

JustComment

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Better planning for homes and communities

As our homes, roads and

television screens continuously grow in size, and our cities spread ever outwards, we consume greater amounts of resources, and produce more waste. Christopher Flavin, president of the Worldwatch Institute, states that "As we enter a new century, this unprecedented consumer appetite is undermining the natural systems we all depend on, and making it even harder for the world's poor to meet their basic needs."¹ If Australian cities are to curb these trends and provide sustainable communities, they need to encourage new, more creative initiatives.

New Residential Estates

Consumption of resources begins in the home, "the largest source of greenhouse gas emissions from Australian households", coming in ahead of transport. By designing energy efficient housing and using energy more efficiently in our homes, we can help to cut down on the current average household's output of eight tonnes of carbon dioxide per year².

Unfortunately, some architectural trends are moving in the opposite direction, constructing houses which are highly inefficient to run, both in terms of ecological and economic impact. Large homes built on small blocks are now ubiquitous in outer Sydney estates. Some of these homes have poor design features, such as a lack of shade and clipped eaves. Such houses are more reliant on air conditioning, making them both more expensive to run, and more damaging to the environment.

Built in obsolescence

Today many of the things we buy, from kitchen appliances and cars to iPods, are built to become obsolete within a certain time frame so that a newer, more desirable version can be purchased. This is happening too with traditionally longer lasting goods such as houses³. Rebuilding before the end of a house's useful life has financial and other costs, such as requiring more materials and energy. Large volumes of waste are usually disposed of in the process⁴.

Better planning

A number of steps can be taken to try to minimise the environmental impact of building or renovating. These include using recycled or renewable materials, reusing whole buildings or parts thereof, minimising the energy used to transport materials by using locally produced materials, or simply building a smaller house⁵.

Eaves, cross ventilation and other passive solar features are essential in Australia for helping to cool the house without the use of air conditioners. One innovative solution is linking air conditioning to a solar collector. At the hottest part of the day, when air conditioning is needed, the solar connector would also provide the most energy. These measures would reduce both long term economic and environmental costs⁶.



Homes in NSW can be made more environmentally friendly and cost efficient with the renewable energy option "Green power" which the NSW State Government says can reduce household emissions by up to 50%⁷. However, at the moment there is not enough of this green power to meet demand. Some products which advertise themselves as "green" are not certified as such, and of the certified products, some are less green than others.

Local solutions

Tathra Surf Club, assisted by the Bega Valley Shire Council, has recently installed wind turbines and solar power panels at a cost of \$20 000. This will both reduce greenhouse pollution, and save the club about \$1000 per year in electricity bills. The model was strongly supported by the local community, and is expected to spread to other surf clubs throughout Australia⁸.

Some innovative solutions are taking place in the outer suburbs of Sydney,

with the Rouse Hill Recycled Water Scheme, in Sydney's north-west providing 1.7 billion litres of recycled water to homes per year. Non-drinking water is provided for toilets and outdoor use, reducing the demand for drinking water by 35%⁹.

Food for communities

Food planning is another important aspect of sustainable communities. The continuous outwards expansion of housing, especially around the Sydney Basin, is encroaching upon valuable agricultural land. This land produces much of Sydney's fresh vegetables, but also provides many farmers with a livelihood and has an economic value of \$1 billion a year. Having food produced close to the city also not only reduces the environmental costs of transport but is also important in providing a secure source of food into the future¹⁰.

Communities and transport

Transport emissions, in particular those from passenger cars, form one of the largest sources of emissions growth in Australia¹¹. However, many residents of

new or outer suburbs have little option but to travel in their own cars, with public transport either unsatisfactory or non-existent.

Australian capital cities such as Melbourne have been described by Professor Peter Newman, Director of the Sustainability and Technology Policy at Murdoch University, as "a system grinding to a halt." Professor Newman cites urban sprawl, which turns into car dependent outer suburbs, new roads that don't work because they fill so quickly, fuel prices and greenhouse gases as major causes of problems. He argues that long term under investment in public transport is one of the root causes of these problems. He advocates faster, more regular and more widespread public transport which can compete with cars¹².

A new Griffith University report has examined who is bearing the costs of poor transport planning and infrastructure, and found that "poorer outer suburbs in Australian cities are likely to be most affected by rising petrol costs because of their dependence on motor vehicles and limited access to public transport."¹³

The inadequacy of public transport to these areas can have high social costs for residents, as well as impacting upon their access to employment. This is especially so for the young, elderly and disabled.

Sustainability and your ecological footprint

"Ecological footprint" is an indicator of sustainable development, offering a snapshot of environmental impact. It estimates how much of the planet's area is required to produce the resources that we use, the emissions from energy sources that we burn, and our production of waste¹⁴. Australia's ecological footprint, at 7.7 hectares per capita, is the world's sixth biggest. Globally, there are only 1.8 hectares available per person¹⁵. In other words, our demands on nature exceed nature's ability to supply.

We need to use measures such as the ecological footprint when considering the construction of our homes, communities and roads – measures which do not simply take into account short term economic gains, but incorporate the long term sustainability of our environment, and the impact on all members of our society.

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- 16 Department of the Environment and Water Resources, (2007) Indicator: HS-74 Australia's ecological footprint [Online] <http://www.environment.gov.au/soe/2006/publications/drs/indicator/434/index.html> and Australia leaves behind 6th biggest ecological footprint (2006) [Online] <http://abc.net.au/news/newsitems/200610/s1772525.htm>

Just Action

- Check out your ecological footprint by doing a short quiz at <http://www.myfootprint.org/>
- Whether building or renovating, <http://www.greenhouse.gov.au/yourhome/> and <http://www.abc.net.au/science/planet/house/default.htm> contain some handy hints
- To find out more about sustainable food production, go to <http://www.sydneyfoodfairness.org.au/index.html>
- Walk, ride or take the train to work – you'll get fit and save money at the same time.



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