

TREE

Tweed River Environmental Echo
Newsletter of The Caldera Environment Centre



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50c or free



***Water Wise * They're Fracking where? * How the Rally came and went * Byrrill Creek Update * A Biosphere Reserve * Stirring the Calderan * How the Tweed will cope with Climate Change * Working with Nature * Climate Denial Tweed Style * Captain Sage**

EDITORIAL



In the Tweed Valley it can be disheartening that the battle to protect what we love is so unrelenting. The work is never done and it seems that unlike other regions we can never sit back and relax, safe in the knowledge that the incredible beauty and biodiversity of the area will be okay.

Some of us may dream of moving to a region where what we value is cherished by everyone, including those in power. Is there such a place? Oh well. We are in the incredible Tweed and naturally want to protect it. So therefore we find ourselves standing up to continuous waves of greed, thoughtlessness and outright destruction in many forms - Car races through the rainforest, Deathly dams in biodiversity hotspots, Developments threatening to turn us into the Gold Coast and pushing out our wildlife and so on and so on. Now we can also add Fracking - a gas exploration and mining process which threatens water supplies.

So we do all this campaigning because we are familiar with the area. Many of us have travelled and some of us have come from other places so we know how special it is here. Because of this we feel like we have to do something. And we do it unpaid, in whatever free time we have. In return many environmental campaigners get attacked and vilified. We get accused of doing it because we have big egos when really standing up for what we love is as natural an action as a mother standing up for her child. Sometimes we even get arrested or even sued. The recent news of developer Bob Els suing our local hero Katie Milne is beyond belief. Katie has literally dedicated her life to preserving some of this paradise for future generations and in return she gets sued by one of the richest and most powerful men in the country, and faces the prospect of living her life in debt. And in case you think this couldn't possibly be successful, think

of Greens MLC Ian Cohen, recently sued for 1 million for something he said at a community event.

No doubt this kind of thing puts a lot of people off taking any action to stand up for their environment, but for some of us it still turns out to be better to do something than nothing. Despite the many sacrifices and disappointments there are rewards. Sometimes we have a win, as in the case of the Unpopular Rally, or with the Byrrill Creek dam. Besides this we can feel good about how we spend our time. It's meaningful. It matters deeply. We make fabulous connections with other people who care, and can really feel a part of a community. The work we do is also often appreciated. Michael McNamara reflects upon the many people thanking him and others who stood up to the Rally in his article. Just the other day a guy from work told me how he thought it was great that I was involved. "If you guys weren't around", he said, "there would be nothing to stop the place looking like one big parking lot".

And beyond the Tweed Valley the work that needs doing is almost crippling in its immensity. Mother nature is literally screaming out for help at the moment on an all too frequent basis. Her current communicating medium of choice is natural disasters and extreme weather events - One on top

of another. Some of the largest floods in Australian history, the largest and most powerful cyclone to hit Queensland in living memory in the same 12 month period as the worst wild fires in Russian history along with their all time highest ever recorded temperatures, all time snowfall records for Baltimore, Wilmington, Philadelphia, Atlantic City and Washington in the US, record flooding in Tennessee, Pakistan, Record droughts in the Amazon, and so on. The latest figures from both NASA and the US National Oceanic and Atmospheric Administration have 2010 tied with 2005 as the "Warmest Year on Record". Climate deniers will say that local extreme weather events are not uncommon, but when it's happening all over the world at such great rates??

Mother nature seems to be trying her very best to wake us all from our slumber. The message to me seems to be "please work with me rather than against me" but we still have the prominent mindset of 'nature is to be controlled and used'. This is the mindset that puts dams on natural waterways and thinks it can develop on flood plains and 'conquer' the bush in a rally car, and burn billions of tons of fossil fuels with no effect. Fortunately a lot of us are 'waking up' but there are very powerful and greedy forces at work trying to ensure we do not.

This edition of TREE edited by Judy Oakenfull and Christine Moore

Cover Photograph of Byrrill Creek by Megan Jack

*Submissions for the next edition to:
tree@calderaenvironmentcentre.org*

ANNUAL REPORT FROM CO-ORDINATOR 2010-11

1. Major Developments at Cobaki and Kings Forest

•Both developments approved by state government - Caldera Environment Centre sponsored the EDO (Environmental Defenders Office, Lismore) to investigate the possibility of legal shortcomings by Leda Developments concerning Part 3A of the EPBC Act 1999.

•No joy for Kings Forest or Cobaki. Still under investigation.

•Serious storm water/siltation problems impacting on salt marsh communities in Cobaki Lakes. Huge earth moving and clearing. Manmade lakes axed. Environmental mitigation measures a joke. Blatant non-compliance. Massive increases in density.

•Wildlife corridors/reserves at Kings Forest include pathways used by pedestrians and bicycles. Koalas are expected to follow these pathways and "negotiate" a number of pedestrian crossings over major roadways. Wildlife habitat includes the golf course, (of course). No sustainability design measures initiated.

2. Byrrill Creek Hotspot

•The Rally has moved to Coffs Harbour

•BUT Byrrill Creek Dam proposal voted for on 3-3 basis. Larger option favoured by three pro-development councillor's; with the Mayor Mr Kevin Skinner using his second vote, to vote for the dam twice, bringing it to a 3-4 outcome.

•Minister for Water, Mr Phillip Costa, maintains prohibition on Byrrill Creek for 'Water Sharing Plan' for Tweed Shire on environmental grounds.

•Will a Coalition government move to rescind development ban?

3. Local Environment Plans - Shirewide and Tweed Heads

•Some respite for Rural Land. Development restrictions using 'steep lands' criteria concerning maximum slope gradients for mapping overlays.

•High Rise proposed for Tweed Heads along Wharf Street.

•Medium Rise for South Tweed Heads and South Murwillumbah, still uncertain because of flooding problems and access by emergency services (SES).

4. Community Strategy Plan

•Consultation by Mr Graham Samson, University of Technology, Sydney, good/adequate but Report by Council 99% actual process and 1% about outcomes concerning community attitudes.

•Environment and Population - two major issues concerning public but no policy redirection or response from council. No detailed or specific action plans.

•Fourth objective named "Civic Leadership", should be renamed "Transparent Governance".

5. UNESCO'S World Environment Day and Biosphere Reserve Projects

•Last year's "Biodiversity" themed event, probably the best so far. Thanks to all volunteers.

•This years "Forests" theme World Environment Day event, to be part funded by Tweed Shire Council, as in recent years. We plan to follow a strictly environmental theme.

•"Border Ranges Biosphere Project" to be considered by Council along with "Border Ranges Rainforest Biodiversity Plan", early in the year.

•Possibility of engaging other public and Local Government Agencies at official and grassroots levels for major presentation and combined offensive to Federal Government level.

6. Election of a conservative state government

This looking very likely in March and probably of "landslide" proportions. Part 3A may be repealed but town planning policies will probably become even more favourable for developers. Urban Sprawl and development of greenfield sites will be favoured over urban consolidation. Please help the campaigns of Greens candidates Sue Stock in Lismore and Andrea Vickers for Tweed. Legislative council (upper house) representation is worth fighting for.

7. Mining

The fracking issue of coal seam gas extraction is beginning to hot up and will be with us for the long haul. A good film on the subject is "Gaslands". Funny how things invariably seem to go from bad to worse There seems to be no political will to tackle global warming which has been relegated to the too hard basket.

8. Web

Email and website for the caldera under further development with most input now coming via Kim Hollingsworth. Thank-you Kim.

Paul Hopkins (Hop.e)
Co-ordinator,
Caldera Environment Centre

How the Rally came and went

by Michael McNamara

Public Officer of Northern Rivers Guardians and former President of No Rally Group



For anyone who didn't know, the Repeco Rally has been chased out of the Tweed Valley and Kyogle areas. Late last year organisers decided to move the rally to Coffs Harbour.

While this is no great win for the environment generally it is a very significant win for the residents and environment of the Far North Coast.

As far as I know this is the first time anywhere in the world that a World Rally Championship venue has been moved because of local opposition.

Our community based struggle to rid the area of this horrid little event started in February 2009.

Sometimes when I look back on our struggle I am reminded of the Lord of the Rings trilogy - a small diverse band of travellers on a quest to defeat the forces of evil. I also think of the old Dungeons and Dragons role playing game where each player collected skills and weapons along the way and used them to best effect.

The No Rally Group was a bit like that.

The rally brought together a diverse band of local residents opposed to its imposition on this area. Each came with their own reasons, skills, abilities, interests and experience.

Each member of the group put them to good use.

Jenny Pearson (Janaki) called the first public meeting at Uki in February

2009. It drew about 100 people from all over the Tweed Shire.

From that meeting the No Rally-Group grew. So did the opposition and the conviction that we would win.

I had come from a background of trade union and community activism that was very structured. The No Rally Group blew me away. It was anarchy in action - but it worked. We were a beautiful rabble.

The day Julie and I got married was the day of the first protest at Kingscliff. We were unable to attend and everyone was worried that there would be a small turnout.

Sledge and Danielle arrived for our wedding at about 4:30pm and told me that there had been over 200 people at the protest. It was a great success! I told Julie as we leant in to each other at one point in the ceremony. Some guests are still wondering why, in the middle of the wedding ceremony, she turned to Sledge and Danielle and gave them a big two handed "thumbs up" and the biggest smile.

Judy's "Dinosaur" poster is another memory. That dinosaur really got under the organisers' skin.

Many other memories of an absolutely hectic 20 months flood back as I write this - memories of the actions and absolute commitment of the members of No Rally Group:

- the march through Murwillumbah in May, full of noise, colour and passion, in which Rainer was made up as a rally car. He seemed to be having too

much fun for a protest as he zipped here and there in his wheelchair!

- numerous addresses to the Tweed Shire Council's Community Access sessions by various NRG members

- countless letters to anyone and everyone from anyone and everyone

- endless research (especially by Cloud, Jules and Wendy) to make sure that we were presenting factual and soundly based information

- the inspirational speeches in state parliament by Dr Gordon Moyes and the Greens MLCs in the debate on the state government's special legislation to allow the rally to proceed

- the picture in the Tweed Daily News of our "delegate" on the steps of the FIA building in Paris as she delivered a 1.5kg package of documentation from us about the rally and why it should not run here. (The efforts of Andrea, Megan, Liffy and Menkit to get the package organised in a very short timeframe were stunning)

- the sight of police emerging from a bus (parked illegally) at the Uki protest with full riot gear, including shields. Thankfully someone in the police ranks had the sense to tell them to put their toys away.

As with any group we had our ups and downs. One day we would be convinced the rally had been defeated only to have our dreams shattered the next.

We had our internal frictions and disagreements. Members joined and

others resigned, including me at one point.

Through it all the commitment by everyone involved in the struggle was unflinching.

An important factor in our success was our vigilance and our capacity to respond to anything put out by the rally organisers. If they stuck their heads up – we kicked them.

Another critically important factor in our success was that, I believe, we really did represent majority community opinion. This was demonstrated through the response to our petitions and the Daily News online polls. I don't think we ever "lost" one of those polls.

That broad community support is also shown by the number of times I have been stopped in the street by strangers who just wanted to say "Thank You", not just to me but to all who opposed the rally.

The false media stories about rock throwing at Byrrill Creek were designed to discredit us but eventually worked in our favour. The Daily News and other media outlets had to run apologies and corrections after re-running the claims some months later. They had ignored a definitive statement at a public meeting in front of 180 local residents by the Relieving Police Local Area Commander that "Let me make this very clear. It did not happen!"

I won't go over the protests during the running of the rally in detail. I do recall a sense of fun and camaraderie, including from people I had never seen before and some who I knew from other contexts.

I believe that one of the key strengths of No Rally Group (and subsequently of Northern Rivers Guardians) was a capacity to see and articulate a "bigger picture" relating to sustainable and appropriate development in the Northern Rivers.

This article is far from a definitive history of the successful struggle against the rally. It represents some of my impressions. It is for others to write a more detailed account – and I hope they do.

When they do – it will be a story of right against might, of a community standing up for itself in support of its core values and beliefs.

It will be a story of ordinary people achieving extraordinary outcomes.

I will be forever grateful for the privilege of being involved in that struggle and look forward to being involved in the positive efforts of Northern Rivers Guardians to achieve a truly sustainable community in the Northern Rivers (especially the Tweed Valley).

I invite you to join me.

BYRRILL CREEK UPDATE

KEVIN SKINNER and other pro development councillors are still campaigning heavily for a dam at Byrrill creek, despite the Minister for Water maintaining the prohibition on the dam in the 'Water Sharing Plan'. A review by environmental consultancy firm GeoLINK has concluded the shire has plenty of water compared to other parts of Australia, and cheaper water options would make the dam unnecessary, but this has not convinced them either. If the Council continues on this path the Byrrill Creek Dam could go through a part 3A Process, through the Department of Planning, which can over ride the WSP recommendation. The CEC encourages members to continue lobbying council on this issue, and to be sure to ask all NSW election candidates their position on Byrrill Creek.



Murwillumbah Anti Rally Rally May 2010

THEY'RE FRACKING WHERE?

Fracking is a process of creating fractures in rocks deep below the earth's surface in order to stimulate gas flow for mining.

Millions of gallons of water, sand and chemicals are injected under high pressure, which fractures the shale, and props open fissures that enable the gas to flow freely. Some kinds of fracking use up to 596 chemicals and millions of gallons of water per frack, which becomes contaminated and must be cleaned and disposed of. The problem is that a lot of this water mix stays underground and can leach into local water supplies, as shown in the film *Gaslands*.

The Film (recently screened at the Regent in Murwillumbah by the Tweed Greens) shows the effect

that this process has had on rural American communities. It includes examples of people whose water became so contaminated it could be set on fire as it came out of the tap. The film also documented the terrible health problems of those unfortunate enough to drink it.

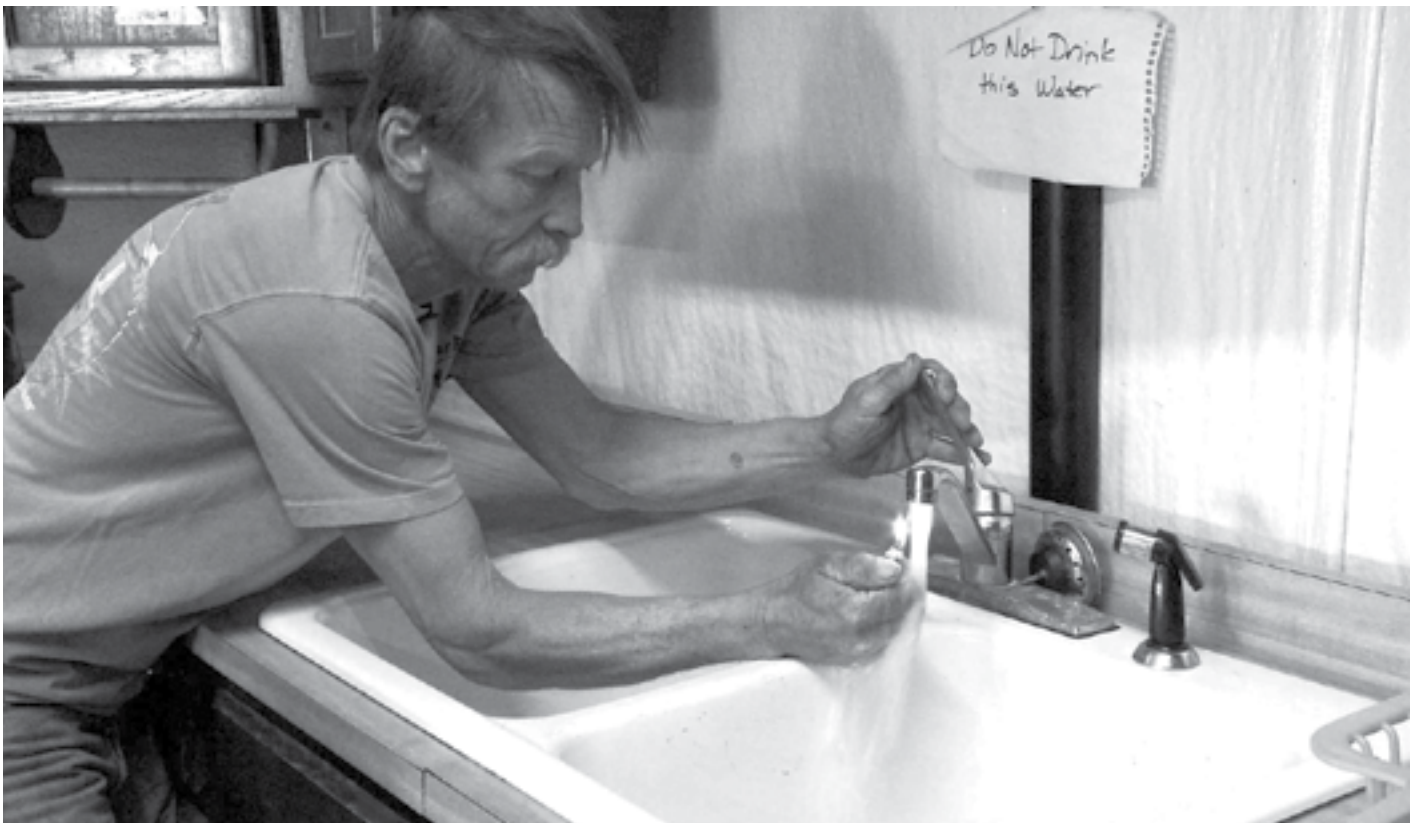
As well as the risks to water supplies and the potentially devastating effects to productive farmland there are also air quality and atmospheric risks. The volatile organic compounds used in Fracking (such as benzene) in contact with diesel exhaust from trucks and generators can degrade local air quality and produce Ozone.

And while the gas industry has been seen as a lower Carbon way to transition to a renewable economy, with about half the Greenhouse emissions of the coal industry, this view has been called into question

by Cornell University and the US Government's Environmental Protection Agency. Apparently previous estimates of gas emissions had not included a significant number of issues and had left out the effect of methane. Actual emissions were about double what they were considered to be in 2006. Methane is 72 times more powerful as a greenhouse gas than carbon dioxide and significant amounts escape into the atmosphere during the mining process.

Fracking is happening in Australia right now.

According to Sue Stock, Lismore Greens candidate, there are already 4000 coal gas seam exploration wells in Queensland. In Northern NSW there has been significant exploration near Lismore already and there are further plans for exploration across the region.



Man lights his tap water on fire in the movie 'Gaslands'

While the coal seam gas process has the potential to threaten prime farmland, so far the National Party has spoken favourably of companies involved. The SMH reported that other NSW Nationals have been busy lobbying the NSW government for support for the expansion of the industry in NSW.

Eastern Star Gas, who are involved in Fracking, are headed by former National Party leader John Anderson, and Aston Resources, also involved, are headed by another former National leader, Mark Vale.

Sue Stock says, "It will be vital to know the details of the Coalition's policy on coal seam gas mining, if as expected they come to power after the next State election in two months time. We urgently need to know the views of our local National Party representatives here in the Northern Rivers."

Whilst supporters of the industry may claim Fracking in Australia is 'safer' than in America, because we don't use the same chemicals here, a Sydney Morning Herald investigation stated that "A government list of 36 chemicals used in coal seam gas extraction in Australia includes hydrochloric and acetic acid, and naphthalene- an ingredient once used in napalm as well as more mundane items such as mothballs – and many other hydrocarbons." According to the SMH gas producers have detected toxic chemical contamination in Australian drill sites 3 times in 2010. What they found was evidence of a solution called BTEX, which contains benzene, toluene, ethylene and xylene.

Citizens concerned about Fracking say that even discounting the use of chemicals, Fracking is still a serious threat to our water supply. For example methane, salt water and chemicals already underground can also contaminate water supplies.

Information for this article taken from
Susan Stock: <http://nsw.greens.org.au/content/coal-seam-gas-update>
Courier Mail: <http://www.couriermail.com.au/news/flawed-science-fans-doubts-on-gas-industries-greenhouse-gas-emissions/story-fn7kjcme-1225995090508>
Sydney Morning Herald: <http://www.smh.com.au/environment/toxins-found-at-third-site-as-fracking-fears-build-20101118-17zfv.html>
<http://www.smh.com.au/environment/list-reveals-toxic-chemicals-used-in-coal-seam-mining-20101019-16s26.html>
Gaslands: <http://www.gaslandthemovie.com/>

LOCK THE GATE

The LOCK THE GATE Alliance is a national alliance of community, industry and environmental groups.

We are calling for a balanced and rigorous regulatory approach to police the development of the coal and unconventional gas mining industries in Australia.

Australia is being let down by deficient laws and governments which allow the unconstrained growth of those destructive fossil fuel extraction industries.

This is at the long-term cost of our water, food security and our communities. Fossil fuel extraction has a detrimental effect on the health of people and the environment.

An undemocratic process has disenfranchised the Australian people.

Enough is enough!

Australian citizens are the rightful custodians of this land not governments.

Australian citizens must have a voice in deciding when, where and how our resources are exploited.

Our government representatives

are elected to serve the Australian community and must be held accountable to act in our best interests.

Our governments must restore the balance between rampant short-term development of our natural resources and the preservation of the environment and quality of life for present and future generations of Australians.

We are calling for:

1. The immediate establishment of a Royal Commission to investigate all impacts of the coal and gas mining industries, to advise on reparation of damage done and to define a robust and balanced framework under which they will be governed.

2. An immediate Moratorium on all coal mining and all unconventional gas mining (including coal seam, shale and underground coal gasification) approvals until a robust legislative framework is in place.

3. The introduction of groundwater preservation requirements under the Federal Environmental Protection and Biodiversity Conservation Act.

4. The elimination of fast track planning processes for the coal and gas mining industries in all State legislative Acts.

5. The introduction of comprehensive national food security legislation that prohibits coal and unconventional gas mining on productive agricultural land.

6. Local governments to have a strong active role in determining if, where, when and how these mining activities should proceed.

For more information drop in to the CEC shop or visit:
<http://lockthegate.org.au/>

A BIOSPHERE FOR OUR REGION

The Caldera Environment Centre Inc (CEC) invites local community groups and individuals to form an affiliated coalition to lobby Australian governments (at all three levels) to nominate the Border Ranges bioregion as a UNESCO Biosphere Reserve.

The UNESCO Biosphere Reserve concept provides an aspirational model/template for a worldwide web of reserves. There are currently 564 biospheres reserve sites in 109 countries worldwide, and 15 in Australia. The Border Ranges and Noosa Biosphere Reserves could provide green belt buffers/lungs at either end of the urbanized strip we call the Moreton Basin megalopolis, centred on Brisbane but including the Sunshine Coast and the Gold Coast. Approximately 250 kilometres of concrete and bitumen. Give us a break. Give peace a chance.

What is a Biosphere Reserve?

- A biosphere reserve is a unique concept which includes one or more protected areas and surrounding lands that are managed to combine both conservation and sustainable use of natural resources.
- Each biosphere reserve conserves examples of characteristic ecosystems of one of the world's natural regions, managed for their protection and study.
- It is a land and/or coastal/marine area in which people are an integral component, and which is managed for objectives ranging from complete protection to intensive yet sustainable production.
- It is a regional centre for monitoring, research, education and training on natural and managed ecosystems.
- It is a place where government decision makers, scientists, managers and

The three functions of biosphere reserves



local people cooperate in developing a model program for managing land and water to meet human needs while conserving natural processes and biological resources.

- Finally, each biosphere reserve is a symbol of voluntary cooperation to conserve and use resources for the well being of people everywhere.

How did the Biosphere Reserve concept start?

The origin of Biosphere Reserves goes back to the "Biosphere Conference" organized by UNESCO in 1968. This was the 1st intergovernmental conference examining how to reconcile the conservation and use of natural resources, thereby foreshadowing the present day notion of sustainable development. This conference resulted in the launching of the UNESCO "Man and the Biosphere" (MAB) Program in 1970. One of the original MAB projects consisted in establishing a coordinated 'World Network' of sites representing the main ecosystems of the planet in which genetic resources would be protected, and where research on ecosystems as well as monitoring and training work could be carried out. These sites were named as "Biosphere Reserves", in reference to the MAB program itself.

What are the functions of Biosphere Reserves?

Each biosphere reserve is intended to fulfill 3 basic functions, which are complementary and mutually reinforcing:

- A conservation function - to contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- A development function - to foster economic and human development which is socio-culturally and ecologically sustainable;
- A logistic function - to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.

What are the Biosphere Reserve zones?

Biosphere reserves are organized into 3 interrelated zones:

- The core area
- The buffer zone
- The transition area

Only the core area requires legal protection and hence can correspond to an existing protected area such as a nature reserve or a national park. The zonation scheme is applied in many

different ways in the real world to accommodate geographical conditions, socio-cultural settings, available legal protection measures and local constraints. This flexibility can be used creatively and is one of the strongest points of the biosphere reserve concept, facilitating the integration of protected areas into the wider landscape.

What are the benefits of Biosphere Reserves?

The biosphere reserve concept can be used as a framework to guide and reinforce projects to enhance people's livelihoods and ensure environmental sustainability. UNESCO's Recognition can serve to highlight and reward such individual efforts. The designation of a site as a biosphere reserve can raise awareness among local people, citizens and government authorities on environmental and development issues. It can help to attract additional funding from different sources. At the national level, biosphere reserves can serve as pilot sites or 'learning places' to explore and demonstrate approaches to conservation and sustainable development, providing lessons which can be applied elsewhere. In addition they are a concrete means for countries to implement Agenda 21, the Convention on Biological Diversity (for example the Ecosystem Approach), many Millennium Development Goals (for example on environmental sustainability), and the UN Decade of Education for Sustainable Development. In the case of large natural areas which straddle national boundaries, transboundary biosphere reserves can be established jointly by the countries (states) concerned, testifying to long-term cooperative efforts.

Who is in charge?

UNESCO does not require any change in law or ownership: each biosphere reserve has its own system of governance to ensure it meets its functions and objectives. The management system of a biosphere reserve needs to be open, evolving and adap-

tive in order for the local community to better respond to external political, economic and social pressure, which would affect the ecological and cultural values of the area. Hence it is necessary to set up an appropriate governance mechanism, for instance a committee or board, to plan and coordinate all the activities of all the actors concerned, each within their own mandate and competence. Usually a biosphere reserve coordinator is named as the contact person for all matters dealing with the biosphere reserve.

Who pays?

Everyone; the level of funding depends on the nature and extent of the projects and activities undertaken. Often, additional funding is not needed: existing budgets can be aligned to meet shared goals. Industry, tour operators, charitable foundations, research funding agencies, governments, local municipalities can all help. Continual support from government - even if only moral and technical - ensures good connections with national policy and international efforts related to sustainable development. UNESCO can provide advice and occasionally seed funds to initiate local efforts; these can help broker projects or to set up durable financial mechanisms.

What is the difference between a Biosphere Reserve and a natural World Heritage site?

A biosphere reserve is a representative ecological area with 3 mutually reinforcing functions; conservation, sustainable development and logistic support for scientific research and education. Collectively, all biosphere reserves form a World Network linked by exchanges of experience and knowledge. They are part of a UNESCO scientific program, governed by a 'soft law', the Statutory Framework.

Natural World Heritage sites must be of outstanding universal value in accordance with the UNESCO Convention on the Protection of the World Cultural and Natural Heritage (1972). Efforts to enhance local development and to promote scientific understanding are means to ensure the protection of the natural World Heritage values.

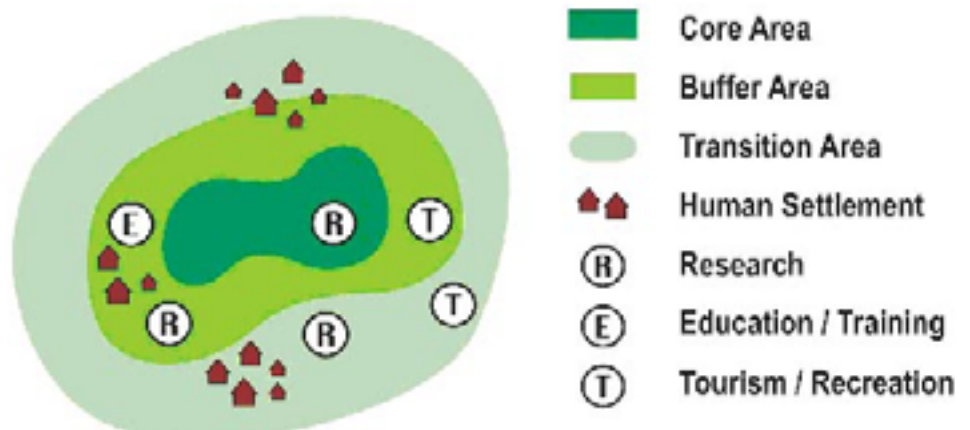
In some instances, a core area of a biosphere reserve can meet World Heritage criteria: the usually larger biosphere reserve can therefore serve as a complementary means to protect the integrity of the World Heritage site.

Please email or visit the CEC to obtain a form letter and help lobby the Government to nominate this region

For more information on Australia's Biosphere Reserves go to: <http://www.environment.gov.au/parks/biosphere/>

Drop in to the CEC Shop to pick up a form letter.

Structure of a model biosphere reserve.



HOW THE TWEED WILL COPE WITH CLIMATE CHANGE

The climate is changing and all of Australia will be affected by these changes. The Tweed is no exception. It is expected that over the next fifty years and beyond, sea levels will rise, the region will get drier, summers will get hotter and winters will have fewer frosts. Weather overall will become more variable. There is also a greater likelihood for the region to experience more natural disasters such as fires, severe storms, floods and tropical cyclones.

Frank Stadler, Tweed resident and Research Coordinator at the National Climate Change Adaptation Research Facility (NCCARF), gave a public presentation to the Tweed Climate Action Now group on 11 November 2010 where he introduced some of the major climate change impacts the region can expect and explained which adaptation options could be employed to cope with this change.

Regardless whether one accepts climate change or not, there is no denying that carefully planned and implemented adaptation has many co-benefits that extend far beyond climate change. Careful adaptation measures can increase the sustainability of human activities, make social and natural systems more resilient, contribute to food security, provide for livable cities and enhance our quality of life.

With climate change, coastal northern NSW and south-east Queensland are likely to experience more extreme storms more often. Projections also suggest that tropical cyclones will reach further south with the potential to cause much destruction in our region.

Severe storm systems, known as East Coast Lows, have caused significant destruction in the past. The latest hit the region in May 2009. East Coast Lows mainly occur during autumn and winter and bring gale force winds, heavy rainfall and flooding. They also cause heavy swells and severe coastline damage.

Sea level rise is making matters worse. Severe storms, such as East Coast Lows, usually increase sea surface height. This higher than usual sea level adds to the tidal level and the phenomenon is known as a storm tide. The narrow continental shelf off the coast means that these storms also produce large waves with devastating consequences for the sandy coast line. Sea level rise will add further to the overall height of the storm tide, with major consequences.

A recent CSIRO study of coastal inundation in south-east Queensland suggests that a 20 centimeter sea level rise will mean a catastrophic 1 in 100 year storm tide of 2.5 m at Moreton Bay, is likely to recur about every 61 years, and recur every 38 years if sea levels rise 40 centimeters.

Sea levels are predicted to rise 20 centimeters by 2030 and 40 centimeters by 2050 which means that very soon, even low intensity storms could cause significant erosion.

Because there is a high residential turnover along the coast the majority of coastal residents may never have experienced a severe storm event with coastal inundation and dramatic beach erosion.

While storm events can not be prevented, it is possible to prepare for their impact. More frequent and more severe inland and coastal flooding and coastal erosion will challenge the way we plan, develop, and protect our infrastructure and natural assets.



Conventional flood defence infrastructure such as the levy along the Tweed River in Murwillumbah is effective, but it is also costly to establish and to upgrade. It would be cheaper to avoid exposure to damage in the first place.

Options include zoning and planning measures that limit or prevent development in flood prone areas, building codes and design standards for new infrastructure and housing stock to ensure that it can handle inundation for short periods of time and clean-up is facilitated. Existing vulnerable housing and infrastructure might also need to be altered.

In order to cope with the consequences of sea level rise and greater coastal erosion all adaptation options need to be considered. This includes traditional approaches such as temporary sand bagging, longer term beach nourishment and permanent sea walls and dune protection infrastructure. However, planned retreat strategies for such properties that are simply too costly or too difficult to defend may also need to be considered.

CLIMATE DENIAL TWEED STYLE

By Judy Oakenfull

In an area with a strong National Party base, we naturally have our fair share of Climate Denial in the Tweed. It's most commonly encountered in the letter pages of local papers and 'Denialist' style conversations can often be overheard in public places

We can hear older people talking about how hot it was when they were young and this is nothing new, so therefore climate change is baloney. We can hear plenty of complaints about a price on carbon and what it is supposed to do to us. Just recently I heard someone in the context of denying climate change, saying how it was the first time in December they'd ever had to wear a jumper. In these conversations the 'weather' often gets confused with 'climate'.

Uncertainty and questioning about what's happening in our world is not uncommon and generally a great thing in a democracy. Usually we turn to reason and logic and - dare I say- Science and experts in the field to help us sort things out and work out the best course of action to take.

The problem here is that peoples' uncertainty about climate change is being fed by a multimillion-dollar campaign that is specifically designed to obscure and confuse. Also millions of dollars and the best PR companies are being employed by big energy to attack the science and thousands of individual scientists who have done the work and know what they are talking about. Often this kind of stuff is sent around peoples email networks, and can be found on thousands of blogs and websites.

Why do big energy companies do this? The heart of it is that any action governments take on climate change will most likely limit their ability to make huge profits. Big corporations have a long history of fighting tooth and nail against anything that may impede their ability to make lots of money. Historically they have fought just about everything that has the potential to threaten profits, for example

unions and anti-pollution lobbyists. More recently it is interesting to see how science itself is one of the main things under attack.

The nature of science is that it is based on objective empirical observations. The problem is that sometimes these observations show that the products corporations make money from are not always so good for us. The classic example here is Tobacco. The science on the health effects of smoking was clearly not good. This was a rather large threat to Tobacco company profits therefore they spent a fortune trying to discredit the science. Their tactics included setting up think tanks, false experts and fake 'grass roots' organizations. They used the best PR companies to cast doubt on the links between smoking and cancer. They promoted discredited scientific studies. They did stuff like predict dire economic consequences if regulation came in, and ignored cost benefits for the health system.

Over the last few decades' corporations have also challenged the link between CFCs and the ozone hole, asbestos and cancer, DDT and environmental degradation along with many other 'inconvenient truths'. By the time Climate change came around they were absolute experts at these tactics. Institutes like The Heartland Institute, The George C Marshall Institute and PR Companies like Hill and Knowlton were and continue to be heavily involved in all of this. They are largely funded by Big Corporations, though increasingly they get donations from conservative citizens as well. Here in Australia we have The Institute of Public Affairs.

In 'Merchants of doubt' Naomi Oreskes and Erik M. Conway have

written a detailed account of how these organizations work, with a focus on how they use the same discredited scientists and bogus arguments each time. She mentions Fred Singer as one name that regularly appears. In 1983, Singer argued that evidence of acid rain damage was lacking and that much acidification was natural and potentially beneficial. Singer also argued that ozone depletion was a natural variation being exploited by scientists wanting more grant money. He also denied the carcinogenic effects of second hand smoke. Today Singer writes articles attacking the validity of climate change. He and several other 'scientists' such as Patrick Michaels, and here in Australia Bob Carter and Ian Pilmer use the same kind of arguments. These consist largely of "there is no evidence and is no consensus". They say it's all a conspiracy and may even be beneficial, and human impact is too small to have an effect. Oreskes says "All the same arguments were being repeated over and over... by the same people." It's these arguments we can hear on the streets of the Tweed today along with claims it's caused by volcanoes, sunspots, cosmic rays and even aliens.

The aim of all this is not to convince people of their arguments 100 percent. They have actually done their job if they manage to confuse people enough, so that action is delayed or prevented. These tactics delayed action on smoking and CFCs. Now action on climate change is being delayed.

As well as a strong interest by companies in their bottom line, it is a strong ideological belief which is behind all of this, and it is this belief that drives politicians and ordinary citizens to

promote the false messages of big energy. This belief could be described as Neo Conservative or simply Right Wing. Essentially it is based on a strong faith in the economy of which big energy is such a huge part. Some follow this line as they have personal wealth themselves, perhaps with shares in fossil fuel companies. Some have jobs in energy or mining. For example they may be engineers, geologists or work in coalmines. And some simply hold on to the idea that an unrestricted economy will be good for everyone and everything and provide jobs and a good way of life for all. This is the argument that these guys most often push in the mainstream media but while it may sound nice on the surface for some, I do not think it really holds up to scrutiny. It can easily be seen that it is only in countries with strong governments as well, that most citizens are able to enjoy economic prosperity. In countries with weak or corrupt governments, where corporations are allowed to do what they like, unimpeded by regulation, then citizens usually fare very

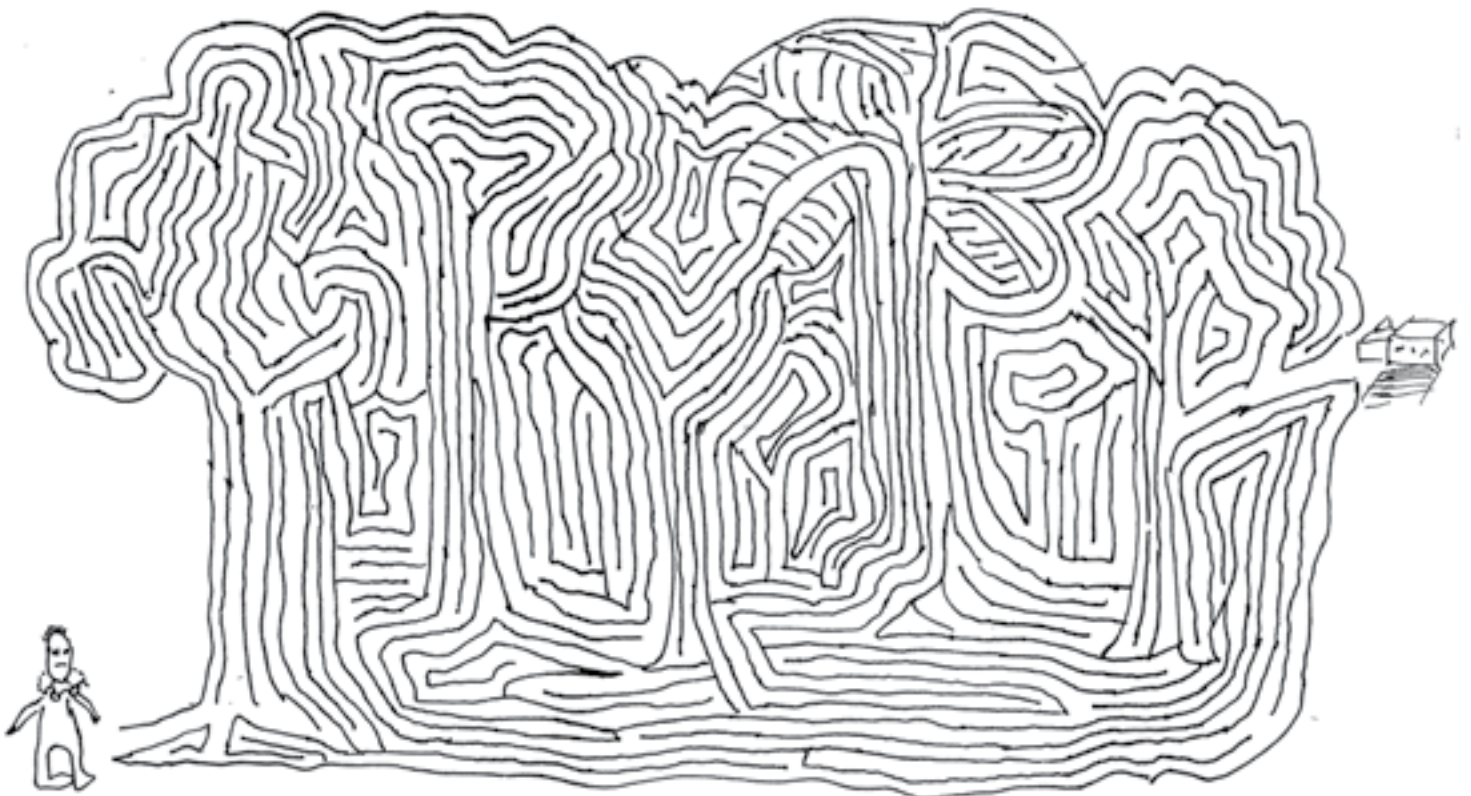
badly unless they are in the top few percent.

Whilst those on the right of politics are always the first to argue for Law and order on ordinary citizens, any such 'law and order' on corporations is opposed. As Orekses writes, "any time the government steps in to 'protect' us from harm, then we're on the slippery slope to socialism". Of course one of the main conspiracy theories about climate change is that it is just a 'socialist plot'. Amusingly, this sentiment is clearly expressed in some of the climate denial letters in our local papers.

Recent experiences in the Tweed make me wonder if big energy has found yet another ingenious way to fight climate change regulation. Industry propaganda seems to have found its way into the arguably more left leaning conspiracy theorist websites and magazines. Some people that would normally consider themselves 'green' are also expressing skeptic views. From what I can gather,

instead of spreading the message that climate change is a socialist plot, they are talking up the conspiracy that climate change is a plot devised by big business to make more money out of us all, or a way for big business to have even more control over us. They question the motives of people like Al Gore and organizations such as 350.org asserting links with big money in the US. I guess it's just a conspiracy theorist thing. I find it all rather fascinating, though a little sad that these people are also helping out big energy by spreading this stuff around.

So readers take your pick. Is climate change a socialist plot to enable world takeover, or is it a plot by big business to make more money? Or is it even remotely possible that it could actually be happening? Will you take your information from industry-funded lobbyists, conspiracy theorist blogs or from the thousands of climate scientists, physicists, environmental scientists, biologists and others in the field doing the actual work?



Can you help our environmental Mayor find a way through the Byrith Creek forest, and make it to the Council meeting on time?

Greetings lovely ones. Well we're positively fizzing with hope and delight here.

The best news around right now is the resurgence of decent people standing up for the planet. You could say the Tweed's been a bit apathetic for a while, but the No Rally Group (now Northern Rivers Guardians) has changed all that. They've been leaping about, gathering good energy and spreading it far and wide: rekindled lots of hopes and girded many a loin. Their campaign to stop the rally was successful not only in itself, but in waking up lots of sleepy people and showing us the power we can have.

Even Caldera Environment Centre is having a bit of a surge. Lively, respectful, productive meetings make for more good energy and on it goes. There's still the dam loitering in the background, King's Forest and Cobaki Lakes monsterring the immediate future, and any amount of other interesting times ahead, but we're all the better for this renewal. Sincere thanks to everyone involved.

Speaking of brilliant and life affirm-

ing, we have to give a big hug to the Tweed Echo. What an amazing thing it is to have a slice of the media which tells us what's actually going on.

Okay I'll stop frothing now. Maybe. Our other piece of good news is the Pixel building in Melbourne. This is



an office building, housing eighty people, which is carbon neutral. It supplies all its own water and power. It's got some sweet innovation, like harvesting the methane from the toilets and using that energy to heat the hot water for showers and sinks. There are wind turbines and solar panels on the roof, the panels actually turn to face the brightest bit of the sky and follow it about.

The water is collected from the roof, it's treated to potable stand-

ard and stored in a 20,000 litre tank under the building. The toilets are vacuum system (like aeroplanes) which means they only need half a litre of water per flush, as opposed to the minimum four and a half litres in normal systems. The grey water goes to a pit with a live filter in it, then on to a "living edge" system of greenery which cools and shades the workspace. Not totally perfect, because the partly treated remains of the sewage (everything they couldn't squeeze out for their own use) ends up in the sewer. But it's all quite amazing non the less.

Other features include the concrete, which contains half the usual embodied carbon, and the wood, which is all either recycled, or sourced from FSC (Forest Stewardship Council) approved areas. There's heaps more. Google it

The architect, Dylan Brady from Studio 505, says the aim is to prove it can be done, and the more people who opt for these life affirming methods, the cheaper and more attainable they become.

It's good to see a bit of sanity creeping into the mainstream. Who knows where it might lead. Glory in it, Consuela

CAPTAIN SAGE

ARIES: There is no need to stress out trying to make a good impression, but running a comb through your hair once in a while wouldn't hurt.

TAURUS: Travel broadens the mind, Taurus, but why not consider a destination a bit more adventurous than Tweed City?

GEMINI: Yes, yes, we all know you are vetting our calls with your digital display phone, but it's nice to know your failing eyesight makes it a hassle.

CANCER: Relax, no one is accusing you of being a neat freak, Cancer, we just wish you would do it when we're not around.

LEO: What is the point of me warning you about Mercury in retrograde when I know you aren't going to take the slightest bit of notice?

VIRGO: Go on, Virgo, make a fool of yourself. At least then you'll get it out of your system.

SCORPIO: When the going gets tough, the tough get going, but try aiming for something more heroic than ordering in pizza when the fridge is empty.

SAGITTARIUS: The ethics of air travel might chisel away at your conscience, but there's nothing quite like a gin & tonic at 30,000 feet.

CAPRICORN: Lucky colour red, lucky number 3? Come off it, Capricorn, if you want easy answers you better look elsewhere.

AQUARIUS: It's OK, we know you're a greenie at heart, so don't fret too much about that new cappuccino machine.

PISCES: There's more to style than colour-coordinates, but no one wants to bring you down, Pisces - we all know you're trying.

WORKING WITH NATURE

A PERSONAL VIEW by Ian Herscovitch

In 2003 Friends of Wollumbin Landcare Group commenced work regenerating a 700 metre strip of land at Byangum, between the Tweed River and Kyo-gle Road. Formerly used for cattle grazing, the site was a mixture of pasture on the higher ground, and weeds and native trees along the river. The project was undertaken with the specific intention of encouraging native regeneration without the use of chemicals.

An enthusiastic group of volunteers attend monthly workdays on site, sometimes half a dozen, sometimes twenty or more on planting days. The regularity of these workdays has been crucial to the success of the project. An ongoing tree-planting program over the past seven years has spectacularly transformed much of the pasture area close to the road. Now attention is being directed more at dealing with weeds along the river bank. The Environment Centre is currently administering a grant which was awarded to Friends of Wollumbin to continue this work.

What I would like to do here is offer a few personal thoughts on chemical-free bush regeneration. In our efforts to repair damaged native habitat, it is easy to be discouraged by the task at hand. We feel overwhelmed when confronted by luxuriant weed-scapes, of which there are many

fine examples here in the Tweed Valley. This visual impact inclines us to a sense of urgency, that the job has to be done as fast as possible. We sometimes liken it to waging a war. We want quick results. Resorting to chemical control seems like a fast and effective strategy.

It is true that we need to repair and restore native ecosystems, but it is very important that we strive to see the big picture here. Natural processes often take a long time. Native vegetation is strong and resilient, and native forest makes every effort it can to repair itself. Instead of being held captive to our ideas of what should or shouldn't be there, and instead of imposing our notions of time on these natural processes, it is sometimes better to take a step back and look at how mother nature does things.

Weeds are a kind of scar tissue. They rush in to colonise degraded land, protect soil, and often provide habitat and food for birds and animals. They replace something that has been lost. Like unruly teenagers, weeds can run rampant, and this is what scares us. Even so, they are doing important work, though sometimes it may be hard for us to appreciate. Consequently, weed control should not be focused on elimination for its own sake, but on encouraging the native species to displace the weeds. And this takes time.

Bush regeneration, I believe, is about shifting the balance in favour of natives. This can be a slow



and undramatic journey. But slow and gentle may be the way that most closely emulates natural processes.

I do not want to talk much about chemicals here. It is worth noting, though, that Monsanto has been convicted by the French Supreme Court for falsely claiming that glyphosate is bio-degradable. After four months more than half the applied glyphosate was found to be still present in agricultural soil. After one year glyphosate was still found in food crops at harvest. It is known to be lethal to many beneficial insects, earthworms and fungi. Yet this is the chemical most favoured in the bush regeneration business. And of course nobody can say for sure what the long-term effects might be for frogs, birds, insects and countless other species involved.

If we are serious about restoring natural habitats, how can we entertain the idea of introducing poisons into these very environments we seek to protect? In bush regeneration we make decisions that affect the whole array of plants, animals, insects, birds and

soil flora and fauna. If the intention is to help out all these species, why do we inflict toxic chemicals on them? More often than not it's because we are time-driven, overtaken by that sense of urgency. It is not a good enough reason.

Sometimes the non-chemical solution is not only friendlier, but also more effective. Ringbarking of camphor laurel is easy and clean, and the resulting slow decline of the tree over several years means a gradual introduction of light to the ground, nurturing native seedlings.

I often liken weed control to washing dishes. You do a bit every day, not let it pile up for a year and then decide it's impossible. In native bush repair a project spread steadily over many years is prefer-

“Unless someone like you cares a whole awful lot, Nothing is going to get better. It's not.”
— *The Lorax, Dr Seuss*

able to a scenario where one huge effort is made for a month, then it's forgotten about for ages. Sometimes people will say “I don't like to use chemicals, but...”, describing herbicides as a necessary evil in getting the job done. They are, more accurately, an unnecessary evil.

We all know the poisons are harmful, maybe a little bit, maybe a lot –no one really knows for sure - and we know that weeds can be controlled without them, even if it takes longer. It seems to me that slow, clean and safe is far prefer-

able to fast, toxic and risky.

In the end, it really comes down to a duty of care. That means doing the best we can by all the plants and animals that populate these areas in our care. Not to mention duty of care to our fellow humans. Friends of Wollumbin welcomes everyone to our landcare workdays at Byangum. Next one will be a planting day on Saturday March 5th, from 8 am. Shared morning tea under the shade of our older planted trees is always a highlight. You can contact me on 66795441 for information.

WATER WISE Hop.E. Hopkins.

The most damaging floods, the ones that change landscapes and destroy property, are the one in one hundred and one in fifty year very high rainfall events. During these relatively rare occasions, dams are of little consequence because of the huge volumes of water involved. Witness the recent flooding of the Wyvenhoe Dam catchment and beyond to Brisbane. In mega events, releases are made to safeguard the dam, or the water soon reaches a level where it spills over the spillway.

The prudent course of action for Tweed Shire Council would be to heed the engineer's advice and repair/modify the spillway of the Doon Doon Dam.

Dams are also subject to siltation and blue/green algae growths and are not the panacea for flood relief or water storage that some councilors seem to imagine. Above all

they are extremely costly in dollar and environmental terms.

In an area of very high rainfall like the Caldera, the no-brainer option is to harvest roof and storm water for on-site and local precinct use. Government rebates make rainwater tanks quite affordable and householders do not have to ingest chlorine or other harmful chemicals like sodium hypochlorite. Combined with on-site gray water treatment and household by-product composting and with appropriate landscaping and plantings, residents can partly free themselves from the shackles and shekles of Council rates.

Water and sewerage consumes half of Council's budget. Half of your rate contributions.

The push for a dam on Byrill creek is all about making money for Tweed Shire Council (in the

long term) and assisting the mega coastal developers in the short term.

But the biggest lesson of all for governments arising from the record breaking and deadly weather events from around the world – blizzards, bushfires, floods and droughts in both the Northern and Southern hemisphere, is the need to immediately adopt radical strategies to tackle global warming. Is it responsible for Council to spend millions on unsustainable projects like new dams, beach replenishment, unnecessary 'beautification' and unwanted high rise schemes when whole environmental and ecological systems are unraveling before our eyes?

Head in the sand Ostrich leads to death like Dodo and mown down Moa.

SOME COMING EVENTS

SAVE BYRRILL CREEK: come walking, first Sunday of the month, call Janaki on 66797163 for details

CALDERA INSTITUTE FOR SUSTAINABLE COMMUNITY DEVELOPMENT: April 6th is the opening day of the Caldera Farmers Market at the Murwillumbah Showgrounds at 7am, then every Wednesday from then on.

EARTH LEARNING: for meetings, talks and events, contact Adrienne on 66791439

TWEED CAN (Climate Action Now) : 2nd Thursday of month, upstairs at the Imperial Hotel Murwillumbah, 6.30pm

TWEED LANDCARE: meets the third Wednesday of the month, at the RSL Murwillumbah at 6pm.

FRIENDS OF WOLLUMBIN LANDCARE: 1st Saturday of month, Kyogle Road, opposite Boulder Close, 8am

TWEED SHIRE COUNCIL: Meetings, third Tuesday of the month 3.30pm. Community Access - preceding Thursday 4.30pm

TWEED VALLEY WILDLIFE CARERS: next orientation day, mid May, call the hotline 66724789 for details.

WOLLUMBIN BUG (Bicycle Users Group): 4th Wednesday of the month, Imperial Hotel, Murwillumbah, 6.30pm.

NRG: (Northern Rivers Guardians): 3rd Saturday of month 2-4pm. For location Ph: Secretary, Andrea Vickers: 0459355862

NSW STATE ELECTION 26th March 2011 Questions for Candidates

1. Will you immediately repeal the undemocratic Part 3A planning laws and put major planning decisions back in the hands of the communities that have to live with them?
2. Will you continue to protect the Biodiversity Hotspot that is Byrrill Creek from a dam. Will you support cheaper and more effective water options instead?
3. Do you believe Climate Change is largely caused by human activity? What will you do to support citizens in the change from a fossil fuel economy?
5. Will you support a moratorium and inquiry into fracking/ coal seam gas mining?
4. Will you lobby for a UNESCO biosphere for our region?

If undelivered, please return to:
Caldera Environment Centre
PO Box 5090
Sth Murwillumbah 2484

The CEC is located at
4 Queen Street,
Murwillumbah,
Ph: 66721121
Email tree@calderaenvironmentcentre.org