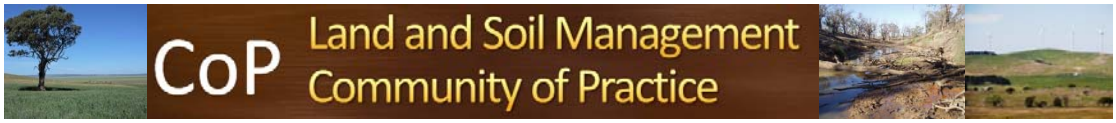

How the World's Most Fertile Soil Can Help Reverse Climate Change


Dr. David Suzuki

Feeding more than 7 billion people with minimal environmental and climate impacts is no small feat. That parts of the world are plagued by obesity while starvation is rampant elsewhere shows part of the problem revolves around distribution and social equity. But agricultural methods pose some of the biggest challenges.
http://www.ecowatch.com/how-the-worlds-most-fertile-soil-can-help-reverse-climate-change-1906689975.html

Opinion: NRCS soil health effort is deep, impactful and taking root across the nation

By Guest Author

By Jason Weller, Chief, Natural Resources Conservation Service

An opinion piece published recently on AgriPulse ("2018 Farm Bill - Soil Health") outlined the importance of the growing interest in improving the health of the nation's agricultural soils. I want to build upon the article's points and highlight a few of the significant impacts USDA's Natural Resources Conservation Service (NRCS) and its many partners have made by focusing on supporting farmers and ranchers as they use science-based solutions to improve the health of their soils.

A robust effort is needed to not just promote soil health, but provide extensive training for both conservationists and producers, ensure that NRCS has the capacity at the field level to support farmers and ranchers, and to expand our scientific understanding of the physical, chemical, and biological properties of healthy soils. I also know that rebuilding and regenerating our nation's soil is a huge endeavor, which will require the contributions, ingenuity, and hard work of experts and organization from across the nation. http://www.agri-pulse.com/Opinion-NRCS-soil-health-effort-is-deep-impactfu-and-taking-root-across-the-nation-07052016.asp

Soil's big wins buried in the science

MIKE FOLEY

We need recognition of soil as one of the two core assets for agriculture: Soil scientist Andrea Koch.

AUSTRALIA'S approach to soil must dig deeper if our agriculture sector is to keep pace with its competitors.

Government policy has for too long taken a narrow focus on soil, prioritising funding for research aimed at enhancing environmental outcomes, as opposed to research that delivers productivity gains.

That’s according to soil researcher Andrea Koch, formerly of the United States Study Centre’s soil carbon initiative. http://www.theland.com.au/story/3871247/soils-big-wins-buried-in-the-science/

Here’s a good news conservation story: farmers are helping endangered ecosystems

June 22, 2016 12.40pm AEST

The Fat-tailed Dunnart is found in box gum grassy woodland. Damian Michael

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There a many reasons to be unhappy about the state of the environment. But we’ve recently found some good news: a conservation program that works.

You probably haven’t heard of the Environmental Stewardship Program (ESP). It was a market-based agri-environment program that ran between 2007 and 2012, which funded farmers to conserve threatened ecosystems on their property. Land managers were given contracts for up to 15 years to deliver results.

Overall, 297 land managers will receive about A$152 million over roughly 18 years to implement their conservation management plans. The last of these contracts will end in 2027. No new funding rounds are expected.

There’s been a variety of market-based programs for conservation on farmland in Australia,

Authors




https://theconversation.com/heres-a-good-news-conservation-story-farmers-are-helping-endangered-ecosystems-60794?utm_content=bufferb32a1&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer

FARMING FIRST

A global coalition for sustainable agricultural development

Sheryl Cowan: Private Sector Drivers for Sustainable Growth in Agriculture

In this guest blog post, Sheryl Cown, Vice President of Programs at CNFA highlights the ways the private sector can catalyse sustainable agriculture and tackle global food security issues.

With the world population expected to reach nine billion by 2050, FAO projects that food and feed production will need to increase by 60 percent to meet the world's food needs. The questions that arise are – Can we meet this growing demand? And can we meet this demand in a sustainable manner without harming our earth's resources? http://www.farmingfirst.org/2016/06/sheryl-cowan-private-sector-drivers-for-sustainable-growth-in-agriculture/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+FarmingFirst+%28Farming+First%29

Hope in healthy soil

You know how they say when you're really stressed you're supposed to go outside, take off your shoes, stand barefoot in the grass and just breathe? Something about re-grounding yourself. In my case, it's a nice long run and then I'll go barefoot. And you know what? Call me crazy, but I always feel better afterwards. Whether it's a runner's high or there really is something to "re-grounding" yourself, more times than not, it gets me through whatever issues I'm stressing over.

Well, according to a series of 15- and 30- second public service announcements the NRCS has distributed, there really may be something to "re-grounding" yourself. These PSA's highlight the critical role healthy soil plays in our lives all over the country. They're very well put together and show the solutions to many of our problems could be right beneath our feet. Check it out…could there be hope in healthy soil?

Healthy soil lays the foundation for the rest of our lives. I'll let that sink in on this fine Earth Day. http://www.worldorganicnews.com/?p=44377

Soil science and policy challenges

Sarah Connors, EGU Science Policy Fellow

Antonio Jordán, University of Seville

Discussions during the 5th International Conference of Fire Effects on Soil Properties

in the O’Brien Centre for Science, Dublin, Ireland (2015), by Antonio Jordán. Distributed by Imaggeo.

Soil is often considered as the skin of the Earth and is located at the interface between the lithosphere, hydrosphere, atmosphere and biosphere. Soil is the physical and nutritional support for living organisms in emerged areas.The major soil typws of Europe.

From another point of view, soil is the basis for the production of food, fiber, medicines, fuel and ecosystem resources or services. However, soil is a limited resource because of its low formation rate and finite area of land. Although human activity has always contributed to soil degradation, the pressure on soil resources has particularly increased over the last century. This is because of the intensification of crops and productive activities, reduction of forest and natural areas and the expansion of urban areas. About a third of the world soil surface is moderately or severely affected by physical (erosion, compaction) and chemical degradation processes (salinity, acidification, loss of nutrients or pollution).

Soil produces food. Apricots in Les Alcusses valley, Eastern Spain, by Artemi Cerdà. Disributed by Imaggeo.

There is now an increasingly important consensus on soil's value as a productive resource and basis of ecosystems. Increasing investment in research, education and awareness programs and sustainable development are some of the ways to halt land degradation and promote the restoration of degraded areas.
https://gsoil.wordpress.com/2016/02/03/soil-science-and-policy-challenges/

Full of holes: why Australia's mining boom will leave permanent scars

With the coal boom on the wane, mining companies want to escape the cost of rehabilitating their sites. But even if governments effectively restrain them, many of the huge voids in the landscape will never be filled in

The cost of filling in the ‘final voids’ left by Australia’s mega coalmines is often estimated to run into the hundreds of millions – or even billions – of dollars. Photograph: David Hancock/AFP/Getty Images

Michael Slezak and Joshua Robertson

Wednesday 20 July 2016 08.03 AEST Last modified on Wednesday 20 July 2016 09.40 AEST

Australia is teetering on the edge of a massive hole – one left by huge mines that may soon close. As they do, the country is playing a desperate game of catch-up to make sure the mining companies pay for the cleanup. But a legacy of limited environmental requirements means that even if that succeeds, the end of the coal boom will leave Australia pockmarked with unfilled holes.
https://www.theguardian.com/environment/2016/jul/20/full-holes-australia-mining-boom-permanent-scars

Pauline Hanson's One Nation will bring climate science denial to the Senate

Graham Readfearn

Fringe political groups such as One Nation, Family First and the Liberal Democrats still reject the evidence that humans are causing climate change

One Nation's Pauline Hanson and climate science sceptic Malcolm Roberts, No 2 on her Queensland Senate ticket. Photograph: Dan Peled/AAP

So we're in that post-election twilight zone where analysts, psephologists and columnists try and pull something cogent out of all the mess of uncertainty.

Who'll be the next prime minister? Which party will lead and how will they do it? What does it all mean, and did Donald Trump have anything to do with it? What do psephologists do when there's no election on?

And then, of course, there's the questions over the key issue of climate change and energy policy. Where might all this leave Australia?

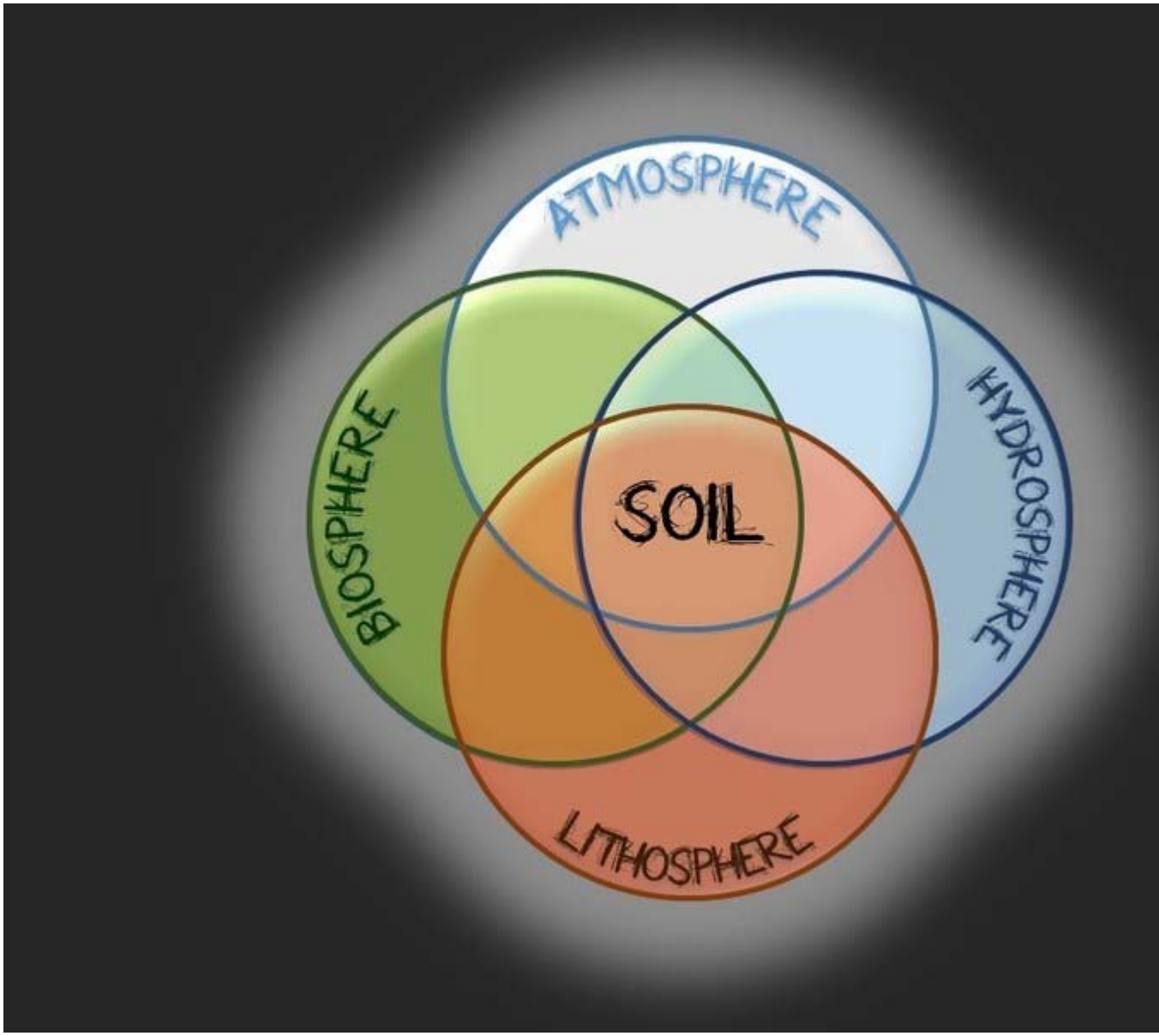
https://www.theguardian.com/environment/planet-oz/2016/jul/05/pauline-hansons-one-nation-to-bring-climate-science-denial-to-the-senate

The long, long travel from rock to soil (I)

There is hardly a subject in all nature, of which the majority of people has so unclear terms and which has hitherto been so completely misunderstood, as the soil on which they walk.

F.A. Fallou

Soil is often considered as the skin of the Earth and is located at the interface between the lithosphere, hydrosphere, atmosphere and biosphere. Air, water, rock and living beings interact to form soil, which, in turn, is the physical and nutritional support for living organisms in emerged areas. Currently, we define soil is an open system that temporarily stores the necessary resources for living organisms. The availability of these resources (water, energy, mineral nutrients, etc.) depends on the intensity and speed of exchange processes between soil and the rest of compartments of ecological systems.



Soil in the interface, by Antonio Jordán. Distributed by Imaggeo.

But the concept of soil has been modified in accordance to the increasing understanding of its components and the relations among them. During centuries, soil was considered not more than dirt on rocks, when not simply one of the strata in geological profiles. See, for example, the following statement: "*That all the earthy part of soil consists of minute fragments of rock does not require argument, or need proof, but inspection merely to determine it. We have only to place specimens under the magnifier and their rocky origin will become manifest*" (Eaton and Beck, 1820). https://gsoil.wordpress.com/2016/02/06/the-long-long-travel-from-rock-to-soil-i/

Neil McKenzie, CSIRO Agriculture presentation at the ABARES National Outlook Conference 2016

http://www.agriculture.gov.au/abares/outlook-2016/Pages/presentation-videos-transcripts/neil-mckenzie.aspx

Scientists Hope to Cultivate an Immune System for Crops

Carl Zimmer

16 JUNE 2016

Brassica seed meal is spread in an apple orchard in efforts to alter the soil microbiome. Credit Shashika Hewavitharana

The world's crops face a vast army of enemies, from fungi to bacteria to parasitic animals. Farmers have deployed pesticides to protect their plants, but diseases continue to ruin a sizable portion of our food supply.

Some scientists are now investigating another potential defense, one already lurking beneath our feet. The complex microbial world in the soil may protect plants much like our immune system protects our bodies.
http://www.nytimes.com/2016/06/21/science/soil-microbiome-immune-system-pesticides.html?_r=0

Opinion: A solution to the challenge of land-disposed sewage sludge

27 June 2016

By Richard Honour and Patty Martin
For Environmental Health News

For the sake of our health and the health of our land, we need to abolish land-disposed sewage sludge, but where will it go? The challenge and the solution are clear: Sewage sludge—consisting of semi-liquid waste obtained from processing municipal sewage—is toxic waste, and must be reduced to safer material with little or no toxicity in preparation for safe disposal. But by what technology, and at what cost to whom? Our air, soil, water and food are at risk.

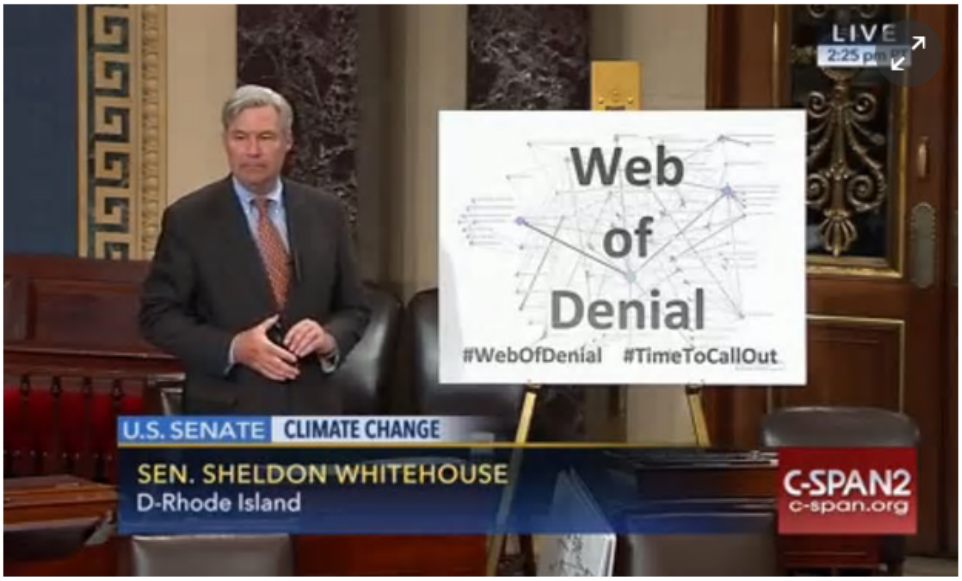
Sludge in the wheat fields of Douglas County, Washington. (Credit: Richard Honour)

Using federal data, we estimate that about 60 percent of nearly 100 million wet tons of sewage sludge from nearly 20,000 municipal wastewater treatment plants in the U.S. is disposed each year on the nation's farms, forests and rangelands, and it's all toxic wa
http://www.environmentalhealthnews.org/ehs/news/2016/june/opinion-a-solution-to-the-challenge-of-land-disposed-sewage-sludge

US senators detail a climate science 'web of denial' but the impacts go well beyond their borders

Graham Readfearn

Australians have been both helpers and victims of the fossil fuelled web of climate science denial being detailed in the US Senate



A screenshot as US Senator Sheldon Whitehouse spoke about the climate science 'web of denial'. Photograph: C-SPAN

By the middle of this week, about 20 Democratic senators in the US will have stood up before their Congress to talk about the fossil fuelled machinery of climate science denial.

The senators are naming the fossil fuel funders, describing the machinery and calling out the characters that make up a "web of denial".

https://www.theguardian.com/environment/planet-oz/2016/jul/12/us-senators-detail-a-climate-science-web-of-denial-but-the-impacts-go-well-beyond-their-borders

Keep calm and save the Earth

By Lyn Bender - posted Monday, 4 July 2016 Sign Up for free e-mail updates!

Australians' concern about climate has surged in the last three years to its highest ever. The Climate Institute reports that 72 per cent accept the science on human caused climate change..Significantly, only 17 per cent of voters think the Coalition has a credible climate plan, with Labor only marginally higher at 20 per cent. Only eight per cent of voters think that ignoring climate change is an answer.

63 per cent of Australians now back carbon pricing.

Yet the climate crisis was barely mentioned by the major parties, over eight weeks of electioneering. http://www.onlineopinion.com.au/section.asp?name=environment

Abandoned CSG wells go untested by NSW regulators, fanning community concern

8 July 2016

NSW regulators do not routinely test coal seam gas wells after they have been plugged and abandoned, relying instead on "technical reports" by the companies that the wells pose no threat to communities and the environment.

Residents of Gloucester, north of Newcastle, say it is a "massive relief" that gas giant AGL will no longer go ahead with plans for a major coal seam gas project in the area.

The issue of who is responsible for the integrity of CSG wells after they are decommissioned is coming to a head as residents of Gloucester demand answers after AGL's decision in February that it would exit the entire industry.
http://www.smh.com.au/environment/abandoned-csg-wells-go-untested-by-nsw-regulators-fanning-community-concern-20160703-gpxtfi.html

Rog Wood: 'All farmers should make pedology - the scientific study of soils - their particular care'

Rog Wood

18 Jul 2016 / Rog Wood, Farming correspondent

Adopting the latest technologies and sustainable land use practices could allow soil to play a key role in locking away huge quantities of greenhouse gases. Plants, through the process of photosynthesis, have the ability to extract carbon from the air and feed it to the soil through their roots.

http://www.heraldscotland.com/business/14624905.Rog_Wood___39_All_farmers_should_make_pedology___the_scientific_study_of_soils___their_particular_care__39_/

This election, what hope is there for the Great Barrier Reef?

Michael Slezak

Before you head to the polls, here's one last quick attempt to clear some of the haze of half-truths and complete rubbish surrounding the parties' reef policies

To give the Great Barrier Reef a fighting chance, scientists estimate $10bn needs to be spent to reduce water pollution over the next 10 years. Photograph: Alison Godfrey/AAP

If the Great Barrier Reef is an election issue for you, then before you head to the polls this weekend, here are a few things worth noting about the major parties' policies.

Firstly, by way of background, remember that almost a quarter of the reef was killed by warm waters this year, in the worst bleaching event on record. And those water temperatures are expected to be average temperatures within 20 years. To give the reef a fighting chance of surviving that, scientists estimate $10bn needs to be spent to reduce water pollution over the next 10 years.

https://www.theguardian.com/environment/2016/jul/01/this-election-what-hope-is-there-forthe-great-barrier-reef

85% renewable electricity system cheaper than renewing the current coal and gas

By Ben Rose - posted Thursday, 30 June 2016

All three major Australian political parties agree, (but not with the same urgency) that 'the science is in' on global warming. It's real, it's a man-made problem and it will have to be solved on a global scale. Global action is slowly accelerating with the signing of the 2016 'Paris COP' agreement of 155 nations.

But the media has largely ignored climate policies in the lead up to the coming election and both major parties have been reluctant to debate and present their policies in any depth.. Nearly all experts agree that the Government's 'plan' – essentially paying polluters for emission reductions they should have implemented anyway and paying farmers not to clear some trees– is entirely inadequate to meet their 26% reduction target, which is considered by most other COP parties to be far too low. Labor has a target of 50% renewable power and a plan for two carbon emissions reduction schemes; an emissions trading scheme for industry and a 'baseline and credit' scheme for electricity, which may work (depending on the 'fine print').

Ben Rose is a semi-retired carbon consultant, energy auditor and natural resource development officer. He is a committee member of both the Sustainable Transport Coalition of WA and Sustainable Energy Now

http://www.onlineopinion.com.au/view.asp?article=18343

Nitrogen a key to crop production, but complex

Bob Freebairn25 Jul 2016, 4:30 a.m.
News

Here is a dual-purpose cereal top-dressed with 100 kg/ha urea (background deeper green portion of paddock) compared with front portion where not treated. There's a difference in production of more than 100 percent.

Nitrogen at 40 to 100 kg/ha (and sometimes more) is standard practise for many cereal and canola crops, including dual purpose and grazing-only ones. Such use commonly also return big profits, despite fertiliser cost, if carefully assessed and tailored to likely crop needs. http://www.theland.com.au/story/4037412/nitrogen-a-key-to-crop-production-but-complex/

How will leaving the European Union affect our food?

Tim Lang

Whoever leads negotiations on leaving the EU faces big choices - any new food policies must have health, the environment and justice at their heart

The UK's food system depends on migrant labour. Photograph: Andy Hall for the Observer

Food barely featured in the referendum, but years of jibes about Eurocrats controlling our food standards, and myths about bent bananas, left their mark. Food politics will now come to the fore in ways most consumers might not like.

This was predicted by the few studies which bothered to look at this vital area of UK life. The academic reports on Brexit unanimously anticipated not liberation but a period of turmoil and dislocation in the food system.

https://www.theguardian.com/environment/2016/jun/29/how-will-leaving-the-european-union-affect-our-food

Renewable energy smashes global records in 2015, report shows

Last year saw record worldwide investment and implementation of clean energy such as wind, solar and hydropower

Solar powered water pump in Malawi. African and Latin American countries set some of the world's most ambitious targets for clean energy deployment in 2015. Photograph: Joerg Boethling/Alamy Stock Photo

An upsurge in new wind, solar and hydro plants and capacity saw renewable energy smash global records last year, according to a report on new supply.

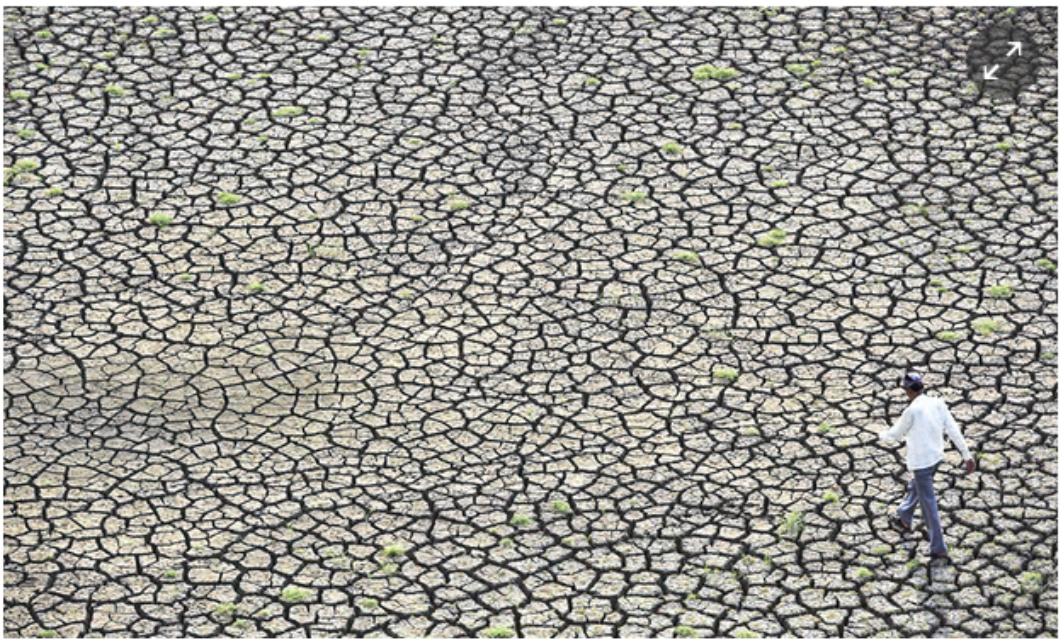
Some 147 Gigawatts of renewable electricity came online in 2015 - the largest annual increase ever and as much as Africa's entire power generating capacity.

Clean energy investment increased to $286bn (£198bn), with solar energy accounting for 56% of the total and wind power for 38%.

https://www.theguardian.com/environment/2016/jun/01/renewable-energy-smashes-global-records-in-2015-report-shows

World could warm by massive 10C if all fossil fuels are burned

Arctic would warm by as much as 20C by 2300 with disastrous impacts if action is not taken on climate change, warns new study



A parched Manjara dam project reservoir in Dhanegaon near Latur in Maharashtra, India. Parts of India are currently facing drought. Photograph: Anshuman Poyrekar/Getty Images

The planet would warm by searing 10C if all fossil fuels are burned, according to a new study, leaving some regions uninhabitable and wreaking profound damage on human health, food supplies and the global economy.

The Arctic, already warming fast today, would heat up even more - 20C by 2300 - the new research into the extreme scenario found.

https://www.theguardian.com/environment/2016/may/23/world-could-warm-by-massive-10c-if-all-fossil-fuels-are-burned

The environmental benefits of grass-fed, pasture-rotated cattle

Scott Morefield
Tags: grass-fed beef, environment, carbon sequestration

(NaturalNews) Ever since the U.N. Food and Agriculture Organization blamed livestock for 18% of the world's man-made greenhouse-gas emissions in a 2006 report, the globalists, always looking to use the environmental movement as a power-grabbing scheme, have used the report to further their

war against eating meat. They play 'good-cop' against the giant factory-farming operations whose practices actually do harm to the environment and the health of consumers who eat their antibiotic and hormone laden fare - always posturing but never really doing anything of value. Meanwhile, the real solution remains largely ignored.

Learn more: http://www.naturalnews.com/037213_grass-fed_beef_environment_carbon_sequestration.html#ixzz4EjUHmvlw

What lies beneath Antarctica's ice? Lakes, life and the grandest of canyons

July 18, 2016 6.05am AEST

What lies beneath: bedrock peeks through the Antarctic ice. Russ Hepburn, Kenn Borek Air, Author provided

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There are few frontiers in the world that can still be said to be unexplored. One of these *terra incognita* is the land beneath Antarctica's ice sheets. Buried under kilometres of ice is a fascinating realm of canyons, waterways and lakes, which is only now being mapped in detail.

There are more than 400 known lakes in this harsh environment, and more are being discovered as technology advances. This water beneath the ice lubricates the interface between the ice sheet and its rocky bed, and thus controls the flow and behaviour of the ice itself.

http://theconversation.com/what-lies-beneath-antarcticas-ice-lakes-life-and-the-grandest-of-canyons-61748

"… soil management is highly determined by the soil type. So what works on one soil doesn't work on another."

Neil McKenzie ABARE National Outlook Conference 2016