

**Submission to the NSW Government's Standing Committee on Natural Resource Management (Climate Change)**

**From Ms Lyndall McCormack**

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**Member of the A.C.F**

**Member of the A.T.A**

**Delegate of the NUW Market Research branch Sydney**

**Member of the National Seniors**

**Parishoner of the Anglican Church Padstow**

**Member of the Padstow RSL Club**

**Member of the Revesby Workers Club**

Question

- (a) The likely consequences of human-induced climate change on land (including salinity), water and other natural resources

Answer

There are many documents showing the effects of climate change  
I will copy web links below

[http://www.usyd.edu.au/envsci/students/notes/air/NSWgov06\\_climate1.pdf](http://www.usyd.edu.au/envsci/students/notes/air/NSWgov06_climate1.pdf)

<http://www.greenhouse.gov.au/science/guide/pubs/chapter4.pdf>

[http://www.abareconomics.com/interactive/ac\\_sept07/htm/a1.htm](http://www.abareconomics.com/interactive/ac_sept07/htm/a1.htm)

<http://www.science.org.au/nova/091/091print.htm>

<http://www.greenhouse.gov.au/science/accsp/pubs/discussion-paper.pdf>

<http://www.dest.gov.au/NR/rdonlyres/1262AD77-7449-4B0E-8ABD-D8BC23E6D879/7262/ABAREBRSRDCrevisions04.rtf>

<http://www.environment.gov.au/soe/2001/publications/theme-reports/biodiversity/biodiversity04-1e.html>

[http://www.unep.org/geo/geo\\_ice/PDF/GEO\\_C6\\_C\\_LowRes.pdf](http://www.unep.org/geo/geo_ice/PDF/GEO_C6_C_LowRes.pdf)

<http://www.pewclimate.org/docUploads/Regional-Impacts-Gulf.pdf>

<http://unfccc.int/resource/docs/2007/sbsta/eng/misc15.pdf>

<http://scitation.aip.org/getabs/servlet/GetabsServlet?prog=normal&id=JWRMD5000133000005000405000001&idtype=cvips&gifs=yes>

<http://whc.unesco.org/uploads/news/documents/news-262-1.doc>

<http://unisdr.org/eng/library/biblio/isdr-biblio-2-drought-2007.pdf>

[http://www.gcric.org/ipcc/ar4/wg1/faq/ar4wg1\\_FAQs\\_Full.pdf](http://www.gcric.org/ipcc/ar4/wg1/faq/ar4wg1_FAQs_Full.pdf)

<http://www.iied.org/CC/documents/ClimateChangeReportFinal.pdf>

<http://www.australianclimateforum.com/index2.php>

[www.lowyinstitute.org/PublicationGet.asp?i=391](http://www.lowyinstitute.org/PublicationGet.asp?i=391)

[http://hdr.undp.org/en/reports/global/hdr2007-2008/papers/reid\\_hannah%20and%20huq\\_saleemul.pdf](http://hdr.undp.org/en/reports/global/hdr2007-2008/papers/reid_hannah%20and%20huq_saleemul.pdf)

<http://www.forestrystandard.org.au/files/4708.pdf>

<http://www.nht.gov.au/publications/newsletters/pubs/nht30.pdf>

<http://www.hancock.forests.org.au/docs/carbon.htm>

[http://www.acfonline.org.au/news.asp?news\\_id=267&c=22310](http://www.acfonline.org.au/news.asp?news_id=267&c=22310)

[http://www.melbourne.foe.org.au/pdfs/Foe\\_Climate\\_Justice\\_Guide\\_small\\_PDF.pdf](http://www.melbourne.foe.org.au/pdfs/Foe_Climate_Justice_Guide_small_PDF.pdf)

<http://www.science.org.au/events/thinktank2007/2007-thinktank-program.pdf>

[http://www.coastal.crc.org.au/pdf/CRC\\_Conference\\_Abstract\\_Booklet\\_Final2005.pdf](http://www.coastal.crc.org.au/pdf/CRC_Conference_Abstract_Booklet_Final2005.pdf)

[http://www.bom.gov.au/announcements/media\\_releases/climate/change/20050106.shtml](http://www.bom.gov.au/announcements/media_releases/climate/change/20050106.shtml)

<http://www.maweb.org/en/Article.aspx?id=58>

<http://www.bio.mq.edu.au/ecology/publist.htm>

[http://www.co2australia.com.au/site/files/ul/data\\_text30/256385.pdf](http://www.co2australia.com.au/site/files/ul/data_text30/256385.pdf)

<http://www.ioci.org.au/publications/pdf/IOCIReport.pdf>

[www.nff.org.au/get/2432305959.pdf](http://www.nff.org.au/get/2432305959.pdf)

<http://www.affashop.gov.au/PdfFiles/adaptivemgtframeworkgroundwatersurfacewater.pdf>

<http://www.clw.csiro.au/publications/science/2007/sr40-07.pdf>

<http://www.deus.nsw.gov.au/publications/IWCM%20Guidelines%20-%20October%202004.pdf>

[http://www.amos.org.au/conf2007/AMOS07\\_ABSTRACTS.pdf](http://www.amos.org.au/conf2007/AMOS07_ABSTRACTS.pdf)

[http://www.aph.gov.au/senate/committee/ecita\\_ctte/waterbill\\_2007/report/report.pdf](http://www.aph.gov.au/senate/committee/ecita_ctte/waterbill_2007/report/report.pdf)

<http://healthysoils.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/98/53.pdf>

<http://healthysoils.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/98/53.pdf>

<http://www.environment.nsw.gov.au/threatspec/biobankscheme.htm>

[http://www.oceans.gov.au/pdf/NOO\\_PAS\\_Report\\_Final\\_DEC04.pdf](http://www.oceans.gov.au/pdf/NOO_PAS_Report_Final_DEC04.pdf)

[http://www.daff.gov.au/data/assets/pdf\\_file/0010/97822/pap\\_all\\_v2.pdf](http://www.daff.gov.au/data/assets/pdf_file/0010/97822/pap_all_v2.pdf)

<http://www.physorg.com/news109582055.html>

<http://www.physorg.com/news114358953.html>

[http://www.afma.gov.au/information/publications/corporate/annual/ar06\\_07/ar\\_06\\_07\\_01.pdf](http://www.afma.gov.au/information/publications/corporate/annual/ar06_07/ar_06_07_01.pdf)

[http://www.library.unsw.edu.au/~thesis/adt-NUN/uploads/approved/adt-NUN20071112.120522/public/02chapter1\\_4.pdf](http://www.library.unsw.edu.au/~thesis/adt-NUN/uploads/approved/adt-NUN20071112.120522/public/02chapter1_4.pdf)

[http://www.climatechange.sa.gov.au/PDFs/SA\\_CMAR\\_report\\_High\\_resolution.pdf](http://www.climatechange.sa.gov.au/PDFs/SA_CMAR_report_High_resolution.pdf)

[http://www.srfme.org.au/documents/SRFME\\_finreport\\_int05.pdf](http://www.srfme.org.au/documents/SRFME_finreport_int05.pdf)

<http://www.environment.nsw.gov.au/resources/sdwcfullreport.pdf>

<http://www.abc.net.au/news/stories/2007/12/13/2118152.htm>

<http://www.un.org/apps/news/story.asp?NewsID=25036&Cr=climate&Cr1=change>

Please note chapter 5 here at this web page on water

[http://www.coag.gov.au/meetings/130407/docs/infrastructure\\_reports\\_com.pdf](http://www.coag.gov.au/meetings/130407/docs/infrastructure_reports_com.pdf)

Note at this web site Change Driver 7 Change driver 7 – Protection of climate, environment & biodiversity

[http://www.tafe.swinburne.edu.au/sdg/documents/research/change\\_drivers\\_chartJuly04.doc](http://www.tafe.swinburne.edu.au/sdg/documents/research/change_drivers_chartJuly04.doc)

<http://www.innovationaustralia.net/article/article.php?article=11,178>

<http://www.cpa.org.au/garchve07/1316.pdf> The outgoing government had decided to as noted in this web link .I think the CSIRO are specialists and you have to go into partnership with them

**"The government's latest scheme, to dam and pipe water from the Clarence River in northern NSW into south-east Queensland, has been assessed as technically and economically feasible by the CSIRO. However, a specialist report concluded that there would be so many unknown factors that the scheme should not proceed."**

If this was pure research and they mentioned who was the expert I might wonder why that expert's opinion is worth more than a whole team of CSIRO scientists

## Question

(b) Options for ensuring ecologically sustainable natural resource use, taking into particular account the impacts of climate change

## Answer

I Live in hope that we have many options

We have to compile regional and social economic profiles

[http://www.cgris.com.au/opencms/opencms/regional\\_overview/planning\\_issues.html#compiling](http://www.cgris.com.au/opencms/opencms/regional_overview/planning_issues.html#compiling) but I think they should be linked to catchments and maybe regional development boards others might disagree?

I think we need a NSW Climate Summit related to our natural resources and then we include and Integrated Natural Resource Management Plan inside our NSW Climate Change Action Plan .We also need to compare and contrast with other states to see if they have any innovative ideas and if they do we should adopt some of there ideas

Please read these web sites. If we don't have a NSW Institute of Integrated Natural Resource Management then I think we need one. There might already be one I just don't know. I think we need to look at and keep our catchment management initiatives and improve on our social impact statements and keep our multi species impact statements. I also wondered if there was any reason to also have natural resource impact statements in our planning systems as well.

[http://www.thepremier.qld.gov.au/library/pdf/climate/ClimateSmart\\_2050.pdf](http://www.thepremier.qld.gov.au/library/pdf/climate/ClimateSmart_2050.pdf)

<http://www.sydneycoastalcouncils.com.au/documents/SCCGStrategicPlan.pdf>

<http://www.nrmbnt.org.au/files/inrmp/INRMPlanMarch2005.pdf>

<http://www.tct.org.au/neJe06.pdf>

[http://www.dpi.vic.gov.au/CA256F310024B628/0/AF4B7979F28479A1CA2572F1007A2E84/\\$File/Vic+Local+Gov+Climate+Change+Case+Studies.pdf](http://www.dpi.vic.gov.au/CA256F310024B628/0/AF4B7979F28479A1CA2572F1007A2E84/$File/Vic+Local+Gov+Climate+Change+Case+Studies.pdf)

<http://www2.skynews.com.au/eco/article.aspx?id=207887>

[http://www.sactcg.org/documents/sub\\_catchment\\_plans/act\\_nrm\\_plan.pdf](http://www.sactcg.org/documents/sub_catchment_plans/act_nrm_plan.pdf)

[http://www.nwc.gov.au/nwi/docs/WTImpPlan\\_Part1.pdf](http://www.nwc.gov.au/nwi/docs/WTImpPlan_Part1.pdf)

[http://www.namoi.cma.nsw.gov.au/attachments/SP\\_Environmental\\_Scan\\_Namoi\\_09Oct07.pdf](http://www.namoi.cma.nsw.gov.au/attachments/SP_Environmental_Scan_Namoi_09Oct07.pdf)

#### Question

- (b) Approaches to land and water use management practices on farms and other natural resource management practices, having regard in particular to the role of such practices in contributing to climate change or as a tool in helping to tackle climate change;

#### Answer

Please read the web links posted here

[http://www.acfonline.org.au/news.asp?news\\_id=326](http://www.acfonline.org.au/news.asp?news_id=326)

[http://www.acfonline.org.au/articles/news.asp?news\\_id=131](http://www.acfonline.org.au/articles/news.asp?news_id=131)

[http://www.acfonline.org.au/articles/news.asp?news\\_id=967](http://www.acfonline.org.au/articles/news.asp?news_id=967)

[www.nccnsw.org.au/index.php?option=com\\_docman&task=doc\\_download&qid=393](http://www.nccnsw.org.au/index.php?option=com_docman&task=doc_download&qid=393)

It looks like the Australian Ag Industry can adapt to change Please read this news link [http://fw.farmonline.com.au/news\\_daily.asp?ag\\_id=47600](http://fw.farmonline.com.au/news_daily.asp?ag_id=47600)

There may be some solutions to toxins in water please read this news item <http://www.ens-newswire.com/ens/jul2007/2007-07-30-09.asp#anchor3> **New Material Sponges Up Pollutants, Leaving Water Clean**

[http://www.cfi.org.au/secure/CFI\\_Newslette\\_May\\_07.pdf](http://www.cfi.org.au/secure/CFI_Newslette_May_07.pdf)

[http://www.c4cs.curtin.edu.au/resources/publications/2007/isglobalwarmin  
g.pdf](http://www.c4cs.curtin.edu.au/resources/publications/2007/isglobalwarmin<br/>g.pdf)

<http://www.rirdc.gov.au/reports/HCC/07-097.pdf>

<http://www.solve.csiro.au/0207/solve0207.pdf>

[http://www.austlii.edu.au/au/legis/nsw/consol\\_reg/swcmpr2001684/](http://www.austlii.edu.au/au/legis/nsw/consol_reg/swcmpr2001684/)

[http://www.austlii.edu.au/au/legis/nsw/consol\\_reg/swcmr2000476/](http://www.austlii.edu.au/au/legis/nsw/consol_reg/swcmr2000476/)

<http://www.csiro.au/files/files/pa7v.pdf>

<http://www.griffith.edu.au/er/gazette/pdf/climate-change.pdf>

[http://192.148.120.24/PDFs/CKHMP07\\_11.pdf](http://192.148.120.24/PDFs/CKHMP07_11.pdf)

[http://fw.farmonline.com.au/news\\_daily.asp?ag\\_id=47602](http://fw.farmonline.com.au/news_daily.asp?ag_id=47602)

[http://ses.library.usyd.edu.au/dspace/bitstream/2123/2100/3/WaterWindC  
h5Spruyt.pdf](http://ses.library.usyd.edu.au/dspace/bitstream/2123/2100/3/WaterWindC<br/>h5Spruyt.pdf)

[http://www.apal.org.au/assets/content/3206/afg\\_may2007\\_final.pdf](http://www.apal.org.au/assets/content/3206/afg_may2007_final.pdf)

Farmers can become eco generators of energy but growing crops for fuel for cars has a rather large ecological footprint and I wouldn't recommend it and I don't recommend them using GM crops as they wont grow without water and they do affect the surrounding biological diversity. Growing switch grass for fuel would be better than GM corn. I don't think it is worth using waste from forest industries as fuel. This was originally decided on for cold countries we have a warm climate and burning wood makes for more CO2. I feel that it would be better to place sawdust in recycled plastic to make Scrimber for fence posts rather than burn it in any way.. There are so many markets for products now I feel the timber industry in Country towns should be looking at the life cycle assessment of there products and there should be no GMO trees grown either.

<http://www.austlii.edu.au/au/journals/DeakinLRev/2004/1.html#Heading7>

I appreciate bob Brown of the Greens and I like his dynamism to protect our forests and I like to read what they have to say

<http://manage.greens.org.au/greenmag/greenpastissues/green16>

I would also like rural people to accept what my church is deciding upon here and to try to reduce our ecological footprint

[http://your.sydneyanglicans.net/culture/reading/a\\_lighter\\_footprint/](http://your.sydneyanglicans.net/culture/reading/a_lighter_footprint/)

[http://ecogeneration.com.au/editions%5CECO\\_SepOct06\\_Web.pdf](http://ecogeneration.com.au/editions%5CECO_SepOct06_Web.pdf)

I am a zero waste person and I believe that waste is linked to saving natural resources by designing innovations into a product up stream

Please read this web link I think in NSW we should have a water quality tool kit for designing and implementing water quality trading programs. If there is one then compare it to this there may be a better low environmental impact in this it is Canadian but modeled on the US / EPA Please check it <http://www.epa.gov/waterqualitytrading/WQTToolkit.html>.

#### Question

- (c) The effectiveness of management systems for ensuring that sustainability measures for the management of natural resources in New South Wales are achieved, having particular regard to climate change

#### Answer

I always wanted to know what it means in this COAG agreement

the *Murray-Darling Basin Agreement 1992* to enable improved water business practices, to clarify the original agreement in the matter of limiting Queensland's liability and to other minor changes.

What does it mean limiting Queensland's liability does that mean that the owners of Cubby station get to hoard water? I am not impressed by the wording here at all .Liability for what? I would like more .detail would be great otherwise its not transparent and you cant tell if it is an illegal call from them.

I have read articles like this and so it makes me suspicious. It is my teaching that has made me think as I do.

<http://www.corpwatch.org/article.php?id=14495>

I Like to read this type of research

<http://www.foe.org.au/resources/publications/climate-justice/A%20fair%20share%20of%20the%20Atmosphere.pdf>

<http://www.coag.gov.au/meetings/140706/docs/coag140706.pdf>

I think you should examine the value of core sustainability indicators across all natural resource groups in NSW also you might read this paper

And get your secretariat to do a literature review on the NSW current work



“Diesendorf, M. 2001, 'Models of sustainability and sustainable development' International Journal of Agricultural Resources, Governance and Ecology 1:109 -123.’

<http://www.anra.gov.au/topics/people/pubs/national/references.html>

The above web page could be updated with current information on rural people displacement.

(e)The likely consequences of national and international policies on climate change on natural resource management in New South Wales.

I am a person who mostly looks at the Waste Avoidance and Resource Act. I am now reading the NSW Waste Avoidance and Resource Recovery Strategy and Performance report 2006 the consultation draft. I know that because people in the community like myself and students and scientist’s have lobbied and completed submissions to government then changes wouldn’t be occurring I would like the government to look more seriously at the industry Partnership Program the report says only 400 business have participated I wish that was mandatory. Both the Labor Party and the Liberal party have listened and I think the Labor government where very wonderful in there response to climate change not as quick as we would like it but they do believe the science

Because we have just been waiting for news from the Bali Climate Change Conference run but the IPCC .I feel they must start to make bigger cuts in there greenhouses gases and I personally feel we have reached the tipping point. I think we must drastically reduce the soot or particulates in the atmosphere and so too our greenhouse gases. I have supreme faith in the ingenuity of human beings and I feel the science is available for people to shift to more greener processes of production.

Please look at the summary of the NEWS from Bali I am posting below And the other pieces of information

## SustainabiliTank

(December 13th, 2007); UN Chief in Bali: World Expects **Climate Change** ..... people from the rubble,” she told reporters at a **news** briefing in New York. ...

[www.sustainabilitank.info/category/un-reports](http://www.sustainabilitank.info/category/un-reports) - 279k - [Cached](#) - [Similar pages](#)

<http://www.sustainabilitank.info/category/un-reports>

The Final Evaluation Of The Bali Meetings Looks Better Then We Dared To Hope For - This Because There Are Clear Dynamics That Does Not Allow Leaders In Power To Have Their Ways. (December 18th, 2007)

<http://www.sustainabilitank.info/category/un-reports#3650>

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The Final Evaluation Of The Bali Meetings Looks Better Then We Dared To Hope For - This Because There Are Clear Dynamics That Does Not Allow Leaders In Power To Have Their Ways.

Posted on Sustainabilitank.info on December 18th, 2007  
by Pincas Jawetz ([PJ@SustainabiliTank.com](mailto:PJ@SustainabiliTank.com))

**The Final Evaluation Of The Bali Meetings Looks Better Then We Dared To Hope For - This Because There Are Clear Dynamics That Does Not Allow Leaders In Power To Have Their Ways.**

*OK, time has come that we summarize the events of the last two weeks and after that march away to other pressing issues.*

*Clearly, Bali did not live up to the exaggerated expectations the European leaders put into their wishes from the meetings, but was it a failure?*

*For those that expected the earth to fall into climate-collapse and disrepair, Bali presented very dim results. But then, if the worst of the prognoses would indeed materialize, then also all what Europe does is not sufficient, and a more forthcoming result from Bali could also not have saved the world - for that - it is already late.*

*But, if we think with cooler minds, then we can see that Bali has made it possible for a definite move to progress:*

- Let us start with Japan and Russia that obliged themselves with planning for moves to reduce dramatically their CO2 emissions.

- The Responsibilities of the more advanced among the developing countries were defined more accurately.

- With the political U-turn in Australia, a country that joined now the ranks of those that signed the Kyoto Protocol - this left in the rejectionist's front only the US and Canada from among the industrialized countries.

- With the US there was also a change. There is a slowly creeping change of mind and the surprising agreement reached by its delegate to Bali, the White House insider, Paula Dobriansky, has now made possible that agreement will be readied in two years.

- The eventual agreement will go beyond the Kyoto Protocol to the UNFCCC, because now all big States will be part of the agreement. The finalization of such an agreement will occur after the Presidential elections in the USA.

Seemingly it was always planned this way.

- By the time of the COP 14 of the UNFCCC meeting in Poznan, in December 2008, there will already be a new US "President-in-Waiting" and he or she will come to the meetings or will send an emissary. With the new President

moving into the White House on January 20, 2009, it will be this new President that will be involved in the negotiations during the year 2009 - with the final outcome planned for Copenhagen at the COP 15 of the UNFCCC.

All the main contenders in the US elections, the Democrats, and the Republicans, have shown interest in pulling through the new climate change agreement, this because there is already a majority among the US population that wants positive results. Some of the main US States, including California, are already moving along lines similar to the EU States. Many US businesses are already on the process train - and the train is moving indeed.

- It is clear that the developing countries will commit suicide if they do not think about the effects their fast industrialization has on the planet, but it is also true that they will do nothing unless the industrialized countries make first and decisive moves. So, a US Administration that starts by showing a positive example will have a much higher chance for succeeding in its negotiations with China and India, than the present Bush Administration.

- So far as the UN is concerned, the snail pace of the UN decision making process is a hindrance by the fact that it is slower than the pace of climate change. We say thus with full understanding of the meaning of this skepticism when thinking about the UN, that the efforts by the US in starting bilateral negotiations with other large polluters, if handled by a US President who is keen about what he says, is not such a bad idea as it sounds, when put forward

by the present US administration. Eventually a club of major polluters, let's say of 80% of the total emissions, will be formed, and the implementation of the program that will be discussed in Copenhagen will be entrusted to this club.

Were the US present Administration not as obstinate as they were, they could even have claimed some rights in trying to engineer this polluter's club. The reality remains that they lost credibility by expressively not recognizing the

seriousness of the problem, censoring scientific research, removing some of the best leaders in climate change

issues and so on ..., but looking back at Bali, all may yet be back on track. Thank you German Minister of the Environment, Mr. Gabriel - you are credited with getting the US attention on 12/16.2007 as you got the UN Commission on Sustainable Development attention on the night of 5/11/ 2007. The post-Kyoto process was now back on tracks; the CSD process has yet to be revived. The CSD is important because in the end effect, there will be no action on climate change if there is no consensus that all development must eventually be of the Sustainable Development kind.

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## A BRIEF ANALYSIS OF COP 13 & COP/MOP

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by the IISD team in Bali the

KIMO ENB Summary and Analysis now online:

BALI: ISLAND OF THE GODS AND BREAKTHROUGHS?

You should not be impelled to act for selfish reasons, nor should you be attached to inaction. (Bhagavad Gita 2.47)

Marking the culmination of a year of unprecedented high-level political, media and public attention to climate change science and policy, the Bali Climate Change Conference produced a two-year “roadmap” that provides vision, an outline destination, and negotiating tracks for all countries to respond to the climate challenge with urgency that is now fixed in the public mind in the wake of the headline findings of the IPCC’s Fourth Assessment Report. The outline destination is an effective political response that matches both the IPCC science and the ultimate objective of the Convention; it was never intended that the Bali Conference would focus on precise targets. Instead, the divergent parties and groups who drive the climate regime process launched a negotiating framework with “building blocks” that may help to square a number of circles, notably the need to reconcile local and immediate self-interest with the need to pursue action collectively in the common and long term interests of people and planet. The informal dialogue over the past two years has now been transformed into a platform for the engagement of parties from the entire development spectrum, including the United States and developing countries.

This brief analysis opens with a discussion on the complexity of the climate change process, and describes the elements of the Bali roadmap and their potential significance in enabling negotiations on the future of the climate regime, including a post-2012 agreement. It identifies the main political achievements of the Conference, and assesses some of the specific outcomes from negotiations on the so-called “building blocks” of mitigation, adaptation, financing and technology transfer.

### MANAGING COMPLEXITY

Of the 10,000 participants in the Bali Conference, it is likely only a handful of them had a meaningful grasp of the pieces that now make up the deepening complexity of the climate change regime. Delegates in Bali had to balance meetings of the UNFCCC COP and the Kyoto Protocol COP/MOP, along with the subsidiary bodies and the Ad Hoc Working Group, dozens of contact groups and informal consultations on issues ranging from budget and national reporting to reducing emissions from deforestation in developing countries, not to mention side events held by governments, international organizations, business and industry, and environmental NGOs. Balancing a large number of participants, issues and negotiating venues requires stamina, time management and a lot of creativity. With the launch of new negotiations on a long-term agreement, which, by definition must be more ambitious than anything that has gone before, yet another piece has been added to the ever-growing complex puzzle that makes up the climate regime.

Managing this deepening complexity in a highly sensitive – and largely transparent – political environment has become an extraordinary feat, undertaken by a UNFCCC Secretariat that continues to impress participants with

combination of professionalism, competence and good humor. The UN Secretary-General's decision to adopt climate change as one of his own UN system-wide priorities, with a more effective division of labor and line accountability on climate-related issues throughout the UN system, will shore up the resources required for the future. A greater emphasis on the need to draw on expertise found outside the immediate UNFCCC process was also a notable and timely feature of discussions in Bali.

Nevertheless, the challenge of defining precisely what elements of the Bali decisions and outcomes constitute the "Bali roadmap" is its own complex work in progress. For example, what exactly is the nature of the agreement that must result from the Bali roadmap? This is still a matter of debate, with divergent views on the legal form and architecture that will accommodate and, perhaps elaborate, existing commitments under the Convention and Protocol in the near term and after 2012. So, while the Bali roadmap was never categorically defined, most are viewing it as a compendium of decisions and processes adopted and launched by the COP and COP/MOP, which can be divided into three types:

- Negotiating tracks;
- Building blocks; and
- Supporting activities, including reducing emissions from deforestation and forest degradation.

#### NEGOTIATING TRACKS

The Bali roadmap builds on the negotiating tracks on long-term issues launched at the Montreal Climate Change Conference at the end of 2005. In addition to the legal necessity to address the post-2012 period after the Protocol's first commitment period expires, the Bali roadmap aims to mend some of the fractures that have evolved in the architecture of the climate change regime, most notably the refusal of the United States to ratify the Protocol. The institutionalization of tensions between developed and developing country parties, the crisis of confidence surrounding the implementation of existing commitments, and a growing need for the distribution of responsibilities to reflect the economic power and responsibilities of major emerging economies, have also haunted the process. The Bali roadmap must continue to provide a means to re-engage the United States in negotiations on future commitments, with some level of comparability with other developed country undertakings; it must develop innovative mechanisms and incentives for the engagement of the major emerging economies; and it will be judged, above all, by the extent to which it addresses the ultimate objective of the Convention – to put the world on a path to avoid dangerous climate change – by responding, without equivocation, to the IPCC's findings.

At the heart of the Bali roadmap are the negotiating tracks to be pursued under the newly launched Ad Hoc Working Group on Long-term Cooperative Action and the existing Ad Hoc Working Group on Further Commitments for Annex I Parties under the Protocol. The work of each track will be important, but – in all probability – it is the convergence of views, with each track taking the work of the other on board, that will inform deliberations on the ambition and the means for all to contribute to a future agreement or agreements. One indication of the likely contents of the roadmap came early on in Bali in an intervention by COP President Witoelar during the Contact Group on Long-term Cooperative Action. He explained that the roadmap has a timeline for negotiations under the Convention, with a milestone in 2008, and a destination in 2009. The centerpiece of this track is the decision on the Ad Hoc Working Group on Long-term Cooperative Action, which for the first time sets out a negotiating agenda that encompasses discussions on mitigation for both developing and developed countries. Since the negotiations will take place under the Convention, they will include all parties – developed countries and the US. However, there is some question as to the nature of the mandate for this track, other than the reference to the ultimate objective of the Convention. Some have contrasted the work of this AWG with the stronger mandate built into the Ad Hoc Working Group on the Berlin Mandate, which resulted in the Kyoto

Protocol. “We may have to return to the COP to clarify and strengthen the mandate; for the moment we have taken a leap of faith,” said one observer, hoping that the work would result in a binding agreement.

On the Protocol track is the work programme, methods and schedule of future sessions of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Protocol. Important aspects of the work of the AWG will be taken on board and feed into the second review of the Protocol under Article 9 at COP/MOP 4. One of the most significant developments in Bali was a shift that the Executive Secretary likened to the “dismantling of the Berlin Wall.” While a “two-track” approach will continue and maintain a degree of separation between discussions under the Convention and the Protocol, the decision on the AWG on Long-Term Cooperative Action uses for the first time language on “developed” and “developing” countries, rather than “Annex I” and “non-Annex I” countries. This is widely regarded as a breakthrough, as it offers the prospect of moving beyond the constraints of working within only Annex I and non-Annex I countries when defining future contributions to a future agreement. It is anticipated that new approaches to differentiating contributions, tied to countries’ economic capacity, will form part of the future architecture. Moreover, the new AWG will also fully engage and address the future role of the US, which has not ratified the Protocol.

The risk in all of this, identified by some developing country parties, is that certain Annex I parties may seize this development to “jump ship” and attempt to adopt more relaxed commitments than those under the Kyoto Protocol. This led to proposals for a “firewall” that would lock existing Annex I parties into the most ambitious end of the commitment spectrum.

#### BUILDING BLOCKS

Integral to the emerging and no doubt cross-fertilizing work programmes across the negotiating tracks are the called “building blocks” of mitigation, adaptation, technology and finance. These key issues were considered under the roadmap negotiations and in related talks on topics such as the Adaptation Fund.

With evidence that the confidence-building phase of negotiations has begun to yield some results in terms of re-engagement of the US and engagement of major developing country economies, the Bali Conference was regarded by some, notably the EU and major NGOs, as the moment to lock the process into evidence-based negotiations on mitigation and commitments. The timing and ambition of the EU’s agenda was not unexpected and contributed to some of the fiercest exchanges between negotiators.

MITIGATION: The debate on mitigation, notably the terms of engagement by developing countries, in the context of the Ad Hoc Working Group on Long-term Cooperative Action, was not resolved until the COP plenary on Saturday. Under the gaze of unprecedented media attention, India turned the final hours of negotiations into something approaching a Bollywood Blockbuster, with star-studded cameo roles by none other than the UN Secretary-General and the President of Indonesia, calling on parties to close a deal. Up until Saturday afternoon the prospect of a collapse of the negotiations was not ruled out by senior participants.

In a defining moment of the Conference, at the final and dramatic COP plenary session, the US stood down from its opposition to a proposal by India, supported by the G-77/China. The Indian proposal aimed to ensure that mitigation actions by developing country parties are supported by technology, financing and capacity building subject to measurable, reportable and verifiable procedures. This new paragraph has far-reaching implications linking developing country participation in a future agreement and confidence that they will access the means to deliver. Fired by a suspicion that developed countries had set up future negotiations that might relax their own commitments, while placing too much onus on developing country contributions, India deftly seized the momentum for the closure of a deal on the roadmap, in the full gaze of the world’s media, to introduce a new rigor to the delivery of developed country commitments on capacity building. Introducing this outstanding deal into the final COP plenary on Saturday was just one of the high-risk strategies deployed to press for closure on issues that had played out for days behind closed doors. In the end, after phone calls reportedly involving Washington, the US delegation dropped its opposition to the Indian proposal, stung by rebuffs from South Africa and Papua New Guinea and lengthy applause from delegates and observers who favored the proposal.

The mitigation debate was also behind contested approaches to referencing the IPCC Fourth Assessment Report. This battle was fought on two fronts: under the Protocol and under the Convention. In the AWG under the Protocol, Russia, Canada, and Japan lined up to oppose a reference to the 25-40% greenhouse gas emissions reduction range in the AWG's report from Vienna, which included this and other quotes from the IPCC AR4. Noting that media coverage was feeding public expectations that countries were "going to agree" to reduction in this range and that "we have to be careful about presenting the range as the target," the Russian Federation continued its opposition all the way to the AWG closing plenary. Canada and Japan, which had argued in the informal consultations that Russia should be heeded, changed their position after a concerted campaign by AOSIS to insert a comprehensive reference to the IPCC AR4.

There was less success on the Convention front in the Dialogue on Cooperative Action, where the reference to IPCC science is weaker. AOSIS was unable to summon up the support for a stronger reference when negotiators met in a small informal group to close on this issue. Participants believe that this will be a weaker starting point for negotiations on cooperative action under the Convention, and the IPCC references may have to be revisited.

**ADAPTATION AND FINANCE:** One of the significant outcomes bringing together both adaptation and finance was the decision to operationalize the Adaptation Fund, which was set up to finance adaptation in developing countries. The Fund had proven to be particularly delicate to negotiate because, unlike other funds under the UNFCCC, it is funded through a levy on CDM projects undertaken in developing countries and is therefore not dependent on donors. At past meetings, proposals to appoint the GEF as the Fund's manager have generated controversies between developed and developing countries, and an agreement on the Adaptation Fund Board operating under the guidance of the COP/MOP, was a significant breakthrough. However, the early stages of the Conference were marked by intensive lobbying by representatives from the GEF who were determined to secure a role in servicing the Fund. In the end, they secured an interim role in providing a secretariat function.

The establishment of the Adaptation Fund was widely applauded. It was also seen as one of several positive outcomes for the G-77/China at this meeting, which some observers note are a reflection of the increasing economic and political clout of this group.

**TECHNOLOGY:** The basis for an interim funding programme under the GEF was brokered behind the scenes early in the Conference, although agreement on the final details was complicated. Technology funding is expected to be scaled up when a comprehensive agreement on future commitments is reached, possibly in Copenhagen. Governments agreed to kick start a strategic programme to scale up investment in the transfer of both the mitigation and adaptation technologies needed by developing countries. Again, the outcome was widely viewed as a positive one for developing countries.

#### **SUPPORTING ACTIVITIES – REDUCING EMISSIONS FROM DEFORESTATION**

A decision on reducing emissions from deforestation in developing countries is as significant for the wider deforestation debate as it is for the climate regime. As one observer put it, the deforestation issue has suffered from a level of fragmentation and now, perhaps for the first time, may ultimately be brought under a legally binding framework.

There was an agreement to launch a process for understanding the challenges ahead, including through demonstration activities over the next two years, in preparation for addressing these issues in a post-2012 agreement.

A problematic part of this debate was how to include the issue in the post-2012 regime. The US supported a reference to "land use" in the decision on reducing emissions from deforestation, alarming some observers as it recalled broader discussions of land use that included not only forestry but also agriculture and other forms of land management. There was, however, agreement to open up options in future discussions on long-term cooperative action by including in the decision an explicit reference to reduced emissions from deforestation and consideration of ... the role of conservation, sustainable management of forest and enhancement of forest carbon stocks."

## MOVING FORWARD

The Bali Conference demonstrated that at certain moments in climate talks, notably when negotiations are taking place in the full gaze of a public and media who are better informed than at any time since the emergence of the climate change agenda, parties come under extreme pressure to face up to the science. The high-level political attention given to climate change has introduced an unprecedented level of interest and investment of expertise by organizations, not only by research and advocacy organizations, but also by the media. The number of side events held in parallel to the conference was also unprecedented, and included two full day events during the week: the Climate and Development Days, and the Forest Day.

A youth delegate told the COP plenary, “You can’t negotiate with physics and chemistry.” This, of course, is entirely true. Parties do disagree with the science, but their arguments can sometimes change when they are exposed to the critical gaze of global public opinion. A feature of the Bali Conference was the shift in a number of positions when negotiators left the closed-door ministerials and returned to the plenary sessions, as illustrated by the pressure that came to bear on the US and Canada in the final COP plenary. Transparency can be a decisive factor.

At COP/MOP 3, the interplay between international climate politics and domestic elections was illustrated by the dramatic win by Kevin Rudd’s Labor Party in Australia. In 2008, another domestic election may have a dramatic impact on the global climate change regime, whatever the outcome. The global public gaze that fixed on the plenary in Bali will now turn to the US election in November 2008.

In the meantime, parties to the Convention and the Protocol have succeeded in honoring the call for a “breakthrough” that came from the UN Secretary-General’s climate change summit in September. Bali launched far reaching negotiations with a clear deadline for the conclusion of an agreement on the post-2012 period. Bali was successful in delivering the expected roadmap and building blocks. Now it is up to everyone, negotiators, politicians, public opinion and media to play their respective parts – progress in negotiations, take action, keep the pressure, and maintain vigilance – to make sure the road from Bali doesn’t end up in the sea.

On Saturday evening, December 15, 2007, as the remaining participants at the BICC rushed to catch their flights home or scattered to Ubud or elsewhere to recover, the ENB writing team began work on our twenty thousand word summary and analysis. **The PDF version can be found at <http://www.iisd.ca/download/pdf/enb12354e.html> and for easy cut-and-paste (“Yes, we know you do!!!” - writes KIMO) go to <http://www.iisd.ca/vol12/enb12354e.html>**

<http://www.britishflame.org.uk/calendar/pastevents.htm>

[http://www.ktnetworks.co.uk/epicentric\\_portal/site/IPMNET/menuitem.81e6e0d2a64366a067b0c1108380e1a0/](http://www.ktnetworks.co.uk/epicentric_portal/site/IPMNET/menuitem.81e6e0d2a64366a067b0c1108380e1a0/)

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Energy expert says crops seen inefficient as biofuel

Thu Jan 5, 2006 11:47 AM GMT

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OXFORD (Reuters) - Waste products make a better biofuel than traditional British crops such as rapeseed and grain because of the energy it takes to grow them, a former chairman of Shell Trading and Transport said on Thursday.

"The attractive thing about waste is that it represents a problem," Lord Oxburgh told reporters at the annual Oxford Farming Conference.

He said rapeseed and grain required fertiliser inputs, effectively negating much of the savings they might otherwise provide when changed into biofuels.

"You really have got to think very hard about the amount the energy that goes into producing your biofuel," he said.

"I think if they (British farmers) grow the same crops in the same way, it probably won't work," he told reporters.

Lord Oxburgh pointed to the production of ethanol from waste straw in Canada as one example of a project which was energy efficient and had environmental benefits.

By way of contrast, he said the most expensive method was being employed in the United States using maize, which consumes an enormous amount of energy before being turned into fuel.

"You put in nearly as much energy into producing energy than you get out of it. It doesn't actually make a lot of sense," he said.

Britain announced late last year plans to increase use of biofuels over the next few years and British farmers hope that domestic rapeseed oil will be used to produce biodiesel and surplus wheat to make bioethanol.

Lord Oxburgh said if Britain imported biofuels from palm oil produced in recently cleared rainforests in southeast Asia there could be adverse environmental impacts.

"There isn't one solution for the whole world," he said.

<http://www.abc.net.au/news/newsitems/200601/s1542971.htm>

**Last Update:** Friday, January 6, 2006. 1:32pm (AEDT)

## **Timber plantations have mixed environmental effect: study**

The CSIRO says a global study shows timber plantations have a mixed effect on the environment.

While the plantations can help to counteract greenhouse gas emissions, they can also stop river flows and increase salinity.

Dairy and sheep farmers in the Green Triangle area of Victoria and South Australia say they have noticed water run off onto their properties has been reduced, when timber plantations are established nearby.

The CSIRO's Dr Damien Barrett, who contributed to the study, says all countries need to think carefully about where timber plantations are established.

"What we found was that about 10 years after extensive establishment of plantations, on average about one in eight of the streams had dried for one or more years," he said.

"And after 20 to 25 years the run off from streams in those plantations had decreased by about a half."

<http://news.bbc.co.uk/2/hi/science/nature/4605398.stm>

'Doomsday' seed bank to be built

**Norway is planning to build a "doomsday vault" inside a mountain on an Arctic island to hold a seed bank of all known varieties of the world's crops.**

The Norwegian government will hollow out a cave on the ice-bound island of Spitsbergen to hold the seed bank.

It will be designed to withstand global catastrophes like nuclear war or natural disasters that would destroy the planet's sources of food.

Seed collection is being organised by the Global Crop Diversity Trust.

"What will go into the cave is a copy of all the material that is currently in collections [spread] all around the world," Geoff Hawtin of the Trust told the BBC's Today programme.

Mr Hawtin said there were currently about 1,400 seed banks around the world, but a large number of these were located in countries that were either politically unstable or that faced threats from the natural environment.

"What we're trying to do is build a back-up to these, so that a sample of all the material in these gene banks can be kept in the gene bank in Spitsbergen," Mr Hawtin added.

The Norwegian government is due to start work on the seed vault next year, when it will drill into a sandstone mountain on Spitsbergen, part of the Svalbard archipelago, about 966km (600 miles) from the North Pole.

Permafrost will keep the vault below freezing point and the seeds will further be protected by metre-thick walls of reinforced concrete, two airlocks and high security blast-proof doors.

The number of seeds and types of plants in the bank would be determined by the countries wishing to use it.