

## OPINION: Future Requirements for Soil Management

Dr Doug Edmeades Opinion Thursday, 18 February 2016, 12:20PM



Late last year, December to be exact, the Ministry of Primary Industries released a report entitled, “Future Requirements for Soil Management in New Zealand.” It begins with a statement of the obvious; “Soil is fundamental to life on Earth – it underpins food, feed, fibre and fuel production.” A nice piece of alliteration for a government document, I thought. Perhaps a reminder to remember your four F’s – eff-this and eff-that, all squared, of course.

<http://www.farmingshow.com/opinion/dr-doug-edmeades-opinion/opinion-future-requirements-for-soil-management/>

# CSIRO cuts provide cause for pause

February 21, 2016

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## EDITORIAL



CSIRO boss Larry Marshall has said his organisation can divert money and talent away from climate monitoring and modelling. *Photo: Daniel Munoz*

The chief executive of the CSIRO is paid to think about the future. Being the head of Australia's premier scientific research body demands thinking deeply about causes and consequences. It requires that you have a fair idea of what might be coming down the pipe, and what to do about it. To be taken by surprise is not a good look.

We can't know, but it doesn't appear that Larry Marshall, the physics-trained, former Silicon Valley entrepreneur who came back from 25 years in the United States to lead the CSIRO in 2014, paid much regard to the consequences when he set in motion swingeing job cuts of 350 positions over two years, mainly in the Ocean and Atmosphere, and Land and Water units.

<http://www.smh.com.au/comment/smh-editorial/csiro-cuts-provide-cause-for-pause-20160219-gmyu63.html>

## CSIRO cuts: Without climate modelling, we won't be able to adapt

OPINION

By Tom Quinn

Updated 5 Feb 2016, 4:28pm Fri 5 Feb 2016, 4:28pm



**Photo:** CSIRO work is critical to

our business and environment. ([Lucy Barbour](#))

***A well-resourced CSIRO is crucial if we're going to adapt to climate change. But instead, the rug has been pulled out from beneath it, writes Tom Quinn.***

The cuts to climate science positions at the CSIRO that were announced yesterday will directly harm our most climate-exposed industries, with flow-on impacts throughout the economy.

Prime Minister Malcolm Turnbull must pull the organisation into line, and give it the funding necessary to do its job, so that we can end the economic vandalism that is harming our economic potential.

The CSIRO announced that up to 350 positions in the organisation will change, with the Oceans and Atmosphere and Land and Water divisions set to be hit hardest.

There's a growing multi-trillion dollar market for sustainable and climate adaptive business models. We should be competing for a share of this global boom, not pulling the rug out from the institutions we need to show us how.

*Tom Quinn is the CEO of the Future Business Council. He will be speaking on The Evolution of Business at PauseFest in Melbourne on February 8-14.*

<http://www.abc.net.au/news/2016-02-05/quinn-csiro-cuts-why-we-need-climate-modelling/7143584>

## CSIRO cuts will leave us heading forward blind

By Imogen Jubb - posted Wednesday, 10 February 2016

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Cutting climate science is like throwing out your speedometer while driving at full speed down a road you have never been down before. We know the direction, but we lose our ability to control how fast we are going. So what will be the impact? It doesn't take an innovative entrepreneur of a start up to figure it out.

Yet late last week Larry Marshall, Chief Executive of the CSIRO sent an email to staff announcing his plan to decimate the CSIRO's highly revered climate science



division. The move is incredibly short-sighted and apparently caught even the Prime Minister 'blindsided'.  
It seems Abbott climate policies are alive and flourishing in a Turnbull government. <http://www.onlineopinion.com.au/view.asp?article=18008>



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## Science and business

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Sunday 21 February 2016 7:45AM [\(view full episode\)](#)

Merlin Crossley, Dean of Science at the University of New South Wales, thinks that bridging the gap between academia and industry is one of the biggest challenges faced by the modern university – but one that is by no means insurmountable.




IMAGE: SCIENCE BUSINESS (CHRIS RYAN/GETTY IMAGES)

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<http://www.abc.net.au/radionational/programs/ockhamsrazor/science-and-business/7173940>

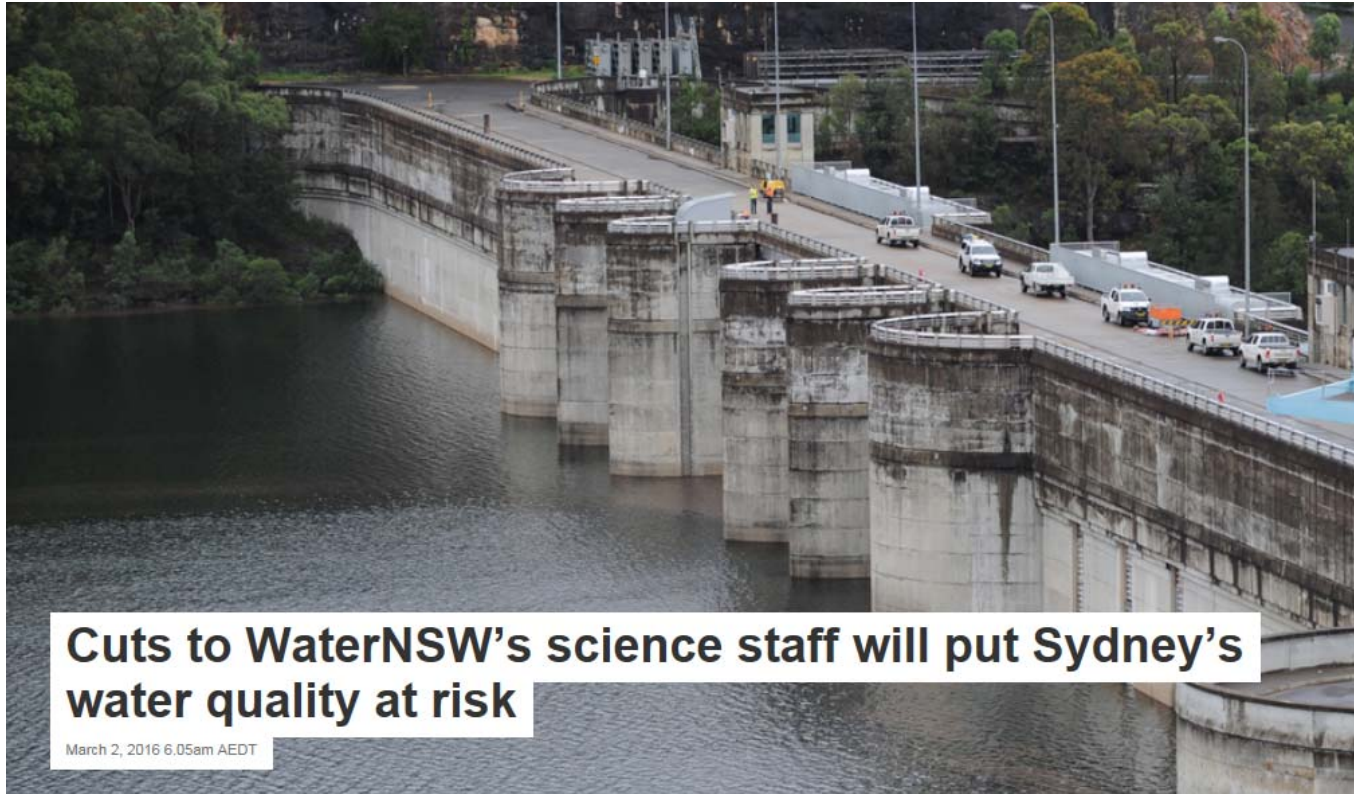
## Time to raise the bar for N concentrations?

Dr Doug Edmeades Opinion Tuesday, 3 February 2015, 11:01AM



If you stand back far enough with a fish-eyed perspective you can detect some time-dependent themes - modus operandi - methods of operation - that have guided the development in the pastoral sector over the years. For most of our farming pioneers, the initial goal was simply to survive, some did not – they walked the bridge to nowhere. This spirit of survival gave way, after World War II, to the production mode; more sheep, more cattle, more cows was called progress. Grow two blades of grass where previously there was one as Jonathan Swift the Irish author put it. This narrative in turn morphed in the 1970s and 1990s to productivity – utilize those two blades of grass better - the drive for efficiency was on as farmers consolidated their mainly family business. With the introduction of the RMA (1992) the new imperative became grow 2 blades of grass, use them efficiently and at the same time, look after the environment. Water quality was the primary issue.

<http://www.farmingshow.com/opinion/dr-doug-edmeades-opinion/time-to-raise-the-bar-for-n-concentrations/>



## Cuts to WaterNSW's science staff will put Sydney's water quality at risk

March 2, 2016 6.05am AEDT

There are still concerns over the impact of upstream coalmines on water in the Warragamba Dam, a key part of Sydney's water network. AAP Image/Dean Lewins

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The [recent axing](#) of five of the six senior scientists charged with protecting the health and safety of Sydney's drinking water has understandably created concerns.

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This follows last year's [merger](#) of the New South Wales State Water Corporation and the Sydney Catchment Authority, creating a single body called [WaterNSW](#) to oversee water for the entire state. Later in the year the newly created agency [suffered around 80 job cuts](#).

<http://theconversation.com/cuts-to-waternsws-science-staff-will-put-sydneys-water-quality-at-risk-55313>

## Are we causing longer, more intense bushfire seasons?

OPINION

By John Connor

Updated 8 Feb 2016, 3:55pm Mon 8 Feb 2016, 3:55pm



**Photo:** When summer rolls around each year we are faced with the incessant distress of raging bushfires around our country. ([Dave Hancock: User submitted](#)) *If you think bushfires are becoming both more common and more fierce, you're right. And the science says it's not just because of natural climate variations, writes John Connor.*

Over summer we have yet again witnessed frightening, destructive bushfires in South Australia and Western Australia.

Now, in Tasmania, we face the global tragedy of bushfires continuing to burn in extremely vulnerable world heritage alpine old growth forests, incinerating 1,000-year-old trees. Ancient ecosystems may be lost forever.

Each summer we have learned to expect horrific bushfires across southern Australia. I am not alone, I am sure, in the creeping sense of dread I experience as the first vision breaks on the news, signalling the commencement of what has become known as Australia's annual "bushfire season".

Faced with this annual carnage, and the astonishing efforts of the people who battle these fires, many of us with a few decades under our belt can't help but recall times not too long ago when these raging infernos didn't seem quite so ubiquitous during summer.

[John Connor](#) is the CEO of *The Climate Institute*, which released its *True or False? Facts and Myths About Bushfires and Climate Change fact sheet*

<http://www.abc.net.au/news/2016-02-08/connor-are-we-causing-longer,-more-intense-bushfire-seasons/7149044>



# When it comes to a shift to low-carbon energy, key players need a history lesson

## Andrew Simms

From railway rollouts to post-war 'homes for heroes', history shows us that societies are capable of great and rapid transition in response to a known challenge with clear targets



📷 Hundreds of post-war homes being built after Doncaster's Labour borough council had taken office in 1945.  
Photograph: Larry Burrows/ Getty Images

### **Nine months and counting**

Energy UK, the trade association representing the big six energy suppliers, has in welcome - if belated - fashion [come out in favour](#) of a large-scale shift to low-carbon, renewable energy.

Their desire to not be left behind might seem rather academic, as they already have been - both by a warming climate and [countries whose embrace of renewable energy](#) is far advanced.

<http://www.theguardian.com/environment/2016/mar/04/when-it-comes-to-a-shift-to-low-carbon-energy-key-players-need-a-history-lesson>





## This thing called life

Evolution, biodiversity, the future of the planet, thinking scientifically and the sheer joy of discovery

# Identification of animals and plants is an essential skill set

February 26, 2016 4:34pm AEDT



La Trobe University students learning how to identify plants near Falls Creek. Susan Lawler

I have recently been made abundantly aware of the lack of field skills among biology students, even those who major in ecology. By field skills we mean the ability to identify plants and animals, to recognise invasive species and to observe the impact of processes such as fire on the landscape.  
<http://theconversation.com/identification-of-animals-and-plants-is-an-essential-skill-set-55450#republish>

## Profits season: Australia's non-mining companies step up to the plate

OPINION

By Sheryle Bagwell

Posted 23 Feb 2016, 2:08pm Tue 23 Feb 2016, 2:08pm



**Photo:** No one knows more about the cyclical nature of business than Qantas. ([AAP: Paul Miller](#))

*Australian companies are proving reasonably adept at changing with the times. Maybe it's time to stop thinking about Australia as a country owing all its good fortune to mining, writes Sheryle Bagwell.*

The big miners thought diversity would save them. But when the prices of all your main products get smashed, there can be no escape.

And so it was for BHP Billiton - the world's largest diversified miner - which today unveiled its first loss in 16 years. It fell into the red in the first half of the financial year to the tune of \$US5.7 billion (\$7.8 billion) - a massive 233 per cent fall on the corresponding period.

<http://www.abc.net.au/news/2016-02-23/bagwell-australias-non-mining-companies-step-up-to-the-plate/7192678>

## Be like the beaver: build more dams

By Viv Forbes - posted Wednesday, 2 March 2016

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Water is essential for all life, and happily it is abundant on our blue watery planet. However, salty oceans cover 70% of Earth's surface and contain 97% of Earth's water. Salt water is great for ocean dwellers but not directly useful for most life on land. Another 2% of Earth's water is tied up in ice caps, glaciers and permanent snow, leaving just 1% as land-based fresh water.

To sustain life on land, we need to conserve and make good use of this rare and elusive resource

<http://www.onlineopinion.com.au/view.asp?article=18062>



## Biopiracy: when indigenous knowledge is patented for profit

March 8, 2016 11:32am AEDT

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As genetic research becomes more sophisticated, so does our ability to use plants and animals to develop new drugs or modify crops to meet food security needs.

Often, in the search for new biosources, researchers draw on local people's traditional knowledge about the properties of a particular plant, animal or chemical compound. When researchers use traditional knowledge without permission, or exploits the cultures they're drawing from – it's called [biopiracy](#).



<http://theconversation.com/biopiracy-when-indigenous-knowledge-is-patented-for-profit-55589>



News, News and Opinion, Sustainable Development Goals

## IASS and Partners Propose Shortlist of Global Land and Soil Indicators to Support SDGs



The protection of land and soils will contribute to the achievement of several Sustainable Development Goals (SDGs). It is therefore necessary to develop an appropriate monitoring and accountability framework to track the state of these resources. Finding appropriate indicators is...

<http://globalsoilweek.org/category/news-and-opinion/page/4>



# Global ocean monitoring program struggling to stay afloat, warn scientists

## Graham Readfearn

The Argo array of ocean floats supported by 31 countries has 'revolutionised' our understanding of the oceans but its future is uncertain



📷 An Argo float is deployed into the ocean Photograph: CSIRO

Right now, roughly a kilometre below the surface of an ocean near you, a yellow cylinder about the size of a golf bag is taking measurements of the temperature and saltiness of the water.

Every couple of days, the float will drop deeper - down to 2km - and then rise to the surface to transmit its data, before disappearing back into the depths to do the whole thing again.

<http://www.theguardian.com/environment/planet-oz/2016/feb/24/critical-global-ocean-monitoring-program-struggling-to-stay-afloat-without-funding-promises-warn-scientists>

## Surviving the Anthropocene: What's Next for Humanity?

*Jedediah Purdy ABC Religion and Ethics 1 Mar 2016*



The Anthropocene will pose unavoidable questions about what life is worth and what people owe one another. It will either amplify existing inequality, or set in motion a different logic of power. *Credit: Science Photo Library / Getty Images*

*Jedediah Purdy is Robinson O. Everett Professor of Law at Duke University. His most recent book is **After Nature: A Politics for the Anthropocene.***

Officially, for the past 11,700 years we have been living in the Holocene epoch. From the Greek for "totally new," the *Holocene* is an eyeblink in geological time. In its nearly 12,000 years, plate tectonics has driven the continents a little more than half a mile: a reasonably fit person could cover the scale of planetary change in a brisk eight-minute walk.

***Jedediah Purdy is Robinson O. Everett Professor of Law at Duke University. He is the author of a trilogy of books on American identity and, most recently, **After Nature: A Politics for the Anthropocene.** You can hear him in conversation with Waleed Aly and Scott Stephens this week on **The Minefield on RN*****  
<http://www.abc.net.au/religion/articles/2016/03/01/4416386.htm>



## Australian coal v renewables: how much will it cost to bring electricity to India's poor?

March 7, 2016 6:04am AEDT

Renewables could be a better answer to India's power problems. [DVA/USAID/Flickr](#), CC BY-NC-ND

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The Australian government continues to claim that [coal will play a vital role in bringing cheap energy to developing nations](#). In particular, it's claimed India's poor will benefit from the development of coal reserves in Queensland's Galilee Basin. But is that really the case?

In our [recent research](#), my colleagues and I tested claims that coal will help India's poor, relative to the impact of alternative, renewable energy sources. We found that when you add up all the costs and benefits of coal – including positives such as jobs, and adverse impacts such as those on health – renewable energy is cheaper.

### The cost of coal

<http://theconversation.com/australian-coal-v-renewables-how-much-will-it-cost-to-bring-electricity-to-indias-poor-55449>

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# Curiosity, the mother of innovation

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Sunday 6 March 2016 7:45AM ([view full episode](#))

A shark-proof suit. A combination cigarette lighter/perfume dispenser. A bicycle propelled by a rowing action. Death rays. A flying machine powered by vultures. A gun mounted in a shoe and fired by tapping the heel. A tapeworm trap, baited and lowered into the gullet on a string. Giant lawn mowers as weapons of war.



IMAGE: PETER MACINNIS TEACHES CHILDREN ABOUT THE NATURAL WORLD IN NOVEL WAYS (GETTY IMAGES/)

Curious?

You should be.

Peter Macinnis investigates nature with gear you can find in the shed.

<http://www.abc.net.au/radionational/programs/ockhamsrazor/curiosity,-the-mother-of-innovation/7216866>

## If the science is settled, why do we need all these people working at it?

By Don Aitkin - posted Tuesday, 9 February 2016

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I had hoped to spend more of my time and energy on subjects other than 'climate change', apart from completing my 'perspective' summary. But in the last few days there has been some 'news' in this domain, and this article is devoted to it. I begin with the email that the CEO of CSIRO, Dr Larry Marshall, sent to his staff, letting them know that about 350 jobs would be terminated, a lot of them in the 'climate change' area. That was bad enough, as far as climate botherers were concerned. But it was his rationale that really stirred them up.



“We have spent probably a decade trying to answer the question ‘is the climate changing?’” he told Fairfax Media.

“After Paris that question has been answered. The next question now is what do we do about it? The people that were so brilliant at measuring and modelling [climate change], they might not be the right people to figure out how to adapt to it.” <http://www.onlineopinion.com.au/view.asp?article=18007>



“Chook farms ruin lives!”. Australians consume a lot of cheap chicken, but not all of them appreciate an intensive chicken factory as a neighbour. Marco Amati, Author provided

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Once upon a time, chicken was a luxury few could regularly afford. It was a rare meal reserved for special occasions. Yet since 1965 the per-capita annual consumption of chicken meat in Australia has [increased ten-fold](#) from 4.6 kilograms per person in 1965 to 44.6 kilograms in 2012.

The retail price of chicken per kilogram has [decreased steadily](#) in real terms from around A\$9.67 in 1986 to A\$5.67 in 2009. The [arrival of Kentucky Fried Chicken in Australia in 1968](#) coincided with rapid increases in consumption. Today, Australians consume [more than 600 million chickens per year](#).

The vast majority is produced in intensive “broiler” farms. How does chicken production

<http://theconversation.com/done-like-a-chicken-dinner-city-fringes-locked-in-battles-over-broiler-farms-54886>

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Disclosure statement



## Big Ideas

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# The silo effect and how to break down the barriers

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Wednesday 24 February 2016 8:05PM [\(view full episode\)](#)

The consequences can be dire when a large organisation is plagued by separate competing divisions and excessive tribalism. Helping such a workforce to see a bigger picture often means dismantling the silo mentality and this involves more than simply creating open plan offices.

Gillian Tett, an astute observer of corporate and organisational culture, draws on her training and experience as an anthropologist to examine the problems that silos can cause and offers a number of case studies to illustrate how some of the world's leading companies are breaking down internal barriers.

Highlights of *The Silo Effect*, presented by the RSA in London, November 2015.



IMAGE: BREAKING DOWN SILOS IN LARGE ORGANISATIONS IS ABOUT MORE THAN JUST CREATING OPEN PLAN OFFICES. (VIEW PICTURES/ UIG/GETTY IMAGES)

Monday 10  
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and Sunday  
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<http://www.abc.net.au/radionational/programs/bigideas/the-silo-effect/7168738>

# World wildlife day: Animals are being slaughtered one by one, not saved two by two

We need to act now to stop the poaching and trafficking driving many species towards extinction. This means increased penalties for criminals as well as reducing demand



📷 A pangolin skin is displayed amongst other exotic and illegal animal parts in Mong La, a mostly lawless area in Myanmar of poached animals, gambling, and prostitution. Photograph: Taylor Weidman/Getty Images

**A**nimals, according to many traditions, were once protected from a global flood by entering the shelter of an ark.

Today, many of those same animal species face a new catastrophic flood, but this time the deadly downpour is caused by humans. Animals around the world confront a rain of bullets, poisonings, traps, and snares.

<http://www.theguardian.com/environment/2016/mar/03/world-wildlife-day-animals-are-being-slaughtered-one-by-one-not-saved-two-by-two>





## Queensland coal mines will push threatened finch closer to extinction

March 4, 2016 6:03am AEDT

The southern black-throated finch could be brought to the brink by coal-mining developments. [Seabamirum/Wikimedia Commons, CC BY](#)

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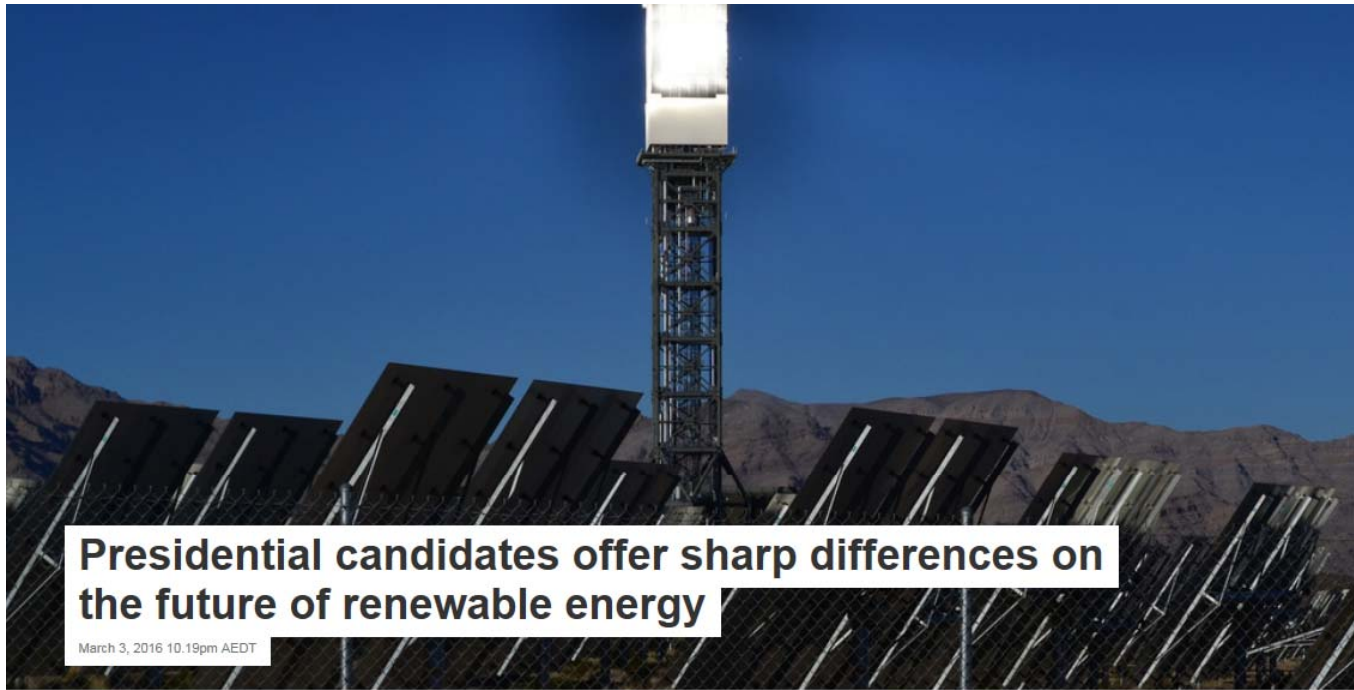
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Australia has a bad record for losing species, and more are likely to follow: [more than 1,700 species of animals and plants are listed](#) by the [Australian government](#) as being seriously threatened.

The extinction of a species usually comes about from several interacting threats, and the extinction process usually starts with losing a few populations, or a particular subspecies, until eventually there are only a few individuals remaining.

<http://theconversation.com/queensland-coal-mines-will-push-threatened-finch-closer-to-extinction-55646>





## Presidential candidates offer sharp differences on the future of renewable energy

March 3, 2016 10:19pm AEDT

The Ivanpah Concentrating Solar Electric Generating System, built on public land in California's Mojave Desert. ATOMIC Hot Links/Flickr, CC BY-NC-ND

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We are in the middle of a [long-term global transition](#) away from fossil fuels and toward more efficient, renewable-based energy systems. This shift will deliver many benefits, including jobs, reduced air pollution, lower greenhouse gas emissions and less exposure to the volatility and risks of extracting, storing and transporting fossil fuels. It also will offer individuals, households and communities [more local control](#) over their energy systems.



<http://theconversation.com/presidential-candidates-offer-sharp-differences-on-the-future-of-renewable-energy-55473>

# Why is 2016 smashing heat records?

January and February have both broken temperature records. Karl Mathiesen examines how much is down to El Niño versus manmade climate change



📷 The Arctic experienced terrific warmth throughout the winter, with temperatures at the north pole approaching 0C in late December – 30C to 35C above average. Photograph: AP

Yet another global heat record has been beaten. It appears January 2016 - the most abnormally hot month in history, [according to Nasa](#) - will be comprehensively trounced once official figures come in for February.

Initial satellite measurements, [compiled by Eric Holthaus at Slate](#), put February's anomaly from the pre-industrial average between [1.15C](#) and [1.4C](#). The UN Paris climate agreement struck in December seeks to limit warming to 1.5C if possible.

<http://www.theguardian.com/environment/2016/mar/04/is-el-nino-or-climate-change-behind-the-run-of-record-temperatures>



## It takes a lot of water to feed us, but recycled water could help

March 3, 2016 6.02am AEDT

Artichokes growing in Werribee South, an area that uses recycled water for irrigation. Jen Sheridan

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Australians eat a lot of water – the water that is used to produce our food. New findings from our [Foodprint Melbourne study](#) estimate that [more than 475 litres of water is used to grow each person's food every day](#).

This is just the irrigation water used to grow our food. We consume much more than 475 L if you include rainwater (which isn't tracked in national water accounts) or water used in processing and manufacturing.

To put this in context, the amount of water used to grow food for Melbourne each year (758 GL) is around double the amount of water [used in people's homes \(376 GL\)](#).

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<http://theconversation.com/it-takes-a-lot-of-water-to-feed-us-but-recycled-water-could-help-55502>

**“The greatest enemy of knowledge is not ignorance, it is the illusion of knowledge.”**

— [Daniel J. Boorstin](#), [The Discoverers: A History of Man's Search to Know His World and Himself](#)