



# Benalla Sustainable Future Group

Newsletter 19

December 2017

Benalla Sustainable  
Future Group Inc.  
PO Box 642  
Benalla 3672

## **Next Meeting**

The next General BSFG meeting will be held

**Thursday December 14 at 7.30 pm**

in the Meeting Room in the Uniting Church, Carrier Street Benalla, opposite the Coles car park.

Our guest speaker for the meeting is Warwick Bone (Woz) from Benalla Permaculture. Woz has advised the topic of his talk is

### **'What on Earth is Permaculture?'**

He will give a brief introduction into the functional design system we know as Permaculture and how it can be used to develop solutions to the global and local problems we currently face.

This will be an interesting evening for anyone concerned about down to earth solutions to these local and global problems.

[Benalla Permaculture](#) is a Permaculture Victoria group. The group has a busy schedule of activities which can be followed at [Facebook Groups](#).

Woz has provided us with an introductory article for this issue of our newsletter - see last page.

We look forward to seeing you at the meeting after which a light supper will be available.

(Just a reminder to members to please read the circulated minutes of the last meeting prior to the meeting).

# Benalla Permaculture

## **President's Column**

### ***What did you do, once you knew?***

Recently I watched Al Gore's second movie, 'An Inconvenient Sequel - Truth to Power' at a free screening by Swanpool Landcare at Swanpool Cinema. There were some disturbing images of ice melt in Iceland and the impact of extreme weather events such as the typhoon that caused incredible damage and loss of life in the Philippines.

Al Gore closed the film with a passionate speech which I believe is a challenge to all of us. I have transcribed as much as I could find. In the background as he was speaking were images of the severe impacts of extreme weather events. The words in capitals were displayed on the screen during his speech.

*"The next generation will ask, "What were you thinking?"*

*Couldn't you hear what the scientists were saying?  
Couldn't you hear what Mother Nature was screaming at you?"*

TAKE ACTION

*"This movement is in the tradition of every great movement that has advanced humankind."*

MAKE YOUR VOICE HEARD

*"It is **right** to save humanity! It is **wrong** to pollute the earth!"*

*It is **right** to give hope to future generations!"*

FIGHT LIKE YOUR WORLD DEPENDS ON IT -  
FOR YOUR WORLD DEPENDS ON IT

This speech reminded me of a poem I had found in Bob Brown's book, 'Optimism - Reflections on a life of action'.

This poem expresses very much the same sentiment as Al Gore and I think it is just as challenging, particularly the final question.

*"Earth provides enough to satisfy every man's need, but not every man's greed." - Mahatma Gandhi*

It's 3:23 in the morning  
 and I'm awake  
 because my great great grandchildren  
 won't let me sleep,  
 my great great grandchildren  
 ask me in dreams  
 What did you do while the planet was plundered?  
 What did you do when the earth was unravelling?  
 Surely you did something  
 when the seasons started failing?  
 as the mammals, reptiles and birds were all dying?  
 Did you fill the streets with protest  
 when democracy was stolen?  
**what did you do  
 once you knew?**

Part of a poem from "Hieroglyphic Stairway"  
 by Drew Dillinger

Some readers may remember this poem as I have written about in a previous newsletter some time ago. I think the essential message from Al Gore and Bob Brown is that it is future generations who will suffer greatly from our inaction.

We need to make our voice heard. We need to fight for our world. We need to give hope to future generations. How will we answer our grandchildren when they ask,

**"What did you do once you knew?"**

*John Lloyd*

## **Medibank Ditches Fossil Fuel Holdings**

Nicole Hasham writing in *The Age* on 28/11/2017, 'Medibank ditches fossil fuel holdings over health impacts', reports that Medibank will stop investing in fossil fuel companies internationally because of the health effects of climate change.

In a recent statement to the Australian Stock Exchange Medibank said it would transition to low-carbon investments in its international portfolio in the next year, to reflect the global transition to clean energy.

The statement also said, "We are also committed to exploring a similar approach with our domestic equity portfolio, and so we will be actively encouraging fund managers to develop a suitable product for us that is socially responsible, cost effective and delivers a sustainable investment return. We understand that the health of the environment has an impact on the health of the community. Medibank acknowledges the science of climate change and the impacts on human health."

Environmental finance group Market Forces' campaigner, Pablo Brait said, "It's extremely positive that Medibank has ended its unhealthy addiction to fossil fuels. The medical profession has long understood that climate change has a devastating effect on people's health, so it stands to reason medical insurers should not be invested in the industries which drive it."



From the website *Skeptical Science*.

This cartoon has been regularly screened during the opening adverts at Swanpool Cinema.

*"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has." Margaret Mead*

## **Consumerism - enough of the stuff**

Reducing consumerism would seem to be an essential part of the answer to the question 'What did you do ...'? An article written by Ross Gittins, *'Enough of the stuff: curing affluenza'*, *The Age*, 15/11/2017, deals with this issue. What follows is a copy of much of his article.

"We live in a consumer society, surrounded by our possessions. We're always buying more stuff, more gadgets, an extra car, more TVs for other rooms, more laptops, iPads and smartphones. We update to the latest model, even though the old one's working fine, and make sure our car is never more than a few years old. We buy new clothes all the time - a lot on impulse - filling our wardrobes with stuff we wear rarely, if ever. We buy more food than we can eat, chucking it out when it's no longer fresh so we can buy another lot.

Why do we keep buying and buying? Short answer: because we can afford to. Long answer: because, for a host of reasons, we've become addicted to consumption, whether or not it provides lasting satisfaction. We suffer from 'affluenza'".

In his new book, *Curing Affluenza*, Richard Denniss, chief economist of The Australia Institute, observes that, these days, much consumption is done for symbolic, signalling reasons, not because we actually need the stuff.

And then there's retail therapy - stuff we buy purely for the fleeting thrill we get from buying some new thing. If something's telling you all this needless consumption can't be a good thing, you're not wrong. What's less obvious is why: because of the damage it does to the natural environment. Not only the extra emissions of greenhouse gasses, but also excessive use of natural resources - both non-renewable and renewable, when usage exceeds the rate at which they can be renewed.

The richest 15 per cent of the globe's 7.6 billion population can continue living the high life only for as long as we have the wealth to commandeer more and more of the other 85 percent's share of the world's natural resources. But as the world's poor, led by India and China, succeed in raising their material living standards towards ours, this will get ever harder. It is not physically possible for all the world's population to live the wasteful lives we do."

How can we stop using more than our fair share of the globe's natural resources? Denniss says we can start by distinguishing between consumerism, which is bad, and materialism, which isn't.

He defines consumerism as the love of buying things, whereas materialism is just the love of things. Meaning the latter is a cure for the former. The more we love and care for the stuff we've already got, repairing it when it breaks, the less we're tempted to buy things we don't need.

It's true the capitalist system invests heavily in marketing and advertising to con us into believing we

need to buy more and more stuff. But we're free to resist the system's blandishments. Indeed, I often think the people most successful in the system are those who most resist.

Denniss argues that much of what we do - and buy - we do for cultural reasons. Because it's the normal, accepted thing to do. But, just as our grandparents weren't as spendthrift as we are, culture can change. And you need less than a majority of people changing their behaviour to reach the critical mass that prompts most other people to join them and, by doing so, cause an improvement in the culture.

If we all stopped buying stuff we don't need, however, wouldn't that cause economic growth to falter and unemployment to shoot up? Yes it would - if that's all we did. The trick is that *every* dollar we spend helps to create jobs. So we need to keep spending, but we don't need to keep spending wastefully.

There are a host of things we could spend on - better health, better education, better public infrastructure, better lives for the disabled and the elderly, less congestion, less pollution - that would yield us more satisfaction while doing less damage to the environment.

I have a feeling however that the cure to affluenza will require more than just changed behaviour by enough individuals. We replace rather than repair many things because the cost of repairers' labour greatly exceeds the cost of the material parts we throw away.

We need to re-jig the tax system so we reduce the tax on labour income - and increase the tax on use of natural resources."

## **CSIRO in hydrogen fuel program**

Australia is bidding to become a world leader in hydrogen fuel technology. The CSIRO has launched new Future Science Platforms (FSP) to make Australia a renewable energy exporter and hydrogen fuel hotspot.

Hydrogen fuel has been touted as a major future energy source. The development of a Hydrogen FSP will support the creation of technologies that will enable Australia to export its solar energy as a low-emissions energy source.

Larry Marshall, CSIRO chief executive said, "Under our strategy 2020, we're committed to increasing funding for science that underpins innovation and will reinvent and create new industries and jobs for Australia's future.



Dr Marshall also said that hydrogen also has the potential to act as energy storage in order to stabilise the grid.

*Cole Latimer, The Age, 9/11/2017*

## Climate Change and Extreme Rainfall

The latest Climate Council report, '*Extreme Rainfall: the Impact of Climate Change*' was released because of the predicted extreme rainfall event in much of Victoria, which thankfully, Benalla was spared. The following is an extract from this report.

### The influence of climate change on extreme rainfall - key points

1. Climate change is influencing all extreme rainfall events. The warmer atmosphere holds more moisture, about 7% more than previously. This increases the risk of heavier downpours.
2. Globally, there are more areas with significant increases in heavy rainfall events than with decreases.
3. Extreme rainfall events like the Victoria rains are expected to further increase in intensity across most of Australia.
4. While there isn't a significant trend in observed extreme rainfall in Victoria yet, maximum one-day rainfall is projected to increase by 2-23% in Victoria by the end of the century if greenhouse gas emissions continue to rise.

Climate change is intensifying many extreme weather events in an atmosphere that is warmer and wetter because of increasing greenhouse gas emissions from human activities, primarily the burning of fossil fuels - coal, oil and gas.

### Extreme Rainfall

As greenhouse gases increase in the atmosphere, the climate system is warming because these gases are trapping more heat. The oceans are also warming, especially at the surface, and this is driving higher evaporation rates that, in turn, increases the amount of water vapour in the atmosphere. A warmer atmosphere can hold more water vapour, leading in turn to more intense rainfall. The 1°C temperature rise that has already occurred, together with increasing evaporation, has led to an increase of about 7% in the amount of water vapour in the atmosphere. This means that there is a greater risk of heavy downpours.

## Impacts of Extreme Rainfall

Extreme rainfall has devastating effects on human health and our economy.

### Health Impacts

Periods of heavy rainfall can threaten human health and wellbeing. While intermediate levels of rainfall can cause damage to property, heavy rainfall can claim lives. For example, in 2011 intense downpours in Toowoomba and the Lockyer Valley caused flash flooding of up to 11 m through the Toowoomba city centre; 23 people drowned in these floods.

### Economic Impacts

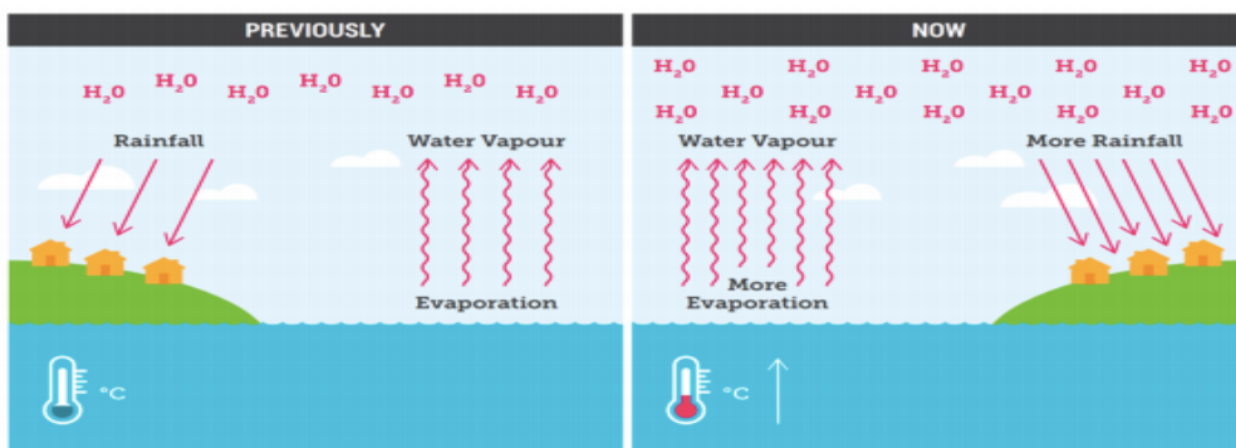
In recent years, Melbourne has been significantly affected by several storms. In March 2010, a hailstorm brought very large hailstones – some of the biggest to hit Melbourne city in decades – resulted in over \$1 billion in insured losses. Houses, businesses and schools were most affected.

### Extreme Rainfall projections

A 2°C rise in average global temperatures could result in a 10-30% increase in extreme downpours. In Australia, extreme rainfall events are projected, with high confidence, to increase in intensity, where extreme events are defined as the wettest day of the year and the wettest day in 20 years. For Victoria, the state likely to be most affected by the extreme rainfall, such events are likely to become more intense in future. For example, maximum one-day rainfall is expected to increase by 2-23%, by the end of the century for a high emissions scenario.

### Halting the escalating risks of extreme weather

Extreme weather events such as extreme rainfall and consequent flooding are very likely to become more intense and destructive over the next couple of decades because of the climate change that is already locked in from past greenhouse gas emissions. But the severity of extreme weather events that our children and grandchildren will face later this century depends on how fast and how deeply greenhouse gas emissions can be reduced now, next year and over the next couple of decades.



### The influence of climate change on the water cycle

*Left:* The pre-climate change water cycle. *Right:* The water cycle operating under higher surface and ocean air temperatures, leading to more water vapour (H<sub>2</sub>O) in the atmosphere, hence more rainfall.

(Climate Council 2017)

## ***The End of the Road for Adani***

Australian and Chinese banks have refused Adani's request for funding, and analysts say Adani's failure to secure funding for the Carmichael mine leaves it high and dry.

In his article, [Is this the end of the road for Adani's Australian megamine?](#), *The Guardian*, 7/12/2017, Michael Slezak provides a history of the campaign against Adani. I have chosen selected extracts but the complete article is worth reading (see link above).

Slezak says that Adani's operations in Australia appear to be hanging on by a thread, as activists prove effective at undermining the company's chances of getting the finance it needs.

China seems to have ruled out funding for the mine, which means it's not just Adani's proposed [Carmichael coalmine](#) that is under threat, but also its existing Abbot Point coal terminal, which sits near Bowen, behind the Great Barrier Reef.

The campaign against the mine has been long. Environmentalists first tried to use Australia's environmental laws to block it from going ahead, and then failing that, focused on pressuring financial institutions, first here, and then around the world.

Slezak asks, "Is China's move the end of the road for Adani's mega coalmine in Australia, and will the Adani Group be left with billions of dollars in stranded assets?"

According to most commentators, financing from China was the end of the line for the company's operations in Australia. "Approaching China would seem like the last roll of the dice so Carmichael is now looking even more like the definition of a stranded asset," says Simon Nicholas, an analyst from the pro-renewables Institute for [Energy](#) Economics and Financial Analysis .

John Hewson, *'Why the Adani coal project should be rejected'*, *The Age*, 10/11/2017 says that the Adani family, as distinct from the public company, is particularly exposed on its key asset, Abbott Point. If the mine doesn't go ahead, Abbott Point will be forced to operate well short of "optimum capacity", threatening losses to the family.

Writing this in early November Hewson says, "Evidence and common sense suggest Adani's Carmichael proposal should already be recognised as a "stranded asset". There is no justification for financial support from the federal or state governments. To do otherwise is simply "intergenerational theft". Any short-term political arguments are entirely misplaced, the employment benefits exaggerated and the international reputational damage to Australia long lasting."

Slezak reports that Julien Vincent, from financial activist group Market Forces, says the fact every major bank in Australia has ruled out financing Adani, and the

Chinese government is saying the project is not viable, it will be surprising if another financier jumps on board. "We've now got probably the vast majority of the top 20 coal-funding banks worldwide saying they're not going to fund the project," Vincent said. "That's massively influential."

Simon Nicholas says. "Adani is faced with writing off their A\$1.4bn investment if they can't get the project going so they'll continue to state that they are pursuing funding and make it sound like everything's under control."

Tim Buckley, also from the Institute for [Energy](#) Economics and Financial Analysis, says without financing, coalmining in the Galilee basin is dead. "There will be no other buyer – Adani has invested \$1.5bn, invested seven years, they are one of the richest groups in India," Buckley says, adding if it isn't able to get the project over the line, nobody will.

***John Lloyd***

## ***Glacial Melt a Boon?***

In Peru glacial melt, caused by climate change, has become a boon for farmers, as reported in the *New York Times* and reprinted in *The Age*, 28/11/2017, *'Glacial melt a boon to farmers - while it lasts'*.

The desert blooms now. Blueberries grow to the size of ping-pong balls in nothing but sand. Asparagus fields cross dunes disappearing over the horizon. The desert produce is packed and shipped to places such as Denmark and Delaware. Electricity and water have come to villages that long had neither. Farmers have moved here from the mountains, seeking new futures on all the irrigated land. It might sound like a perfect development plan, except for one catch: The ice cap high up in the mountains is melting away and the bonanza may not last much longer.

In this part of Peru, climate change has been a blessing - but it may become a curse. In recent decades, accelerating glacial melt in the Andes has enabled a gold rush downstream, contributing to the irrigation and cultivation of more than 40,000 hectares. Yet the boon is temporary. The flow of water is already declining as the glacier vanishes, and scientists estimate that by 2050 much of the ice cap will be gone.

The government irrigated the desert and turned it into farmland that in a few decades could be under serious threat. A changing climate has long haunted Peru. Many archaeologists believe that one past civilisation, the Moche people, built cities in the same desert, only to collapse more than a millennium ago after the Pacific Ocean warmed, killing fish and causing flash floods. Now dwindling water is the threat.

*"We are the first generation to feel the impacts of climate change, and the last generation to be able to do something about it."* former US President, Barack Obama

## **Renewable Energy Benalla (REB)**

In October REB held a Benalla Business Breakfast with the support of Benalla Rural City, and the Benalla Business Network. The purpose of the breakfast was to open up communication with the business community about a renewable energy future for Benalla. Key elements of the BZE transition plan for Benalla were presented as were key findings from the Energy Survey of Benalla Businesses. It was also an opportunity for local businesses to share their experiences of reducing their energy use and/or generating some or all of their energy needs. Information was also provided on funding options and grants available to businesses to assist with costs of implementing options to reduce energy use and/or generate energy.

### **Transition Strategy**

REB has been working with Beyond Zero Emissions (BZE) to develop a ten year transition strategy for Benalla to achieve 100% renewable energy. This transition plan was completed in November and details three key strategies that need to be implemented to reduce greenhouse gas emissions and achieve zero net energy. These strategies are:

- i) Energy efficiency measures to reduce energy use,
- ii) Promote and install local roof top solar,
- iii) Investigate utility scale renewables, battery storage and micro grids.

On 28<sup>th</sup> November, Renewable Energy Benalla and Beyond Zero Emissions, with support from Benalla Rural City Council, held a community forum and workshop to launch the transition strategy and to explore opportunities for energy efficiency, roof top solar, bulk buy programs, community energy projects and the potential for utility scale renewable energy.

As a result of this workshop a number of community members volunteered to form small action groups to help Renewable Energy Benalla implement each of the three strategies mentioned above.

*John Lloyd*

## **Plastic Wise Benalla**

This action group of BSFG has been fairly active in the last few months making upcycled fabric bags in an effort to encourage the use of reusable bags and to create a thought process about our consumption of plastics.

An enthusiastic and passionate team have been hard at work sourcing unwanted clean fabric; cutting fabric to size; and then sewing the bags. Working bees have been held fortnightly at the Drill Hall.

The next session will be held on

**19<sup>th</sup> December from 12.30pm until 3.30pm**

All are welcome. No sewing skills are necessary as we also require cutters, ironers, and fabric matchers.

We had a very successful sell day at the BSFG stall at the Day in the Gardens Market and we continue to sell the bags for \$5 each. Any monies raised will go back in to the project to support our plastic reduction goal.

I would like to thank the local businesses that are stocking the bags. These businesses are One Wild Apple Cafe, Leading Edge Books, Blooms on Bridge, Samaria Farm and the BSFG Bulk Food Co-op. If you know of any other business that would be interested in selling them please let me know.

I would also like to thank the team of hard working individuals ... whether you are a fabric finder, a cutter, ironer, salesperson or seamstress. We have a great team who encourages each other; has a laugh and good chat when we get together; and is also very productive. We are also very passionate about reducing the amount of plastic used in our community. Thank you all.

I know that several of the bags have been sent internationally and are being used for Christmas presents in lieu of wrapping paper. Please support the businesses who are stocking them.

If you have any queries on this project or would like to help in any way please email me:

[wendibaker30@gmail.com](mailto:wendibaker30@gmail.com)

*Wendy Baker*



Nicole of Leading Edge Books with our shopping bags.

## ***Permie Ponderings***

Permaculture as a design system has been around for over 40 years now, a product of the collaboration between Bill Mollison and David Holmgren. In terms of strategies and techniques there was very little that was new, in fact Mollison himself is known to have said repeatedly, "There is nothing new in Permaculture!" Indeed these strategies and techniques have been around for a long time, often centuries or millennia.

What was and still is new about Permaculture is the bringing together of all these strategies and techniques into a Functional Design system. But even then, defining Permaculture is a high impossible task.

Some colleagues and I were asked the question, "How would you explain Permaculture to a non Permaculture type person?" It is often said that if you ask five Beekeepers the same question, you will get six different answers, possibly more, and sometimes the same is true for Permaculturists. Discussing this it became evident that there are many viewpoints as to the make up of Permaculture, each predicated on an individual's needs and experiences.

This is of course as it should be. Permaculture is such a flexible design system that it presents what is needed to each situation and thus also presents differing experiences and perceptions to individuals. And therein lies the challenge - how to express such a versatile and powerful concept to those with no Permaculture knowledge or experience.

One of my colleagues then offered, "Its how you think." Hmmm, ponder, ...

And that is the key. Permaculture is a design system using Ethics and Principles to formulate a series of Tactics, Strategies and Techniques to achieve the desired result. BUT, it requires a different way of thinking. The world is still following one form of thinking; economy, fossil fuels, compartmentalisation, and so on. To change all that, we need to change our thinking. And that's where Permaculture comes in.

Permaculture is often seen as a way of gardening, something beyond organic gardening. This is quite understandable as Permaculture started out primarily as an agricultural design system based on observing and using nature's inherent design. Given that life on earth is dependant on energy that ultimately comes from the sun, plants and therefore gardening are a vital link in the chain of converting the sun's energy into a form that we can use - fruit, herbs, vegetables, and so on.

But the Permaculture Design System is capable of much more than that, it can also be used to design tangible structures such as houses, infrastructures such as transport and communications, and intangible structures such as communities and financial systems.

***So, what is Permaculture?***

***Permaculture is about design,  
and changes the way you think!***

***Warwick Bone (Woz)***

## ***Benalla's Baseline Emissions***

The Transition Strategy developed by Beyond Zero Emissions and Renewable Energy Benalla included information on Benalla's greenhouse gas emissions and energy use. This data collected for 2016 establishes a baseline against which progress in reducing emissions and moving towards 100% renewable energy can be measured.

In 2016, emissions relating to stationary energy for Benalla were **189,785 tonnes CO<sub>2</sub>-e**. Total energy use between 2012 and 2016 increased by 2.7%, representing a 3% increase in electricity consumption and 2% increase in gas use.

In 2016 the industrial sector was the largest consumer of electricity at 48%, compared to 33% residential and 19% commercial. Similarly, the industrial sector consumed 63% of gas, the residential sector 29% and the commercial sector 8%. Industrial electricity is the sector contributing the largest to Benalla's GHG profile.

The number of households in Benalla Rural City rose from 6,343 in 2012 to 6,517 in 2016. During this time electricity consumption per household per day reduced from 18.3 kWh to 17.9 kWh.

Some major points from the Benalla Baseline Emissions Report show that within the Benalla municipality in 2016:

1.07 million GJ energy was used

189,785 tonnes CO<sub>2</sub>-e was produced

Approximately \$32 million was spent on stationary energy by the community

The community spent approximately \$2,389 per person on stationary energy

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