



e-Parliament

## Climate Change and Energy Access

Inter-regional Parliamentary Hearing  
for Legislators from Africa, the Caribbean and the Pacific

15th-16th November 2008 at Arnos Vale, Tobago  
Co-sponsored by the World Future Council

### Executive Summary

This was the first of three hearings bringing together legislators from all three 'ACP' regions: Africa, the Caribbean and the Pacific. The event was attended by MPs from Benin, Ghana, Kenya, Uganda, Tanzania, Barbados, the Bahamas, Guyana, Jamaica, Trinidad and Tobago, the Solomon Islands, Samoa and Kiribati.

Whilst the diversity of these countries certainly presented some new challenges for the Climate Change and Energy Access project, the event also provided an opportunity to take a much-needed global view of the climate and energy problem – and also of the potential solutions. It was the first time that Caribbean and Pacific legislators had been included in the ACP process.



*The hearing location on the Caribbean island of Tobago.*

In a stirring opening presentation, Dr. John Agard, a member of the Intergovernmental Panel on Climate Change, outlined the current trajectory and likely consequences of climate change. Drawing the legislators' attention to the current and projected impacts of climate change for small islands, particularly in the Caribbean region, he explained how a small difference to the sea level will have a huge impact. Amongst other major projected consequences, the speaker cited papers published in the journal Science predicting – with a 99% confidence level – a massive intensification of storms and cyclones in the region.

Dr. Gerhard Knies, a physicist and the world's leading expert in solar thermal technology, outlined the vision of his organisation, DESERTEC, to use solar thermal power stations in deserts to provide all the energy the world requires and to transport this energy to the major cities using High Voltage Direct Current (HVDC) transmission cables. Turning to the experience of the small island states, he described them as the world's 'pain sensors', emphasising the need for them to advocate in the strongest possible terms for their 'right to exist'. They should, he suggested, propose a Planetary Climate and Energy Security Fund at the United Nations to ensure a rapid conversion of the world's energy supplies to renewable sources.

The Tobago took several alternative approaches to addressing the question of how cash-strapped developing country governments should fund the implementation of policies to support the development of a renewables-driven economy. In a new departure for the ACP project, Dr. Norbert Wohlgemuth explained to the legislators how their countries could draw on a range of financial mechanisms to kick-start the transition to renewables, emphasising that investment in additional energy capacity over the next two decades is projected to be \$22 trillion. He outlined the vast and growing range of global investment schemes targeting the sector, including initiatives of more than 20 UN agencies, the World Bank group, the Global Environment Facility, regional development banks, EU schemes and so on.



*The effects of climate change at the hotel: sandbags are being used to protect the swimming pool from rising sea levels and storm surges.*

Stefan Schurig of the World Future Council, speaking about Feed-In Tariffs (FITs), also addressed the question of financing. He suggested that FITs in developing countries could be partly funded from the CDM. Feed-In Tariffs oblige utility companies to purchase electricity generated from renewable sources at a premium rate, which is guaranteed over a certain number of years. By guaranteeing renewable energy producers access to the grid and setting a favourable price per unit of power, FITs ensure that renewable energy becomes a stable, sound and long-term investment.

Rupeni Mario of our partner organisation the Pacific Islands Applied Geoscience Commission (SOPAC) provided an outline of the challenges facing the region and the range of innovative small-scale projects being implemented to meet them. He summarised a range of policy measures for the

promotion of energy efficiency, such as appliance labelling, reduced import duty on energy-efficiency equipment, and reduced price compact florescent lightbulbs (CFLs) for the poor.

Finally, Dr Indra Haraksingh of the University of the West Indies painted a promising picture of the speed of change currently engulfing the Caribbean energy sector, including wind power in Jamaica, solar in Grenada and geothermal in St. Lucia. Aware of the need for rapid capacity-building and cultivation of local expertise to cope with the envisaged expansion of the sector, Dr. Haraksingh is developing an MSc course in renewable energy at the University of the West Indies. She noted that legislators from her own country, Trinidad and Tobago – the biggest carbon emitter as well as one of the richest Caribbean nations – had a responsibility to lead the way.

As in the case of the previous two hearings, the presentations provoked lively debates and sometimes also controversy. A topic of considerable interest at the hearing was the issue of whether the Small Island Developing States (SIDS) should launch claims against the large carbon emitters for the current and future damage caused by climate change.

The assembled parliamentarians closed the meeting by committing to a range of actions to expedite the shift from fossil fuels and further the progress of renewable solutions in their respective countries – please see the full hearing report for further details.

This report is divided into four sections:

1. Participants
2. Action Ideas Discussed
3. Follow-up Actions
4. About the e-Parliament and the World Future Council



*The hearing in progress.*

# 1. Participants

## MEMBERS OF PARLIAMENT

Kwame Ampofo MP, Ghana. Member, Committee of Energy & Mines. Member of the e-Parliament Council.

Noel Arscott MP, Jamaica.

Penelope Beckles MP, Trinidad & Tobago. Former Minister of Environment.

Kouraiti Beniato MP, Kiribati. Minister of Public Works and Utilities.

Fitzgerald Jeffrey MP, Trinidad & Tobago. Minister of State in the Ministry of Science, Technology, and Tertiary Education.

Florence Ibi Ekwaugwu MP, Uganda. Member of Natural Resources Committee.

Quenum Epiphane MP, Benin.

Niko Lee Hang MP, Samoa. Minister of Finance /Energy.

Denis Kellman MP, Barbados. Ambassador to CARICOM.

Moses Lessonet MP, Kenya.

Gordon Darcy Lilo MP, Solomon Islands. Minister of Environment and Conservation.

George Nangale MP, Tanzania. Chair of Environment Committee, East African Legislative Assembly. Member of the e-Parliament Council.

Phenton O. Neymour MP, Bahamas. State Minister for the Environment.

Dharamkumar Seeraj MP, Guyana.

## EXPERT PRESENTERS

Prof. John Agard, Department Of Life Sciences, University of the West Indies.

Dr. Indra Haranksigh, Department of Physics, University of the West Indies.

Dr. Gerhard Knies, Founder, Trans-Mediterranean Renewable Energy Co-operation (TREC).

Mario Rupeni, Pacific Islands Applied Geoscience Commission (SOPAC).

Stefan Schurig, Director of Climate and Energy, World Future Council.

Prof. Norbert Wohlgemuth, Department of Economics, University of Klagenfurt.

## E-PARLIAMENT STAFF

James Corre, Programme Officer.

Jesper Grolin, Executive Director.

Susana Guerreiro, Programme Officer.

## 2. Action Ideas Discussed

### CLIMATE CHANGE AND ITS IMPACT ON SMALL ISLANDS



The proceedings were opened by John Agard (left), one of the lead authors of the 4th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), who made an arresting presentation on the current trajectory and likely consequences of climate change. Dr. Agard spoke of the global picture but also drew the legislators' attention to the current and projected impacts of climate change for small islands, particularly in the Caribbean region.

He pointed out that recent scientific discoveries have shown that the position taken in the 4<sup>th</sup> Assessment Report was far too conservative and said that the challenge now is to work urgently to avoid reaching the 'tipping points' beyond which climate change would become "a threat to civilisation as a whole". He noted that the IPCC's conservative rules regarding the replication of study results caused the organisation to ignore a great deal of credible new scientific papers highly pertinent to the current crisis.

In the Caribbean, he said, a small difference to the sea level will have a huge impact. Guyana, for example, actually finds a substantial part of its land *below* current sea level, making any further rise potentially disastrous. Annual sea-level rise in the Caribbean has doubled over the last decade, and it is extremely difficult to predict when this increase might intensify still further. Amongst other major projected consequences, the speaker cited papers published in the journal *Science* predicting – with a 99% confidence level – a massive intensification of storm and cyclone levels in the region.

Dr. Agard reminded the audience that the last cyclone to hit Grenada cost the country three years' GDP within just a few hours, and it was therefore vital that politicians act now to mitigate climate change. His own country, Trinidad and Tobago, has been accused of being unwilling to act for fear of endangering its oil exports. However, Dr. Agard emphasised that the country's oil revenues give it a unique opportunity to invest in renewable technologies and to help usher in a new era.

### RENEWABLE ENERGY OPTIONS

Dr. Gerhard Knies issued a warning at the beginning of his presentation on the renewable technology options available to developing country policymakers: one should not focus too much on adaption at the expense of mitigation. It was, he said, like a 'hold-up': the gun of climate change is pointing at us, and we must remove the gun rather than trying in vain to protect ourselves from the bullet!



*Dr Knies (centre) in conversation with Dr. Kwame Ampofo and Dr. Norbert Wohlgemuth.*

Dr. Knies outlined the vision of his organisation, DESERTEC, to use solar thermal power stations in deserts to provide all the energy the world requires and to transport this energy to the major cities using High Voltage Direct Current (HVDC) transmission cables. These can transport electricity over long distances at a much lower cost and rate of loss than traditional alternating current cables. There has been keen interest expressed by MPs in East and West Africa in using HVDC connections to expand renewable energy in their regions.

Turning to the experience of the small island states, he described them as the world's 'pain sensors', emphasising the need for them to advocate in the strongest possible terms for their 'right to exist'. They should, he suggested, propose a Planetary Climate and Energy Security Fund at the United Nations to ensure a rapid conversion of the world's energy supplies to renewable sources. He suggested that industrialised nations could be compelled to pay up to 1 percent of their GDP into such a fund.

#### INTERNATIONAL AND LOCAL FINANCING MECHANISMS

Dr. Norbert Wohlgemuth (right) then explained to the legislators how their countries could draw on a range of financial mechanisms to kick-start the transition to renewables. He explained that investment in additional energy capacity over the next two decades is projected to be \$22 trillion, but there are various barriers that make it difficult for countries to attract global finance for renewables – technical, market, institutional/political and social/environmental.



Dr. Wohlgemuth focused his presentation on market barriers, and in particular drew attention to the enormous state subsidies applied to the fossil fuel industries, a large proportion of which are provided by the governments of developing countries. These, he said, would have to be challenged.

Dr. Wohlgemuth described a range of financial mechanisms designed to address the renewable energy funding gap, including schemes targeting research and development, direct investment, production-targeted schemes, and consumption-targeted schemes. He outlined the vast and growing range of global investment schemes targeting the sector, including initiatives of more than 20 UN agencies, the World Bank group, the Global Environment Facility, regional development banks, EU schemes and so on. Whilst the Clean Development Mechanism (CDM) launched by the UN Framework Convention on Climate Change (UNFCCC) also theoretically provides funding for renewables in developing countries, he noted that high transaction costs and tough eligibility criteria have meant that ACP countries have received very little assistance through this mechanism, with the largest transfers going to China.

Dr. Wohlgemuth noted the success of schemes that combine public and private finance, and recommended that legislators embrace such partnerships in order to expedite growth. He highlighted the need for urgent reform of subsidies, paying particular attention to the unintended market distortions introduced by some of the subsidies currently targeting renewables – particularly the EU biofuels targets. The legislators agreed that these have already had a significant negative impact on food prices, and could therefore be said to be 'biofuelling poverty'.

The decision to directly address the question of financing in the ACP project responds directly to the request of the parliamentarians who have participated thus far. The concern has often been raised that, whilst there is no shortage of good ideas presented at the hearings, the question of how cash-strapped developing country governments should fund the implementation of such policies has not been sufficiently emphasised.

#### CREATING STRONG MARKETS FOR RENEWABLE ENERGY

Stefan Schurig of the World Future Council (right), speaking about Feed-In Tariffs (FITs), also addressed the question of financing. He suggested that FITs in developing countries could be partly funded from the CDM. Feed-In Tariffs oblige utility companies to purchase electricity generated from renewable sources at a premium rate, which is guaranteed over a certain number of years. By guaranteeing renewable energy producers access to the grid and setting a favourable price per unit of power, FITs ensure that renewable energy becomes a stable, sound and long-term investment. Mr. Schurig demonstrated the efficacy of the Feed-In Tariff as compared to alternative measures by means of a graph comparing the outcomes of the German FIT with the UK's alternative 'Renewables Obligation' (RO), which has been significantly less successful in stimulating the growth of a green energy sector.



Mr. Schurig also suggested that the small island states represented at the hearing form an Alliance of Islands for Renewable Energy – or 'AIRE' – which would collectively call on the Annex 1 signatories to the Kyoto protocol (the industrialised countries) to provide a compensation scheme for climate change damages. This fund would be used to invest in renewable energy generation capacity.

#### RENEWABLE ENERGY AND ENERGY EFFICIENCY IN AFRICA AND THE PACIFIC

Rupeni Mario (below) of our partner organisation the Pacific Islands Applied Geoscience Commission (SOPAC) began by emphasising the acute vulnerability of many of the Pacific islands to climate change, with many islands only a few metres above sea-level.



Mr. Mario provided an outline of the challenges facing the region and the range of innovative small-scale projects being implemented to meet them. Tuvalu, for example, which is currently highly dependent on costly and frequent import of fossil fuels, has begun to install grid-connected photovoltaic (PV) systems. Whilst the current high price of PV means that it is not usually an economically viable addition to national grid systems in much of the world, the specific conditions pertaining to islands such as Tuvalu make it more cost-effective; this will increasingly be the case if the price of oil rises rapidly once more as has been predicted by many market analysts. Mr. Mario also outlined a range of policy measures for the promotion of energy efficiency, such as appliance labelling, reduced import duty on energy-efficiency equipment, and reduced price compact florescent lightbulbs (CFLs) for the poor.

## RENEWABLE ENERGY AND ENERGY EFFICIENCY IN THE CARIBBEAN



Dr Indra Haraksingh (left), of the University of the West Indies, started by noting that the Caribbean region depends on imported fossil fuels for 93% of its energy requirements, and that, despite huge resources of geothermal, solar, wind and marine energy, only 3% of power came from renewable sources! Sustained dependency on imports has resulted partly from the preferential access to Venezuelan oil afforded to many countries in the region under the Petrocaribe agreement.

Whilst acknowledging that take-up of renewables has so far been slow, Dr. Haraksingh also painted a promising picture of the speed of change currently engulfing the sector: Jamaica, for example, is “moving very quickly” towards exploitation of its wind power potential; Grenada is embracing grid-connected photovoltaics; Barbados has rolled out huge solar water-heating programmes; and St. Lucia is actively exploring its vast geothermal resources. Some of this development has taken place under the auspices of the Caribbean Renewable Energy Development Programme (CREDP), which is a collaboration between CARICOM, the United Nations Development Programme (UNDP) and the German overseas assistance programme GtZ. The project is investing €7m over a nine-year period, and expires in 2012.

Contributing to the debate regarding the need to develop new tactics to attract investment, Dr. Haraksingh introduced innovative schemes such as the Caribbean Wind Energy Initiative, which bundles initiatives from the region into projects large enough to attract overseas investment. She also noted the massive potential for cogeneration within Caribbean industry, focussing on combined heat and power (CHP) in the sugar cane industry in particular.

Aware of the need for rapid capacity-building and cultivation of local expertise to cope with the envisaged expansion of the sector, Dr. Haraksingh is developing an MSc course in renewable energy at the University of the West Indies. The course will commence late in 2009, and will be followed next year by the launch of a bachelor’s degree.

The speaker closed by highlighting the important role of legislators in expediting the shift to renewables. In particular she pointed out that legislators from Trinidad and Tobago – the biggest carbon emitter as well as one of the richest Caribbean nations – had a responsibility to lead the way. Without the appropriate legislative framework, she suggested, no amount of private investment or enthusiasm can make the industry take off.



## PARLIAMENTARY DIALOGUE



Introducing the final discussion, Dr. Ampofo (left) used a four-point schema for MPs to consider, suggesting that legislators must:

1. ensure energy access for the poor
2. bring about security of supply
3. ensure 'environmental compatibility' [i.e. reduce emissions]
4. strive for economic efficiency

He entreated those present to strive towards policies that demonstrate firm political support for the development of renewables, creating consistent policies at all administrative levels and offering financial incentives to support a rapid transition toward carbon-neutral economies.

As in the case of the previous two hearings, the presentations provoked lively debates and sometimes also controversy. A topic of considerable interest at the hearing was the issue of whether the Small Island Developing States (SIDS) should launch claims against the large carbon emitters for the current and future damage caused by climate change. Whilst this veers away from the central theme of the process, MPs nevertheless seized the opportunity to discuss this emotive topic. It was suggested by some participants that such compensation could be used to develop renewable alternatives to fossil fuels. Some participants, however, pointed out that the pursuit of compensation and adaptation could serve to distract attention from the more urgent task of mitigation.



*Video producer Mariel Brown interviewing Ambassador Kellman of Barbados.*

## 3. Follow-Up Actions

### CARIBBEAN



Ambassador Denis Kellman MP of Barbados promised a drive to introduce solar energy in his country and spoke of the need to persuade parliamentarians to 'buy in' to the renewables vision.



Dharamkumar Seeraj MP of Guyana spoke of agreements recently struck between the sugar industry in his country and the state-owned energy utility. Whilst wishing to

support the development of FITs, he was unsure whether Guyana was ready to introduce such legislation, since the current legislative framework may not even permit private power production. He promised to investigate the situation, with the assistance of the e-Parliament.



Phenton O. Neymour MP, the State Minister for the Environment of the Bahamas, acknowledged the need to involve NGOs in policy-making in the energy sector, and promised both further tax incentives for renewables and the development of a FIT to promote PV, wind and biodiesel from waste oil.



Noel Arscott MP of Jamaica invited the e-Parliament to come to address the Jamaican parliament directly, saying that this would be one of the fastest ways to shape legislators' opinions and noting equally that more emphasis should be placed on climate change and its solutions within the educational system. He was impressed by the 'tremendous possibilities' presented by CSP, as well as committing himself to supporting the continued expansion of wind power in Jamaica. Finally, he spoke of the high unemployment rate in his country and of his hopes that renewable energy might play an important role in job creation.



Penelope Beckles MP of Trinidad and Tobago requested that the e-Parliament collect data on legislation to support renewables worldwide in order to compile a future reference document for MPs.

#### AFRICA



Quenum Epiphane MP of Benin spoke of his country's chronic energy shortage, with all-day power cuts up to three days a week in many grid-connected regions. He said that an immediate priority for the government was to roll out solar-PV programmes on a massive scale, starting with a project to implement this technology in 159 villages.



Florence Ibi Ekwau MP of Uganda also favoured solar, but pointed out that the price of this technology currently puts it out of the reach of most Ugandans. She urged further research to bring down the cost of PV panels.



George Nangale MP of the East African Legislative Assembly (EALA) noted that financing remained the biggest impediment to further take-up of renewables in his region. He said that he would urge all those drafting the East African Renewable Energy Plan (EARAP), which is currently passing through the EALA, to consider the financing options proposed at the Tobago hearing.

#### PACIFIC



Niko Lee Hang MP of Samoa spoke of the need for small islands to reduce dependence upon expensive fossil fuel imports. To do this he suggested developing local alternatives, such as the production of biofuels from coconut oil, and he also called for

more investment into PV.



Kouraiti Beniato MP of Kiribati said that the most appropriate technology for his country was clearly solar-PV, but that full transition could not be achieved without a significant injection of funding from overseas.



Gordon Darcy Lilo of the Solomon Islands and Fitzgerald Jeffrey of Trinidad and Tobago also attended the hearing.

#### 4. About the e-Parliament and the World Future Council

The e-Parliament is a new global forum in which democratic national legislators work together to exchange and implement good policy ideas. It is led by an International Council of members of Parliament and Congress. We are combining the new communications technologies with face-to-face meetings to apply at the global level some of the methods of a national Parliament. For more information on the e-Parliament please visit our website at [www.e-parl.net](http://www.e-parl.net).

The World Future Council (WFC) aims for a global membership of wise thinkers, practical pioneers and young leaders. It will identify the "implementation gaps" between current practices and necessary measures to assure a sustainable and equitable world. As an institution representing humanity's common values, the WFC will provide an ongoing forum for debate and action. For further information please see our website at [www.worldfuturecouncil.org/](http://www.worldfuturecouncil.org/).

#### 5. Acknowledgement



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