



## **Climate Change and Energy Access for All**

Final International Parliamentary Hearing for Legislators from the ACP countries

12<sup>th</sup>-14<sup>th</sup> November 2010 in Arusha, Tanzania

### **Summary report**

The Arusha hearing was the last in a series of nine international hearings for African, Caribbean and Pacific island (ACP) legislators funded by the European Commission and the Swedish Development Agency (SIDA) on the subject of 'Energy Access for the Poor'. Previous hearings in the series have taken place in Kenya, Ghana, Tobago, Guyana, Mozambique, Vanuatu, Cameroon and Fiji.



Legislators, experts and members of the Climate Parliament team gathered for the final ACP hearing in Tanzania

The 17 legislators who attended the event in Arusha had all taken part in one of the previous hearings and were therefore able to report back on their experiences of promoting renewables in their national parliaments. MPs gave an overview of the current state of play on renewable energy (RE) in their respective countries, and reported on actions they had taken since the beginning of their involvement in the Climate Parliament's process. Some of these actions can be viewed [here](#).

These achievements served as a basis for discussion on how MPs and national parliaments can push for more public investment in clean technologies and what the spending priorities should be. Participants heard about feed-in-tariff schemes, government loan guarantees and how renewable energy obligations on utilities can be combined with public spending to increase the share of RE in each country.

The idea of allocating at least 1% of national budgets to investments in renewable energy was widely supported by the MPs present, and the majority have signed a draft statement calling on the world's governments to commit to this target.

This report is divided into four sections:

1. Participants
2. Action Ideas Discussed
3. Follow-up Actions
4. About the Climate Parliament

## **1. PARTICIPANTS**

### **a) Members of Parliament**

Dora Byamukama, **Uganda**, Member of the East African Legislative Assembly, Member of Climate Parliament International Council

Angela Njodo Cifire, **Zambia**, Member of Parliament, Deputy Minister in the Ministry of Information and Broadcasting Services

Picewell Forbes, **the Bahamas**, Member of Parliament

John Kigyagi, **Uganda**, Member of Parliament, Deputy Chairperson of Natural Resources Committee, Member of National Economy Committee

David Koech, **Kenya**, Member of Parliament

Georgette Koko, **Gabon**, Senator, Former vice Prime Minister for the Environment and Renewable Energy

Bernadette Lahai, **Sierra Leone**, Member of Parliament, Chair of African Parliamentary Network on Climate Change

Jacqueline Muhongayire, **Rwanda**, Member of the East African Legislative Assembly

George Nangale, **Tanzania**, Member of East African Legislative Assembly Chairman of Environment Committee

Jackson Ngiraingas, **Palau**, Member of Parliament, Minister of Public Infrastructure, Industry and Commerce

Eusèbe Ossagou, **Gabon**, Senator, Secretary-General of REPAR

Michael Peart, **Jamaica**, Member of Parliament, Former Speaker of the House of Representatives

Généviève Péa-Péa, **Democratic Republic of the Congo**, Member of Parliament

Danielle Perrier, **Mauritius**, Former Junior Minister for the Environment

Nasrin Pillane, **Malawi**, Member of Parliament, Member of Agriculture and Natural Resources Committee and Industry, Commerce and Tourism Committee.

Abdou Sané, **Senegal**, Member of Parliament, Chair of the parliamentary group on climate change.

Norbert Tiendrebeogo, **Burkina Faso**, Member of Parliament

#### **b) Experts**

Jonathan Curren, South Africa, Managing Director for South Africa, Camco

Tri Mumpuni, Indonesia, Executive Director, People Centred Economic and Business Institute (IBEKA)

Graham Watson, United Kingdom, Member of the European Parliament and Chairmain, Climate Parliament Council

#### **c) Observers**

Enrica Arcadinape, OIKOS, Best Ray project officer

Savinus Kessy, Tanzania, Programme Analyst, UNDP

Nehemiah Murusuri, Tanzania, National Coordinator, GEF Small Grants Program

Nicolas Tavitian, Belgium, Consultant, Environmental Policy and Governance Coordinator

#### **d) Climate Parliament Staff**

James Corre, United Kingdom, Programme Officer

Nick Dunlop, United Kingdom, Secretary-General

Susana Guerreiro, Portugal, Programme Officer

## 2. ACTION IDEAS DISCUSSED

The meeting opened on Friday afternoon with a visit to **Oldonyosambu village** near Arusha, where the Italian NGO and renewable energy consultancy Oikos has installed solar panels, biogas digesters and improved cooking stoves. The participants visited a primary and a secondary school where Oikos has installed 135W **solar systems** that provide lighting and electricity to run a computer room where teachers receive IT training and students acquire skills that enable them to obtain qualifications in computing.



MPs in computer room powered by solar panels



MPs enquiring about biogas plant

Legislators also saw five **energy efficient cooking stoves** in action, and learned how these reduce the amount of smoke indoors and the amount of firewood burnt. Oikos staff also showed the participants a **biogas digester** installed in one of the households. Local people are trained to install and maintain these biogas plants, which use cow dung to produce gas for cooking. As the project officers explained, the manure of four cows can

produce up to four hours of cooking gas per day. MPs saw



how this simple technology helps the local villagers, especially the women who no longer have to walk long distances to fetch firewood and thus avoid the hazards of indoor smoke. MPs also visited a solar-electrified rural health centre and a small rural renewable energy education centre that serves to promote the project. The project was financed by the European Commission, and Oikos is now exploring how it can become economically sustainable once the organisation leaves the village.

The proceedings started on Saturday 13<sup>th</sup> November with each of the MPs introducing themselves and the progress their countries had made as a result of their involvement in e-Parliament/Climate Parliament hearings. A detailed description of these actions can be found in section 3 of this report under “Follow-up Actions”.

**Nicholas Dunlop**, secretary-general of the Climate Parliament, provided a brief overview of the main climate change impacts worldwide, particularly in the ACP regions, emphasizing the need for governments to act quickly and to make a switch to clean energy sources. The increase in price of fossil fuels is yet another reason to make this transition fast, as most ACP countries are greatly dependent on expensive fossil fuel imports – an irony considering most ACP countries are endowed

with enormous renewable energy potential, particularly solar radiation. With the right policies in place and the necessary investments each region could be energetically self-sufficient.

There are a number of measures governments and national parliaments can adopt to make this possible. It has been widely demonstrated that setting up feed-in tariffs (FITs) is the best way to increase private investment in renewable energy technologies (RETs). However, governments need to accept that some public money is needed to make the transition. A small percentage of the world's national budgets should be allocated to RE generating capacity and grid infrastructure (regional supergrids and village level mini-grids), as well as to research and development to create more efficient technologies that can compete with the prices of traditional energy sources, particularly coal. Public money should also be spent on loan guarantees to help reduce the risk for private investors, and on measures to control electricity bills and avoid the sharp increase in prices that the switch to renewables would otherwise initially trigger.



**Sanjay Kumar**, Climate Parliament's India Director, recommended priorities for public investment in the hypothetical case that governments allocate 1% or more of their national budgets to renewables. To give MPs an overview of their own national context, Mr. Kumar started by presenting figures (on total budget expenditures, on the corresponding 1% of the total expenditure, on total electricity net generation, on electricity generation from RE, etc.) for each of the countries represented at the hearing.

Using India's national budget – the 'Union Budget' - as an example, Mr. Kumar demonstrated how an investment of around 1% could create sustainable infrastructure for RE generation and kick-start a wave of private investments. Mr. Kumar emphasized that 1% of the Union budget (US\$2.46 million) expenditure is less than what the government currently spends as subsidy either on supplying cheaper kerosene to the poor or on supplying fertilisers to farmers. If allocated to renewable energy, 1% of the total budget could be spent in the following manner:

- **30%** of the 1% of Union Budget expenditure (approximately US\$0.79 billion) could be spent on a **FIT**. This could cover the increase in the total cost of electricity bills for all consumers until the share of RE in the energy mix of the country increases by 3%, at which point the industry will have achieved greater economies of scale and thus be far better prepared to target grid parity (the point at which renewable energy is price-competitive with fossil fuels without the need for public subsidies).
- **40%** of the 1% of the budget, if spent on **direct subsidies** at a rate of 30% of the total cost of RE plants, could lead to the installation around 2500MW of new capacity (from a mix of renewables including biomass). To be effective, such subsidies need to be combined with a **Renewable Purchase Obligation (RPO)** on power companies to ensure that there is a buyer for all the RE being generated. In addition, there should be quality standards to ensure the generating capacity is being fully utilized.
- **10%** of the 1% of Union Budget, if spent on a **Risk Guarantee Fund (RGF)**, could create market confidence and decrease the cost of capital for investors. Through the RGF, the

government could downgrade the risk of payment default by the distribution company to the RE generation company selling power to the former at a higher price, or due to technical failures. By reducing the cost of capital for investors the RFG is implicitly providing a subsidy for private investment.

- A further **10%** could be spent on village level mini-grids, which would provide power to around 5500 villages every year. Thus, as Mr. Kumar pointed out, in 20 years all 110,000 villages in India could have their own RE based mini-grids. These mini-grids could later be connected to the national grid.
- The remaining **10%** of the 1% of the total budget expenditure, if spent on **R&D** and **Human Resource Development (HRD)**, could promote rapid evolution of technologies that are cheaper and more efficient.

**Tri Mumpuni**, Executive Director of the People-Centred Economic and Business Institute (IBEKA), gave an enthusiastic presentation on how small villages can harness their own energy resources and become producers of clean energy through mini-grid systems. At present in Indonesia, over 110 million people from a total population of 240 million have no electricity access, and 32,000 villages remain unelectrified. Tri Mumpuni provided examples from very remote villages on the West Coast of Indonesia, where access is difficult and electrification is very expensive.



Other barriers to community-based renewable energy development are the villagers' limited knowledge and ability, and the high investment cost as there are no government or bank support schemes for community-based micro- or mini-hydro development. Apart from reducing greenhouse gas emissions and decreasing fossil fuel dependency, the projects implemented by IBEKA aim at utilising indigenous RE resources (mostly hydro) and at local capacity-building, thus creating a sense of community ownership and reinforcing local economies.

Using as an example a project on the island of Sumatra, Mumpuni explained how the community was involved in the project from its initial stages. The villagers established their own community utility and created their own set of rules that guarantee ownership of the utility. These rules are legally binding and cannot be overruled by local governments. Due to technical difficulties in tapping into the 3.5 MW of hydro potential, there is currently only 40KW of installed capacity. Nevertheless, the community utility already sells excess power to nearby villages.

Mumpuni also described an interesting public-private partnership model for rural electrification. The United Nations Economic Commission for Asia and the Pacific (UNESCAP) provided the equity funding (50%) for the mini hydro project. The remaining 50% of the funding came from IBEKA, which particularly targeted local capacity building. This model has made joint ventures between community cooperatives and private investors feasible. Through change in Indonesian regulations that Mumpuni helped enact, the villagers can now sell their excess electricity to the state-owned utility, which under the current legislation is forced to interconnect and buy all power generated by small- and medium- size producers. 50% of the revenue generated goes to the community cooperative, and the remaining half to the private enterprise. The community also has the power to

decide electrification priorities within the village, usually opting to connect schools and health centres first.

As Mumpuni highlighted, these models can also be applied in ACP countries. The key for success is to build a community ownership model, through local capacity-building and the establishment of community cooperatives. This ensures the long-term sustainability of the project even after the NGOs and donor agencies leave. However, governments have an important role to play by creating legislation and institutions that support such a rural electrification model, removing regulatory barriers to allow mini-grids to work effectively, and establishing transparent tariffs.



**Jonathan Curren**, Managing Director of Camco South Africa, opened the session on Sunday with an overview of how feed-in-tariffs and other mechanisms can stimulate a transition to clean energy. Mr. Curren started by providing an overview of RE investments in recent years. Solar PV, for instance, has had a massive increase in investment in the past 10 years, reaching 24 GW of installed capacity worldwide in 2009, compared to only 1GW existing in 1999.

There are plenty of good reasons for the private sector and governments to invest in renewables. National governments can benefit from the utilization of domestic resources, thus reducing expenditure on fuel imports and improving energy security. Moreover, governments can increase access to energy – especially at the rural level – bringing socio-economic development (creating green jobs, promoting development of small and medium enterprise and attracting investment). The private sector can benefit from new market opportunities and carbon credit investments.

Mr. Curren highlighted some of the mechanisms available for investments in RETs, such as grants, tenders, market mechanisms like cap & trade systems and voluntary tradable certificates, and Feed-in-Tariffs. FIT schemes have been successfully implemented in over 75 countries and are a simple and effective mechanism that can be set up at a low cost. A FIT reduces financial risk for investments in RETs, thus increasing private sector investment and driving down the cost of clean technologies. He pointed out some principles that governments should consider when setting up a FIT scheme:

- A FIT should be established for new projects only – it should not be applicable to existing power plants;
- Tariffs should be differentiated according to technology and size of the projects;
- The initial tariff should be high and decrease progressively with time.

In the specific case of developing countries, Mr. Curren emphasized that the FIT needs to be part of a wider energy strategy and have clearly defined policy and objectives. Funding is a key aspect to consider when setting up the scheme. Although in Europe the consumers bear the difference in price, in developing countries this might not be feasible, so other funding options need to be considered such as taxes, revenues from green electricity sales, carbon finance and international donor funds. Furthermore, governments need to establish guidelines, legislation, technical codes and power purchase agreements (PPAs), and guarantee that the FIT is monitored on an ongoing basis and the tariff adjusted as required.

However, Mr. Curren stressed that the FIT is just another tool in the toolbox and that there is “no one size fits all”. South Africa, for instance, got the FIT wrong, especially because there was no policy framework in place. The utility – ESKOM – published the FIT but didn’t have the capacity to implement it.

### **3. FOLLOW-UP ACTIONS**

As most of the MPs present had all been present in previous hearings they were able to report back following the commitments they had made previously, and to discuss the next steps they intend to take in their parliaments.

#### **Angela Njodo Cifire MP, Zambia,**



Angela Cifire, who attended the Mozambique hearing in September 2009 for Southern African legislators, said that Zambia is looking into alternatives to large hydro, the traditional energy source in the country. Efforts are being made to seek funding for mini-hydro plants and other RE sources – especially solar, wind and some biomass. Angela stated that she was confident the Zambian government could be convinced of the need to allocate 1% of the budget to renewables.

#### **Picewell Forbes MP, The Bahamas**



Picewell Forbes has attended three Climate Parliament hearings, and is campaigning hard for his government to devote more attention and resources to renewable energy. He believes the Bahamas could easily meet its energy needs from wind, solar and biomass. Picewell has made a number of interventions in Parliament on the subject, and recently had a two-hour meeting with the Minister of Energy. He reports that his work has contributed towards the government recently issuing a new energy action plan. An Energy Bill is to be introduced in November 2010, and Picewell is pressing for the elimination of import tariffs and taxes on renewable energy equipment. He will be advancing the goal of 1% of the budget to be devoted to renewables. A former radio presenter, Picewell is also making good use of the airwaves to promote renewable energy.

#### **John Kigyagi MP, Uganda**



John Kigyagi attended e-Parliament first hearing in East Africa on renewable energy, held in Kenya's Amboseli National Park in November 2006. Upon his return home, he initiated a chain of events which has led to significantly increased investment in renewable energy in Uganda.

First we organized a meeting of the Chairs and Vice-Chairs of all the relevant sectoral committees in the Parliament, followed by a meeting with the Permanent Secretaries of all the relevant Ministries. In these meetings it was agreed to try to create a 9<sup>th</sup> Millennium Development Goal for Uganda focusing on energy, adding to the eight that were agreed at the United Nations. It was also agreed that an Energy Fund should be created to increase investment in energy access for the poor, with a strong emphasis on renewable energy.

He then convened a meeting of the Ministers in charge of the various Ministries, who gave their support to these ideas, followed by another meeting with Ministers, the Prime Minister and the President. The President enthusiastically supported the initiative. A Resolution was then proposed in Parliament by the Minister of Energy and Mines, formally adopting the 9th Millennium Development Goal on Energy. The Resolution was supported by MPs from both the governing party and the Opposition. The Energy Fund was created as a temporary measure, given that due to lack of rainfall at that time Uganda was facing serious challenges with electricity supply.

In 2008 John Kigyagi attended the East African regional hearing in Kenya's Samburu National Park, together with Florence Ibi Ekwau MP from the national Parliament, and Dora Byamukama and Mike Sebalu, Ugandan members of the East African Legislative Assembly. After the hearing, the four of them launched a successful initiative for the Energy Fund to be made permanent. The Energy Fund is required to spend at least 70% of its money on renewable energy. The funds come from Ugandan tax revenue, not from donor agencies.

In 2008, the first year, the Fund received approximately US\$70 million. In 2009-2010, it received another \$70 million. In 2010-2011, it has received \$85 million. The expenditure is devoted mostly to hydroelectric power, which is Uganda's main renewable resource, including both larger projects and small-scale hydroelectric mini grids. Some resources are devoted to solar powered mini grids at village level, and some to electricity generation from biomass such as sugarcane waste. Geothermal power is now receiving increasing attention.

The Climate Parliament has also assisted John Kigyagi and his colleagues with two pieces of legislation. One was initiated by John to control the use of plastic bags in Uganda, and is expected to become law by the end of the current Parliamentary session. While the law is proceeding through the legislative process, the Government has taken interim action to ban most polythene bags. The second law concerned the management of revenues from the new oil discoveries in Uganda. In both cases, the Climate Parliament was able to put the Ugandan MPs in touch with colleagues and experts in other countries who had experience of similar laws. This even led to a delegation of Ugandan MPs visiting Sao Tome and Principe to learn about their innovative law for handling oil revenues.

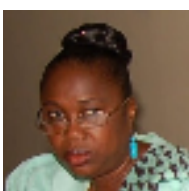
#### **David Koech MP, Kenya**



David Koech who now chairs a Parliamentary Network on Renewable Energy and Climate Change in the Kenyan Parliament, has been actively involved in promoting RE and rural electrification in his country. After the hearing in Arusha, David committed to arrange meetings with members of the Energy Committee, and the Minister of Energy to advance the goal of 1% of the budget for renewable energy.

Mr. Koech said he would also push government to subsidise compact fluorescent lightblubs (CFLs) to reduce electricity consumption.

#### **Bernadette Lahai, Sierra Leone**



Bernadette Lahai had attended our West Africa hearing in Akosombo, Ghana in September 2008. Since then she has been one of the most active MPs in our network. Partly thanks to her, the new National Energy Policy in Sierra Leone includes a high component of RE. After the meeting in Arusha, she promised to

arrange a meeting with the Minister of Energy, before putting a number of Parliamentary Questions to the Government on renewable energy.

Bernadette believes that 1% of Sierra Leone's total expenditure does not represent a significant amount and she fears the country would still have to rely on international donors, so she will push for a higher percentage to be allocated to renewable energies. Mrs. Lahai was one of the MPs that strongly supported the issuing of a communiqué to help disseminate this idea. Bernadette has also done a series of media interviews to build public interest in renewable energy.

#### **George Nangale, Member of the East African Legislative Assembly, Tanzania**



George Nangale believes e-Parliament/Climate Parliament hearings have enhanced EALA members' knowledge on climate change issues, providing a solid basis for parliamentary debates, and helping to introduce motions and resolutions in parliament.

Following the Arusha hearing, the MPs will be putting questions to the East African Governments regarding their current expenditure on renewable energy and their investment in village mini grids for rural electrification. They will also be examining the new East African Energy Master Plan to see how its provisions on renewable energy could be strengthened. They are exploring the possibility of having the Community produce a detailed map of renewable energy resources throughout the five member states.

#### **Minister Jackson Ngiraingas, Palau**



As Minister responsible for the Energy portfolio, Jackson plans to ensure that Palau meets the 1% budget target for renewables. Moreover, he will work on having that as a permanent allocation in future budgets. As the only representative from the Pacific in this meeting, he will be presenting the joint statement from Arusha to an upcoming meeting of Pacific Island Energy Ministers,

to encourage them to sign it.

#### **Michael Peart MP, Jamaica**



Michael Peart says a lot has changed in Jamaica since he attended the ACP hearing in Guyana in March 2009. He and other MPs who participated in our hearings in Tobago (in November 2008) and Guyana have been actively contributing to preparations for a new renewable energy feed-in tariff law for Jamaica.

The government is also planning a 20MW wind farm and to upgrade existing hydro plants to make them more efficient. Following our Vanuatu hearing in November 2009 he helped to conduct a review of Jamaican renewable energy policy. Michael is now planning to create a cross-party group on renewable energy in the Jamaican Parliament, which among other things will press for 1% of the budget to be devoted to renewable energy.

### **Généviève Péa-Péa MP, Democratic Republic of the Congo**



On her return from our Cameroon hearing, Généviève Péa-Péa MP produced a paper on renewable energy. On the grounds that African women are among those most threatened by climate change, she has convened five women's associations in the country to work together on promoting renewable energy.

### **Danielle Perrier, Mauritius**



After our November 2009 hearing in Vanuatu, Danielle Perrier returned home to form a group of distinguished Members of Parliament, including a former Minister of Public Utilities, to press the Government to give greater priority and resources to the environment and renewable energy. Their theme is "Maurice Isle Durable" (Mauritius the Sustainable Island). The group held a press conference, and has given a number of presentations. Danielle reports that the renewable energy feed-in tariff in Mauritius, which had been stalled, is now moving forward again. The Government is approaching energy issues with more urgency, with a new wind farm being developed, new hydroelectric projects, thousands of homes being equipped with solar water heaters, and streetlights receiving new energy-efficient bulbs.

### **Nasrin Pillane MP, Malawi**



After our Mozambique hearing, which included a session on energy and gender, Nasrin Pillane has started to introduce energy efficient cookstoves for women in her constituency. She is also working to have climate change formally included in the mandate of the Agriculture Committee, of which she is a member. She is calling for a new or amended Energy Act which will be more supportive of wind, solar and mini-hydro power.

Nasrin believes the 1% target is a good idea, but admits some changes need to be made in the energy sector in Malawi before promoting this target in Parliament. The priority is to open the electricity market, since the current Energy Act only allows for one power company – the South African utility ESKOM – to produce electricity.

### **Abdou Sané MP, Senegal**



This was the first Climate Parliament hearing Abdou Sané had attended. The President of the National Assembly supported and followed Abdou's participation in this hearing and they plan to organise a special session on renewable energy upon Abdou's return.

## **Norbert Tiendrebeogo MP, Burkina Faso**



After attending the e-Parliament hearing in Asosombo, Mr. Tiendrebeogo promoted the creation of a parliamentary network on Climate Change and Environment. He says the network is succeeding in raising the government's attention to RE, namely solar.

After the Arusha hearing, Norbert Tiendrebeogo, is planning to propose an increased national budget for renewable energy. He is also proposing that the Ministry of Environment should become the Ministry of Environment and Climate Change.



**Dora Byamukama from Uganda and Jacqueline Muhongayire from Rwanda, members of the East African Legislative Assembly and Senators Georgette Koko and Eusèbe Ossagou from Gabon also attended this hearing.**

## **4.About the Climate Parliament**

The Climate Parliament was set up in 2009. Prior to that, our parent organization, the e-Parliament, conducted a poll in which more than 700 legislators from over 70 countries participated, to determine global priorities on energy issues. The top three choices were renewable energy, energy efficiency and energy access for the poor.

Since 2007, the e-Parliament has conducted 20 international parliamentary committee hearings to look at policy options for promoting these priorities. Each hearing brings together around 20 members of Parliament and Congress to spend two days questioning leading experts from around the world.

The Climate Parliament has inherited the work of the e-Parliament on climate and energy. The [Clean Power for All](#) strategy has emerged from the e-Parliament hearings.

## **How we work**

To build regional action networks and assist the legislators in taking action, the Climate Parliament:

- Develops Parliamentary Toolkits giving legislators all the information they need to advance a policy idea within their own political process.
- Organises international Parliamentary committee hearings, and field trips for legislators to see new policies and technologies in action.

- Reaches out through the Internet to national and state legislators worldwide. Key members of our network send the Parliamentary Toolkits to their colleagues by e-mail, using our unique database which already contains the e-mail addresses of more than 20,000 national legislators. Actions taken are reported through our electronic newsletters.
- Builds national and regional committees of knowledgeable and committed Members of Parliament and Congress to plan strategy in their own parts of the world, and to take the lead in their own Parliaments.



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