

PUBLIC SYMPOSIUM
UNIVERSITY OF SYDNEY

**Towards an Ecologically Integrative Climate Paradigm
Re-Coupling Carbon and Water Cycles**

If international climate negotiations are locked in a serious conflict between the affluent global North versus 'developing' South, Australian climate policy is deadlocked by a superficial political contest between political Right and Left. Moreover, in Australia 'economic solutions' like taxes or trading are being proffered for 'ecological problems'! This can achieve little on the ground - since economics and ecology deal with two different orders of reality. A higher level of public eco-literacy will be critical for sound climate policy.

Meanwhile, the press often plays the climate crisis as a highly antagonistic two-headed controversy between position 1 - denialists who argue that human impacts on climate are negligible, and position 2 - believers who argue that human impacts are significant and a result of carbon dioxide emissions. So far little attention has been given to a 3rd climate position, a body of scientific opinion that might help resolve many socio-political tensions by cutting to the real 'ecological bottom line'. As Michal Kravcik one of the founders of this perspective points out: 'Land use changes and water management are interconnected with climate stability. And what is more, water evaporation is actually the most important agent of energy transformation on earth'.

At international summits like Copenhagen and Cancun, attention has been deflected from this integrative climate paradigm. But recognition needs to be given to a range of first-order climate forcings and humanly induced causes of climate destabilisation as significant as carbon dioxide emissions. These include practices associated with deforestation, agro-industry, and urbanisation. The UN climate negotiations are promoting programs such as the Clean Development Mechanism, where forests in the global South are used as 'passive' carbon sinks for pollution from industrialised countries. But as Professor Wilhelm Ripl says: 'What is overlooked is the fact that intact vegetation 'actively' helps manage the small water cycle, and keep the earth cool by converting sensible heat to the latent heat of evaporation.'

The human benefits of keeping such ecological functionings intact are enormous. And 'the real bottom line' for any society, including its economy, is ultimately a healthy ecosystem. - Our challenge is to achieve a climate politics that is at once responsive to local conditions, ecologically effective, socially democratic, and globally just.

This symposium is designed to enhance public and academic awareness of interactions between water, land, plants, and climate with a view to

deepening climate debate and policy. Central to this integrative approach, is an understanding of how water and carbon cycles are interconnected. Two international keynote speakers, Dr Michal Kravcik of the People and Water NGO, Slovakia, and Professor Wilhelm Ripl of the Technical University of Berlin, will initiate this discussion along with leading Australian science researchers and policy makers. However, getting the science right is only half the story. The complexity of natural processes is overlaid by other 'climate forcings', such as social conventions, economic power, cultural assumptions, and even the philosophy behind different scientific methodologies. Each needs to be taken account of in the search for sustainable ecologies and societies.

For this reason, the event is a transdisciplinary collaboration between the Faculty of Arts and Social Sciences at the University of Sydney, the *International Journal of Water*, and the Natural Sequence Farming Association. In addition to scientific papers, the meeting will showcase climate studies from the School of Social and Political Sciences at the University of Sydney - work in political economy, anthropology, political ecology, and environmental ethics. Two recent climate focused publications put together by academics from the School will be launched on the day - the *International Journal of Water* and the *Journal of Australian Political Economy*.

The symposium will interest university workers and students, the public service, business, unions, teachers, farmers, environmental NGOs, and the general public. The low Registration fee is set to make the event as widely accessible as possible.

Climate change is a contentious political issue and rightly so, but this event is designed for problem solving and to encourage innovative non-partisan networking. The program considers several competing analyses of, and solutions for, the crisis. Speakers and participants are asked to leave political affiliations outside the door; to listen with an open mind; to comment respectfully; and to look for common ground. The community needs broad alliances supporting direct hands-on ecological action for climate. The current reliance on economic solutions to the crisis simply obfuscates the problem.

Co-Conveners:

Ariel Salleh, Political Economy, University of Sydney
Duane Norris, Natural Sequence Farming

We acknowledge and thank the following sponsors:



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**Towards an Ecologically Integrative Climate Paradigm
Re-Coupling Carbon and Water Cycles**

9 - 5 Friday 6 May 2011 University of Sydney
International House, City Rd near Cleveland St

9.00 Registration

Australian Waves (Eduardo Juárez Herrera: images)

9.30 Arguments for an Integrative Climate Paradigm

Chair: Duane Norris, Natural Sequence Farming Coordinator

9.40 A/Prof Clive McAlpine, Geography, University of Queensland
Land Use Impacts on Climate Change: International Research Trends

10.00 Keynote: Dr Michal Kravcik, People and Water NGO, Slovakia
The New Water Paradigm: Evapotranspiration and Climate Change

10.30 Open mike

10.45 Break

11.00 Building Ecological Knowledge on Water and Carbon

Chair: Ms Holly Creenaune, Friends of the Earth

11.00 A/Prof Willem Vervoort, Faculty of Agriculture, University of Sydney
Water, Carbon, and Sequestration: Where Are We in Terms of Science?

11.20 Keynote: Prof Wilhelm Ripl, Ecology, Technical University Berlin
Water Loss, Carbon Loss, and Landscape Entropy

11.50 Peter Andrews OAM, Founder of Natural Sequence Farming
Healing the Land by Re-Coupling Water and Carbon Cycles

12.10 Open mike

12.25 Launch:

Transdisciplinary Climate Studies at the University

International Journal of Water (ed), A/Prof Ariel Salleh, SSPS

Journal of Australian Political Economy (ed), Prof Frank Stilwell, SSPS

Launched by Prof Simon Tormey

Chair, School of Social and Political Sciences, University of Sydney

12.45 Lunch

The New Water Paradigm and Urban Design (Marco Schmidt: images)

1.30 The Centrality of Carbon in the Climate Debate

Chair: Prof David Mitchell, Institute for Land, Water and Society, CSU

1.30 Prof Brendan Mackey, School of Environment and Society, ANU
Why Australian Forest Ecosystems are Good Carbon Buffers

1.50 Carolyn Currie, Public-Private Sector Partnerships
Carbon Trading Does Not Work: How about a Carbon Swap Bank?

2.10 Dr Stuart Rosewarne, Political Economy, University of Sydney
Social and Economic Contradictions of Carbon Pricing

2.30 Open mike

2.45 Break

3.00 Perspectives from Ethics, Anthropology, Political Ecology

Chair: A/Prof Ariel Salleh, Political Economy, University of Sydney

Panel:

3.00 Prof David Schlosberg, Government, University of Sydney
Climate Change and the Tools of Environmental Justice

3.15 Prof Linda Connor, Anthropology, University of Sydney
Miners, Farmers, Mothers, and Climate Politics in the Hunter Valley

3.30 A/Prof James Goodman, Social-Political Sciences, UTS
Competing Priorities: Global climate policies versus local livelihoods?

3.45 Prof Andrew Biro, Political Science, Acadia University, Canada
Water, Climate, and the Production of Scarcity

4.00 Open mike

Re-Coupling Water and Carbon Cycles: Jobs for Ecosystem Integrity

Chair: Prof Max Finlayson, Institute for Land, Water and Society, CSU

Informal panel and open mike:

4.15-5.00

Dr Michal Kravcik, People and Water NGO, Slovakia

Dr Paul Sinclair, Australian Conservation Foundation

Major General Michael Jeffrey, Outcomes Australia

Dr Pat Ranald, Australian Council of Trade Unions

Prof Wilhelm Ripl, Technical University of Berlin, Germany

5.00 Reception

The conference is catered and space is limited. Please email Duane Norris
<duane@nsfarming.com> to confirm your intention to attend.

Registration is at the door - corporate \$80, waged \$50, student \$10.

Early settlement of the continent by people with European cultural assumptions disrupted established interactions of water, soil, and plants resulting in lost fertility. Moreover, agricultural practices such as clearing, burning, ploughing, draining, and irrigation, have implications for global warming. Soils hold twice as much carbon as the atmosphere, and three times as much as vegetation. But carbon in exposed soil oxidises releasing CO₂ into the atmosphere.

Duane Norris & Peter Andrews, *International Journal of Water*, No. 5

By the logic of the New Water Paradigm, it is deforestation, industrial agriculture, and urbanisation that determine climate by draining land, so that more solar energy re-enters the atmosphere as sensible heat, rather than latent heat of evaporation. Human made 'hot plates' lead to irregular precipitation and other climate destabilisation effects, but these can be mitigated through rainwater conservation and re-vegetation. This integrative paradigm combines the management of climate, water, biodiversity, and land, with implications for agriculture, forestry, engineering, urban design and regional planning.

Juraj Kohutiar & Michal Kravcik, *International Journal of Water*, No. 5

Under natural conditions order is created by interactions between water, temperature, chemical gradients, ground surface, and organisms. However, in the 'developed' landscape, order is replaced by randomness ... [In the healthy ecosystem] dissipative structures balance terrestrial and aquatic ecosystems, returning short water cycles to the atmosphere. This ecosystem integrity benefits food production as well as climate.

Wilhelm Rippl, *International Journal of Water*, No. 5

In the interests of not frustrating the growth objective, not only are polluters rewarded for their polluting activities, capitalising on the costs they have imposed on others, but a whole raft of rent-seeking and revenue-making opportunities is presented ... Carbon capture and storage transforms the spent resources of depleted oil and gas reserves into valuable assets, and carbon trading promises to foster an extraordinary expansion in carbon futures and derivatives trade, while the forests of the South are transformed into sequestration sites to help the polluters of the North avoid any meaningful engagement in meeting emissions reduction targets.

Stuart Rosewarne, *Journal of Australian Political Economy*, No. 66

'Power to the People Building Sustainable Jobs in the Illawarra', made no mention of the global warming impacts of steel manufacturing or coal mining ... The architects of Australia's NGO red-green alliance, the ACF's Don Henry and the ACTU's Sharan Burrows ... advocated expanded industries, including 'mineral wealth', on the back of environmental technologies ... [Astonishingly] the Green Jobs Illawarra Report to the State Government argued that coking coal was the key element of 'green industry infrastructure'.

James Goodman, *Journal of Australian Political Economy*, No. 66

Many community actions are not overtly political ... and most participants would reject a cultural or political identification as 'environmentalist' (or 'greenie', which is used as a very negative epithet). But there is a significant broadening of discourses about land, nature, water and 'the environment', even among people for whom 'climate change' is an alien word.

Linda Connor, *Journal of Australian Political Economy*, No. 66

Getting the science right is a necessary condition of planetary survival, but it is not a sufficient condition. Taking action to reduce climate instability will mean coming to terms with - the respective roles of business-as-usual and the climate justice movement - the reliance on reductionist scientific models by governments and agencies - the modernist faith in technological solutions for ecological problems - the externalisation of risk on to those without a political voice - the lack of class, race and sex-gender reflexivity among decision-makers. The media will be critical to moving beyond the feel good macho clash between sceptics and believers.

Ariel Salleh (ed), *International Journal of Water*, No. 5

