

SUSTAINABILITY SPEAKING

No 4 Winter 2011

Climate change is real and action is needed to build a clean energy future



Geological site Little Bay

EVIDENCE AT KOOLOORA'S BACK DOOR

The Little Bay site next door to Kooloora is of very high biogeographical significance. It is the only site containing peat of the Miocene age (22million years BP) known on the coast of New South Wales. This peat contains evidence of past climatic conditions and vegetation. In the early Miocene the sea level was approximately **26 metres higher** than today – a level that would put the Prince Henry Community Centre site under water. The pollen assemblage represents rainforest growing in a wet climate with no dry season. The dominant pollen type is the Southern Beech (Nothofagus) which is now found growing only in New Guinea. Other species include the Wollemi Pine, now only



found in the Wollemi National Park north west of Sydney.

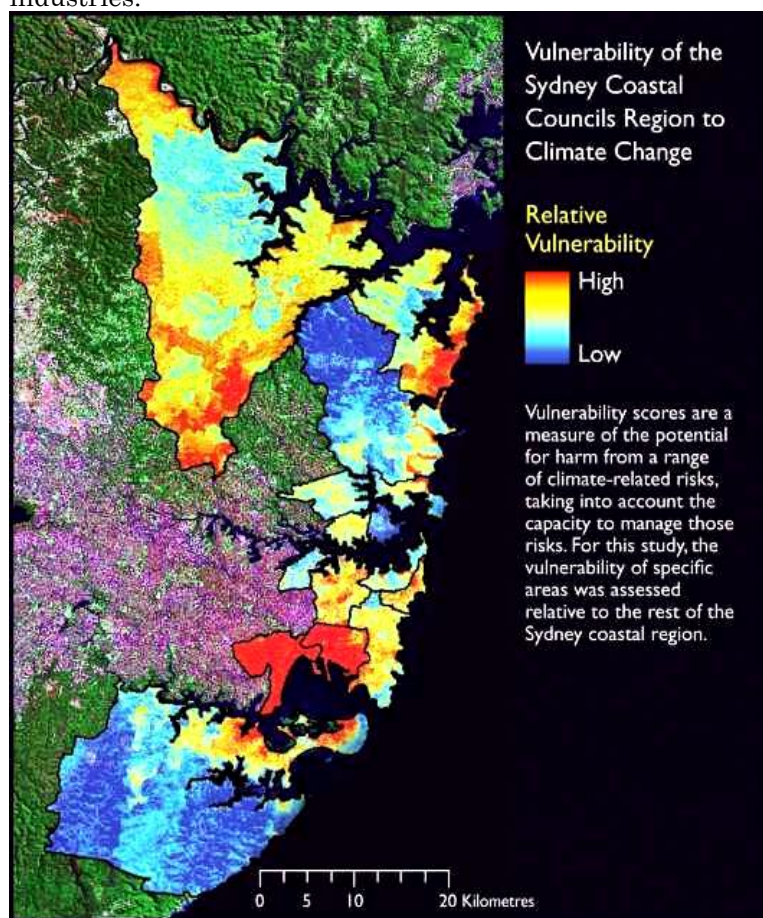
Over the past 2.4 million years, the Age of Man, Australia has become drier and hotter. It is now the driest vegetated continent on Earth dominated by two plant genera - acacias

and eucalypts. Years of drought may be punctuated by floods but the long term forecast is for higher temperatures. Australia recorded its warmest decade from 2001 to 2010. The consensus among climate scientists is that the warming is being accelerated by human impacts hence the need to move to lower impacting lifestyles.

“We would be foolish indeed to ignore the accumulated scientific evidence that mankind’s behaviour has contributed to the process of global warming ... Australia will continue to lead internationally on climate change, globally and in the Asia-Pacific region. Not in a way that lectures and moralises, but in a way that builds support for global action to tackle this enormous global challenge ...” John Winston Howard, announcing his emissions trading scheme in a speech to the Liberal Party federal council in June 2007.

Time is of the essence. Rising sea levels threaten this region in particular. In 2008 the CSIRO published a map of the Sydney Basin showing the area around Port Botany and Sydney Airport at the highest level of vulnerability. This was

measured on the potential for harm from a range of climate-related risks. While there are more glamorous areas of Australia under threat, such as the Great Barrier Reef, the impact there would be of small consequence compared to the loss of Port Botany, Sydney Airport and surrounding industries.



PRICING CARBON

So you think you know where greenhouse gasses come from. So did "Geoff", a creation of the British economist Tim Harford who wrote about Geoff in his book *Adapt*.

After seeing *An Inconvenient Truth* Geoff decides to take action. He starts the next day, as usual, "filling the kettle for a coffee". "But then he remembers the kettle is an energy-guzzler, so he has a cold glass of milk instead. He saves more by eating his usual two slices of bread untoasted."

But after analyzing Geoff's day, Harford notes it wasn't so successful.

"Let's start with the milk, which requires a critical piece of equipment to manufacture: a cow. Cows emit a lot of methane. And methane is a more potent greenhouse gas than carbon dioxide: in producing about 250 ml of milk, a cow belches 7.5 litres of methane, which weighs about five grams, equivalent to 100 grams of carbon. Add all the other inputs to the milk and the 250 ml that Geoff drank produced the equivalent of about 300 grams of carbon dioxide. By not boiling his kettle he saved only about 25 grams of carbon dioxide. His first planet-saving decision, eschewing a coffee in favour of a glass of milk, increased his greenhouse gas emissions by a factor of 12. Dairy products are so bad for the planet Geoff would have done better to toast his bread but not butter it, rather than buttering it but not toasting it."

Harford's point isn't that we are ignorant it is simply that our brains aren't powerful enough to do all the calculations. It is for that reason, he argues, that we need the market system - a "vast analogue cloud computer, pulling and pushing resources to wherever they have the highest value".

Imagine, he says, a tax on emissions. At \$14 per tonne, it would lift the price of an electricity kilowatt hour "by about 1½ cents if the energy came from coal, but only by three quarters of a cent if it came from natural gas, creating a small incentive to use less electricity and for power companies to build natural gas instead of coal-fired power stations".

"Geoff wouldn't have to point his smart phone at any barcodes," he says. "He could just look at the price. Every decision maker, from the electricity company to Geoff himself would be given an incentive to reduce their carbon footprint using whatever tactics occurred to them."

According to Harford, our economy – and its emissions of carbon dioxide and methane – is nothing more and nothing less than the sum of all the everyday decisions we make as consumers, producers, entrepreneurs and the rest. If the economy must change, those decisions must change. We could do nothing and hope that climate change turns out to be manageable which is the current policy. Or we could allow the Government to tell us what light bulbs we can use, how many flights we can take, or whether our cappuccinos should be made with UHT milk. That bureaucratic approach is not appealing when you add up all the flights and light bulbs and cappuccinos in the country, reflect on the intricacies of their production and the subtle trade-offs that inform our choices to do this or buy that. Our Government doesn't have sufficient information to make our choices for us.

The most efficient way to approach the problem is to set a price for carbon. The carbon price would influence every decision we make, nudging us towards consuming in less carbon-intensive ways.

Harford makes the same point as the Productivity Commission. He also comments on an opportunity unique to Australia:

"If there was some way to reduce the methane being belched out by cows and sheep - almost a tenth of the total gas emissions - that would be a huge achievement," Harford says. "Australian scientists have realised that kangaroos don't emit methane and are now trying to figure out how to get kangaroo-gut bacteria into the stomachs of cows. It may be a blind alley. It may not. But a proper price on greenhouse gases would encourage every path to be explored."

"NEVER DOUBT THAT A SMALL GROUP OF THOUGHTFUL, COMMITTED PEOPLE CAN CHANGE THE WORLD. INDEED, IT IS THE ONLY THING THAT EVER HAS" - Margaret Mead

The Goldman Environmental Prize is a prize awarded annually to grassroots environmental activists, one from each of the world's six geographic regions. The prize includes a no-strings-attached award of US\$150,000 per recipient. This year's European winner is Ursula Sladek of Schönau, Germany, a small town of 2,500.



Ursula Sladek created her country's first citizen-owned renewable power company in response to the Chernobyl melt-down in 1986 and Germany's reliance on nuclear energy.

As a mother of five she was extremely concerned about the affects of nuclear radiation. Following the Chernobyl disaster her community was advised to stay indoors, to not drink milk, and to this day to not eat mushrooms from the forest or wild boar. Seeking alternatives to nuclear energy Ursula formed Parents for a Nuclear Free Future and initiated energy saving contests in her town. The owner of the local power company felt threatened and said that he was in business to sell energy, not save energy. Ursula realized that big changes would require not only renewable energy but that the power must rest in the citizens' hands.

Ursula has gone above and beyond to create a healthy alternative. Ursula wasn't an expert in energy. In fact, she jokes that all she knew about electricity was that it came from the power sockets. But she knew something needed to change so she took it upon herself to learn everything about energy plants and policy. Most importantly she utilized the power of community to get the job done. The 10 year project included taking over the local grid and providing sustainable renewable energy such a wind, solar and hydro power. Ursula claims that their model is "the only way to solve the energy problem. The only solution is renewable energy." EWS now serves over 110,000 homes and businesses in Germany. Though German regulations required EWS to incorporate in order to claim ownership of a power grid, the company operates more like a nonprofit that prioritizes the

environmental and social benefits of its work rather than its profits. The company has 1000 cooperative owners who receive small dividends each year, while the majority of the company's profits go into investments for more renewable energy production facilities and outreach efforts that have helped several other towns in Germany set up their own community-owned energy companies. To date, the company has grown annually, with total sales reaching 67 million Euros in 2009.

*Come gather 'round people
Wherever you roam
And admit that the waters
Around you have grown
And accept it that soon
You'll be drenched to the bone
If your time to you
Is worth savin'
Then you better start swimmin'
Or you'll sink like a stone*



For the times they are a-changin'!

Bob Dylan 1963

THE BOTANY BAY AND CATCHMENT WATER QUALITY IMPROVEMENT PLAN -recently published - makes key recommendations including:

5.1.1.2 (Australian Government) Sets up a specific funding program to implement actions listed in the Botany Bay & Catchment WQIP, possibly via a devolved grants program,

5.1.2.4 (NSW Government) Ensures any new government policies or plans developed for, or will have an impact on, the Botany Bay Catchment meet the Plan's water quality targets and are consistent with its objectives,

5.1.2.5 (NSW Government) Ensures that land/infrastructure/facilities under its control (including ports, roads and rail) minimise their negative impacts on water quality,

5.1.2.11 (NSW Government) Ensures Sydney Water continues to improve the overflow performance of its sewer systems throughout the Catchment. Particular attention should be given to the sensitive waterways of the Upper Cooks River Catchment and the Upper Georges River Estuary,

5.1.3.8 (Local Councils) Ensure new or renewed local council infrastructure (i.e. roads, drainage, car parks, buildings, footpaths, bike paths, etc.) are designed from a WSUD perspective and meet the stormwater pollutant load reduction targets, to minimise impacts on waterways,

5.1.3.13 (Local Councils) Engage with and support local communities implementing actions consistent with the Botany Bay & Catchment WQIP,

5.1.6.3 (Private Households and Businesses) Take actions on their own properties that support the load reduction targets for the Catchment. These might include things like installing rainwater tanks, permeable paving, rain gardens (small household-scale bioretention systems) etc.,

HENRY HEAD TO CAPE BANKS WALKING TRAIL



is currently being established with a \$95,000 grant from Orica, pledged in 2009.

50th ANNIVERSARY OF VICKERS VISCOUNT BOTANY BAY CRASH



Wreckage of Ansett Airlines Vickers Viscount aircraft recovered from Botany Bay 1961/62. This airliner crashed

into Botany Bay on November 30, 1961, close to the site of the subsequent runway extension into the Bay. The airliner lost a wing and part of the tailplane and then probably went into a violent roll. It hit the water at an estimated 450 miles an hour. The wreckage took over 3 months to recover and pieces were found kilometres away on the southern side of the bay. 15 people died in the crash. The most notable results of the subsequent investigation included the requirement for airline aircraft to be equipped with weather radar, which would enable the pilots to negotiate hazardous weather more safely. It also gave rise to an operating arrangement called JACMAS or Joint Air Traffic Control and Meteorological Air Service.

GOOD NEWS FOR BOTANY BAY - GREATER FOCUS ON POLLUTION, INAPPROPRIATE COASTAL DEVELOPMENT AND INTRODUCED SPECIES AND DISEASES

In a recent media release concerning Marine Parks, May 25, the Environment Minister, Ms Robyn Parker, stated that “Labor’s bandaid measures fell short of addressing the real issues, and there must be a **far greater focus on addressing threats such as pollution, inappropriate coastal development and introduced species and diseases.**”



Artificial Reefs ready for installation in Yarra Bay.

COUNCIL PROPOSES RE-ZONING OF CHINESE MARKET GARDENS IN DRAFT OPEN SPACES LEP

CHINESE MARKET GARDENS – 1-19,21-39 Koorooera Ave, 1002-1100 Bunnerong Road & 1R Koorngai Ave – Council recommendation: Due to its uniqueness in terms of local food production, biodiversity, heritage and scenic values, the site is **proposed to be rezoned RU4 Primary Production Small Lot** to preserve the primary agricultural use on the site, while protecting the State significant heritage and scenic character of the land.

Lynda Newnam, June 2011 - www.laperouse.info