published in Europe and the US, noted Mr. Janssens de Bisthoven. Among the background materials on the IES website are the CNA report on *National Security and the Threat of Climate Change*, the CNAS / CSIS report, *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change* and the International Alert report, *A Climate of Conflict: The Links Between Climate Change, Peace and War*. The issues raised in such reports are the subject of the current session of the conference. ■



Colonel Alex R. "Alpo" Portelli
Chief, Europe Division, United States European
Command, Stuttgart, Germany

The speaker began by noting that in his capacity as Energy Security 'point of contact' at European Command in Stuttgart, his dealings around the world have revealed the wide range of issues that are interlinked with climate change, and how it has influenced European Command's dealings with Africa Command in particular. The two most critical energy resources in the world, noted Colonel Portelli, are not oil and gas, but rather food and water, and battles over oil and gas merely represent a sub-stage in future battles over these resources. Presenting the US perspective, the speaker related that climate change is affecting both food and water, with global warming leading to both less arable

land and less water – with Saharan and sub-Saharan Africa the best examples of this. This problem in itself is further marked by migrations towards and conflicts over resources, he remarked, and is leading to massive displacements of people in the hundreds of thousands looking for food and water. Within this migration you can find government, non-governmental and asymmetric actors feuding over access to resources, in turn leading to instability.

However, continued Colonel Portelli, global warming contains other factors that affect a greater range of actors, both strong and weak, for which he cited the example of the melting polar ice caps. The speaker noted that while he did not wish to discuss whether this phenomenon was man-made or part of a larger natural cycle, the consequences of this are interesting. Even with the most optimistic prediction, he remarked, as a result of polar melting and associated rising water levels, Bangladesh will be underwater in 8-10 years, and the Maldives will be wiped out. Furthermore, this leads to once peaceful countries such as Canada and Denmark fighting over their territorial borders as a result of "new land" appearing due to melting ice and glacial rebound - a fight over resources between modern countries. The security implications of this boils down to one major point, remarked Colonel Portelli: how we, collectively, shape our involvement in the broader global competition between the haves and the have-nots, and how countries interact to increase stability and decrease stressing factors that will occur globally and simultaneously whilst military forces are already stretched by the broader war on terrorism and the wars in Iraq and Afghanistan. The US in particular, whether alone or with allies, will be drawn more frequently into these situations, noted Colonel Portelli, and he remarked that he had witnessed this himself in the form of civil-military support to aid relief in Somalia. Whether it be flood relief, earthquake relief, or dealing with displaced people through NATO, UN and EU efforts, this was an increasingly complex situation, he remarked. In the US he noted, there was a debate regarding whether the US is a global police force, a global help agency, or a global provider, and this complexity is revealed when decisions over resources must be made. Stability, reconstruction and reconstitution operations represent the future, continued Colonel Portelli, but because these are resource problems there is the possibility that we could see resurgence in state on state warfare, as it is still easier to grab rather than negotiate rights. In the meantime, whilst diplomatic efforts continue, the military takes on a support role, taking food to people, helping reconstruction areas, stabilising governments that are having problems as a result of climate change and in some cases, starting from scratch and building nations.

The speaker remarked that he had read the energy security policies of up to 40 nations, including supranational bodies like the EU, and was surprised to find no mention of collaborative broader efforts to rectify the solution. Rather they always express a 'stovepipe' sovereign perspective, which the Colonel noted he is intent on changing. As an energy security policy example, the speaker noted the US's policy to break its reliance on energy imports, which involves altering existing ties and conserving existing energy resources. There is no mention in this policy of what role the US should have in the world to fix energy security. The energy policy of the Norwegians he noted, also lacks a global perspective, but is rather focused on supporting the welfare state after resources are diminished, and has led to the creation of a petroleum fund in excess of \$400 billion, with the goal of preservation of the state. The Russians, he noted, will also start amassing funds for similar reasons, and may put some of these funds towards military means. The EU energy security policy meanwhile is all about lowering emission standards and going 'green', but also lacks a broader perspective on how cooperation will be achieved to bring this to fruition. Therefore, he noted, we are aware of the variety of issues that need to be addressed, but we must be proactive and actually do something. This involves establishing what the links are between climate change and security and how they are collectively dealt with. This requires an environment of security cooperation, and the political will to expend resources to achieve this, rather than more talking. He noted that whilst we may be good at writing studies, hosting discussions and holding debates, we lack execution which is what the speaker was aiming to initiate. Therefore, remarked Colonel Portelli, we must establish whether we are ready to act and how much we are willing to spend today.

In response to this, the following speaker, Andrew Standley, noted that whilst this 'stovepipe mentality' was indeed accurate, the recently signed Lisbon Treaty, although not yet ratified, provides a legal base for an EU energy policy focusing on security supply in a spirit of solidarity, which both men agreed was 'a start'. ■



Andrew Standley

Acting Director, Directorate L:
Strategy, Coordination and Analysis,
External Relations Directorate-General,
European Commission

Over the last two weeks in Bali, began Mr. Standley, it has been continuously repeated that climate change is far more than an environment issue. As weather patterns shift, water resources will be depleted and the agricultural practices and capacity of certain regions will be affected,

leading to a discussion of water and agricultural issues. The UN Development Programme's latest report he noted, informs us that climate change will undermine efforts made to reach the Millennium Development Goals: a serious development concern. When malaria and cholera and other water-born diseases spread further because of climate change, it is a health issue. Likewise, he remarked, as people are driven from their land due to intolerable physical conditions, it becomes a migration issue. The 'Stern Report' of last Spring, he noted, showed that if nothing is done, the economic impact of climate change will be of about 5 to 20 % of world GDP by 2030 and therefore a major international economic issue also. That may sound like another dry figure, he remarked, but a similar economic downturn in the 1930s had disastrous consequences.

Climate change is consequently a global issue affecting everybody, everywhere, in every policy field, he remarked, and in the vast majority of cases has negative implications. Climate change can therefore be considered as a threat, the speaker continued, threatening our resources, our food supply, economic development, peoples' health and peoples' homes. The need to consider climate change seriously from a security perspective has become a political concern in Europe, he continued. In this regard the Council High Representative and the Commission have been asked by the EU Heads of State to work on a joint report on the international security implications of climate change. The speaker remarked that he was unable to comment further on this report, but the fact that such a joint report has been requested at the highest political level is the clearest indication possible of the seriousness with which the security dimension of climate change is being addressed.

Globalisation has added new threats to the security of our citizens, particularly in the context of international terrorism, remarked Mr. Standley, but climate change represents the most global threat of all. When looking at climate change through the lens of security, or 'realism' in international relations theory terminology, he noted, it is said that climate change is a 'threat multiplier'. In this sense climate change has the potential to disrupt already unstable economies, increase poverty, undermine development efforts, enhance tensions over scarce resources and drive people off their land. This therefore 'multiplies' the likelihood of severe suffering, humanitarian disasters and even armed conflict. As recently remarked by UN Secretary General Ban Ki-moon, he continued, climate change has the potential to generate wars and represents one of the biggest threats to humanity.

The speaker then provided a number of examples of climate change and its impacts. Melting ice in the Arctic, he noted, will change the livelihood of entire communities, opening up new trade routes that may facilitate transport within the Northern hemisphere. It will make exploita-

tion of the resources of the North Polar region possible, especially hydro carbons, and this even more so with high energy prices. A problem is that there is no international regime to regulate this area and the UN Convention on the Law of the Sea (UNCLOS) has not been ratified by all major powers that claim a stake in this region. The bidding for sovereign rights in the Arctic he continued, has already started in earnest, with Russia planting a flag on the seabed at the North Pole this summer. For the moment, all this is happening peacefully but there are major interests at stake, he noted, and the international community needs to anticipate these potential tensions.

Moving on to the case of Bolivia, Mr. Standley remarked that several of its major cities are highly dependent on mountain glaciers for their supply of drinking water. Within just a few decades, these glaciers will have melted completely and disappeared, leaving some 1.5 million people with serious water scarcity. An already tense social and political situation within Bolivia will be further stressed by this situation, he noted, and if attempts are made to draw water from nearby Lake Titicaca, international tension will undoubtedly be fuelled with Peru, which shares the lake with Bolivia. Peru itself faces similar problems on an even larger scale, he continued, with Lima's 8 million-strong population facing the prospect of water scarcity as glacier run off dwindles to a trickle as Andean glaciers retreat and disappear.

Mr. Standley then discussed Bangladesh, one of the most densely populated countries in the world which is regularly struck by natural disasters that take their toll of human lives, increasing levels of poverty and hampering development perspectives. This was likely to get worse, he noted, as IPCC predictions indicate that earlier snow and ice melt in the Himalayas will affect the Ganges and Brahmaputra river basins. As the situation becomes untenable, populations will seek to move, he noted, potentially leading to internal or international conflict. Furthermore, a rise in ocean levels will push back Bangladesh's territorial limits, redrawing the map and opening the possibility of disputes with neighbouring countries over potential offshore gas reserves. These are just three examples he noted, but others include the 5 million people directly threatened by sea level rise in the Nile delta, and the aggravation of tensions in the Middle East over water management. When considering the implications for hard security issues, he remarked, it is clear that these factors will destabilise governments and regions, and the weaker the governance systems in place and the weaker the economy, the weaker the ability to cope. In addition, Mr. Standley noted, if the international community is not able to provide solutions, we are likely to see more unilateral moves by countries, more tensions between the rich who can cope and the poor who cannot. Some of these potential conflicts may entail real security costs. However, he continued, while climate

change may pose a number of 'hard security' threats, the policy answer cannot be centred around 'hard security' instruments alone. Rather, a broad definition of how global insecurity will be augmented by climate change is required and a correspondingly broad agenda with a wide range of collaborative and cooperative responses are called for.

The first step, he noted, must be prevention, namely the prevention of climate change through a reduction in green house gas emissions. The EU has set the objective of limiting climate change to an increase of 2 degrees. That is ambitious and will be difficult to achieve but this is urgently necessary, he remarked, but adaptation is also necessary, helping countries cope with climate change and its destabilising effects. UNFCCC, he noted, recently said that by 2030, 200 billion US dollars would be needed every year for the world to adapt. That figure seems impressive but is dwarfed by the costs of non-adaptation. For both of the above approaches to succeed, cooperation must be greatly accelerated in the field of technology transfer so as to ensure that those countries that have the will to address climate change seriously also have the capacity and know-how to do so. The Bali conclusions underlined the importance of this issue as part of a post-2012 framework, notably by focussing on addressing financial barriers to and incentives for scaling up technology cooperation.

Mr. Standley further noted that local action was required in the identification of threats that may lead to conflicts, through remote sensing, developing scenarios, and bringing data and information providers together with users, to enhance understanding and make environmental and security-related information available to the people who need it. This, he remarked, will enable policy-makers throughout the world to be better informed of the potential scenarios to consider in all policy fields thus enabling better informed conflict prevention strategies. Furthermore, he highlighted the need to reinforce disaster intervention capacities. The EU, he noted, has increasingly been called upon to intervene in disasters, often related to climate change. Humanitarian and civil protection should therefore be combined, he noted, and reconstruction performed in a way that reduces future vulnerability. There are clear complementarities and synergies between civilian and military capabilities in order to define and implement appropriate actions and responses, he noted. Climate change, he concluded, forces us to envision new forms of collaboration between actors who have tended, according to traditional divisions of labour, to operate somewhat separately. Indeed it obliges us to redefine concepts of foreign policy.

Mr. Standley went on to note that the EU already has a number of defined strategies and tools at its disposal which it could further develop to ensure that climate change threats are fully integrated. This, noted the speaker, is what

is referred to as 'mainstreaming'. In development cooperation policy, as well as in our security perspectives, the climate change dimension must be systematically incorporated. At the European Council last Friday, he recalled, EU heads of state requested an examination of the implementation of the European Security Strategy "with a view to proposing elements on how to improve the implementation and, as appropriate, elements to complement it, for adoption by the European Council in December 2008." The speaker suggested that the further risks of climate change should be considered in this context to ensure that the appropriate level of urgency was attributed in addressing this threat to international security. In so doing, he concluded, the EU must maintain a strong sense of leadership. The EU was driving the agenda when it addressed the issue at the UN Security Council last spring and continues to drive it when it puts climate change at the forefront of all bilateral summits. The EU's ambitious positions on climate change, he noted, are saluted all over the world, but it must ensure that the fight against climate change unites the international community to protect the globe and its population for generations to come and show that a low carbon economy is possible. ■

- Discussion -

Following the presentation by Mr. Standley, the moderator began the debate by asking the first question: Given the convergence around the risks of climate change, could this common risk present an opportunity for the EU and the US to work together?

Colonel Portelli stated his absolute agreement with this fact. Referring to a paper written by a former Chief of Staff of the US Army, Gordon Sullivan, Colonel Portelli noted that all nations were aware of the risks, a fact reflected in national estimates, but that the instruments and the mechanisms for change were still lacking. To put this into perspective, he noted that the US had, on the 1st of October 2007, established Africa Command, which he believed was a good thing. Within that construct however 'AFRICOM' is very different, he noted, as it was not, like European Command, originally designed for war-fighting. This scenario is gone, he noted, and the construct of Africa Command is consequently two thirds civilian and operates very differently from a traditional combatant command. The term the Colonel used to describe this construct is a 'strategic clearing house', as it coordinates with US and other relief agencies on a variety of missions in Africa including getting relief in, or supplying assets that are needed. The reason the military is used for this, he noted, is they have the capacity through their infrastructure, transport planes, ties to larger organisations and manpower. However, noted the speaker, AFRICOM is not a multinational command at this time. A large number of countries are standing by to assist AFRICOM, he noted,

but what is lacking is a collaborative mechanism to make this easier. Energy security cooperation in itself may act as a facilitator to make this easier. Embedding European and other international staff into their operations would allow the US to tackle its concerns with manpower relating to such missions. Furthermore, these nations have far greater history and experience in Africa, through both charity and colonial links. Therefore, concluded the speaker, the challenge is addressing how to tackle these problems beyond mere military means. This would ideally involve bringing in the NGO sector who, through their own expertise, often exceed international military capabilities in deployment, communications, in-place infrastructure and logistics.

One of the participants, a representative of the European Commission, Mr. de Vries, then addressed the panel with three remarks. Firstly, he addressed the 'stovepipe approach' mentioned, stating that while this was true and it was important to look at the linkages, as there is a tendency to look at responding to climate change in a stovepipe fashion. A recent UNEP report, he noted, implied in its conclusions that even if we were able to deal with climate change and limit global warming to two degrees, population pressure would remain enormous. The global population has grown 40% in the last two decades, leading to immigration pressure and the degradation of land use. Even without climate change, the pressures on resources, particularly in Africa and parts of Asia, would be huge, he noted. These problems are possibly even more challenging and difficult to deal with, but indicate the importance of avoiding stovepipe approaches. Secondly, addressing the report mentioned in the second presentation, the speaker expressed his hope that this will put the time frames in perspective, as there is a tendency to reason from the most pessimistic scenario. He said while many think in terms of Bangladesh and The Netherlands disappearing, the details of the IPCC's report make it clear that nothing that dramatic is likely to happen until the end of this century. Expectations of sea-level rises in this period for example vary between 18 and 58cm. Therefore, it is important to consider the time scales, he noted. Rising sea levels would not affect conflict in the OECD regions he remarked. A better idea was to look at existing conflicts that can be related to climate degradation, such as the conflict in Darfur, and asking what could have been done to prevent this? This would put timescales into perspective and lead to more serious developments. Thirdly, the speaker noted that up to that point, the conference had resonated with a pessimistic gloom reflecting the possible catastrophes awaiting us. There is an optimistic approach as well, he remarked, particularly when one considers new technologies becoming available. With the right investments, it may be possible to significantly mitigate the risks without a huge transfer of resources. Furthermore, although the climate is a public good that traditional market mechanisms often struggle to cope with, these mechanisms can help. For

example, he noted, high oil prices incentivise companies to produce better, cleaner engines, and the same goes for water scarcity. Water scarcity leads to the rising cost of water, and desalination plants then become feasible, he remarked, which was already occurring in Spain and Israel. There is a tendency to overlook these possibilities and dramatise events, he remarked, which holds the danger of politicians crying wolf without the effects being noticeable by the broader population, leading to an erosion of support.

Mr. Standley firstly responded to the issue of pessimism mentioned by Mr. de Vries, stating that he was in agreement and noting that he had presented this issue in the hope of initiating the policy reforms necessary to strike the right balance. However, he noted, the two degree limit proposed by the EU, which may be seen as pessimistic, is also optimistic in the sense that it believes such a limit can be achieved. It is therefore an inherently positive message, he remarked, but only if people take the measures and initiate the policy mechanisms necessary to ensure it can be honoured. Therefore, he disagreed that the EU's message was negative, but agreed that it was important to strike the right balance for public perception.

Before asking the following question, the next speaker made a point in response to Mr. Standley's statement on optimism and pessimism. Naturally we should be optimistic if the right steps are taken, he noted, but the link to technology is what is really needed, as today's technology is by and large fairly old. By the time the world population expands in the next 40 years we are likely to have developed new technologies to help us face these issues. The speaker then stated his first question: Would it be possible to create an international panel on climate change and security, focussed on analysing those situations where security is at risk? Noting the IPCC's success, such a global panel he stated could forecast and put issues on the international agenda. His second question was: Would it be possible to create packages or cross-border bodies on a regional or sub-regional basis that allowed countries to cooperate on energy security issues, given that the current view of energy security on a narrow, national scale and the possibilities climate change presents to unite?

In response to the second question, Colonel Portelli stated his agreement that this could be possible, but that creating such bodies would only be effective if they were capable of action. At this point the speaker referred to a new initiative entitled 'The Atlantic Energy Security Initiative', a results-oriented plan run through various foreign and defence agencies. This results-oriented method was vital and resulted from political will, he stated, which differs from the European perspective. He cited the example of the United Arab Emirates building desalination plants for its people and asked why nobody was building such plants

in Somalia. All that is required is food, water and medicines to prevent people dying. Therefore, he concluded, such an international panel could be useful, but only if it resulted in action and not just another website or discussion forum. He closed by noting that militaries around the world are often attributed blame, but they are merely an 'action arm' of policy, and that concerns with this policy should be addressed to the policy-makers. Therefore it was too easy to equate security with the military, all the elements of national power must be brought to bear, including: diplomatic; informational; military; and economic. From an American perspective, he noted, it was encouraging to note more inter-agency cooperation, as evidenced by the US Secretary of Defence asking Congress for additional State Department funding. Political will relies on using all the tools in the bag to achieve goals, and therefore requires interagency cooperation. Progress on the interagency process would, Colonel Portelli concluded, make him far more optimistic.

The following question, from a Danish pharmaceuticals representative, asked to what extent the organisations represented to the two speakers engaged with the corporate sector? He noted that the discussions had focussed on the strategic implications of climate change and both speakers had appealed to their core constituencies, namely political constituencies. However, he noted, both messages can be very powerful when communicated to the private sector. In doing this, he noted, it might be helpful to reduce the analysis from the macro to the micro-level, so CEOs and business leaders can see that it is in their own interests to act. Corporations were traditionally motivated on climate change by corporate social responsibility, opportunities presented by these changes, and preparedness of legislation affecting them related to climate change, the fundamental issues. However, the issues discussed by the speakers are much more fundamental, he noted, as global supply chains and 'just in time' delivery economic models could be severely impacted by the climate change issues raised.

The next question related to the issue of 'stovepiping' and the search for a 'holy grail' of effective interagency cooperation. Whilst there have been some improvements on the ground, he noted, such as provincial reconstruction teams and the integrated mission planning process at the UN, the policy level is more difficult. There has been soul-searching in the UK and a lively debate in Washington about the role of the National Security Council. Therefore he asked: What are the respective roles of rewiring 'organograms', changing the incentives for officials involved in the policy process, or just building shared awareness? More specifically: What is the single best example of coherence in policy-making by any national government or multi-governance forum?

Colonel Portelli quickly responded to this, stating that he simply despaired of rhetoric-only politicians. He noted that this was simply the nature of the beast, as, at least in American politics, the process to get elected entailed promises to anybody who could help. However, politicians are starting more than ever to cooperate, he noted. This was due in part to globalisation and the realisation by politicians that they are no longer immune to these problems.

A further question from Marinha Embiricos was: If the G8 decides to take action, will following a military-style strategy lead to a rapid-deployment force for climate change? Colonel Portelli responded that within a broader Global Strategy for Active Security, he was ready to take action as soon as he had the necessary resources.

The following remark, from Tom Spencer, related how his experience of military lobbying in Kyoto had revealed that the US Air Force did not want military emissions to be included in any calculations of climate change. Would this still be the case today, he asked? Secondly, he noted that what the Colonel had been addressing was a response to adaptation, and he had not addressed the question of how a deal on mitigation is to be struck, which depends on the relationship between the US and China and whether they treat one another as geopolitical opponents.

In response, Colonel Portelli noted that the US Air Force was changing its methods, and had recently flown a C-17 aircraft entirely on biofuel. The Department of Defense is also changing its approach as part of the US strategy on energy security by looking at biofuels and other greener fuels, he remarked. Moves are also underway to make NATO more fuel efficient, he noted, and he pledged his support for making an energy saving with NATO. The reason for this, he remarked, is that militaries are traditionally the largest energy consumers in any given nation. The US military, in one year alone, uses enough energy to run the whole of Greece for a year. Depending on political will, a 5% reduction in US military energy consumption could conserve the equivalent of 2 months energy supply from Russia. Therefore, he noted, in the event of Russia turning off the taps, NATO members could have strategic reserves of fuel as a result. In any event, energy savings could result in increases in international energy and monetary reserves. With reference to Mr. Spencer's second comment, he noted that he, as a military man, would readily engage further with Russia and China but that military engagement constraints often existed at a political level.

A further question came from Philippe Martin, a representative of the European Commission. He welcomed the remarks by both speakers, and noted that in the context of climate negotiations the aim seems to be to protect value, rather than creating it. Therefore, he asked, did the speakers believe that it was possible to open climate negotiations to non-climate items?

At this point, Michael Penders rose to further elaborate on the points made by Colonel Portelli and Mr. Standley. He noted that eight years ago he had been Chairman of the G8 nations working group on Environmental Crime. At the same time, in the leading national security document of the United States, the National Security Strategy, there was mention of sub-Saharan Africa and climate change as a critical factor and organising principle for US strategic goals with regard to climate change. The question therefore, he stated, is how to make such policy commitments operational? He cited a recent example of policy-making its way into International Standards in ISO 28000, the standard for supply chain security integrating environment, health, safety and security management, and offering an integrated risk assessment for supply chain management. Therefore, he noted, corporations are far ahead of their governments in terms of their commitments and achieving performance goals of their organisations, as their enterprise risk management is at stake. Consequently, he urged the IES to take full account of the policy documents available and to strive for ways for the EU to remain a leader in implementing policy goals and utilising new technologies such as satellites and space science.

Mr. Standley responded to the Colonel's points by expressing his sympathy for his views, but noting that he believed talking did achieve results. With regard to climate change, what they were discussing was a new system of global governance which takes time, and heavy negotiations to establish. However, with the Bali roadmap he noted, there exists an ambitious objective for a clear structure for the post-2012 scenario. He further agreed with the point made regarding the private sector's ability to convert policy into action, noting that in some ways the private sector was far ahead and that more engagement was needed. At the same time however, he noted that what was sought in Bali were clear targets to transfer policy into action. While this didn't occur, it is a way to focus minds, reach agreement on funding and technology transfer, and leads to policy being turned into measurable results. The European way of dealing with this involves a lot of dialogue and discussion that leads to collaborative behaviour, which is the European model, he noted. This has been the method for 50 years and even with all its ups and downs it has been of huge benefit to Europe. The application of this approach would be of benefit to the world's citizens as a whole, he remarked. With respect to the earlier comment on the formation of an international panel on climate and security, he expressed his belief that in a few years time people would be surprised to think that climate change could be discussed without security. The two issues will become further interlinked and cannot be separated, he noted, and therefore he was not sure whether a specific panel was necessary. In conclusion, he reiterated his belief that the European method was to create international forms of governance. He also noted that the EU believed

strongly in regional integration, as it itself was the result of such integration. Further integration in Africa, Latin America and Asia, would bring about synergies and lead to common solutions, he noted. The desire to see this come about must be accompanied by interventions where disasters occur, but in the hunt for mitigation and solutions this must be done through dialogue.

In closing, Colonel Portelli addressed the point made earlier regarding the private sector, noting that discussions on the Atlantic Energy Initiative had included representatives of the world's seven largest oil companies, some of which themselves had been accused of creating instability. What was interesting from a business perspective, he continued, was that the translation of business ethical guidelines leads many energy companies to choose between either better business or no business. The profit motive leads to a willingness to be proactively involved in this process, and putting aside budgets to deal with 'green' issues. ■

6. New Issues for Poznan - III: Implications for Foreign Policy: Environment, Security and Sustainable Development



Moderator:
Margaret Brusasco-MacKenzie
 Member of the Advisory Council, IES /
 Former Head, International Affairs, DG ENV,
 European Commission

The moderator opened this session by saying the implications for foreign policy with respect to environment, security, sustainable development and climate change was an area of particular interest to her given her previous experience in the European Commission as Head of International Affairs in DG Environment. She was especially pleased that we were able to bring together this panel of five speakers and a rapporteur with such rich and diverse backgrounds and experience who together should be able to stimulate a very useful discussion on the need for integrated approaches to these interdependent policy areas. ■



Ikaros Moushouttas
 Horizontal Security Issues, Policy Planning and
 Early Warning Unit (PPEWU),
 Council of the European Union

Mr. Moushouttas began by noting that the Council of the European Union was working jointly with the Commission on a report addressing the impact of climate change on international security, referred to by Mr. Standley earlier, which would be presented next spring by Javier Solana and the European Commission. The thinking behind this started a year ago, he remarked, thanks in part to two IES conferences hosted by IES and GLOBE. He outlined the relationship of water to security before expanding to include climate change and security. A number of initiatives, including the UN Security Council debate on this issue and the conference organised by the Commission and the German Presidency on "integrating environment, development and conflict prevention", helped to inform the ongoing process of the generation of ideas for solutions. The Danish government, he noted, also held a small informal seminar inviting member states, the Commission and the Council,

at which it became clear that this nexus of issues had to be highlighted at a higher level.

From a security point of view, climate change can be seen as a permissive rather than an immediate cause of conflict, he noted, but by its nature climate change policy can only succeed in line with other policies including CFSP, environment, development, energy and trade. It was with this understanding that the report was initiated, looking at what security threats were under discussion, explaining these in security and non-security sense, and confirming the broader definition of security which include 'human' as well as 'military' security. The report itself has not yet been published, he noted, but he expressed his hope that it would raise the profile of climate change in terms of security in discussions at the Political and Security Committee and the General and External Affairs Council, who have not so far discussed this issue. Different Member states have tackled the issue in various forums, but none brought it into the EU context to look at possible ways of dealing with the issue. He therefore reiterated his hope that the new report would bring the issue to the attention of foreign affairs representatives. Considering EU institutional evolution, he noted, a new structure should be in place by 2010, with a President and High Representative for CFSP, which would hopefully enable better synergies between different policies, and climate change and its security angle is one to benefit from that. ■



Ben Slay
 Director, UNDP Bratislava Regional Centre /
 Chairman, ENVSEC Initiative

Mr. Slay began by stating his and the UNDP's view that environmental sustainability and development are two sides of the same coin which cannot be pursued successfully separately. Unclean water, he noted, is the world's second biggest killer of children: every year, 1.8 million children die because of inadequate access to clean water and sanitation services. Millions of women and young girls are burdened with the tasks of collecting and boiling water for their families, reinforcing gender inequalities in employment and education. Therefore, he remarked,

poverty alleviation in the developing world is both an economic and moral imperative, and attempts to shift the burden of combating climate change to developing from developed countries will simply not work.

As has most recently been pointed out in the UNDP's 2007-2008 *Human Development Report*, he remarked, climate change is likely to have serious implications for peace and security, as well as for the environment and development. In the Security Council debate on climate change earlier this year, UN Secretary General Ban Ki-moon outlined several "alarming, though not alarmist" scenarios. These included growing tensions over access to energy, food and water; large international migratory flows; and increasing inequalities and conflicts within societies. The Secretary General called for a "long-term global response" to deal with climate change, based on coordinated efforts involving the Security Council, member states and other international bodies. The Bali, Poznan, and Copenhagen meetings must be seen in the context of this "long-term global response".

For these and other reasons, he remarked, it should be common practice for those who defend the environment to speak and understand the language of others, since solving environmental problems almost always requires cooperation with those who are not environmentalists. In a typical developing country, climate change adaptation requires coordinated action by many ministries, including agriculture, economic development, energy, spatial planning, forestry, transport, internal and, in trans-boundary situations, foreign affairs. Environment ministers and partner organisations need alliances to achieve their goals, he noted, and international organisations must also look for partnerships in order to be effective. The Environment and Security Initiative (ENVSEC), a joint venture of a number of UN and other international organisations working with governments and other partners in Central and Southeast Europe, as well as the former Soviet Union, to better address the linkages between environmental, security, and development issues, is an example of such a partnership. He also noted that it is particularly relevant in the context of climate change adaptation.

ENVSEC is a cooperative arrangement between the OSCE, UNDP, UNEP, UNECE and the Regional Environmental Centre for Central and Eastern Europe, the speaker noted. In association with NATO's Public Diplomacy Division, these partners assist countries in Central and Southeast Europe, as well as the former Soviet Union, to address environmental problems that pose security risks. Mr. Slay noted that the programme had enjoyed strong partnership support from a number of government and other organisations represented at the conference, including in particular the governments of Belgium, Finland, The Netherlands, Spain, Sweden, and the European Commission's DG RELEX.

Within ENVSEC, he remarked, collaboration between UNEP and UNDP helps to focus on the socio-economic drivers behind environmental risk and secure government engagement in both donor and programme countries. He noted that UNDP's extensive field presence of country offices and the regional centre in Bratislava, together with UNEP's regional office in Geneva, facilitate the delivery of sustainable energy and environment services on the ground. The OSCE helps the initiative work closely with ministries of foreign affairs in politically sensitive area – including those associated with environmental risk. NATO's expertise, noted Mr. Slay, helps ENVSEC to better address the environmental and security risks associated with obsolete and abandoned military facilities, mines, old Soviet-era weapons, obsolete pesticide stocks and other hazardous chemicals. The UNECE's regional conventions – particularly pertaining to trans-boundary waters and lakes, industrial pollution and public participation in environmental policy-making – provide the overarching policy framework that guides ENVSEC's work. The expertise and resources of the Regional Environmental Centre for Central and Eastern Europe, he noted, help ENVSEC to better connect to EU policies, directives and implementation support.

In addition to NATO's \$20 million portfolio of activities categorised as ENVSEC projects, remarked the speaker, ENVSEC at present consists of some 60 projects with an aggregate budget of close to \$30 million. Many ENVSEC interventions, he noted, are catalytic and generate support from other sources such as the Global Environmental Facility. ENVSEC, he continued, offers programme countries a menu of instruments to address environmental problems that pose security risks – including those associated with climate change. These instruments include participatory assessments of environmental threats, information exchange, political dialogue, joint programming and the provision of technical assistance on the ground. Through combining their expertise, field presence and collaborative networks, the ENVSEC partners have broadened client access to human and financial resources and made programme delivery more cost-effective. Environmental concerns in foreign and security policy have become more visible – and vice versa. ENVSEC has also generated results in terms of institution building, by *inter alia* supporting water management structures in the Dniestr and Kura-Aras river basins. Mr. Slay concluded by expressing his belief that ENVSEC has created structural changes for the better and opened up new avenues for environmental management and peace building. ■



Marc Baltes

Senior Advisor, Economic and Environmental Activities, OSCE Secretariat

The moderator introduced Mr. Baltes by congratulating him on the OSCE's adoption of the Madrid Declaration on Environment and Security which he was instrumental in creating.

Mr. Baltes thanked her and noted that he would be focusing on this ministerial declaration in his speech. This declaration, adopted in Madrid a few weeks prior to the conference, was instrumental in shaping the OSCE's environmental dimension, he noted, and was important as it required a fostering of political will with regard to the environment from political security organisations. The OSCE's agenda, since its inception in Helsinki in 1975, already comprised environmental concerns despite their lesser importance in negotiations during the Cold War, he remarked. However, the OSCE has always understood the security implications of environmental degradation and the unsustainable use of, and access to, natural resources. The organisation has therefore been committed to raising the issue in national and international agendas. He stated a few examples of the OSCE's achievements in this regard, noting their development of river basin commissions, their facilitation of the destruction of dangerous rocket fuel components and that the OSCE has advocated public information centres.

The OSCE's yearly rotating chairmanship was most recently held by the Spanish Minister for Foreign Affairs, Miguel Angel Moratinos (with Finland, Greece, Kazakhstan and Lithuania taking the chair in the coming years). Spain, he noted, had raised many environmental security issues. The most important OSCE event is the Economic Forum, he remarked, with the Spanish chair choosing environmental security and sustainable development, land degradation, soil contamination and water management as the theme for this forum in 2007. The forum brought 400 members from OSCE participating states together, he noted, as well as a number of environmental experts, with the aim to create political will to act on the issues and to give a mandate to OSCE structures. Follow-up events included a workshop in Tashkent on integrated water management in central Asia, with an emphasis on technology transfer, a meeting held in conjunction with the UNCCD aimed at establishing a regional drought monitoring centre for central Asia, also in Tashkent and in cooperation with the NATO Public Diplomacy Division, a workshop on water scarcity, land degradation and desertification with a focus on the Mediterranean region held in Madrid.

He noted that the OSCE, as a political security organisation, can be used as a forum to discuss environmental issues and create the political will that will lead to policy developments. The OSCE works by consensus, he noted, so each member state must agree on every detail of any documents produced, leading to a difficult negotiation process, which was the case for the Ministerial Declaration. Key sections of the document discuss raising awareness of climate change and its economic implications and promoting environmental security as a tool for cooperation and confidence building. It is true, he conceded, that the 25 page document had been reduced to only 3 pages by the time the final 'Madrid Declaration' was produced. This was the price of consensus, he noted, but the political importance of such a document should not be discounted. This was the first time the OSCE has endorsed such a document and it recognises important issues such as the fact that climate change is a long-term challenge, the importance of environmental governance, the importance of sustainable management of water, soil, forests and biodiversity, and the commitment of OSCE states to cooperate on reducing environmental security risks. In the European context this may sound obvious, he added, but the OSCE stretches from Vancouver to Vladivostok and contains the central Asian and the South Caucasus countries where environmental issues have yet to be elevated to the political agenda. The ministerial meeting not only adopted this declaration, but also a decision on water management, the speaker continued, which was the first time the OSCE as a political security organisation agreed on the importance of water management. This would have been impossible four years ago, he noted. ■



Alessandro Villa

Unit A2: Crisis Management and Conflict Prevention, Directorate A: Crisis Platform - Policy Coordination in Common Foreign Security Policy, External Relations Directorate-General, European Commission

Mr. Villa began by noting that despite the difficulties and challenges faced when dealing with climate change, the environment and security, many positives could be taken, and the European Union has been a growing actor in the international arena. The EU is considered the largest provider of external aid, he noted, by which he means not only development support, but foreign policy, external relations, dialogues and cooperation with third parties. The EU has been very busy trying to develop the understanding of these issues in the last 10 years, he continued, as many issues related to climate change are particularly complex. Furthermore, they have been developing policy programmes at all levels, both in the field and at the political level through, papers, strategies, communications and new policies. On a personal level, the speaker noted that

he had never been busier with environmental issues in foreign policy than in the last few years, and looking at the Commission's agenda, its importance is clear. The EU and EC have taken an interesting approach by moving to global collaboration and partnership, both with civil society and third-world countries, as well as with the private sector. This, Mr. Villa remarked, is a shift from lobbying to partnership and represents a new strength of the EU as it implies an understanding that such an approach is now necessary. New initiatives like the 'Peace Building Partnership', which was launched after working with civil society and international organisations, are springing up, but also initiatives which deal with the private sector. The private sector, he noted, has both the resources and the responsibilities in addressing these issues, and cooperation is necessary. The EU is investing a lot in this partnership approach and is increasingly convinced that development cooperation is the framework with which to tackle this. He noted that we have to be careful, therefore, when we talk about security, crisis response and the military as it risks losing the development cooperation terminology which deal with the root causes of climate change. Climate change discussions need to be developed and addressed in the mainstream and not through crisis response tools which are still under development. The third option and last resort is the use of the military.

The speaker noted that one area which deserved more emphasis was the overall policy framework. If development cooperation is adopted he noted, including the increase of technology transfer and further research, then it must be attributed more resources. In this regard he welcomed the invitations of Member States for the Commission to do more, but noted that the Commission always had to fight for budget increases and cannot do everything. The big issue at the moment is more problems and fewer resources to deal with them. Furthermore, he continued, it is not only a question of increasing resources, but also of reshaping of how development cooperation is done. The EU cannot afford to lose the trust of developing countries and have them relying on China for help, he noted, and the EU therefore has to use development cooperation more strategically in a more coherent and solid policy framework. This framework is supposed to be the future European foreign policy framework which will give the EU more power. The signing of the Lisbon Treaty had given hope for this, and he urged Member States to ratify this so that the foreign policy can take shape. In conclusion, he noted that continued discussion and writing on these issues was required for explanation and further understanding for all people and thanked broader civil society for its help in this regard.

Mr. Villa concluded highlighting the importance of education in tackling these issues; we do not do enough yet to teach our children how to behave today and tomorrow in order to address issues like climate change. Consumers'

behavior remains the number one reason that we are discussing all this here today. Environment and security, climate change, etc. should be taught extensively in all schools. ■



Harris Gleckman

Inter-regional Coordinator, IES Pathfinder Project on Combating Illegal Trade in Natural Resources / Senior Fellow, IES / Former Head, UNCTAD Office, New York

Mr. Gleckman began by noting that the discussions so far had centred on economic, social and cultural tools, but that peace, security and conflicts must also be integrated. In his 20+ years at the UN in dealing with economics, trade, investment and environmental issues, he remarked, he had only twice been asked to attend the Security Council sessions. He noted that he had mentioned this to illustrate not only professional discipline limitations, but also to highlight the historic institutional barriers that exist. However, he also highlighted the gradual erosion of these barriers. This was due to a variety of causes, including: Kofi Annan's efforts to redefine the security question and starting preparations for the 2005 summit meeting; Belgium's selection of natural resources as the theme for their presidency of the Security Council; the UK's announcement that climate change is an appropriate issue for the Security Council; and the Congo's presentation of the economic and social reasons behind conflicts and the consequent methods of conflict prevention and its claim that this should be dealt with by the Security Council. It is incumbent on the rest of us, noted the speaker, to contribute to this discussion through policies and to develop the tools to breakdown this barrier which has existed for decades between environmental, economic and social issues on the one side and peace and security and conflict prevention on the other.

Mr. Gleckman then moved on to discuss a project that he was working on with the IES – the Pathfinder Project on combating illegal trade in natural resources, looking especially at the issue of natural resource exports in war zones. This is a generic question that asks why, when these imports arrive in their destination countries, they are treated as legitimate goods, not the result of black market activity which generates funds for ongoing wars. A possible solution to this, he noted, could be to use the customs services in the way the import of endangered species or antiquities are controlled in OECD markets. However, changing this requires a reclassification of existing WTO standards to permit war-zone exports to be treated as a special trade category. Another approach to blocking illegally exported natural resources from conflict zones could be existing criminal justice systems. If a natural resource

product originates in a conflict zone there could be a new presumption in the importing country that the goods were illegally taken from the original country. The importing country could then use its existing criminal justice system to charge receiptants of these goods as dealers in stolen goods. This is currently not the case, even though it would have a significant impact on conflict prevention. A third existing structure that could reduce the value of imported illegal natural resource products from conflict zones are civil court systems. In every OECD country these are well developed and we have rules and procedures to challenge the ownership of assets between businesses. Changes need to be implemented to allow people from developing areas to designate a surrogate to act on their behalf in court and challenge the legality of exported goods. All these methods open new possibilities, he continued, as the seizure of goods could lead to a resource fund that could be eventually used for reconstruction efforts, or used as resources for current peacekeeping efforts. What these methods have in common, he noted, is that they involve bringing social, economic and business tools to bear on peacekeeping and conflict prevention in a creative manner. ■

- Discussion -

The first question, posed by Derek Osborn, was inspired by the discussion of the role civil courts can play and asked the panel to consider a massive extension of the 'polluter pays' principle. Is there a basis, he asked, that some of the southern countries could get some class action suits in the courts against some of the damages they have and may still suffer as a result of climate change? The second question, addressed to the defence community and founded on the premise that prevention is better than cure and that this alleviates the need for future conflicts, asked could the 'peace dividend' be used to transfer resources from arms and military into ways of combating potential environmental causes of conflict?

Secondly, an administrator at the Council Secretariat who is working on issues relating to climate security noted that the one missing stakeholder at the conference was the European consumer. He stated that his country, Sweden, has been known since the 60s for its social engineering and asked whether this focus based on what politicians and bureaucrats believe to be right might be a trap that overlooks the needs of the consumer? Mr. Gleckman's speech, he noted, while very good, focused exclusively on bodies like courts and customs, where the most powerful obstacle for illegal goods is the consumer itself. He asked how the consumer could be brought into the fight against climate change and energy security?

Professor Raoul Weiler of the Club of Rome reminded the conference of the famous Club of Rome report: 'Limits

to Growth', and that it should perhaps have been called 'Favouring de-growth, Limits to the West' or 'Limits to Sinks'. He raised his question to the European Union and its representative, by noting that there is a contradiction in analysis, especially in the origins of the models sustaining the climate change, those being the private sector, the providers of energy and the economic ministries. All of whom speak in terms of growth in the global use of energy of 2.5% for the next twenty years which is in fact a doubling of global energy use in that time frame. Observing Johannesburg, Kyoto and Bali, Professor Weiler noted that most of the environmental NGOs and research institutes are speaking of the need to drastically reduce global energy use, in particular at Kyoto where it was proposed that the West and the industrialised world needs to reduce its energy use by 80%.

This glaring contradiction in what needs to be done and what is actually happening in terms of energy use does not bode well for the future of the planet and Professor Weiler asked what the European Union is going to do about it. He pointed out that the Club of Rome's first report has now been in existence for thirty-six years and during that time there has been much discussion with many world leaders, with the UN and with the USA but all that has transpired is that prospects for the global environmental crisis have increased not decreased and that nothing has been done to avert this. He fore-warned that so long as there is no clear policy and as long as there is no clear answer, then nothing will change.

Alessandro Villa addressed this last question first. This is not a contradiction, he noted, but a problem, that must be tackled at various levels, starting with the individual. Civil society often provides good advice and shocking declarations, but it also has the responsibility to communicate to everyday people, particularly when it comes to the behaviour of energy consumption. This links to the second question as well, he noted, as the behaviour of consumers is the root cause of this. He wondered how many in the room had actually stopped driving to work and started cycling, for example? The behaviour of the consumer is the reason that economies run in an unsustainable manner. Education can play a big role in this and he noted that in schools very little is said about water consumption or where diamonds actually come from. This is a way to start changing the behaviour of consumers and giving the politicians less to do in this regard. Finally, regarding the first question on the 'polluter pays principle', he noted that the European Union is very much in favour of this approach. There is no way to deal with third-world actors without accepting responsibility for this problem, he noted. Finally, regarding the question on military to civilian resource transfer, he noted that he would be happy to see a cap on military resource growth. However, the importance of the military, he remarked, should not be underestimated, and added that non-climate related secu-

ity remained a problem. Therefore military capacity had to remain, but cooperation between military and civilian sectors particularly with regard to crisis response, could be much better developed. The European Union is one of the few players that seriously develop civil-military dialogue, he noted, and it should be maintained.

Marc Baltes then also addressed this final point regarding the potential transfer of funds, noting that it was a very complex issue. The traditional concept of security is no longer applicable, he noted, and it must therefore be defined in a new way. Furthermore, he said that while in English the difference between 'security' and 'safety' was clear, it did not exist in German and Russian languages, leading to complication. However, whilst there may not have been a financial transfer of resources, there has been an intellectual transfer. Discussions at the OSCE, he noted, operate at three different dimensions: political/military, human and economic/environmental. Until relatively recently the first two were considered the key issues, but this has changed and more importance has been given to the economic/environmental dimension. Creating the political will to put this on the agenda was a good first step, Mr. Baltes felt.

Ben Slay then responded to the three questions raised by the audience, starting with the comment relating to the role of the consumer. He expressed his agreement with this point, noting that boycotts, fair trade networks and consumer organisations linked to corporate responsibility initiatives could be extremely powerful. Helping companies engaged in these activities to move 'upmarket' and manage the risk they place themselves in by engaging in grey or black market activities can be a win-win situation, he noted, if done the right way. Furthermore, he highlighted the Global Compact and similar CSR mechanisms which could be useful in this respect. Moving on to the question of energy use and waste, he noted that in the European context there were many European economies who are among the most efficient in the world in terms carbon emissions generation and who do not emit significantly more today than they did twenty years ago despite a growth in GDP. It would be beneficial, he remarked, to study which policies allowed this to happen and to transfer these to other less efficient countries, both in the OECD, the West, and new EU states. He noted that five of the seven countries with the highest carbon emissions per dollar of GDP exist in the former Soviet Union, including the Ukraine. Therefore, initiatives such as improving and expanding the European trading scheme, the Clean Development Mechanism and the Joint Implementation Framework could also help. Finally, he remarked that, whilst there were expectations of China and India to make concessions to curb their emissions, other concessions in global governance structures would be necessary to achieve this – namely the Security Council of the United

Nations. The reform debate following the publication of the UN panel report on this issue has fallen off the radar, he noted, but this must be revisited to achieve concessions on climate change.

The questions were addressed by Harris Glekman. In dealing with natural resource exports from war zones, he noted, it is a black and grey market issue and deals with those who are exporting in order to fund war equipment, those who gain from war and who discover that during a war the black markets are so readily available that it is in their self-interest to continue fighting. In this context there is a huge incentive to disguise the origin of goods, he remarked, and a wide diversity of institutional tools must be used to address this problem. Therefore, while a consumer response was crucial, the ability to track origin is very difficult. While efforts are underway on certain materials such as diamonds (the Kimberley Process) and wood, it is very difficult to differentiate the source of many goods such as coffee and it therefore requires a new approach. Moving on to the 'polluter pays' principle, he noted that the Group of 77 had an implicit understanding of this. The tension around this issue can be seen in discussions of the a-historical approach taken by some nations towards pollution and the developing countries' problems with this. This is one of the reasons why many developing countries were hesitant to move on from Kyoto, he noted.

Allessandro Villa added to Mr. Gleckman's first point on wood, noting that the biggest problem came not from the black market, but from the legal market. This was a consumer issue, with Europe the biggest consumer and responsible for much of the Asian deforestation. ■

7. The Way Forward: Summary of the Discussions, Recommendations and Follow-up to the Conference

Summation by the Panel of Rapporteurs



Panel of Rapporteurs:

From left to right: Paloma Agrasot, Lars Wirkus, Tom Spencer, Chad Michael Briggs, Tom Deligiannis

Having each been assigned a different session to summarise, the rapporteurs then presented some of the conclusions that had been reached. **Paloma Agrasot** began with a summary of the introductory session, noting firstly that security had not been mentioned sufficiently in Bali and that it should be at the top of the agenda at Poznan. Furthermore, the need for innovative solutions for energy concerns was highlighted, she recalled, particularly with regard to transport. Biofuels do not necessarily represent an answer to this problem, she noted, as they can compete with biodiversity and food needs, which is a key issue that must be taken into consideration. Various approaches to alternative energy sources had also been mentioned and the ambassador for Sweden had pointed out that sources of electricity may include nuclear, although others had noted that it may be phased out by 2050. Adaptation was also mentioned, she noted, as was the role of EU leadership and its nature. The role of the EU could include energy package implementation, development and integrating climate change into its foreign policy, as well as the EU's aid policy. EU aid currently has very little to do with climate change and energy, she noted, which is a major cause for concern. This, combined with the need to change its biofuels policy, means it has a lot to change to be a leader over the next two years.

Tom Spencer added to this by noting that one of the big issues he had noticed was the possibilities and responsibility placed on Poland as a result of the next round of talks being held in Poznan. He noted that he had not been given the impression that Poland knew why it had been chosen for this role and that the Polish organisers should be treated in a similar way to an incoming EU presidency – that is, to be supported and offered ideas. Poland is emerging from a turbulent period in its internal politics, he noted, and needs to show that it is big, creative and competent in running such a big conference, with a good conference doing wonders for its global and European reputation.

The second rapporteur, **Lars Wirkus**, who was assigned to the second session dealing with reflections on Bali, then began his summary. Referring to the background paper prepared for the meeting by Ronald Kingham, he noted a citation by Ban Ki-moon – “The potential consequences of quickening climate change are so severe and so sweeping that only urgent global action will do.” He then referred to the problem as “...the defining global challenge of our age.” Mr. Wirkus noted that in his opinion, Bali had only partially managed to answer this ‘global challenge’. The most important achievement of the talks, he noted, had been the fact that everyone is now on board, including ‘climate sceptics’ like America. Bali had failed, however, to come up with the figures and concrete measures that have to be achieved, but did at least open the road for negotiation over the next two years to Poznan and Copenhagen. Commenting on the role of the EU as a world leader, he noted that one of the main messages from the presentations had been that it had to deliver on its promises to the developing world or else lose its credibility. Another important point he noted was the role of NGOs, in their influence on politics, their crucial ability to influence the wider population and as a monitor for agreements made. He remarked that on a personal level he would like to see energy and security higher on the current political agenda and gave an example of how this could happen. Setting up solar power in Northern Africa would require the transfer of technologies and could pose significant infrastructural challenges, as well as the security threat posed by militias. Without analysing the political and security situation this would not succeed and political partnerships with governments in developing countries will be required. In conclusion, he remarked that the Bali process had reminded him of his work with trans-border water management and the negotiations over resources. While the discussion on water-sharing has moved on to benefit-sharing and creating a win-win situation for all parties involved, the

climate debate is still in the embryonic stage of debating over figures and numbers, he noted. However, with the USA's inclusion it is now time for action and learning from regimes already in place.

The third rapporteur, **Tom Spencer**, then presented his discussion of the third session 'New Issues for Poznan - I'. He noted that the next 12 months would be a continuous process of negotiation rather than series of separate events and that there were a number of ways that the Poznan discussions could be aided. These include the debate on energy cooperation between Europe and the Mediterranean, the Middle East peace process and the question of taking energy from North Africa with all the potential for job creation that this entails. These are geopolitical discussions and involve substituting existing sources of European energy, most notably from Russia. These matters must be considered in the broadest range of options, but such assessments had better occur as soon as possible. Moving on to the issue of a second IPCC report being produced prior to Copenhagen, Mr. Spencer noted that this may indeed be possible, as many conclusions that had not been peer-reviewed at the time of going to printing could be included. Such a 'top-up' IPCC report could include recent discoveries on the rate of ice-cap degradation in Greenland such as the melting glacier 80% the size of India which would result in a 1m sea-level rise should it continue to melt at its current rate. Glaciologists find this prospect hugely disturbing, he noted, but as this could not be included in the original IPCC report, a follow-up would help focus minds on what is happening there. Moving on to the discussions of the 'polluter pays' principle, he noted that it must be looked at in the contraction and convergence analysis that includes historic emissions. Failing to take this into account can provide industrialising countries like India with an excuse not to push through efficiency reforms as rapidly, he noted, meaning they could make the same mistakes of the West. While historical equity is important, following the same rhetorical path taken in the 80s and 90s could be dangerous, as this is one of the inhibitors to getting China and India to agree now.

Finally, noting military influence, Mr. Spencer expressed his disagreement with the Colonel's remarks about politicians taking decisions in isolation. He cited the late US president Eisenhower's identification of the Military Industrial Complex and noted that when looking at the US we should take account of the clear concerns of the US military regarding the changing shape of the strategic picture and how this could be utilised to influence an incoming administration, even if that means arguing with 'big oil and 'big coal'. Because, Mr. Spencer reminded the conference, "big military' is a big player in the Washington process and if you really believe what you are saying on the changing nature of climate change and the long term change on security and its implications not just for asymmetrical warfare but

actual conflicts between states in a global resource grab, then the US military ought to be saying this and so should the IES."

The penultimate rapporteur, **Chad Michael Briggs**, then presented some of the issues raised by Andrew Standley and Colonel Portelli in the 'New Issues for Poznan - II' session. Both speakers had agreed on the security threat posed by the current and predicted state of the climate, he noted. Regardless of the nature of these threats, these are real considerations that must be seriously considered by both the Military Industrial Complex and states. He noted his approval of Colonel Portelli's assertion that food and water should be considered as energy and that this was not common in traditional energy security debates. It was also important to mainstream the climate debate in foreign policy, he remarked, as everything will ultimately be interconnected. The problem is not simple administrative and legal stovepipes, but rather mental stovepipes that restrict politicians' views, he remarked. Traditional conceptions of security consider protecting a 'thing' from 'someone' by certain 'means', but transposed onto the climate change debate it implies protecting 'ourselves' from 'ourselves', making it very difficult to grasp exactly what has to be done. Whilst the threats and policy options in terms of adaptation are clear, what has to be done in what time frame and with which motivating factor is far harder to discern, he noted. As remarked by Colonel Portelli, this is far more complex situation than the Cold War but the Cold War did provide a useful template in the form of nuclear deterrence and its assertion that the best way to avoid the unacceptable consequences of a threat is to avoid the threat in the first place. Paraphrasing Bernard Brody, he noted that under conditions of uncertainty any steps necessary had to be taken to avoid an unacceptable outcome. A different sense of collective responsibility is therefore required rather than the traditional blame mentality, as typified by the US's criticism of India and China and the rest of the world's criticism of the US. Noting the decision faced by the UK Prime Minister Gordon Brown to build eight new nuclear power plants, or Canadian President Steven Harper's considerations of oil sands development in Alberta, an understanding of the collective implications of these actions is required, he stressed. As we are not familiar with the potential victims of these actions, it is futile to incorporate climate change discussions into a traditional security model. This also means including different actors, such as corporate and non-state and a consideration that whilst the environmental implications of climate change may be negative, the security changes are not necessarily so. This is not a zero-sum game, he noted, and whilst scarcity can create conflict, it can also create cooperation.

The final rapporteur, **Tom Deligiannis**, then provided a summary of the final 'New Issues for Poznan - III' session. A lot of the discussion had centred on European foreign

policy, he remarked, and he felt that Europe could be proud of its attempts to integrate climate change into this. Several panellists representing the EU Council and Commission had highlighted the ongoing process to integrate the linkages between environmental change and security into policy frameworks and that this process was fostering cooperation between various sectors and creating strategies for action. The EU, he noted, recognises the aggravating impacts of climate change on various security dimensions, but the process of incorporating the two should be accelerated in the run-up to Copenhagen. He recalled that a number of panellists also wondered whether an expert panel could be created to define the security risks of climate change and tie this into the Poznan and Copenhagen agenda. It may also be prudent to link policy cooperation around the environmental security issue in the EU to the Poznan-Copenhagen process he felt. Mr. Deligiannis noted that the OSCE declaration is a good example of 'policy convergence' and that this declaration on the key principles of environmental security and climate change could be expanded globally. The Environmental Security Initiative discussed by the UNDP representative is another example of this form of cooperation, he noted, and demonstrates that the challenges of climate change can be used to build peace between actors. This programme has excelled at building cooperation, information exchange and joint-planning on environmental security issues between the states involved, he remarked. It could therefore be used as a model for the planning and implementation of other similar programmes. It also proves that improvement is needed with regard to planning the implication of interventions though, as the programme has found it challenging to assess how successful its programmes have been. This problem of assessment is universal across any actions taken on climate change, he noted.

He also remarked on Allesandro Villa's comments regarding the European Commission's efforts to push for climate change inclusion in its development framework, stating his agreement with this approach and also its inclusion in other sectors including trade. The last ten years of dealing with environmental security, he noted, have demonstrated a greater appreciation of the role of good development intervention and trade activities and also the challenge faced by the armed forces to find good missions to address environmental security. One of the most interesting recent actions to enhance capacity in developing countries on climate change, he stated, had little to do with climate change but was actually related to debt relief. Such relief has had a significant impact on developing countries in Central America, such as Nicaragua for example, as it frees up resources to deal with the impacts of climate change, such as the impact of hurricanes. Finally, he commented on Harris Gleckman's proposals to bring about a common package of environmental security and noted that such policy ingenuity should be encouraged. His examples

show that such policies can be quickly implemented, he concluded.

Mr. Spencer added that while a comprehensive approach was needed, it should also allow people to think institutionally 'outside the dots'. A good example of this was the European Parliament's recent vote to buy up Afghanistan's heroin crop and sell it commercially, which was a fundamental step to redefine and win wars. ■

Closing Remarks



Doeke Eisma
Executive Director,
GLOBE-Europe / Former MEP

Mr. Eisma began by noting his disappointment at the message from Bali that the climate can wait for the new American president. The United States' decision to include itself however was vitally important, he noted, as an agreement without the US would have also excluded China, India and Japan. However, despite being heartened by this, he noted that the governments were asking a lot of their citizens. Reducing emissions and pollution is one thing, he noted, but without providing good and efficient services, such as public transport, the citizens cannot be expected to act responsibly. He also remarked that while the day's conference had been very successful, it lacked the inclusion of the American House and Senate representatives, which he felt was a missed opportunity. He also expressed his feeling that the relationship between climate change and security had not been highlighted enough at Bali. ■



Fiona Hall
MEP / Member, Temporary Committee on
Climate Change / Member, Committee on
Development / Member, Committee on
Industry, Transport, Research and Energy /
Member, GLOBE-EU

Ms. Hall began by noting that big gains had been made in the last few years. It was only a few years ago that she had heard a presentation relating the issues of the environment and security and that the current level of understanding was symptomatic of the work that had been put in. She remarked that she had first seen the impact of

climate change on a trip to North-West Kenya where she saw diminished grazing possibilities and the conflict over resources that this brought about. However, many issues relating to this though, such as biofuels and nuclear power, lack consensus, she noted, and will require more work. Another big issue Ms. Hall highlighted was the Economic Partnership Agreements, which are mired in controversy. Whether these agreements are right or wrong, she noted, one outcome was that work was not proceeding on the regional strategy papers as a result of this controversy. ■



Michael Ryan
Defence Advisor,
US Mission to the European Union

Mr. Ryan began by noting that anybody reading the papers regularly will be able to list a significant number of crises and instabilities, an increasing number of vulnerable, failing and failed states and a fairly constant number of disasters and tragedies. Adding up the cost to the international community of a typical response to a crisis gives a figure much higher than one may think, he remarked, and certainly much higher than the initial estimates. Multiplying this cost by the number of crises quickly leads to a simple conclusion: that we can't afford it. This is before future crises related to environmental factors are considered. The international community therefore needs to get more effectively involved in conflict prevention, but the international community, he remarked, is poorly organised for real conflict prevention to occur.

Action is required, aimed at dealing with today's problems and with the future consequences of climate change. However, he noted, whilst today's problems are old problems that we know how to deal with, today's dynamic is an old dynamic in a new context. Paraphrasing Colonel Portelli, he noted that the real issue is with political will and money and that as the mechanisms of dealing with this are known, the key question remains: Is climate change enough motivation for us to finally get serious? Some action on conflict prevention is occurring on a national level, he remarked. Nations are pursuing "whole of government" or comprehensive approaches, with The Netherlands as an example, but these are single entities with limited abilities. Interested and often like-minded nations lead however, like the Quad, the Quintet, the Quartet, the EU-3, the Six-Party Talks and the Minsk Group. These groups are made up of countries that are members of larger groups like NATO and the European Union, organisations which can act globally in conflict response and prevention. These small groups come up with the common assessments and

common approaches which they in turn take back to their organisations for action. Multi-national requirements are therefore becoming multi-organisational requirements, which leads to the question of how these organisations can interact to translate the comparative advantages they possess into action. There currently exists the opportunity for a grand trans-Atlantic bargain, he remarked, with 'President Sarkozy, Chancellor Merkel, Prime Minister Brown and President Bush. Therefore, he noted, we must look for complementary roles in the context of a continuous dialogue. For national reasons the relationship between NATO and the EU, and NATO and the UN, was difficult, he noted, although between the UN and the EU this relationship was a bit better. Environmental factors, however, can help bring the big picture to the forefront, he remarked, allowing the perspective of dialogue to stay focused on the outcome, namely how to protect ourselves from ourselves. The goal of this continuous dialogue is to achieve common understanding, which Bali went a long way to achieving. However, it is also important in an organisational sense to let everyone do what they do best.

It was said earlier, he remarked, that NATO stands for No Action, Talk Only, but today he felt the French acronym OTAN – Operations Take All Nations was more appropriate, as NATO observed the fact that we are all in this together. On the 7th of December, the NATO Foreign Ministers meeting in Brussels reiterated in their communiqué that NATO is "...the essential transatlantic forum for security." With NATO, he remarked, the United States is automatically included with Europe and the discussion is tied to action, making it beneficial to deal with the connection between the environment, security and development in this context. The private sector should be included in this process, he added, as it is the only mechanism on earth that can create wealth, as well as being able to innovate rapidly and bring those innovations to market quickly. The same applied to the inclusion of the military, he noted, as was clear in the tsunami response in South-East Asia. It was a US aircraft carrier on the scene first, he remarked, which comprises both a floating airport and the largest desalination plant outside of the Middle East. Furthermore, it was a NATO response force that had been deployed to Pakistan to provide European relief aid delivery, drawing the thanks of José Manuel Barroso and demonstrating the dual-use potential of military technology. ■

8. Conclusions

Nicolas Frankcom & Jan Mortier, Civitatis International

- Facing the Problems -

The Bali climate talks have failed to deliver the tangible results so many craved - no emissions quotas were set and the promises that were made are devoid of the facts and figures that would make them verifiable. Whilst the creation of the Adaptation Fund, for example, is seen by many as a concrete achievement, no serious political capital was expended and, perhaps more importantly, there will be no repercussions for those who fail to push the rhetoric into reality. However, even the weariest pessimist would have to acknowledge the significant step that the Bali talks made, demonstrated by the agreement to hold global negotiations over the next two years leading to Copenhagen in 2009. As noted by a number of speakers at this conference, - 'We are all in the same boat'.

The key implication of the final Bali Roadmap, most clearly exemplified in its references to the IPCC's Fourth Assessment, is that for the first time there is global agreement that climate change is real, man-made and having an impact on people's lives. The signs are all around us, from the accelerated rates of deforestation, now accounting for 18-25% of greenhouse gas emissions, to glacial shrinkage and rising global temperatures. Such changes are not only ecological threats; they are real and widespread security threats. Rising temperatures could contribute to the melting of the Tibetan glaciers, potentially leaving 1.5 billion people without water, and rising sea levels could start to submerge parts of Bangladesh and the Maldives among others, leaving countless homeless. The impacts of climate change are not only limited to water shortages and migrations though - population pressures, arable land shortages and changing crop patterns have all contributed to the Economist Food Price Index currently standing at its highest level since 1845. Such shifts have led some to highlight food and water, not oil and gas, as the two most important energy resources in the world. The security elements of climate change include droughts, floods, disease and food security, and can be directly linked to border conflict, migration and starvation.

- Developed vs. Developing -

Individual governments are largely aware of these risks as shown by national estimates and many have made efforts to mitigate them, but the international cooperation and mechanisms required are sadly lacking and must be developed in the run-up to Copenhagen. Breaking the walls of opposition and complacency requires a show of strength

from the most vulnerable - the developing world - but they require support. When the representative from Papua New Guinea announced to the attendees at Bali that the US should 'Get out of the way and leave the rest of us to it', the implication was clear - there is an 'us', and we are in it together.

If the collective strength of the second and third world, with vocal European support, was one of the most surprising developments at Bali, then the reluctance of the US was perhaps the least. This dynamic between the developed and the developing world became the driving plot behind the story of Bali, with the strong opposition between the US, China and India playing a starring role. As stated by the UN and the Bali Action Plan itself, economic and social development and poverty alleviation in the developing world is an economic and moral imperative, a fact compromised by the US's insistence that the developing world shares the burden of combating climate change equally. The US, among others, sees China and India in particular, as strategic competitors and vice versa, leading to reluctance on either side to give an inch. This intransigence stretches beyond climate change and must be viewed through the prism of international relations and global governance. Expectations on China and India to make concessions to curb their emissions must be met by concessions in global governance structures, most noticeably, and controversially, in the UN Security Council. The resurrection of the reform debate, following the UN panel report's publication and its subsequent drop off the public radar, may play a key role in the Bali Roadmap's progress.

- The EU -

The rise of India and China is perhaps a competing nexus of power to Europe's role in the world as a leader, but while Europe is currently not a major player - as it has yet to put its own house in order to create a unified voice to the world - it still has a vital role to play as a torch-bearer, if not yet a consolidated political leader. Europe must address its internal and structural issues while building the will and the means for unified and coherent external policy. Europe must also deliver on its promises, as even it cannot force the world to change, but Europe can show how change can be achieved. Such vision is required now more than ever as Europe is hosting two COPs in succession, providing Europe with a special opportunity to demonstrate leadership. Firstly, Europe must deliver on promises made to the developing world using development cooperation more strategically

to develop its foreign policy framework – a vital long-term requirement for both Europe's continued influence and the future of the Roadmap. Europe's promises to increase overall aid and assistance in technology transfers have not lived up to expectations and have led to disillusionment in many developing countries, countries which Europe may come to depend upon more than she realises now.

Secondly, although no global targets were set at Bali, the EU, historically a leading force in climate change debates including Bali, has led the world by example once again and set its own targets. The EU's common policy calls for a 50% reduction in emissions by 2050, as well as an increase in energy efficiency and the further use of biofuels. These targets, however, look increasingly unrealistic as the aim of a 50% reduction in emissions by 2050 requires a peak in emissions production in 10 to 15 years and a 25-40% reduction in emissions by 2020. The EU-led aim of a two degree Celsius ceiling in global warming also looks to be in jeopardy according to the IPCC's report. This would require a stabilisation of carbon dioxide levels, which are currently 370 parts per million, to between 350 and 400 parts per million, along with the stabilisation of carbon dioxide equivalent levels, currently at 455 parts per million, to between 445 and 490 parts per million. Though Europe possesses the technological capacity to achieve such goals, finding the necessary political will, investor confidence and agreement on tariffs is likely to prove far trickier. Europe must also invest in its own industries and develop technologies that tackle climate change like carbon capture and solar panels now, rather than allowing America to surge ahead as it did with CFC remedies. One of the biggest challenges to this task comes from its own industries, both agricultural and industrial and, in particular, automotive, and the varying lobbying power that these groups possess within member countries. Here the European Commission should take prompt and **emboldened** steps in the European public interest.

- Stumbling Blocks -

The issue of biofuels was one of the most hotly contested issues at Bali and is likely to remain so for quite some time to come. The European Union's aim to make 10% of its transport fuel consumption derive from biofuels has received praise from many, but questions are being raised over both the carbon footprint of ethanol production and the tension between food and energy resources it creates. An SUV with a full tank of Ethanol uses enough maize to feed someone for an entire year. This entails a choice for farmers between food and energy, creating a potential security risk as a result of rising food prices and shortages, with the balance further upset by the EU's subsidisation of ethanol imports despite the surplus that currently exists, leading to re-exportation. This situation is also reflected in the United States, where the strength of the 'Corn lobby' weighs heavily on government decision-making. While it is no secret that domestic

industries, including 'clean' coal, 'safe' nuclear and carbon-capture systems, as well as corn, lobby the government for subsidies in exchange for support, it is short-sighted to pursue technologies that fail the environment. Here Europe once again, has a chance to lead by example by examining the ramifications of the biofuels issue in greater detail and acknowledging the potentially disastrous implications to the people of the developing world who may be forced to choose between growing food which they cannot afford, or food for fuel export to the West. Europe should instead focus on other utility energy supply options such as DESERTEC solar which would assist in the economic development and improvement of the livelihood for the people of the MENA region. As 'Europe's solar basin' the MENA region's frozen conflicts will require political settlement and stabilisation to serve Europe's 21st and 22nd century energy requirements and thus contribute to the European aim of the promotion of peace.

The problem of subsidisation extends into existing sources of energy and it is vital to recognize the entrenched bias that already exists. One of the speakers cited the example of Pacific Gas and Electric, one of California's two largest utility companies, which enjoys significant tax credits and other benefits for investment in the continued deployment of conventional power plants as a result of statutory/regulatory structures that were established decades ago. There is consequently a significant incentive to continue 'business as usual', which in turn is a significant barrier in terms of tax structures and subsidisation to the spreading of new technologies. The situation is compounded in the United States as 'oil' and 'coal' state senators and representatives are pitched against one another in the battle for political support. Consequently, Europe and the business community have an important task in the run-up to the US elections to influence legislators and get climate change on the US map. Furthermore, the COP at Poznan will coincide with the gap between election results and the new administration – there has rarely been a better time to exert pressure on the US.

- Possible Solutions -

Whilst the US has been slow to act at the national-level, some states have grasped the initiative, with California in particular, showing some promising signs. Governor Schwarzenegger's signature of Assembly Bill 32 (AB32), should lead to mandatory emission caps and the establishment of a carbon trading market in the state. Furthermore, the state has a 20-year history with one of the leading forms of non-fossil fuel energy product – Concentrated Solar Power (CSP). This is a proven, effective solution that can function on a large scale and, whilst reliant on direct sunlight, can conserve power and deliver energy at night. After a long period of stagnation due to falling costs of conventional energy sources, the soaring price of oil and

gas has made the technology increasingly viable and has received strong corporate backing in the form of Google. Such 'Big Solar' technologies represent a fundamental paradigm shift in energy production and, when combined with the development of geothermal, hydro, nuclear and cleaner coal power, can have a significant impact on emissions targets. The outline of the DESERTEC proposal involving solar power production in North Africa and parts of the Mediterranean supplying Europe, are a good example of the potential answers to Europe's future energy requirements. Whilst there are obvious security issues to be considered, the potential for energy cooperation to act as a facilitator for political dialogue is clear and the proposal highlights the importance of streamlining the climate change and energy security debates within foreign policy. There are clearly many other cases where similar forms of cooperation around alternative forms of energy production are possible and hold the potential to foster trans-border relations and regional integration. Organisations like the EU, could provide a carrot in the form of incentives for the creation of cross-border entities to foster such cooperation on a regional or sub-regional basis.

However, such technological solutions only represent one side of the multifaceted approach needed to tackle climate change. Monetary incentives for 'good behaviour' are also fundamentally important in the development of a 'green' market and carbon trading represents a vital piece of the puzzle, but the present system is faltering. The corporate sector has a vital role to play and carbon credits must be made easier to trade commercially, as well as being better regulated and substantially increasing in value. Until this happens, voluntary systems such as the 500,000 hectare forest sink project in Borneo will play a vital role, but these also must be properly regulated and promoted. Governments must therefore be prepared to step in and shoulder some of the risks, providing corporations with the incentives and security necessary to ensure their participation at the state level and through mechanisms at the supra-national level. Furthermore, the analysis of climate change must be made more accessible to the corporate sector as a whole. While 'corporate social responsibility' may be the minimum requirement, reducing the analysis from the macro to the micro level would help business leaders see the benefits of being involved in such processes. Likewise at the macro-level, Bali, Poznan and Copenhagen and the ongoing discussion between and beyond are laying the foundations for a new dimension of issue-focused global governance. The challenge for all actors concerned will be whether we will be able to reach consensus through a satisfactory arrangement that both takes the legitimate needs, concerns and aspirations of the developed and developing world into account and whether short term interests can be transcended in the peremptory immediate to long-term interest of humanity and our undeniable responsibility to succeeding generations and to the planet's ecosystems and habitats

of which we are the custodians. What is certain is that the negotiations to come will require a patient understanding of all viewpoints, a respect for consensus of opinion, the willingness and ability to compromise for the greater good and the desire to overcome what will no doubt be a challenging and difficult process for all, but one based on the best interest of preserving our planet.

The overriding importance of the long-term interest over that of the short-term was best summed by Tom Spencer in his closing remarks:

"I find it bizarre that we are, as a society, prepared to instruct bits of the private sector that they must reduce their production of a dangerous product called cigarettes, yet we are not prepared to say to the oil sector: 'The use of your product is killing millions of people - we wish to shrink your sector'. Until we face up to that and take it into account, then we are not really going to actually achieve the kind of goals we are talking about."

There is simply no way that emission quotas can even be considered without fundamental shifts in consumer attitudes and perceptions and those of the major polluters. Whether it be in terms of consumption patterns, regulation, energy conservation, improving travel efficiency or sourcing locally, the individual consumer citizen and the major polluters must actively strive to limit their footprint. The NGO sector and the media have a significant role to play in this by promoting a more efficient way of life that does not rely on hoped for scientific advancements, which no doubt will come, but perhaps too late to pick up the pieces. Action, not words, are required.

Finally, it is vital to frame the climate change debate within a security framework and eliminate the barrier between environmental, economic and social issues on the one side, and peace, security and conflict prevention on the other. This requires reorganisation at the regulatory and policy level of the state, of the integrated and integrating regions and of the planet, and most importantly the synthesis of climate change and security within foreign policy. Such convergence is already happening within NATO, though not always by design, and the military has a central role to play in conflict prevention, border disputes and humanitarian efforts linked to climate change. The military is also a significant political lobby in most countries, particularly the USA, and could do more to alert its governments to the security implications of climate change. To do this, agreement on how global insecurity is accentuated by climate change is vital, along with a clear agenda on how this may be tackled. Although the response requires far more than 'hard security' responses to tackle climate change, it is not only a battle; it is, as stated by Ban Ki-moon, *'The defining challenge of our age'*. ■

9. Next Steps

Ronald A. Kingham, Director / Brussels Liaison, Institute for Environmental Security

This conference was organised in the context of the Institute for Environmental Security programme on *Environmental Security and Poverty Alleviation*. It was also the latest in a series of meetings organised within the *Greening Foreign and Security Policy network*, which informally brings together a wide range of experts from key international organisations, the EU institutions, national governments, academic bodies, NGOs and the private sector.

Looking ahead, the IES and various partners hope to organise a series of events in follow-up to this conference and in the lead-up to the climate conference in Poznan, stressing that the impact of climate change on security is an additional driver for urgent action by the international community to address climate change causes and effects. These could include the following possible events:

- A symposium on **“The Geopolitics of Climate Change”** organised with the Swedish Defence Research Agency (FOI) focusing on the FOI report of the same title and with further discussion on specific topics such as the Arctic and also energy security;
- A workshop on **Natural Resources, Trade and Conflict Prevention**, which would focus further attention on the need to combat illegal trade in natural resources;
- A workshop on **Economics and Dealing with Climate Change: The Consequences for International Monetary, Financial and Trade Policies**;
- An IUCN Round Table on **“Climate and Security: Towards New Partnerships for Sustainable Development”** at the IUCN World Conservation Congress Forum, “A Diverse and Sustainable World” in Barcelona, 6-9 October 2008;
- Assistance to the Environment and Security Initiative in organising the next meeting of the **ENVSEC Advisory Board** in Brussels;
- A transatlantic Seminar on **Climate Change, Environment, Security and Foreign Policy**, which could be organised after the US elections and before the Poznan conference;

- A Side Event at the UNCCC COP 14 in Poznan on **Climate Change and Global Security**; and
- A 2nd Conference on Climate Change and Security, **From Poznan to Copenhagen: New Issues, New Challenges**, one year from now in Brussels after the Poznan conference.

By 2009, we hope to be able to produce a second edition of our *Inventory of Environment and Security Policies and Practices*, continue to update our on-line *EnviroSecurity Action Guide* and hopefully convene a conference on environment and security in the Mediterranean. Together with other organisations we will also be working to further develop a solidly scientific-based Environmental Security Assessment methodology which should be a valuable tool for a variety of stakeholders.

In all of these activities, our aim will continue to be advocating an integrated approach and to push for more results by the international community on the interface between environment, security and sustainable development. ■

- Annexes -

| Annex I - Programme |

Conference on Climate Change, Security and Sustainable Development

From Bali to Poznan - New Issues, New Challenges

European Parliament, Brussels, 18 December 2007

- 08:30-09:00** **Arrival and Registration of Participants / Welcome Coffee**
- 09:00-09:30** **Welcome and Opening of the Conference**
- Moderator:** Satu Hassi, MEP / Vice-Chair, Environment Committee, European Parliament / Vice-President, GLOBE-EU / Member of the Board, Worldwatch Institute
- Rapporteur:** Paloma Agrasot, Manager, Greening the Neighbourhood Policy Programme, WWF European Policy Office
- Remarks by Ton Boon von Ochssée, Ambassador for Sustainable Development, Netherlands Ministry of Foreign Affairs
 - Remarks by Jan Tombinski, Ambassador Extraordinary and Plenipotentiary, Polish Mission to the European Union
 - Remarks by Olof Ehrenkrona, Ambassador, Senior Advisor to the Minister for Foreign Affairs, Sweden
- 09:30-11:00** **Reviewing Bali: Reflections on the UNCCC – COP 13**
- Moderator:** Wouter J. Veening, Chairman / President, IES
- Rapporteur:** Lars Wirkus, Senior Researcher, Bonn International Center for Conversion (BICC) / Research Associate, United Nations University, Institute for Environment and Human Security (UNU-EHS)
- Avril Doyle, MEP, Member of Environment, Industry and Climate Change Committees.
 - Steen Gade, MP / Chairman, Environment Committee, Danish Parliament / President, GLOBE Europe
 - Derek Osborn, President, Sustainable Development Observatory, European Economic and Social Committee (EESC) / Former Director General, Environmental Protection, UK Department of the Environment
 - Marinah Embiricos, President, Borneo Tropical Rainforest Foundation (BTRF)
 - Discussion
- 11:00-11:30** **Coffee Break**
- 11:30-12:30** **New Issues for Poznan - I: Escaping from Fossil Fuels: The Case for Solar Power**
- Moderator / Rapporteur:** Tom Spencer, Vice-Chairman, IES / Senior Advisor, e-Parliament / Former President, GLOBE International / Former President, EP Committee on Foreign Affairs, Security and Defence Policy (1997-99)
- Andrew Vincent Alder, Senior Fellow, IES, California / President, The Southwest Connection, LLC

- Alex Evans, Head of Climate Change and Global Public Goods, Center on International Cooperation, New York University
 - Discussion
- 12:30-13:30 Lunch**
- 13:30-14:45 New Issues for Poznan - II: The Security Implications of Climate Change**
- Moderator:** Cedric Janssens de Bisthoven, First Secretary of Embassy, Multilateral Affairs, Ministry of Foreign Affairs of Belgium
- Rapporteur:** Chad Michael Briggs, Associate Research Fellow, IES / Assistant Professor International Relations & Environmental Risk, Lehigh University, Pennsylvania
- Colonel Alex R “Alpo” Portelli, Chief, Europe Division, United States European Command, Stuttgart, Germany
 - Andrew Standley, Acting Director, Directorate L: Strategy, Coordination and Analysis, External Relations Directorate-General, European Commission
 - Discussion
- 14:45-15:00 Coffee Break**
- 15:00-16:30 New Issues for Poznan - III: Implications for Foreign Policy: Environment, Security and Sustainable Development**
- Moderator:** Margaret Brusasco-MacKenzie, Member of the Advisory Council, IES / Former Head, International Affairs, DG ENV, European Commission
- Rapporteur:** Tom Deligiannis, Adjunct Professor, Department of Environment, Peace, and Security, University for Peace, Costa Rica
- Ikaros Moushouttas, Horizontal Security Issues, Policy Planning and Early Warning Unit (PPEWU), Council of the European Union
 - Ben Slay, Director, UNDP Bratislava Regional Centre / Chairman, ENVSEC Initiative
 - Marc Baltes, Senior Advisor, Economic and Environmental Activities, OSCE Secretariat
 - Alessandro Villa, Unit A2: Crisis Management and Conflict Prevention, Directorate A: Crisis Platform - Policy Coordination in Common Foreign Security Policy, External Relations Directorate-General, European Commission
 - Harris Gleckman, Inter-regional Coordinator, IES Pathfinder Project on Combating Illegal Trade in Natural Resources / Senior Fellow, IES / Former Head, UNCTAD Office, New York
 - Discussion
- 16:30-17:30 The Way Forward: Summary of the Discussions, Recommendations and Follow-up to the Conference**
- Moderator:** Tom Spencer, Vice-Chair, IES
- Panel of Rapporteurs

Closing Remarks

- Doeke Eisma, Executive Director, GLOBE-Europe / Former MEP
- Fiona Hall, MEP / Member, Temporary Committee on Climate Change / Member, Committee on Development / Member, Committee on Industry, Transport, Research and Energy / Member, GLOBE-EU
- Michael Ryan, Defense Advisor, US Mission to the European Union

Next Steps:

- Ronald A. Kingham, Director / Brussels Liaison, IES

Annex II - Photographs





Annex III - Speakers



• Paloma Agrasot •

Paloma Agrasot is a graduate in geography from the University of Madrid and holds a Master's in Geography of Development from the University of Liege. She taught in Algeria (Univ of Oran) and in Belgium (Univ of Liege) during the 70s. During the 80s she contributed to a research project on "Population and Environment" (Université Catholique de Louvain, Belgium) funded by the EC.

Since the beginning of the 80s she has been working as a policy expert on environmental integration in EU external policies. Between 1982 and 1997 she worked at the European Environmental Bureau, EEB, on the Convention to Combat Desertification, the ACP/Lomé Conventions, the MERCOSUR and the Euro-Mediterranean Partnership.

In 1997 she was appointed by WWF MEDPO as Mediterranean Policy Coordinator. She has further been coordinating from Brussels WWF (FW programme) campaign against the Spanish National Hydrological Plan, SNHP (2002 to 2004), and acting for one year as Marine Coordinator with a focus on the Fisheries Fund and the European Marine Strategy (2004-2005).

Ms Agrasot is managing, since April 2005, the WWF Greening the Neighbourhood Policy Programme in close cooperation with WWF International and the MEDPO, the CauPO and the DCPO.



• Andrew V. Alder •

Andrew Vincent Alder holds a B.A. in History and Economics from the University of Colorado and a J.D. from the School of Law at the University of San Francisco. He was called to the State Bar of California in May 1981 and the State Bar of Arizona in December 1993.

His past legal practice included representing workers injured from asbestos exposure, advocacy on behalf those with HIV/AIDS, estate planning and elder/disability law. Andrew's current legal practice includes the creation and representation of small businesses with a focus on Internet-related technology and related intellectual property concerns, and his specialization is in the field of international environmental law, particularly in the area of carbon emissions trading and related matters.

Andrew is a member of The Climate Project.org, founded by Al Gore, and has been trained by Mr. Gore to present and lecture on the substance of his film, "An Inconvenient Truth".

Andrew also has a consultancy to facilitate increased trade and commerce between the states of the American southwest and the European Union. He lives in Palm Springs, California and commutes regularly to Europe.

He is also Senior Fellow and the California representative of the Institute for Environmental Security.



• Marc Baltes •

Mr Baltes has been working for the OSCE since 2000 where he currently holds the position of Senior Advisor to the Co-ordinator for OSCE Economic and Environmental Activities. Before, he was working for the Luxembourg Ministry of Foreign Affairs with respective postings to NATO and WEU in Brussels and the United Nations in New York. In between, Mr Baltes also worked as a staff member of the United Nations Conference for Trade and Development (UNCTAD) with assignments in Kuala Lumpur, Malaysia and Geneva headquarters.

Mr. Baltes was born in Luxembourg. He speaks four languages and holds a Master's Degree in Political Science from the University of Lausanne, Switzerland.



• Ton Boon von Ochssée •

Ton Boon von Ochssée is the Netherlands' Ambassador for Sustainable Development, Chairman of the inter-ministerial Task Force on Sustainable Development, Chairman of the OECD Annual Meeting of Sustainable Development Experts and Councillor of the International Union for the Conservation of Nature (IUCN).

His previous work experience includes a position of Associated Expert involved in applied research program of FAO and WHO in Zambia and Burkina Faso (1979-1981) and several positions in the Netherlands Ministry of Foreign Affairs (1982-1995). From 1995 to 1999, Boon von Ochssée became Advisor on policies related to Climate Change and Ozone Depletion where he notably set up the Climate Change Study Program for Developing Countries and took part to the negotiations leading to the Kyoto Protocol in 1997. In 1999, he was appointed Coordinator at the Global Environment Facility (GEF) in Washington DC where he prepared policy conclusions for the GEF Council and conducted consultations with the implementing Agencies in the formulation of strategies, business plans and action plans. He remained until 2003.



• Chad M. Briggs •

Chad Briggs holds a Ph.D. in political science from Carleton University in Ottawa, Canada, and an M.A. in international relations from Limerick University in Ireland. He is currently assistant professor of international relations and environmental risk at Lehigh University in Pennsylvania, USA, where he specialises in environmental security and international science policy. After attending gymnasium in Norway, Briggs moved to eastern Europe, and first studied at Eötvös Loránd University in Budapest, Hungary in the early 1990s.

He worked as a political consultant for the Hungarian Free Democratic party in 1993-94, then returned to the US where he worked with the US Department of Commerce and USAID on environmental projects. His government experience also

includes as an aide to the Wisconsin State Senate, budget and policy director for TEACH Wisconsin, and advisor to the Canadian Ministry of Environment. In addition to holding a post as a geography research fellow at University College London, he has taught at California State University Fullerton, and as a Fulbright professor to Corvinus University in Budapest.

In 1995 he began research on the links between US foreign policy and environmental security, particularly the use of scientific data in determining policy. His doctoral work compared dam construction projects in North America, Scandinavia and Eastern Europe, including the Bs-Nagymaros dam between Hungary and Slovakia.

Dr. Briggs's current research includes studies of the chemical perchlorate in the United States, and has worked with Physicians for Social Responsibility on contentious risk assessment activities. In Eastern Europe he researches post-conflict environmental health in states of former Yugoslavia, including vulnerability assessments and postwar reconstruction. He has published numerous articles on these subjects and lectured widely in North America and Europe.

He recently became an Associate Research Fellow of the IES.



• Margaret Brusasco-MacKenzie •

Margaret Brusasco-MacKenzie, LL.B. (King's, London), LL.M. (Yale) is Senior Adviser to the Institute for Environmental Security and has been involved in its work from the beginning. She has worked with the Prince of Wales' Programme for Business and the Environment, with Stakeholder Forum and Green Globe Network. Most of her professional life was spent in the European Commission, notably as head of International Affairs, Environment Directorate General. She has taught in universities in the United Kingdom, Lesotho, and Belgium.



• Tom Deligiannis •

Tom Deligiannis (Canada) is completing his Ph.D. in the Department of Political Science at the University of Toronto, working under the supervision of Thomas Homer-Dixon. His dissertation research is building on the tradition of environmental conflict research at the University of Toronto through detailed field work in Peru, exploring the impacts of human-induced environmental and demographic change in Chuschi and Quispillacta, two communities in south-central Ayacucho, in Peru's southern highlands.

From 2005-2007, he was resident assistant professor in the Department of Environment, Peace and Security, working primarily in the 'Environmental Security and Peace' Masters programme at the UN-mandated University for Peace, in Costa Rica.

During the 2007-08 academic year, he is an adjunct professor at UPEACE. In addition to his teaching duties at UPEACE, he teaches a module on environmental security that is part of the University of Geneva/UNEP's short course on environmental diplomacy. In 2006-07, he was also project director of UPEACE's Climate Change and Adaptation project.



• Avril Doyle •

Avril Doyle is a Fine Gael MEP for Ireland East - (Leinster Region) and a Bureau member of the Group of the European People's Party (Christian Democrats) and European Democrats (EPP-ED).

Avril is Head of the Irish Delegation of Fine Gael MEP's in Europe. She is Vice-Chair of the Fisheries Committee, a Member of the Committee on the Environment, Public Health and Food Safety, the Temporary Committee on Climate Change and she also sits on the Industry, Research and Energy Committee. In addition to her legislative activities, Avril serves as Vice-President of the Delegation for relations with the Gulf States and is a member of the Delegation for relations with China.



• Olof Ehrenkrona •

Ambassador Ehrenkrona is currently Senior Advisor to the Swedish Minister for Foreign Affairs, Mr Carl Bildt. In the late seventies, Ehrenkrona's positions included Chief of Staff for the leader of the Swedish Conservative Party Moderaterna, and editorial writer in Svenska Dagbladet (1984). From 1991 to 1994 he was Head of the Policy Planning Staff in the Prime Minister's Office. In the mid-nineties he founded a consultant company where he was CEO until 2006.

Mr Ehrenkrona has published a number of books about Swedish economic and political history in the 20th Century and is now responsible for the globalisation agenda in the Foreign Minister's Office.



• Doeke Eisma •

A sociologist by training, Mr. Eisma is a former member of the Dutch Parliament from D66 (Liberal Democrats) and a former party spokesperson on environment and foreign affairs and the Maastricht Treaty. From 1994 to 1999, he was a Member of the European Parliament (ALDE/D66) and a coordinator for the environment in the ALDE Group. Since 1999, Mr. Eisma has been Chair of the Wadden Sea Society and Chair of the IUCN National Committee of the Netherlands.

He is currently the Executive Director of GLOBE Europe, a network of European parliamentarians, working on issues of sustainable development.



• Marinah Embiricos •

Marinah Embiricos was born in Malaysia, educated in the United Kingdom and currently lives in Switzerland.

She is at the forefront of a wide-range of high-profile entrepreneurial initiatives ranging from film production, through her Chahaya ('light' in

Indonesian) company, to the development and promotion of cutting edge mobile phone technologies and applications.

In parallel, she has been actively associated with a host of philanthropic, social and humanitarian causes throughout the world, including major fundraising and programme guidance for educational, Red Cross, HIV and coral reef preservation concerns.

Marinah inherited her lifelong passion for sustainable forestry and conservation from her father, a former Chief Minister of Sabah State in Borneo.

She founded the Borneo Tropical Rainforest Foundation in 2004 to promote global awareness and planetary responses to the crucial challenges implicit in rainforest conservation.



• Alex Evans •

Alex Evans is a non-resident fellow at the Center on International Cooperation at New York University, where he runs CIC's work on climate change and global public goods. Alex has a decade's experience of working on climate change issues, and was seconded to the United Nations from June to October 2007 as part of the team charged with planning and executing the UN Secretary-General's High Level Event on climate change. His other current areas of research are resource scarcity and the international implications of rising food prices, and the changing nature of influence in 21st century diplomacy.

From 2003 to 2006, Alex worked as Special Adviser to Hilary Benn MP, then UK Secretary of State for International Development, where he worked across DFID's policy agenda, including UN reform, governance in fragile states, and the Middle East Peace Process. He focused particularly on climate change, including working as a member of the cross-Whitehall team charged with working up the Prime Minister's climate change agenda for the 2005 G8 summit at Gleneagles.

Prior to joining DFID in 2003, Alex worked in a range of other climate and energy-focused roles, including as the head of the climate and energy research program of the Institute for Public Policy Research (2002-3), at the Department of Environment, Food and Rural Affairs as a specialist on emissions trading (2002), as communications director at the Global Commons Institute (2000-2) and as a political consultant on climate and energy policy to organisations including Alcan, Rio Tinto and the World Wide Fund for Nature (1998-9). He has an MSc in environment from Imperial College at the University of London, and an MA in politics from the University of Edinburgh. He is also one of the editors of www.globaldashboard.org, a global issues and foreign policy blog.



• Steen Gade •

Steen Gade is currently working as President of Globe Europe and Chairman of the Folketing's Environment and Regional Planning Committee. He has a long parliamentarian experience which started in 1981 when he entered the Danish Parliament for the Socialist People's Party, where he remained until 1999, and again from 2005 after having led the Danish Environmental Protection Agency (1999-2003). During his parliamentary mandates, Gade has been a Member of the Folketing's European Affairs Committee (1982-1997) and the Folketing's Foreign Affairs Committee (2005-2007). Gade was also successively

appointed Vice-Chairman and Chairman of the Parliamentary Group of the Socialist People's Party.

On the international level, Steen Gade was an initiative-taker in the establishment of the organisation New Europe (1998), Member of the governing body of the European Environment Agency (EEA ; 1999-2003), Vice-President of EEA's Management Board (2001-2003), Member of the Nordic Council's Environmental Awards Committee (1999-2003) and Member of the Management Committee of the Danish Association for International Cooperation (2004-2005).



• Harris Gleckman •

Harris Gleckman is Senior Fellow and New York representative of the Institute for Environmental Security and Principal of Benchmark Environmental Consulting.

From 1986 to 1993 he was Chief, Environment Unit, UN Centre on Transnational Corporations. In 1993 he co-founded Benchmark Environmental Consulting which has undertaken global environmental consulting projects for the IFC, the North American Commission on Environmental Cooperation, and the European Environmental Bureau.

From 1998 to 2003 he was Programme Officer, Financing for Development, UN/DESA where he played an important role in the organisation of the International Conference on Financing for Development in 2002.

From 2003 to 2006 he served as head of UNCTAD's New York Office.

He has been an advisor to governments in the preparatory process for the new UN Peacebuilding Commission, and has written extensively on transnational environmental management.

He is currently also the co-ordinator for the UNU-UNCTAD book on the rule of law and corporate social responsibility in zones of conflict.



• Fiona Hall •

Fiona Hall is the Liberal Democrat MEP for North East England. Before becoming involved in party politics, she was the chair of a large local environmental organisation which championed energy efficiency as an alternative to building a nuclear power station on the beautiful Northumberland coast.

Ms Hall was elected to the European Parliament in 2004. As a member of the Industry, Research and Energy Committee, she was Shadow Rapporteur on the 2006 Energy End-use Efficiency and Energy Services Directive and is currently Rapporteur for the Parliament's report on the EU Energy Efficiency Action Plan.



• Satu Hassi •

Satu Hassi is Member of the European Parliament and Vice-Chair of the European Parliament's Environment Committee. Ms Hassi started her political career in Tampere City Council in the year 1985. She was a Member of the Finnish Parliament for 13 years, until her election to the European Parliament in June 2004. She also worked as a Minister for Environment and Development

Cooperation in Finland during the years 1999-2002.

By profession she's a licentiate of Technology in Electrical Engineering. She has also written several books, from poetry and fiction to textbooks of physics. She was born in Helsinki in 1951, and is married with two adult daughters.



• **Cédric Janssens de Bisthoven** •

Cédric Janssens de Bisthoven entered the Belgian Foreign Service in 1991 and has been posted successively in Canada, Tunisia, Croatia and Vienna (United Nations). Back to headquarters in 2004, he was assigned to the Environment desk where he focused on Environment and Security issues and acted as Belgian focal point of the European Green Diplomacy Network.

In June 2007 he joined the Kimberley Process 2007 Chairmanship Team at the European Commission (RELEX).



• **Ronald A. Kingham** •

Ronald A. Kingham is a co-founder and Director of the Institute for Environmental Security where he coordinated the organisation of 'The Hague Conference on Environment, Security and Sustainable Development' held at the Peace Palace in May 2004.

Recent projects include organising a series of GLOBE-EU / IES conferences on Greening Foreign and Security Policy at the European Parliament, editing the IES "Inventory of Environment and Security Policies and Practices", designing the on-line "EnviroSecurity Action Guide", and coordinating the IES project on Combating Illegal Trade in Natural Resources.

He is also co-founder and Director of the Environment and Development Resource Centre, where he served as coordinator / editor for the Drafting Committee for "Roots of the Future: Global NGO Conference in relation to the 1992 Earth Summit" and where he co-founded the European Council on Drugs and Development.

He is also former Executive Director of the International Coalition for Development Action and has also carried out projects for the Environment Liaison Centre, European Partners for the Environment, European Environmental Bureau, the European Commission – DG Environment, and Shell International. In 2000-2001, he was technical advisor to the UNITAR Project: "Who Needs What to Implement the Kyoto Protocol? An Assessment of Capacity Building Needs in 33 Developing Countries".

Educated in the US and Europe, he is a political scientist with a specialisation in international relations and European integration. His studies also focused on European history, human rights and development economics.



• **Ikaros Moushouttas** •

Ikaros Moushouttas has been a Member of the Policy Planning and Early Warning Unit in the Council of the European Union since 2004. His previous work experience include such positions as advocate in the the Cyprus Bar Association (1992-1993), Press Officer in the UN Headquarters in Vienna (1994), almost ten years as a Diplomat in the Ministry of Foreign Affairs of the Republic of Cyprus (1994-2003) posted in Vienna, Brussels and Nicosia, and Senior Press Officer in the Directorate-General Agriculture, European Commission (2003-2004).

Mr Moushouttas was born in Cyprus in 1967. He graduated in Law in the United Kingdom (1987-1991) and International Relations in Belgium (1996-1997).



• **Derek Osborn** •

Derek Osborn is currently President of the Sustainable Development Observatory in the European Economic and Social Committee (EESC). He is a Former Director General of Environmental Protection in the United Kingdom Department of the Environment and a Former Co-Chair of the 1997 UN General Assembly 5 year review of UNCED. Previously he was Chairman of the Management Board of the European Environment Agency.



• **Colonel Alex R. "Alpo" Portelli** •

Colonel Portelli graduated in 1981 from the University of Tampa, Tampa, Florida with a Bachelor of Arts Degree in Political Science. He was commissioned a Second Lieutenant as a Distinguished Military Graduate of the UT Army ROTC Program. Born in Bangor, Maine and raised in Norway, he holds a Master's Degree in Scandinavian Studies, with an emphasis in European Security from the University of Minnesota, Minneapolis and a Master's degree in Strategic Studies from the U.S. Army War College.

Colonel Portelli's military education includes the Norwegian Army Staff College, the U.S. Army Command and General Staff College, the Armed Forces Staff College, the Foreign Area Officer Program, the Joint Military Attaché School, the Norwegian National Defense College and the U.S. Army War College.

He came to his current position after duty as the U.S. Army Attaché to the Kingdom of Norway. Previous to that, Colonel Portelli served as the Nordics/Baltics Desk Officer, ECJ5-E at U.S. European Command in Stuttgart, Germany. In addition to his Attaché posting in Norway, he has extensive European service with Command and Staff assignments encompassing three tours in Germany, two tours in Norway and a tour in Turkey. Colonel Portelli is an experienced linguist, maintaining native fluencies in Norwegian, Swedish, Danish and German languages and he dabbles in Italian, Spanish, French and Turkish.



• Michael C. Ryan •

Michael Ryan is the Defence Advisor, United States Mission to the European Union, Brussels, Belgium. Mr. Ryan joined the Senior Executive Service of the Department of Defence in 2007 following a 25-year career in the US Air Force having retired as a Colonel. He was commissioned in 1982 from the U.S. Air Force Academy. He is a distinguished graduate of the Joint Military Intelligence College, was a National Defence Fellow with Congress, and attended the Collège Interarmée de Défense in Paris. His assignments include flying duties as an instructor pilot, flight commander, Red Flag mission commander, and assistant director of operations in the A-10A. His staff assignments include the Command Action Group in Air Education and Training Command and a tour in the Office of the Secretary of Defense.

Colonel Ryan has taught extensively in the United States and Europe including as a Department Director at the NATO School. Prior to assuming his current position full-time, he also served as the Military Advisor to the Secretary of Defense Representative, Europe at the US Mission to NATO.



• Ben Slay •

Ben Slay is Director of UNDP's Regional Centre in Bratislava, which provides research, analytical, and managerial services to UNDP's country offices in CIS and Southeast European countries. The Bratislava Centre, which houses some 150 UN staff, works closely with the governments of a number of the new EU member states to help transfer their lessons in development and transition to countries in Southeast Europe and the CIS, as well as in Africa, Asia, and elsewhere. Dr. Slay also serves as an executive editor of UNDP's regional publications and acts as a senior consultant in UNDP regional and corporate initiatives. In 2007, Dr. Slay has served as the chairman of the regional Environment and Security Initiative.

Before coming to UNDP in mid-2001, Dr. Slay worked as a senior economist for PlanEcon Inc., a Washington D.C.-based international economics consultancy. While at PlanEcon Dr. Slay did macroeconomic, balance-of-payments, and political risk analysis and forecasting for Russia, Hungary, and a number of other European and Central Asian countries, including Albania, Bosnia and Herzegovina, Croatia, Kyrgyzstan, Serbia and Montenegro, and Tajikistan. He also served as an advisor to competition offices in Russia, Georgia, and Uzbekistan, and did commercial consulting projects on banking and telecommunications in Poland and Ukraine.

Dr. Slay has held academic positions at a number of universities in the United States, including Georgetown University. His publications include: *The Polish Economy: Crisis, Reform, and Transformation* (Princeton University Press, 1994); *Demonopolization and Competition Policy in Post-Communist Economies* (Westview Press, 1996); and the co-edited volume *Beyond Transition: Development Perspectives and Dilemmas* (Ashgate Publishers, 2004). Dr. Slay is also editor of *Problems of Economics Transition* (<http://www.mesharpe.com/mall/results1.asp?ACR=pet>).



• Tom Spencer •

Tom Spencer is Executive Director of the European Centre for Public Affairs and Visiting Professor of Public Affairs at Brunel University, Uxbridge. He worked for Peat Marwick Mitchell & Co and was then Assistant to the Director of the "Britain in Europe" Referendum Campaign in 1975. He worked in the United States Senate and then joined J Walter Thompson & Co where he was responsible for the Guinness advertising. He was Associate Dean of Templeton College, Oxford from 1984-1989 and founding Executive Director of the European Centre for Public Affairs from 1987 to 1989.

A Member of the European Parliament for Derbyshire from 1979 to 1984 and for Surrey from 1989 – 1999, he was Chairman of the Conservatives in the European Parliament (the British Section of the European People's Party Group) 1994-97 and Chairman of the EP-Czech Joint Parliamentary Committee for the same period. From 1997-99 he was President of the European Parliament's Committee on Foreign Affairs, Human Rights and Defence Policy.

As a committed environmentalist he was, from 1995-99, President of GLOBE International (Global Legislators Organisation for a Balanced Environment). He was Chairman of Counterpart Europe (2000 - 2002) an NGO active in sixty countries. He was a Commissioner of the Commission on Globalisation (2000 - 2003). He was Visiting Professor of Global Governance at the University of Surrey (2000 – 2004). He is Vice Chairman to the Institute for Environmental Security in The Hague. He is a Director of Action for a Global Climate Community. He is a member of the Conservative Party's Quality of Life Group on Climate Change 2006.

His books, "Public Affairs and Power: Essays in a Time of Fear", "Everything Flows: Essays on Public Affairs and Change" and "Challenge & Response: Essays on Public Affairs & Transparency" are published by Landmarks.



• Andrew Standley •

Andrew Standley is currently Acting Director, Strategy, Coordination and Analysis in the Directorate General for External Relations in the European Commission. He has been in the European Commission for more than 20 years occupying various positions such as Development Economist for India (1986-1987), Second Secretary for China (1988-1992) and First Secretary for Pakistan (1992-1996). Consequently, he worked for three years as Secretary, ALA and MED Finance Committees in the Directorate-General for External Relations in Brussels (1996-1999). More recently, he was appointed Counsellor for Costa Rica (1999-2003) and Head of Delegation for Bolivia (2003-2007).

His previous professional experience include a brief passage to the government of the New Hebrides (now Vanuatu) from 1976 to 1979 and to the United Nation Population Fund for Bangladesh from 1983 to 1985.

Andrew Standley is a British citizen, graduate from the Clare College, Cambridge University (BA ; 1976) and the School of International Affairs, Columbia University, New York (MA ; 1982).



• Jan Tombinski •

Jan Tombinski, Ambassador Extraordinary and Plenipotentiary is Poland's representative to the European Union. He has overall responsibility for the work of Polish Representation and represents Poland in the Committee of Permanent Representatives (COREPER). Tombinski's previous professional experience include a position of Assistant Lecturer and Senior Lecturer in the Institute of History at the Jagiellonian University (1987-1989), various positions in the Embassies of the Republic of Poland in Prague and Ljubljana (1990-1996), and a position of Ambassador of Poland in the Republic of Slovenia and in Bosnia and Herzegovina (1996-1998).

Between 1998 and 2001, Tombinski was successively appointed Counselor to the Minister in the Departments of Western Europe, Central Europe and Southern Europe, Director of the Departments of Central Europe and Southern Europe and Director of the European Policy Department in the Polish Ministry of Foreign Affairs. From 2001 to 2007, Tombinski was appointed Ambassador of Poland in France.

Jan Tombinski was born in Cracow in 1958. He holds a Master's degree in German Philology (1984) and a Master's degree in History (1985) at the Jagiellonian University.



• Wouter Veening •

Wouter Veening studied political science, economics and social psychology at the University of Amsterdam. After working as policy adviser at the Dutch Ministry of the Environment, he became policy director at the Netherlands Committee for IUCN/World Conservation Union, where he dealt with the environmental policies of multilateral finance and donor institutions, such as the World Bank, IMF, the Global Environment Facility and the European Union.

As co-founder and Chairman of the Institute for Environmental Security (2003) in The Hague (located opposite the Peace Palace) he now focuses on the policy and legal responses to security risks emanating from environmental degradation in key regions of the world.



• Alessandro Villa •

Alessandro Villa works for the Directorate for External Relations of the European Commission within the – Crisis Platform – Direction for Policy coordination in Common Foreign and Security Policy, crisis management and conflict prevention unit. He is a planner for crisis responses under the Instrument for Stability, 2nd Delegate to Council's Committee for Civilian Aspects of Crisis Management (CIVCOM), migration correspondent and focal point for environment and security aspects and disaster risk reduction. In addition he is the coordinator of an inter-service group on natural resources management and conflicts. Previously he worked in EC Delegations in Africa for more than eight years.



• Lars Wirkus •

Lars Wirkus works at the Bonn International Center for Conversion (BICC) and at the United Nations University – Institute for Environment and Security (UNU-EHS).

Lars Wirkus joined the Bonn International Center for Conversion (BICC) in September 2000 where he works as senior researcher on a number of research topics amongst which are environmental security, environmental degradation and (violent) conflicts, (transboundary) water management and conflict in particular, as well as crisis prevention and conflict management. Lars Wirkus has been giving regular seminars as visiting lecturer on the topic areas of "Environmental Security", "Environmental Degradation and Violent Conflicts" as well as "How to Overcome Water Conflicts" at the Institute for Conflict Research at the University of Marburg (Germany). Currently he is interested in the climate change-(violent)conflict relationship and intends to further develop an analytical framework that helps to assess the conflict dimensions of the global environmental change processes.

In summer 2007 Lars Wirkus took over a part time position at the United Nations University – Institute for Environment and Security (UNU-EHS) whilst continuing his work at BICC on a part time position too. He is part of the Social Vulnerability and Environmental Migration section. As research associate and MICROCON project Manager he is responsible for the management of a research project on "Local water conflicts in Sub-Sahara Africa" which is part of an EU-FP7 funded research program MICROCON (A Micro Level Analysis of Violent Conflict). Within this project the research focus is on local governance structures and their role in either the peaceful or the violent conduct of selected local water conflicts.

Annex IV - Participants

Mrs Paloma Agrasot

Neighbourhood Programme Manager
European Policy Office
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Brussels, Belgium

Mr Iheanyi Aguwa

Masters Student
Environmental and Resource Mgt
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Cottbus, Germany

Dr Mats Ahlberg

Director
Environmental Affairs
Swedish Defence Research Agency
Stockholm, Sweden

Mr Andrew Vincent Alder

Senior Fellow, Institute for Environmental Security
IES Representative, California /
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Mr Nikolas Bader

Research Assistant
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Mr Matthieu Ballu

Policy Officer
Environment
Permanent Representation of France to the EU
Brussels, Belgium

Mr Marc Baltes

Senior Advisor
Economic and Environmental Activities
OSCE
Vienna, Austria

Ambassador Ton Boon von Ochssée

Ambassador for Sustainable Development
DGIS
Ministry of Foreign Affairs
The Hague, The Netherlands

Dr Philippe Bourdeau

Professor
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Institute for Environmental Security

www.envirosecurity.org



The Institute for Environmental Security (IES) is an international non-profit non-governmental organisation established in 2002 in The Hague, The Netherlands with representatives in Brussels, London, California, New York and Washington D.C.

The Institute's mission is: *"To advance global environmental security by promoting the maintenance of the regenerative capacity of life-supporting eco-systems."*

Our multidisciplinary work programme integrates the fields of science, diplomacy, law, finance and education and is designed to provide policy-makers with information and a methodology to tackle environmental security risks in time, in order to safeguard essential conditions for sustainable development. Key objectives of the Horizon 21 programme are:

- **Science:** Create enhanced decision tools for foreign policy-makers, donors and their target groups on regional, national and local levels;
- **Diplomacy:** Promote effective linkages between environment, security and sustainable development policies;
- **Law:** Contribute to the development of a more effective system of international law and governance;
- **Finance:** Introduce new and innovative financial mechanisms for the maintenance of the globe's life supporting ecosystems; and
- **Education:** Build the environmental knowledge capital of people and organisations.

Our mission and programme should be seen in the context of promoting international sustainable development goals and as a contribution toward long-term poverty alleviation.

Global Legislators Organisation for a Balanced Environment – GLOBE-Europe

www.globe-europe.net



GLOBE Europe is a network of 1500 parliamentarians (members) from the 27 EU member states and from Norway, Iceland, Turkey, FYROM, Moldova and Croatia who work together across party- and country lines to enhance sustainable development and support the protection of environment and biodiversity. Besides the members, GLOBE Europe has 250 contacts in environmental NGOs, ministries, industry, business and scientific institutions.

GLOBE Europe started as an offshoot of GLOBE EU, a network of members of the European Parliament (MEPs) in 1994. Currently, GLOBE Europe is an organisation in its own right which supports its members and contacts in their participation in the European decision-making process regarding sustainable development and biodiversity. To achieve this GLOBE Europe carries out two main activities.

First, GLOBE Europe provides up-to-date information on relevant European decision-making. In a weekly newsletter we summarise the developments in the European Parliament, the European Commission and the Council of Ministers that affect the environment, energy, agriculture and rural development, transport and fisheries. We also inform our members of any relevant actions of NGOs.

Second, GLOBE Europe provides a platform for discussion between members and contacts among each other and between members and contacts and the European Parliament. National parliamentarians can use GLOBE Europe to get into contact with other national parliamentarians and MEPs. To facilitate these contacts, GLOBE Europe will periodically organise conferences and provide a forum on the internet. We intend to plan fact-finding visits for national parliamentarians to visit the institutions in Brussels.

Through its activities, GLOBE Europe enables its members to work on environmental legislation in their countries more effectively. They will be better prepared for the debates in their parliaments, they will be better informed and more able to push for better environmental legislation and to ensure good implementation. In this facilitating role, however, GLOBE Europe will remain politically neutral at all times.

GLOBE-EU

<http://www.envirosecurity.org/actionguide/view.php?r=33&m=organisations>



GLOBE EU is a network of Members of the European Parliament, MEPs. It is a sister organisation of GLOBE Europe (a network of national Members of Parliament) and associated with GLOBE International.

GLOBE's purpose is to facilitate high level dialogues amongst legislators on key environmental issues. These dialogues are led by legislators but involve international business leaders and civil society representatives. Their objective is to urge effective action by governments and private sector leaders.

Key themes of recent GLOBE EU activities include bio-energy, climate change, environmental sustainability and world trade rules, land use and food policy, nano-technology, sustainable forestry, sustainable production and consumption and water issues.

e-Parliament

www.e-parl.net



The e-Parliament is the first world institution whose members are elected by the people. It links democratic members of parliament and congress into a global forum, combining meetings and electronic communication. Organizations, companies, journalists and individual citizens are all invited to participate.

The world today is organised into some 200 nation states, each defending its national interests. Each national capital makes policy decisions within its own borders, with no easy way to learn from the experience of the others.

Cooperation to solve world problems involves slow, difficult negotiations to seek agreement among the 200 governments – often with meagre results.

As modern communications bind us into one planetary neighbourhood, and we face mounting global problems, we need to find better ways to work together. In addition to our nation states, we need global systems which enable us to learn more easily from other countries, and which help our elected representatives cooperate to solve shared problems. That's why the e-Parliament is being created.

The e-Parliament is a new global forum in which democratic legislators work together to exchange and implement good policy ideas. It can build the capacity of parliaments to deal with any issue -- from climate change to AIDS to conflict prevention.

The Netherlands Ministry of Foreign Affairs

www.minbuza.nl/



The Ministry of Foreign Affairs is the channel through which the Dutch Government communicates with foreign governments and international organisations. It coordinates and carries out Dutch foreign policy.

The Ministry has two halves: its headquarters in The Hague and its missions abroad (embassies, consulates, and permanent representations).

The five key objectives of Dutch foreign policy are:

- To promote the international order
- To promote international peace, security and stability
- To promote European integration
- To promote sustainable poverty reduction
- To maintain and promote bilateral relations

The Ministry has made this event possible by their very kind financial support of the IES programme on Environmental Security for Poverty Alleviation.

Civitatis International

www.civitatisinternational.com

Civitatis International is an independent and supranational think-tank on the future of human civilization. Civitatis International conducts research according to its mandate: To seek constructive solutions to the common global challenges and crucial issues facing mankind's civilization now and in the future.

Civitatis International works with stakeholders around the world as a supranational research institute so as to effectively analyze and propose solutions to the interlinked complex challenges.

Civitatis International produces reports for clients seeking solutions and has worked at mega-scale conferences of leaders to produce several hundred page in-depth and scientifically researched reports on a range of economic issues.

This report was written for the Institute for Environmental Security by Civitatis International

www.civitatisinternational.com

CLIMATE CHANGE, SECURITY AND SUSTAINABLE DEVELOPMENT

“The aim of this conference was to shed new light on the linkages between foreign policies, the environment, security and sustainable development policies. ... Conflicts are no longer purely the result of different interest groups with competing claims to natural resources, or indeed conflicting opinions on the needs of the poor, but rather a direct conflict between humanity and its own living space: the earth.”

Ton Boon von Ochssée

Ambassador for Sustainable Development,
Netherlands Ministry of Foreign Affairs

“The Council High Representative and the Commission have been asked by the EU Heads of State to work on a joint report on the international security implications of climate change... The fact that such a joint report has been requested at the highest political level is the clearest indication possible of the seriousness with which the security dimension of climate change is being addressed.”

Andrew Standley

Acting Director, Directorate L: Strategy, Coordination and Analysis,
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