

Asia's Future in a Hotter World

International Parliamentary Hearing
on Climate, Energy and Forests in Asia
March 1-2, 2008, Taipei, Taiwan

Summary report

A group of Asian legislators, gathering in Taipei in early March, agreed that **urgent action is needed in the fields of energy and forestry to prevent climate change.**

The 15 legislators – from Japan, the Philippines, India, Indonesia, Hong Kong, Australia as well as Taiwan – heard how only a small increase in global temperature would lead to a rise in sea-levels which in turn could result in massive flooding, movement of peoples, famine and disease.



Mopeds constitute one of the main environmental problems in Taiwan. These were photographed just round the corner from the conference venue.

The hearing, however, was focused on finding solutions to avert such a crisis: through rapid transition to renewable energy and proper protection of the world's rainforests.

Expert presenters showed the legislators how such measures could be introduced right now. Concentrated solar power, the feed-in tariff mechanism and incentives for forest protection were all ways in which legislators could make a difference.

Nicholas Dunlop, secretary-general of the e-Parliament, urged legislators to see the current situation as similar to that of a war. It was important to act fast, he said, to mobilise resources and people to combat the threat.

Throughout the hearing, legislators had good opportunity to talk about their own experience, enriching the discussion with their own ideas and providing solutions in addition to those put forward by the experts.

Tetsundo Iwakuni, for example, talked of his own experience in Japan where he had started a 'tree doctor scheme' to help protect rainforest. Teddy Casino, meanwhile, was able to tell other legislators about his difficulties in instituting the feed-in tariff mechanism in the Philippines.

At the end of the hearing, all legislators agreed that urgent action was needed to avert climate change and returned to their home parliaments resolved to initiate discussion and legislation on the issue.

The e-Parliament looks forward to helping them take this legislation forward.



Participants in the hearing with Taiwanese President of the Legislative Yuan Mr Jin-Pyng Wang. From left: Fitriani Ardiansyah (WWF- Indonesia), Mani Charanemei (India), Belma Cabillao (the Philippines), Lalhming Liana (India), Kay Hull (Australia), Nicholas Dunlop (e-Parliament), Mr Wang, Dr. Gerhard Knies (Germany), JD Sealam (India), Mal Washer (Australia), Jasper Bouverie (e-Parliament), Teddy Casino (Philippines), Tetsundo Iwakuni (Japan)

1. Participants

Members of Parliament

Rep. Belma A. Cabilao, The Philippines: *Chair of the Ecology Committee in the House of Representatives.*

Rep. Teddy Casiño, The Philippines: *Environment spokesperson for the Bayanmuna Party.*

Mani Charenamei MP, India: *Independent member of the Lok Sabha.*

George Kuo-Liang Hsieh MP, Taiwan: *Member of the governing KMT party of the Taiwan Legislature*

Kay Hull MP, Australia: *Chief Whip for the National Party in the House of Representatives.*

Tetsundo Iwakuni MP, Japan: *Director of the Environment Committee in the House of Representatives.*

Lalhming Liana MP, India: *Member of the Rajya Sabha.*

Simon Morin MP, Indonesia: *Vice Chairman of Committee for Inter-Parliamentary Cooperation in the DPR.*

JD Seelam MP, India: *Current First Vice-President of the IPU Peace and International Security Committee, Asia Pacific Group.*

Chiu-Chin Tien MP, Taiwan: *Member of the DPP party in the Legislative Yuan. Involved in democracy and environmental protection movements.*

James To MP, Hong Kong: *member of the Legislative Council for Kowloon West.*

Dr Mal Washer MP, Australia: *Former Chairman of the Standing Committee on Environment and Heritage in the House of Representatives.*

Choy So Yuk MP, Hong Kong: *Member of the Legislative Council's Panel on Environmental Affairs.*



Participants listening to a contribution from Dr. Knies: Tetsundo Iwakuni, Choy So Yuk, JD Seelam, Chiu-Chin Tien, George Hsieh, Dr. Knies and Jasper Bouverie

Expert Presenters

Fitrian Ardiansyah: *Programme Director at World Wildlife Fund Indonesia.*

Nicholas Dunlop: *Secretary-General of the e-Parliament*

Dr. Gerhard Knies: *Coordinator of TREC, the Trans-Mediterranean Renewable Energy Cooperation, a network of around 50 experts in renewable energies and sustainability.*
Stefan Schurig: *Director of the Climate and Energy Programme at the World Future Council.*

Additional Participants

Amy Chen: *Special Associate, International Cooperation, Taiwan Foundation for Democracy*
Yun Chen: *Executive Officer, Dept of European Affairs, Taiwan Ministry of Foreign Affairs*
Lee-Jane Chuang: *Director, Secretariat, Taiwan Legislative Yuan*
Liu His-Shan: *Secretary-General of the Legislative Yuan*
Anne Hung: *Deputy Director-General, Dept of Treaty and Legal Affairs, Taiwan Ministry of Foreign Affairs*
Wen-cheng Lin: *President, Taiwan Foundation for Democracy*
Michael Liu: *Section Chief, Department of European Affairs, Taiwan Ministry of Foreign Affairs*
Wen-cheng Sung: *Deputy Director-General, Dept of European Affairs, Taiwan Ministry of Foreign Affairs*
Bo Teddards: *Taiwanese Foundation for Democracy*
Ching-yu Yao: *Office of Public Relations, the Secretariat, Taiwan Legislative Yuan*

e-Parliament Staff

Jasper Bouverie: *Communications Director of the e-Parliament*
Nicholas Dunlop: *Secretary-General of the e-Parliament*
Jesper Grolin: *Executive Director of the e-Parliament*

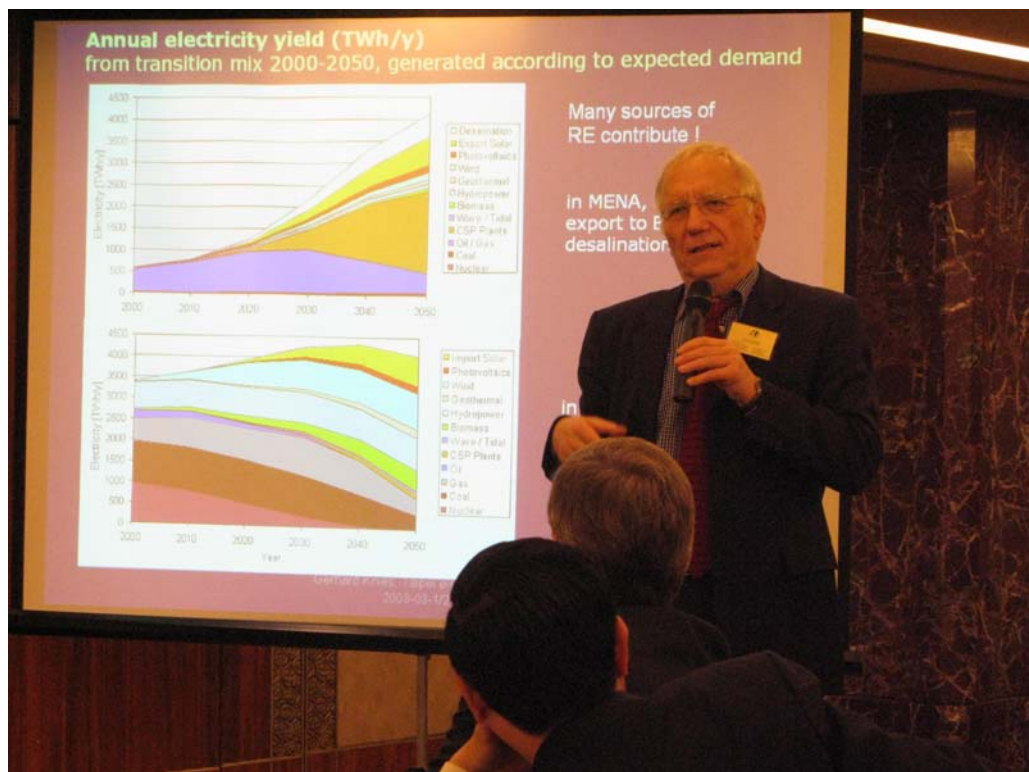


Belma Cabilao from the Philippines chaired the session that featured Taiwanese Vice Minister of Foreign Affairs Ambassador Elizabeth Chu and Taiwanese Minister for Environmental Protection Dr Winston Dang.

2. Action ideas discussed

At the beginning of the hearing the legislators were honoured to meet the Taiwanese Vice Minister of Foreign Affairs, Ambassador Elizabeth Chu, and the Taiwanese Minister for Environmental Protection, Dr. Winston Dang.

In the following sessions experts gave detailed presentations highlighting technologies and ideas that could help the world combat climate change. The experts paid particular attention to policies that legislators could promote in their own parliaments, and these ideas and solutions were actively debated by the legislators present. Here are some of the ideas and policies that were discussed.



Dr. Gerhard Knies making the case for solving the world's energy problems by using concentrated solar power (CSP).

The potential for solar thermal power plants in deserts

Dr. Gerhard Knies presented the project on Concentrated Solar Power (CSP) of which he is a coordinator.

CSP uses mirrors to concentrate sunlight, heat water or other liquids in order to produce high-temperature steam that can drive turbines and thereby power conventional electricity generators. Among solar technologies, CSP is the cheapest, and also holds the potential of becoming the largest bulk producer of solar electricity. And because CSP uses a thermal phase, the energy generated can be stored as heat – in the form of molten salt – so that generation of energy can take place at night as well as during the day.

Dr. Knies focused on deserts in Australia, India and China as being particularly appropriate for solar thermal energy for East Asia and explained how 90 percent of the region would be within 3000 kilometres of these deserts – the distance at which he considers it viable for energy transmission.

Dr. Knies explained that High Voltage Direct Current (HVDC) transmission lines would have to be built from these desert power stations in order to ensure minimum wastage in the conduct of the electricity from source to user. He explained that using these lines ensured that only 3 percent of power was lost over each 1000 kilometres.

Dr Knies also addressed other possible renewable energy sources for East Asia – in particular photovoltaics and wind energy. He acknowledged that thin film photovoltaics might become more financially viable over the coming years and would be particularly valuable for off-grid locations. He also showed a wind map of the region which revealed that the west coasts of India and Taiwan and Australia were among the few places in Asia well-suited to wind technology. He said CSP currently represented the only existing long-term solution given the energy needs of industry and of a growing population – but that these other technologies should be pursued in order to provide a well-balanced mix.



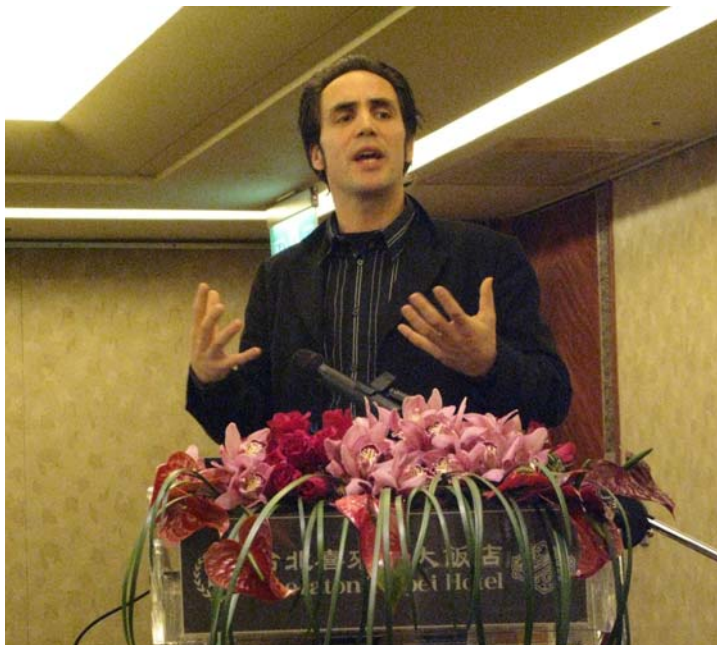
Dr Knies talked of the 10/3 crisis: with the world's population set to increase to 10 billion by 2050, he explained that the increasing scarcity of fossil fuels meant that if we continue, as we do now, to rely heavily on these traditional sources of energy, we will only be able to supply enough energy for about 3 billion people. Therefore, he said, quite apart from the climate change issue, there is a desperate need to convert to renewable sources in order to maintain supply. He said that the criteria for any renewable source should be that:

- it is clean
- it is abundant

- it can be globally distributed
- it has long term source security
- it can be developed quickly
- the technology needs to be proven

He said that currently CSP is the only technology that fits the above criteria – and he also suggested a timescale for a conversion to CSP. He said that he expected the technology to be ready for mass production by 2020 and that the world would need to install 400 MW per day in order to fully convert by 2050.

The result in terms of climate change would be profound. He forecast an 81 percent reduction in CO2 emissions by 2050 – reducing carbon in the atmosphere from 450 parts per million to about 90.



Stefan Schurig of the World Future Council explains the concept of feed-in tariffs.

The need to establish feed-in tariffs for renewable energy

Stefan Schurig of the World Future Council began by acknowledging that it is Europe and the West who are primarily responsible for climate change. He explained that legislators in these countries are now looking to make a bad situation even worse by opting for nuclear power as a 'clean' technology to generate power. Over the next 10 years there is planning for 410 nuclear power plants worldwide and this obviously has implications with regard to safety and the disposal of nuclear waste. Quite apart from that, there is only another 60 years of uranium left from known supplies – so the move to nuclear is also shortsighted.

It is also unnecessary because we have the technology and the legislative tools to ensure a conversion to genuinely clean renewable sources of power which could reduce CO2 emissions by as much as 80 percent by 2050. Politicians could make a difference within this time period, he said, so long as they started acting now and started making bold steps.

Referring back to Dr. Knies' CSP presentation, Schurig posed the question as to why this technology wasn't being introduced now. The reason was that due to failures of the market, the price of fossil fuels do not reflect the cost of pollution and fossil fuels are therefore still economically attractive. There was also the difficulty that deserts do not exist in some of the countries that need electricity and that the solution would require both cooperation across borders and a new legal framework. Furthermore, it would require major investment.

Countries are currently unlikely to invest in renewable technology without being encouraged to do so through one of three support mechanisms: the quota system (whereby the government sets a target for renewables to be achieved by a certain date); the net meter system (whereby consumers are encouraged to produce electricity in their own homes by being paid the same price for the electricity that they export to the national grid as is paid for electricity imported); and the feed-in tariff (whereby companies and individuals are guaranteed a certain price above the standard fossil-fuel rate for electricity generated from renewables).

Of these, the feed-in tariff has proved by far the most successful. In Germany it has led to the rapid development of both the wind and solar (PV) industries. This has arisen from a tariff of 9 euro cents per kilowatt/ hour for wind and 56 cents per kilowatt hour for PV (though prices paid do vary according to location). Producers have clearly benefited from a stable price for renewables. Consumers cover the cost in the form of a surcharge on their electricity bill of between 1 euro and 1 euro 10 cents per month.

For companies and individuals to benefit from the feed-in tariff, Schurig explained that the national grid needs to be in good shape, and that there must be a safe connection to the grid – which would be paid by



the supplier. He said that the feed-in tariff favours the decentralisation of the energy sector and therefore is often opposed by large energy companies. The policy could be combined with the quota system – with the feed-in tariff becoming instrumental in helping a country reach its targets.

Schurig noted that it is important that the feed-in tariff is introduced through stand-alone legislation is not financed by money be taken from existing taxes or budgets. The reason is that tax budgets can easily be squeezed and, in democratic countries, future governments might not have the same enlightened priorities. By introducing dedicated legislation, the mechanism is more difficult to meddle with or repeal. Continuity, he stressed, was crucial for the business community when deciding whether to invest in renewable technologies over the long-term.

The costs of the feed-in tariff in Germany have been relatively small but have led to huge benefits: over 40 million tonnes of CO₂ have been saved and 250,000 jobs created.

The text of the German feed-in tariff law is available in a number of different languages (contact info@e-parl.net) and the law has already inspired similar initiatives in other countries. The World Future Council also provides more detailed information on feed-in legislation (www.worldfuturecouncil.org) and has created an internet portal for climate protection laws (PACT).



Fitrian Ardiansyah of the World Wildlife Fund explaining the need to provide incentives for the protection of forests.

The need for action to protect Asia's forests

Fitrian Ardiansyah of the World Wildlife Fund began by comparing CO₂ emissions from forests with other sources of emissions. Currently, these emissions from land use, land use change and forestry (LULUCF) make up

18 percent of total global emissions – second only to power generation (24 percent of total emissions) and ahead of transport, industry and agriculture (14 percent each).

Of these LULUCF emissions, an extremely high proportion arise in East Asia. CO₂ emissions from Indonesia currently represent 35 percent of the global total, Malaysia 10 percent and Myanmar 6 percent. The only other country with a comparable problem is Brazil whose emissions from LULUCF make up 19 percent of the global total.

Ardiansyah explained the reasons why land in forests was being lost to development. Population growth and poverty mean that those who live in or near forests find it difficult to resist the financial benefits provided by conversion to agricultural uses. In addition, the ownership of land is often in doubt and there are issues surrounding clear governance: frequently it's a case of conflicting policies and inadequate enforcement.

Ardiansyah said that Indonesia was confronted by two sets of developers keen to exploit the forests: furniture manufacturers from China who buy the wood; and food manufacturers from Europe who buy palm oil. Palm oil is currently the cheapest edible oil for European manufacturers. The fact that 70 percent of palm oil is harvested on land that was previously known to be forested is not reflected in its price.

The disappearance of the forest means that the world is less well-equipped to cope with the increase in carbon emissions from industry – because the trees are no longer there to absorb the carbon through photosynthesis. That much may be obvious. Less obvious however is the fact that the actual clearing process results in emissions of CO₂. Peatland, like



permafrost, is a carbon store. When the land is exposed it starts emitting methane which is a greenhouse gas. Furthermore the process involves fires and drainage. 60-80 percent of Indonesia's land and forest fires occur on peatland during the clearing process.

Ardiansyah then moved on to talk about what could be done. There is general international consensus that forest destruction must be halted, and

one of the outcomes of the Bali Climate summit in 2007 was the plan to Reduce Emissions from Deforestation and Forest Degradation (REDD).

However, there are few ideas about how such reductions can be achieved. In setting out to achieve REDD, one of the big problems was the imbalance of funding given to conservation projects when set against the money provided by commercial developers. Australia, for example, has recently donated \$200 million for forest defence – but this has to be weighed up against \$8 billion from China to open palm plantations. In the face of such big money from developers, the big question is how to create incentives to defend the forests.

Ardiansyah suggested that some policies need to be developed and adapted locally to prevent forest fires, for example, and to ensure clear ownership of forest lands. Forest peoples are often the people who are most aware of the ancient nature of forests and their value to future generations so they need the legal support to defend their claims.

These local policies are not sufficient on their own however. Local initiatives must be supported not just at the political level, but also from business and consumers in order to ensure the conservation of forests. The Stern Review estimated that forest preservation is going to require \$5-15 billion a year for the next 20 years and Ardiansyah felt that this was an underestimate. Currently budgets for forest defence are far less than that.

At the end of Ardiansyah's presentation, many of the legislators voiced their concern about the state of the world's forests. Kay Hull, for example, said that it was appalling that so many of the world's trees were being lost to deforestation every day and that responsibility must be shared between the forested countries and the countries importing the wood. Teddy Casiño from the Philippines pointed out that the free market had destroyed the forests and would continue to do so if governments do not intervene.

Tetsundo Iwakuni explained how Buddhist tradition in Japan meant that people had special respect for trees and how they were commonly viewed as being 'housing for birds and animals'. He said that in his time as mayor he had personally initiated an innovative policy whereby money traditionally given to bureaucrats had been reallocated to local people specifically to look after trees. The idea had come to him that trees should have doctors – just like people and animals have doctors. The first three tree doctors were appointed in 1989 and there are now over 1600.



Legislators and experts discussing the day's presentations over dinner. Anticlockwise from right: JD Sealam, Nicholas Dunlop, Tetsundo Iwakuni, Simon Morin, Choy So Yuk, James To, Stephan Schurig, Fitriani Ardiansyah, Mani Charamanei (hidden), Lalhming Liana, Kay Hull, Mal Washer and Jasper Bouverie.

3. Follow-up Actions

All participating legislators were agreed that urgent action was needed to combat climate change as well as protect the forests, and during the afternoon session on the final day, they discussed a range of concrete actions they could each individually pursue in their home parliaments. The e-Parliament secretariat will support these MPs in their efforts to bring about change.



Belma Cabilao – expressed particular interest in defending the rights of indigenous groups in the forests of the Philippines, but was concerned that this needed investment. Currently there is no incentive to protect the rights of indigenous peoples and no value put on the forest. She also felt that the Philippines needed 'clean coal'. There was a need to make 'our coal' a clean source of energy.



Teddy Casiño has been working to include the feed-in tariff in Clean Energy Bill going through the Philippines parliament. The proposal for a feed-in tariff had originally been included in the draft energy legislation, but now seems to have been withdrawn for unknown reasons. Mr. Casiño would pursue the matter and keep everyone informed of his progress.



Mani Charenamei – said that coming from the north-east of India he was aware of the need for conservation measures to preserve existing forests. He felt it was important to use areas that have already been deforested for intensive agriculture in order to feed India's growing population.



George Hsieh – said that a new coal-fired plant was being opened in his constituency and that he was strongly against it. Also said that he was concerned about Taiwan moving towards nuclear power.



Kay Hull was encouraged that Australia did appear to be acting on the right lines. She expressed interest in the feed-in tariff and suggested that the e-Parliament should cooperate with the organisers of the Asia-Pacific Partnership on Climate Change.



Tetsundo Iwakuni – said that he was prepared to support all the recommendations agreed by the other legislators.



Lalhming Liana – said that educating the general public was of great importance and that children must be made more aware that their environment is degrading. This should become a compulsory subject.



J.D. Sealam – Mr. Sealam has already initiated contacts with other Indian MPs on the subject of solar thermal power and said that while there already are solar projects in India, these tend to be on the local and domestic level and there tends to be greater interest in hydropower – particularly for north-eastern area of the country. He said that over 90 potential sites had been identified. He made the point that the Indian bureaucracy system is very strong. It wasn't enough to convince the MPs; one also needed to convince the bureaucrats.



Chiu-Chin Tien – said that immediately after the hearing she would ask the prime minister about the clean energy bill. In her view, there was mainly interest in hydropower in Taiwan, but she was concerned about the new coal fired plant that was about to be opened. She is currently working with an NGO to promote clean energy to legislators.



Dr Mal Washer – said that Australia had stopped cutting down trees partly because of the salinity problems that deforestation had caused. He thought it might be possible to re-grow forests and that research needed to be done into how to ensure biological diversity in reforested areas. He also expressed an interest in battery cars but felt they were inappropriate in Australia because of the large distances involved in travel.



Choy So Yuk – pointed out that Hong Kong has neither a desert nor a forest. She also said that the electricity grid was owned by private companies, so it would be very difficult to introduce a feed-in tariff. However, Choy So is also a member of the National Peoples Congress (NPC) and she would be taking the ideas discussed at the hearing to Beijing. She said that the NPC were increasingly seeing environmental issues as a top priority.



Simon Morin and James To had to leave before the final session had been completed.

4. On the e-Parliament, SwedBio 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.



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/.