



samag  
Seminars for Arts Professionals

## APRIL SEMINAR SUMMARY

### GREENING THE ARTS

Wednesday 29 April 2009

Chair: Tim McGarry and Gillian Clyde  
SAMAG Committee Members

Panel: Dr Samantha Graham - National Education Manager, Carbon Systems Australia  
John Talbot - Senior Environmental Consultant, Carbon Systems Australia  
Christine Dunstan – Christine Dunstan Productions  
Bridget Ikin – Film Producer, Hibiscus Films

It is a generally accepted dictum that we need to be considerate of how our actions affect the environment. What I am sure quite a lot of us probably don't know, however, is exactly why. Ask your average Josephine on the street about why we need to do our bit for the environment, and I'm tipping that they won't be able to give too much detail in their answer. Perhaps I'm showing my at times astounding ignorance here, but if before SAMAG's Greening The Arts seminar someone had asked me the specific reason why we need to tread lightly on this earth, my answer probably would have been something along the lines of 'ummm....because the environment...is....good?' No, Hugh, that just isn't good enough. What exactly is climate change, and what exactly can we, the arts sector, do about it?

John Talbot, Senior Environmental Consultant, and Dr Samantha Graham, National Education Manager for Carbon Systems Australia, were kind enough to come along to SAMAG to tell us.

An atmosphere approximately 15,000 feet deep surrounds the earth. This atmosphere is made up of gases that maintain a reactive balance that has been much the same for 500 million years. While 99.95% of this totally rockin' and super old atmosphere consists of nitrogen, oxygen and argon, it is that tiny little left over .05% that is causing so much strife. What that? How could such a small amount be such a cause for concern? Well, that small, tiny, *minuscule* percentage is made of what are called 'control gases', a pint sized cocktail of gases exerting a huge amount of influence over the earth's atmosphere. These control gases regulate the earth's temperature to an average 15 degrees Celsius, and exist in just the right amount to create the conditions to sustain life. The perfect balance created by these gases - dubbed the Goldilocks Effect (not too hot, not too cold.....just right) - is responsible for all the earth's systems which keep us moving and breathing. It is responsible for the earth's mass, the oxygen cycle, the water cycle and, of course, the carbon cycle.

So this all sounds perfect, right? Yes, it does - and it is - except that we've been messing with it.

#### Goldilocks versus the Hippo

John tells us that there are five main threats to the Goldilocks Effect, which happily form the ominous acronym *HIPPO*:

- H** - Habitat destruction caused by changing land use, which has a dramatic effect on the atmosphere.
- I** - Invasive species such as foxes and toads (yuck!) that upset the natural balance.
- P** - Population constantly growing. The more people there are, the more consumption and thus pollution and waste there is.
- P** - Pollution caused by us damn dirty apes too lazy to do the right thing.
- O** - Overharvesting caused by taking more from the earth than it's geared to provide.

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### When Hippos attack!

So, despite looking somewhat dull witted and oafish, we all know that hippos are pretty kick ass and deadly when up to no good. These combined human activities all produce manmade greenhouse gases whose main goal is to screw with the carbon cycle, thereby causing climate change. Let's have a look at the primary offenders.

Each gas has a Global Warming Potential (GWP) level, which essentially indicates how much it contributes to climate change.

Greenhouse Gas	GWP	Caused By
Carbon Dioxide (CO <sub>2</sub> )	1x	Burning fossil fuels, Deforestation
Methane (CH <sub>4</sub> )	21x	Landfills and agriculture, by-product of fossil fuel production
Nitrous Oxide (N <sub>2</sub> O)	310x	Synthetic fertilisers, fossil fuel combustion, bio-mass burning
Perfluorocarbons (PFC)	9,200x	Refrigerants, aluminium smelting & cosmetics
Hydrofluorocarbons (HFC)	12,500x	Refrigerants, fire extinguishers, propellants and solvents
Sulphur Hexafluoride	23,900x	Gas insulator used in electronic equipment

Despite carbon dioxide having a lower GWP than the other gases, we produce so much of it that is currently has the greatest influence over climate change.

So now we know what is causing climate change, but what is the physical result of it? Have a look at this somewhat frightening table to see exactly what we've done, what we might get away with, and how much worse it could potentially get. The level of carbon dioxide (CO<sub>2</sub>) in the atmosphere is generally measured by parts per million (ppm).

CO <sub>2</sub> Level		Effect
280ppm	Pre-industrial level	This level was not exceeded for 650,000 years.
387ppm	Today's level	Unstable weather, strong storm events, drought.
450ppm	If we act now	If we act now, we'll hopefully cut the effects off at a 2 degree temperature rise, a sea level rise of .8 metres and reduced food security.
550ppm	If we act slowly	This will result in a 2 to 4 degree temperature rise, a loss of biodiversity, decreased agricultural productivity, and a sea level rise of 2 to 3 metres.
>550ppm	If we don't act	If we don't act, there is the threat of runaway warming and an inability to adapt to the new climate. Not a particularly good outcome for anyone involved.

Carbon dioxide emissions in Australia have grown from 550 million tonnes per year in 1990, to 600 million tonnes per year in 2008; this puts us in pole position as the largest CO<sub>2</sub> emitting nation per capita in the



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world. The worldwide output of CO<sub>2</sub> has grown from 5,000 million tonnes per year, to 6,000 million tonnes per year in 2008. Nice.

### How did we get here?

Since moving out of the modern and industrial age, what has become vastly apparent is that we need a change of worldview. The old worldview that saw the earth as being for the exclusive use and abuse of humans is just not appropriate anymore.

The clever people at Carbon Systems Australia put it best in this very simple chart to illustrate the difference.

#### Old Worldview

#### New Worldview

Humans are number 1!	Humans are but a strand in the web
We know best	We know a little, but nature knows a lot
Nature is a machine	Nature means life
Resources are unlimited	Resources are finite

Aside from this, there are many other justifications that people give to avoid taking responsibility for being part of the cure for climate change. The most obvious is that there are still a lot of sceptics out there, people who say that climate change is simply not real. John's advice to people who are not yet fully convinced is to read up on climate change, do your research. The Royal Society has a great, easy to read guide to arguments against climate change. You can find it on the Royal Society website at [www.royalsociety.org](http://www.royalsociety.org) by selecting the link *Science Issues*, followed by *Climate Change* and *Climate change controversies: a simple guide*.

Some other reasons why many people haven't committed to the cause include such gems as '*someone else will fix it*' (ok...and who might that be exactly?), '*sustainability is a burden*' (no, tinea is a burden. Sustainability is a challenge!), '*it's expensive and just something extra*' (and your Playstation 3 wasn't?) and '*I leave my personal beliefs and views out the workplace*' (you're living in the past man!).

Remember, Greening the Arts is all about a shift in perspective. These excuses just ain't cool anymore; and you do want to be cool.....don't you?

So let's look at two arts organisations that are taking the lead in the arts' battle against climate change.

### Christine Dunstan Productions

Christine Dunstan, and her company Christine Dunstan Productions (CDP), a high profile and award winning theatre company, is one example of an arts organisation choosing to have a role in the solution to climate change.

Christine became aware of the issues surrounding climate change around eight years ago when she became concerned with the climate change figures she was reading. Despite having little practical knowledge of how to go about becoming more ecologically minded, Christine learnt as she went. At her home near Berry, on the NSW south coast, Christine and her partner have planted trees, insulated their house, use solar electricity and hot water, grow their own vegies, own chickens, harvest rainwater and recycle almost everything. They produce only one full garbage bag of non-recyclable rubbish in a month. While there is a



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financial cost involved, it is not as much as people often think. There is a variety of government subsidies available to purchase sustainable infrastructure for the home, the main cost being for the installation.

Christine has applied her ecological mindset to her work as well, signing Christine Dunstan Productions up to a carbon offset producer (COP) scheme with the organisation Climate Positive, a not-for-profit organisation that helps its clients become carbon neutral. CDP now measure and calculate all of the carbon emissions that they produce through flights, road travel, rail travel, and shipping. Once the emissions are calculated for each tour (Climate Positive provides their COPs with ways to calculate their emissions) CDP buy offsets from Climate Positive. All of the offsets sold by Climate Positive are internationally accredited and meet stringent industry criteria.

Christine stresses that the time it takes to calculate emissions and purchase the offsets is really not that much of a burden on top of the already time consuming administration involved in touring and that they really aren't as expensive as they are often thought to be. CDP buy their offsets by tour, paying 25 dollars per tonne of emissions. For one of CDP's recent tours, they calculated that for a production that played at 22 venues and travelled through four states, the total cost equalled approximately 17 dollars per show. Peanuts! CDP have even asked venues to subsidise part of that cost and while the take up from them has not been fantastic, Christine remains an active advocate for the COP program. Despite being vocal about the scheme, she has been disappointed by the general lack of interest from the arts sector.

### **Bridget Ikin**

Bridget Ikin is an Australian film producer and has produced films such as *An Angel at My Table*, *Look Both Ways*, and most recently *My Year Without Sex*. For the making of *My Year Without Sex*, Bridget decided to attempt to make the film what she calls 'carbon responsible'. Having no environmental code of practice for the film industry from which to take advice, Bridget approached a Canberra based organisation called Beyond Neutral (Mark O'Brien) with the view to make the film a case study for future productions.

Bridget admits to feeling in the dark as to how to go about making a 'carbon responsible' film, and began by writing up an environmental policy that covered the aspects of the production she had control over. To undertake the task, Bridget needed to have the support of her staff, who were for the most part supportive of the policy. She asked them to bring to work the environmental values that they follow at home.

Bridget identified three levels of control over their activities::

1. Things that could be directly controlled - such as recycling on set, and catering considerations like not using plastic plates and cutlery
2. Things that were caused by the production but were less controllable, such as travel
3. Activities undertaken by outside parties that could not be controlled at all, such as the amount of power used in outsourced postproduction work.

Bridget says that it is important to be able to understand how much power you have to institute new policies and work methods, and to assess how much influence you might have to change activities that are not directly under your control. She also acknowledges that the film industry is by no means naturally ecologically minded. The time pressure put onto productions often translates into unnecessary waste and consumption. For example, a number of car trips being made in a day to fetch various items could perhaps have all been done in one, if time was taken to think ahead.



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Bridget and Beyond Neutral found it difficult to determine the exact emissions for the production, but were able to settle on a figure of 65 cubic tonnes. In order to go 'beyond neutral', they eventually bought offsets to account for 100 tonnes. Bridget ensured that the offsets she bought had integrity and were both environmentally *and* socially responsible by investing in a wind farm in New Zealand, and an indigenous program run by Oxfam.

For any business or organisation it can be easy to see climate change as a problem far too large to deal with on your own. This view is no longer acceptable. The bottom line for any sector, the arts being absolutely no exception, is that we all have a role to play in being part of the solution. As Dr Graham pointed out, perhaps the biggest hurdle is not the technical knowledge, but changing your worldview (and the views of those around you) about the earth we live on, and what we do to it while we're here.

For more information....

[www.carbonsystems.com.au](http://www.carbonsystems.com.au)

[www.climatepositive.org](http://www.climatepositive.org)

[www.beyondneutral.com](http://www.beyondneutral.com)

by Hugh Nichols