

# ENVIRONOMICS

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## Director's Note

The Hub year has received a real kick start with the EERH Annual Workshop held on Tuesday 9 February in the Adelaide Convention Centre. To facilitate attendance for non-Hub people, we again held the workshop as a pre-conference event with the Australian Agricultural and Resource Economics Society.

The workshop provided an opportunity for a section of the Hub community to deliver snap-shots of their research progress to the wider profession including policy advisers. The presentations stimulated excellent discussions that benefited both the presenters and the audience. The PowerPoint slides of the presentations are now available at [http://www.crawford.anu.edu.au/research\\_units/eerh/workshops/workshop\\_0210.php](http://www.crawford.anu.edu.au/research_units/eerh/workshops/workshop_0210.php) within the Hub's web site.

A number of the workshop presentations were backed up by our Hub researchers delivering contributed papers at the main AARES conference. A range of these papers will also be featuring on the Hub website as Research reports.

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## And here we are in Copenhagen .....



*Johanna Cludius and Regina Betz of the Centre for Energy and Environmental Markets, UNSW*

*Photograph by Declan Kuch*

*see details on Outcomes of Copenhagen page 2*

*next issue Hub supported project Prediction Markets at Copenhagen*

As the current round of CERF funding is drawing to a close, DEWHA is in the process of transitioning to the new structure of CERF Hubs. While it is already apparent that the current composition of CERF Hubs will be disbanded, Minister Garrett has written to me indicating that funding will be available for a transition period and that economics will be a key ingredient in the new arrangements. I'll pass on more details as they emerge of the new regime.

Jeff Bennett



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## The Copenhagen Climate Change Conference:

### Outcomes and Analysis

Johanna Cludius & Regina Betz, UNSW

The Copenhagen Climate Conference was going to be the biggest of its kind: It attracted huge public attention, more than 100 heads of state attended the conference and 40,000 people had applied for accreditation. With a capacity of only 15,000, the Bella Center was soon bursting at the seams and the highly restricted access during the last days of the conference raised questions about the transparency of the negotiations during that crucial stage. Many had thought this conference was too big to fail and were hoping that the process that started in Bali in December 2007 would culminate in a new legally binding agreement in Copenhagen.

What we got in the end is the so-called "Copenhagen Accord." On the last day of the conference the heads of state of a small number of countries, including the US, China, India and Brazil, agreed to a text. Many of them, such as US President Obama, announced this deal to the press Friday late at night and left Copenhagen, but the Accord was yet to be put to the final plenary for a vote. These negotiations about the possible adoption of the Accord lasted for nearly 13 hours. Many of the countries who were not involved in the high-level discussions announced that "an agreement reached by a small number of countries was not democratic or diplomatic." In the end, most countries were ready to agree to the Accord. However, as decisions have to be taken unanimously, the refusal of a handful of countries, including Venezuela, Bolivia, Cuba, Nicaragua, Tuvalu and Sudan prevented this formal adoption. After tenacious discussions, the parties decided on Saturday afternoon to "take note" of the accord. This is a long way from a legally binding agreement. Even if the conference

had formally adopted the Copenhagen Accord, it would have only been a politically binding agreement without legal implications or penalty provisions. Until 31 January 2010 countries could register their support for the agreement and submit their targets to the UNFCCC. This deadline has been extended indefinitely, but more than 50 countries representing 80% of global emissions and including all major developed and developing countries have already registered their support. The stringency of their pledges can be viewed as a first indication of where the climate change negotiations are headed over the next few years. The fact that countries largely submitted previously announced or even weaker targets or mitigation actions means that Copenhagen has not significantly pushed climate change negotiations forward.

#### A Binding Agreement?

The Copenhagen Accord is not legally binding. It is, however, politically binding for those parties who choose to sign up to it. This entails no real consequences except political or diplomatic responses, such as public shaming of countries that breach their conditions.

#### Temperature

Point No. 1 of the Copenhagen Accord establishes a below 2 degrees Celsius target for the rise in global temperature. An assessment of this target is envisaged for 2015 with a possible strengthening of the temperature target to below 1.5 degrees. More than a hundred countries would have liked to have seen this lower target in the agreement straight away.

#### Peaking of Global Emissions

The Accord states that countries "should cooperate on achieving the peaking of global and national emissions as soon as possible", but does not identify a specific year. According to the IPCC this peak would have to be reached by 2017 at the latest, in order to limit a temperature increase to 2 degrees Celsius.

#### Reduction Targets and Mitigation Actions

The major unresolved issue of the conference was that no reduction targets for countries were set. Usually, a deal between the developed world, offering stringent reduction targets and financial aid, and the developing world, in turn committing to some sort of "mitigation action", is struck. In Copenhagen this did not take place. Instead parties can register their support for the Copenhagen Accord and submit emissions reduction pledges. Those 2020 emissions targets for developed countries and mitigation actions for developing countries will form the appendix to the Accord. But the question was: What are countries going to submit? Will their submissions be similar to what they had announced in the run-up to the conference?

The US, for example had announced a 17% reduction target on 2005 levels (equal to 4% on 1990 levels). Australia had given a whole target range of 5-25% on 2000 levels (roughly equal to 5-25% on 1990 levels), similar to the EU with 20-30% on 1990 levels. But not only developed countries made mitigation pledges: China wants to reduce its carbon intensity by 40-45% on 2005 levels by 2020, Indonesia has set a 26-41% and Brazil a 36-39% below Business-as-usual target by 2020.

*cont'd Page 3 & 4*



Only if we had seen more ambitious targets than those (preferably without any ranges), the Copenhagen Conference would have really made a difference. However, all above-mentioned countries and others that have submitted so far have stuck to their previously announced pledges and not increased the stringency of their targets. Some, such as Australia and the EU have indeed submitted a target range. This means, an agreement on reduction targets has essentially been postponed.

This "bottom-up" approach of setting reduction targets has been widely criticised. According to Christoph Bals, Policy Director of Germanwatch, looking at the targets countries have announced so far "we are closer to a path to 3.5 degrees temperature increase than 2."

Missing from the agreement are long-term emissions reduction targets. In fact, earlier versions still comprised an 80% reduction target for global emissions by 2050. This was dropped over the course of the last day.

### Finance

One of the most detailed points of the Accord is the one on financial support for developing countries: For the period 2010-2012 around US\$30 billion and a further US\$100 billion per year by 2020 are to be provided. These numbers reflect pledges made by developed countries fairly early on in the conference. Nevertheless, it is not made clear where this money should come from and how it will be used. "It is not ensured that this won't simply be generated through the relabeling of financing for poverty eradication," fears Bals. Moreover, some uncertainty surrounds the new "Copenhagen Green Climate Fund" under the UNFCCC, which is supposed to manage this money. Since this fund cannot be set up without unanimous decision of the parties, the money will have to be managed elsewhere until that is the case. This logistical problem might still prove a valuable tool to put pressure on some countries that are not willing to commit themselves to substantial mitigation actions.

### Forests

The Copenhagen Accord establishes a REDD-plus mechanism for "Reducing Emissions from Deforestation and Forest Degradation plus Conservation." Considering that 17% of global emissions stem from land-use change and forestry (coming third behind the energy supply sector with 26% and the industry sector with 19% of global emissions), this seems to be an important step. However, it is not clear exactly how this mechanism will work. While everyone agrees, that it is important to protect and regenerate forests, many are worried about the potential pitfalls of such a mechanism. As accounting is a major issue in the forestry sector, the problem of additionality could become magnified, if no appropriate mechanism is found.

### Measurement, Reporting and Verification (MRV)

Furthermore, the Accord elaborates on the measurement, reporting and verification (MRV) of developing country actions, a hot topic for China who opposed letting international verifiers into the country. The final version of the text now contains some provisions for international MRV, the details of which are yet to be defined.

### Anything Missing?

Neither a deadline for the achievement of a legally binding

## Choice Modelling in Christchurch, NZ

November 19 & 20, Heritage Hotel, Christchurch

**Kasia Mazur & Gabriela Scheufele, ANU**

The choice modeling workshop 2009 was held in Christchurch and hosted by the Environmental Economics Research Hub and the Lincoln University. About forty academics, students and policy makers from New Zealand and Australia met to debate progress and challenges in choice modeling. A wide array of topics was discussed ranging from practical policy applications to specific econometric aspects of choice modeling.

The first presentation by Matt Hickman provided an insightful end user perspective on non-market valuation and particularly on the challenges decision makers face with using choice modeling results. This was followed by a presentation of David Hensher on embedding reliability in the valuation of travel time savings. Issues related to knowledge base & attribute selection, preference stability, attribute levels and attribute framing were discussed in a session organized by Marit Kragt.

A session chaired by Sonia Akter and John Rolfe addressed integration of risk and uncertainty and triggered a lively discussion about future research in that topic. The first day was closed by Ricardo Scarpa demonstrating how to incorporate attribute non-attendance without having obtained additional information from respondents into choice models using LIMDEP. A discussion in the plenum showed that attribute non-attendance is considered an increasingly important aspect in choice modeling.

The second day started with John Rose who shared his experience with experimental design strategies for stated choice studies. This was followed by a beneficial discussion about impacts of experimental design in discrete choice experiments on choice outcomes. Jordan Louviere provided an interesting presentation on alternative Australian climate change plans including a discussion about linear probability models and model estimate on an individual level. Bill Kaye-Blake continued the discussion about attribute non-attendance from the previous day. He presented a way how to account for attribute non-attendance using additional information retrieved from respondents. The workshop was closed with an impressive talk by Ricardo Scarpa about opportunities and challenges of estimation in WTP space.

The majority of the presentations have been published on the EERH website at : [http://www.crawford.anu.edu.au/research\\_units/eeerh/index.php](http://www.crawford.anu.edu.au/research_units/eeerh/index.php). The workshop provided a great opportunity to share experience, learn and discuss cutting edge developments in choice modeling. It is considered a great success.





# Environmental Economics Research Hub

agreement, nor an indication of its structure are included, both of which featured in earlier versions. They had set a deadline for the climate conference in Mexico City in December 2010 and alluded to a single legally binding agreement. Furthermore, as mentioned above, long-term reduction targets as well as the identification of a year for global emissions to peak did not make it into the final report.

## Synopsis

In the end, many wondered why no agreement could be reached. Didn't there seem to be a great willingness amongst the major players to commit themselves to combat climate change? Hadn't Barack Obama changed his travel plans to be in Copenhagen for the crucial final days of the conference? Hadn't China announced its intention to endorse a strong intensity target? The arrival of the 119 Heads of State and especially Barack Obama, seemed to be the only way to break this dead-lock, but negotiations in the high-level segment did not progress either, and only after Obama had sought out Chinese Premier Jiabao in his hotel, where he was holding talks with his counterparts from India, Brazil and South Africa, a text to put to the plenary for a final vote could be agreed on.

After the close of the conference everyone was quick to find someone else to blame for its outcome, perceived as too weak by many, and there was no shortage of scapegoats: It might also be true that the climate negotiations have become too complex for a conference like the one in Copenhagen to succeed. One draft negotiation text, which had been

developed during the two years prior to the conference, was nearly 200 pages long - virtually impossible to get through in only two weeks, if whole meetings discuss the wording of a mere footnote. Now encompassing issues ranging from social equity, justice and women rights to the preservation of biodiversity and heritage to economic interest and a country's standing in the international arena, climate change negotiations have long ceased to be just about climate change.

All this has led to suggestions that the UN might be the wrong forum to discuss such a multilayered problem and that one should look to other forms of negotiating and place a stronger focus on bilateral agreements or agreements between only a small number of countries. The announcement of all major developed countries to stick to their rather unambitious reduction pledges can be viewed as a first indication that the process cannot continue in its current form. Now the lead-up to and outcome of the next conference in Mexico will be crucial for the survival of the UN process.

Regardless the reason for the shortcomings of the Copenhagen Accord, the world will have to wait at least another year. This is even more unfortunate, since it became clear in Copenhagen that the public, business and industry groups are ready for a strong agreement: Financial companies representing trillions of investments released a document calling for decisive action on climate change, Google is developing a program that measures the energy consumption of people's household appliances and rates their energy performance against their neighbours', big consultancies, like McKinsey and KPMG, discussed whether emissions reporting could be coupled with financial reporting and how international standards can be developed, and an extensive survey amongst citizens of all countries shows overwhelming support for a strong climate change treaty. These are only a few examples that illustrate that the world is ready, only politics seem to lag behind. There is still hope that by the next conference in Mexico in December 2010, the political issues will have been resolved.

## HUB THEME LEADER CONTACTS

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Peter Wood, Jacqueline de Chazal and David Stern in a panel discussion at the 2010 EERH Workshop in Adelaide on 9 Feb

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