
Trial targets tough Mallee soils

11 Jul, 2014 07:03 PM A+ A-

VARIABLE soils, stones and sand are a common theme in Mallee soils and Mallee Sustainable Farming's advanced seeding systems project is aiming to address the challenges faced by growers when it comes to finding the right machine for the job.

http://www.stockjournal.com.au/news/agriculture/general/news/trial-targets-tough-mallee-soils/2704998.aspx

How existing cropland could feed billions more

17 July 2014

University of Minnesota

Feeding a growing human population without increasing stresses on Earth's strained land and water resources may seem like an impossible challenge. But according to a new report focusing efforts to improve food systems on a few specific regions, crops and actions could make it possible to both meet the basic needs of 3 billion more people and decrease agriculture's environmental footprint.

Hoang Su Phi terraced fields, Ha Giang province, Vietnam.

Credit: © hoangtran / Fotolia

Feeding a growing human population without increasing stresses on Earth's strained land and water resources may seem like an impossible challenge. But according to a new report by researchers at the University of Minnesota's Institute on the Environment, focusing efforts to improve food systems on a few specific regions, crops and actions could make it possible to both meet the basic needs of 3 billion more people and decrease agriculture's environmental footprint.

The report, published today in *Science*, focuses on 17 key crops that produce 86 percent of the world's crop calories and account for most irrigation and fertilizer consumption on a global scale. It proposes a set of key actions in three broad areas that that have the greatest potential for reducing the adverse environmental impacts of agriculture and boosting our ability meet global food needs. For each, it identifies specific "leverage points" where nongovernmental organizations, foundations, governments, businesses and citizens can target food-security efforts for the greatest impact. The biggest opportunities cluster in six countries -- China, India, U.S., Brazil, Indonesia and Pakistan -- along with Europe.

Journal Reference:

1. P. C. West, J. S. Gerber, P. M. Engstrom, N. D. Mueller, K. A. Brauman, K. M. Carlson, E. S. Cassidy, M. Johnston, G. K. MacDonald, D. K. Ray, S. Siebert. **Leverage points for improving global food security and the environment**. *Science*, 2014; 345 (6194): 325 DOI: 10.1126/science.1246067

http://www.sciencedaily.com/releases/2014/07/140717141957.htm

NMSU Effort Fights Global Warming While Improving The Soil

Share Tweet E-mail Comments Print

By NEWS EDITOR AND PARTNERS

A New Mexico State University scientist's work in carbon sequestration is turning heads – not just here in New Mexico, but also in Austria and Australia. His work suggests a potential solution for dealing with the carbon dioxide-related problems that seem to be causing global warming.

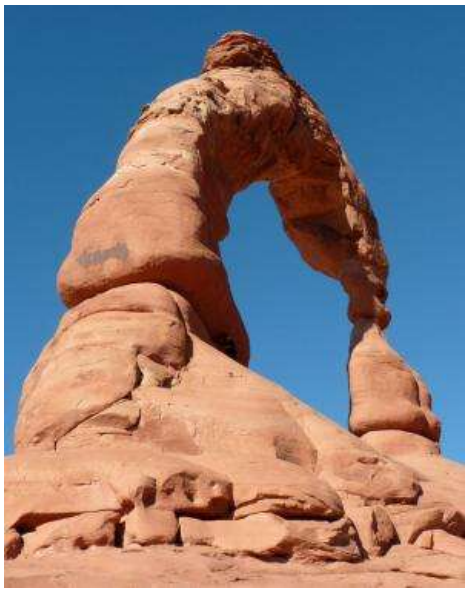
There are nearly seven billion people on Earth with a collective carbon footprint from energy usage of more than 30.5 billion tons of carbon dioxide per year. If reducing this footprint will return the planet to more moderate climatic conditions, experts say we need a safe and inexpensive system to efficiently capture carbon dioxide from ambient air and safely store it, with few negative impacts on the economy or environment and no long-term liabilities for storage.

NMSU scientist David C. Johnson stands in a field at Leyendecker Plant Science Center with a cutting from a sesbania plant grown on his compost system. Johnson's compost work suggests that the solution to global warming lies in the soil. (Courtesy photo)

http://krwg.org/post/nmsu-effort-fights-global-warming-while-improving-soil

Researchers figure out how oddly shaped sandstone landform structures come about

10 hours ago by Bob Yirka



Delicate Arch, Arches National Park, Utah, USA. Credit: Jaroslav Soukup

(Phys.org) —A team of researchers with members from facilities in the Czech Republic and one from the U.S. has discovered the mechanism by which unique sandstone landforms take shape. In their paper published in *Nature Geoscience*, the team describes how their studies of sandstone in their lab led to insights about how both gravity and erosion contribute to the creation of such unique structures as Delicate Arch at Arches National Park in Utah. Chris Paola of the University of Minnesota offers a News & Views piece on the research done by the team in the same journal issue.

Read more at: http://phys.org/news/2014-07-figure-oddly-sandstone-landform.html#jCp

Nurturing life below

KIM CHAPPELL

21 Jul, 2014 03:30 AM A+ A-

Comments 0 Sh

THE world under our feet is critical to the success of a crop, says agricultural ecologist David Hardwick.

Without a balanced and well-supported ecosystem within the soil, crops can't get the nutrients they need, regardless of how much fertiliser is provided.

http://www.stockjournal.com.au/news/agriculture/cropping/general-news/nurturing-life-below/2705549.aspx

Geologist says Curiosity's images show Earth-like soils on Mars

17 July 2014

Geologist Gregory Retallack, based on images and data gathered by the Mars rover Curiosity, believes 3.7 billion-year-old rocks at the bottom of the Gale impact crater contain fossilized soil. Such soil, called paleosols, have been found in …more

Soil deep in a crater dating to some 3.7 billion years ago contains evidence that Mars was once much warmer and wetter, says University of Oregon geologist Gregory Retallack, based on images and data captured by the rover Curiosity.

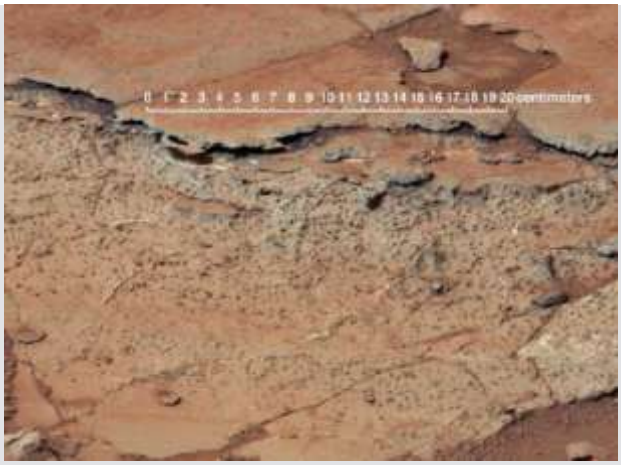
Read more at: http://phys.org/news/2014-07-geologist-curiosity-images-earth-like-soils.html#jCp

Earth-like soils on Mars? Ancient fossilized soils potentially found deep inside impact crater suggest microbial life

17 July 2014

University of Oregon

Soil deep in a crater dating to some 3.7 billion years ago contains evidence that Mars was once much warmer and wetter, says a geologist based on images and data captured by the rover Curiosity.



Soil deep in a crater dating to some 3.7 billion years ago contains evidence that Mars was once much warmer and wetter, saysUniversity of Oregon geologist Gregory Retallack, based on images and data captured by the rover Curiosity.

NASA rovers have shown Martian landscapes littered with loose rocks from impacts or layered by catastrophic floods, rather than the smooth contours of soils that soften landscapes on Earth. However, recent images from Curiosity from the impact Gale Crater, Retallack said, reveal Earth-like soil profiles with cracked surfaces lined with sulfate, ellipsoidal hollows and concentrations of sulfate comparable with soils in Antarctic Dry Valleys and Chile's Atacama Desert.

His analyses appear in a paper placed online this week by the journal *Geology* in advance of print in the September issue of the world's top-ranked journal in the field. Retallack, the paper's lone author, studied mineral and chemical data published by researchers closely tied with the Curiosity mission. Retallack, professor of geological sciences and co-director of paleontology research at the UO Museum of Natural and Cultural History, is an internationally known expert on the recognition of paleosols -- ancient fossilized soils contained in rocks.

Journal Reference:

1. G. J. Retallack. **Paleosols and paleoenvironments of early Mars**. *Geology*, 2014; DOI: 10.1130/G35912.1

Catastrophic debris avalanches represent a second volcanic hazard

18 July 2014

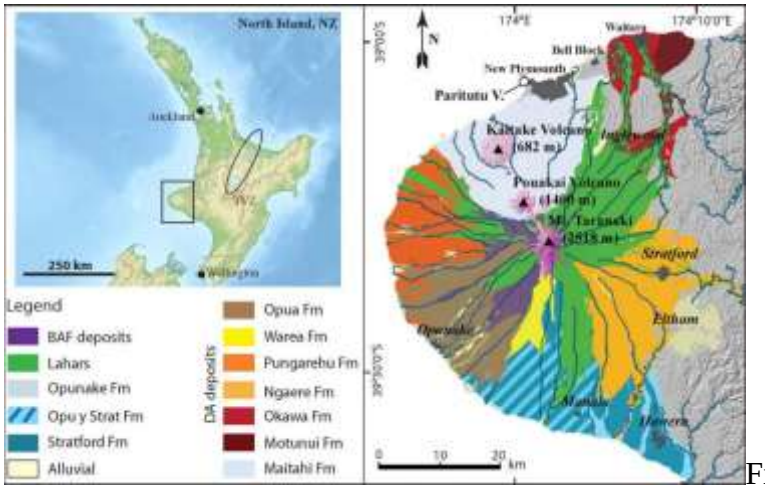


Figure 1 from Roverato et al.: Location map of the Taranaki peninsula and distribution of debris avalanche deposits surrounding Taranaki volcano, New Zealand.

Volcanic hazards aren't limited to eruptions. Debris avalanche landslides can also cause a great deal of damage and loss of life. Stratovolcanoes, with their steep, conical shapes made up of lava and unconsolidated mixed materials, can reach a critical point of instability when they overgrow their flanks. This leads to partial collapse, and the product of this slope failure is a large-scale, rapid mass movement known as a catastrophic landslide or debris avalanche.

Read more at: http://phys.org/news/2014-07-catastrophic-debris-avalanches-volcanic-hazard.html#jCp

Chaff rescues saline soil

JACINTA ROSE

15 Jul, 2014 03:30 AM A+ A- Comments 0 Sha

AFTER a run of dry seasons from 2006 to 2008 farmers on northern Yorke Peninsula started noticing increasing numbers of saline patches appearing in their paddocks.

Crop growth in these areas stopped, leaving farmers searching for solutions to prevent the spread of salinity and make the soil fertile again.

http://www.stockjournal.com.au/news/agriculture/cropping/general-news/chaff-rescues-saline-soil/2704799.aspx

New study identifies contributing factors to groundwater table declines

11 July 2014

It's no secret groundwater levels have declined across the state over the past eight decades, and that the primary reason was the onset of irrigation in agriculture and population growth. But a recent Texas A&M AgriLife Research study has identified other factors having an impact.

The groundwater declines have been most severe in the past four decades, but the news isn't all bad, according to Dr. Srinivasulu Ale, AgriLife Research geospatial hydrology assistant professor in Vernon.

"Long-term (1930-2010) trends in groundwater levels in Texas: Influences of soils, land cover and water use," authored by Dr. Sriroop Chaudhuri, former post-doctoral research associate at Vernon, and Ale, was published in the *Science of the Total Environment* journal recently.

Read more at: http://phys.org/news/2014-07-contributing-factors-groundwater-table-declines.html#jCp

Soil scientists finds sulfur solution

MAX OPRAY

20 Jul, 2014 03:30 AM A+ A- Comments 1 Sha

WHEN agronomist Craig Wissell moved from Burra to Ardrossan to help out on his wife Cindy's fifth-generation family farm in 2004, he noticed something was not quite right with the land.

He said there was an unsustainable amount of nitrogen being spread on agricultural operations in the Yorke Peninsula to get the results farmers needed, a situation he figured was because of an imbalance in the soil.

http://www.stockjournal.com.au/news/agriculture/cropping/general-news/soil-scientists-finds-sulfur-solution/2705609.aspx

Fertilizer placement in strip-till complicates soil sampling

Susan Jongeneel, University of Illinois | Updated: 07/09/2014

Band fertilizer placement may cause non-uniform distribution in the soil.

Why does this matter? Because when fertilizer is unevenly distributed, it may not be possible to use traditional sampling strategies to measure whole-field fertility, said assistant professor of crop sciences Fabian Fernandez. No recent published studies have looked at this problem.

Fernandez has conducted research to determine potassium and phosphorous distribution in no-till and strip-till soils and to develop improved sampling procedures for measuring field fertility.

http://www.agprofessional.com/resource-centers/strip-tillage/nutrient-placement/news/Fertilizer-placement-in-strip-till-complicates-soil-sampling-266426691.html?ref=691

Climate models on the mark, Australian-led research finds

July 21, 2014 11 reading now Comments 303 Read later

Peter Hannam
Environment Editor, The Sydney Morning Herald
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A relatively cool period in the El Nino cycles is masking a global heat build-up.

A common refrain by climate sceptics that surface temperatures have not warmed over the past 17 years, implying climate models predicting otherwise are unreliable, has been refuted by new research led by James Risbey, a senior CSIRO researcher.

Setting aside the fact the equal hottest years on record - 2005 and 2010 - fall well within the past 17 years, Dr Risbey and fellow researchers examined claims - including by some members of the Intergovernmental Panel on Climate Change - that models overestimated global warming.

http://www.smh.com.au/environment/climate-change/climate-models-on-the-mark-australianled-research-finds-20140720-zuuoe.html

66-yard crater appears in far northern Siberia

18 July 2014 by Associated Press

This frame grab made Wednesday, July 16, 2014, shows a crater, discovered recently in the Yamal Peninsula, in Yamalo-Nenets Autonomous Okrug, Russia. Russian scientists said Thursday July 17, 2014 that they believe the 60-meter wide crater, …more

Russian scientists say they believe a 60-meter (66-yard) wide crater discovered recently in far northern Siberia could be the result of changing temperatures in the region.

Read more at: http://phys.org/news/2014-07-yard-crater-northern-siberia.html#jCp

http://www.nswbusinesschamber.com.au/NSWBC/media/Forms/Final-Report_-Thinking-Business-Industry-Research-Collaboration.pdf

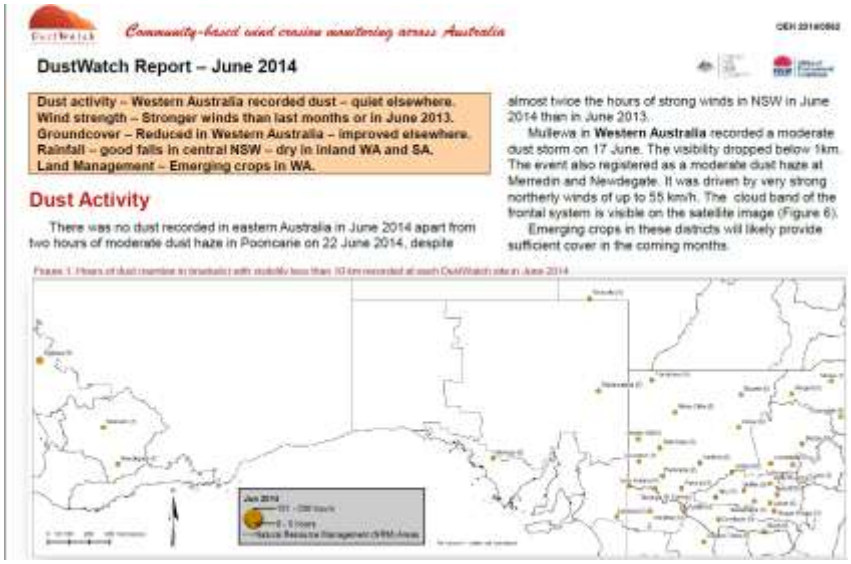
Risk of earthquake increased for about half of US

17 July 2014 by Seth Borenstein

This undated handout image provided by the US Geological Survey (USGS) shows an updated federal earthquake risk map. A new map dials up the shaking hazard just a bit for about half of the US and lowers it for nearly a quarter of the nation. The U.S. Geologic Survey updated Thursday its national seismic hazard maps for the first time since 2008, taking into account research from the devastating 2011 earthquake and tsunami off the Japanese coast and the surprise 2011 Virginia temblor. (AP Photo/USGS)

Read more at: http://phys.org/news/2014-07-earthquake.html#jCp

http://www.abc.net.au/news/2014-07-17/santos-lobbied-for-22no-go22-area-reduction/5605030?&section=news



Community-based wind erosion monitoring across Australia

DustWatch Report – June 2014

Dust activity – Western Australia recorded dust – quiet elsewhere.
Wind strength – Stronger winds than last months or in June 2013.
Groundcover – Reduced in Western Australia – improved elsewhere.
Rainfall – good falls in central NSW – dry in inland WA and SA.
Land Management – Emerging crops in WA.

Dust Activity

There was no dust recorded in eastern Australia in June 2014 apart from two hours of moderate dust haze in Pooncarie on 22 June 2014, despite almost twice the hours of strong winds in NSW in June 2014 than in June 2013.

Mullewa in **Western Australia** recorded a moderate dust storm on 17 June. The visibility dropped below 1km. The event also registered as a moderate dust haze at Merredin and Newdegate. It was driven by very strong northerly winds of up to 55 km/h. The cloud band of the frontal system is visible on the satellite image (Figure 6).

Emerging crops in these districts will likely provide sufficient cover in the coming months.

http://www.environment.nsw.gov.au/resources/dustwatch/140562DWNL.pdf

Jarretts on track for big benefits

JACINTA ROSE

22 Jul, 2014 03:30 AM A+ A- Comments 0 Sha

CONTROLLED traffic farming systems have introduced a level of precision to Australian agriculture never seen before.

Maitland farmer Paul Jarrett implemented the system two years ago, and says the decision has proved especially beneficial this year.

http://www.stockjournal.com.au/news/agriculture/cropping/general-news/jarretts-on-track-for-big-benefits/2705564.aspx

Organic apple orchards benefit from green compost applications

12 hours ago

In traditional apple orchards, effective management practices rely on two interrelated components: finding ways to manage competitive vegetation under the trees, and supplying important supplemental nutrition to trees. These factors are further complicated in organic management systems where limited tools are available, and producers need to meet the stringent soil fertility and crop nutrient management standards of the National Organic Program. University of Arkansas scientists published a study that includes recommendations for the use of various groundcover management systems for apple orchard floors. They say that selected management systems can improve soil quality in organically managed apple orchards.

Read more at: http://phys.org/news/2014-07-apple-orchards-benefit-green-compost.html#jCp

Can Modi clean the Ganges, India's biggest sewage line?

17 July 2014 by Bhuvan Bagga

A youth swims in the polluted waters of the river Ganges at Sarsaiya Ghat in Kanpur on June 26, 2014

Standing on the banks of the river Ganges a day after his election triumph, Prime Minister Narendra Modi vowed to succeed where numerous governments have failed: by cleaning up the filthy waterway beloved of India's Hindus.

Read more at: http://phys.org/news/2014-07-modi-ganges-india-biggest-sewage.html#jCp

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Home > Environment > Soil micro-organisms can help farming reduce greenhouse gasses

Soil micro-organisms can help farming reduce greenhouse gasses

By Ciaran Moran on July 16, 2014

Newly published research into soil microbes shows how, eventually, farmers might reduce greenhouse gas production through the way they manage their soils.

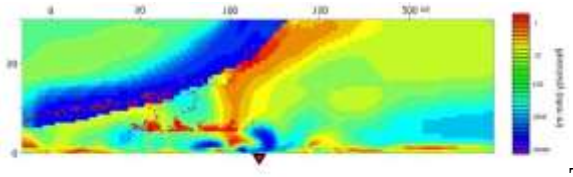
The work, by an EU-wide consortium including Teagasc and researchers from Scotland's Rural College (SRUC), shows how effectively a newly-discovered group of soil microbes breaks down Nitrous Oxide, a major contributor to global warming and a gas blamed for depleting the ozone layer. It suggests that if their growth could be encouraged soils could make a greater contribution to addressing climate change.

The research, published in the respected journal Nature Climate Change, was led by the INRA agroecolgy centre in France. The consortium involved scientists from Teagasc, the Irish Agriculture and Food Development Authority, the Swedish University of Agricultural Sciences and from Scotland, the James Hutton Institute and SRUC.

https://www.agriland.ie/news/soil-microorganisms-can-help-farming-reduce-greenhouse-gasses/

New view of Rainier's volcanic plumbing

17 July 2014



This image was made by measuring how the ground conducts or resists electricity in a study co-authored by geophysicist Phil Wannamaker of the University of Utah Energy & Geoscience Institute. It shows the underground plumbing system that …more

By measuring how fast Earth conducts electricity and seismic waves, a University of Utah researcher and colleagues made a detailed picture of Mount Rainier's deep volcanic plumbing and partly molten rock that will erupt again someday.

Read more at: http://phys.org/news/2014-07-view-rainier-volcanic-plumbing.html#jCp

Lowering river nitrogen load requires major action

Source: Iowa Soybean Association by Dr. Chris Jones, ISA Environmental Programs & Service Environmental Scientist, Theo Gunther, ISA Resource Management Specialist and Tony Seeman, ISA Watershed Management Specialist. | Updated: 07/19/2014

Assessing trends in nitrogen (N) loss is much trickier than exploring how erosion and sediment transport in Iowa have been affected by changing precipitation regimes and extreme events. This article looks at studies of the Raccoon River Watershed in Iowa.

Although a lot of N data is available for the Raccoon River, the data is spotty until 1974, quite a while after large changes in river N loads began (load is the total amount of a substance transported by the river over a defined time period). And because nitrogen cycles into and out of the environment and is consumed by plants and microorganisms, linking river N levels to specific actions on the landscape is very difficult.

http://www.agprofessional.com/news/Lowering-river-nitrogen-load-requires-major-action-267783551.html

Estimating earthquake frequency and patterns in the Puget Lowland

17 July 2014

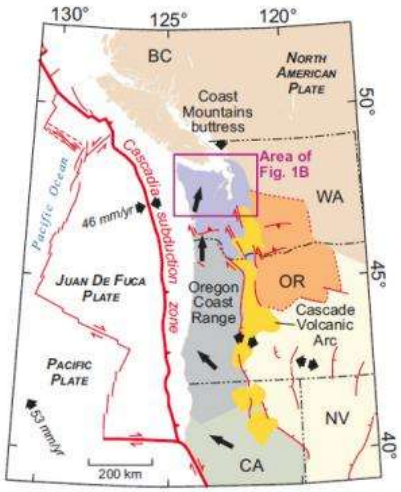


Figure 1. Credit: Nelson et al.

The hazard posed by large earthquakes is difficult to estimate because they often occur hundreds to thousands of years apart. Because written records for the Puget Lowland of northwestern Washington cover less than 170 years, the size and frequency of the largest and

oldest earthquakes on the Seattle and Tacoma faults are unknown. Past earthquakes can only be estimated through geologic studies of sediments and landforms that are created when fault break the ground surface.

Read more at: http://phys.org/news/2014-07-earthquake-frequency-patterns-puget-lowland.html#jCp

The bend in the Appalachian mountain chain is finally explained

18 July 2014

A dense, underground block of volcanic rock (shown in red) helped shape the well-known bend in the Appalachian mountain range. Credit: Graphic by Michael Osadciw/University of Rochester.

The 1500 mile Appalachian mountain chain runs along a nearly straight line from Alabama to Newfoundland—except for a curious bend in Pennsylvania and New York State. Researchers from the College of New Jersey and the University of Rochester now know what caused that bend—a dense, underground block of rigid, volcanic rock forced the chain to shift eastward as it was forming millions of years ago.

Read more at: http://phys.org/news/2014-07-appalachian-mountain-chain.html#jCp

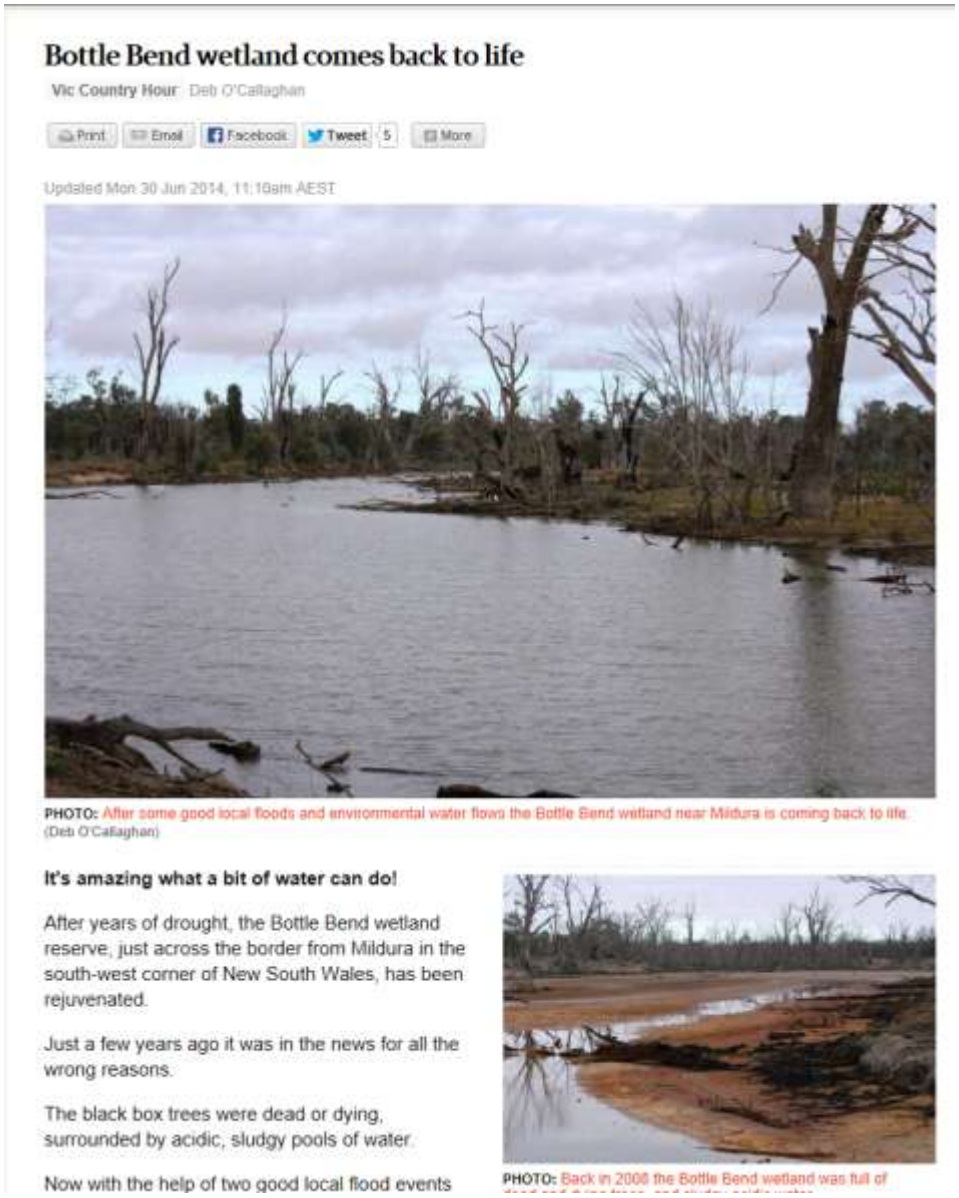
Geophysicists prep for massive 'ultrasound' of Mount St. Helens

Jul 17, 2014


Mount St. Helens. Credit: USGS

(Phys.org) —A small army of 75 geophysicists is set to converge on Mount St. Helens this weekend to begin final preparations for the equivalent of a combined ultrasound and CAT scan of the famous volcano's internal plumbing. The ambitious project, a joint undertaking by Earth scientists at Rice University, the University of Washington, the University of Texas at El Paso and other institutions, requires placing more than 3,500 active seismological sensors and 23 seismic charges around the volcano over the next few days.

Read more at: http://phys.org/news/2014-07-geophysicists-prep-massive-ultrasound-mount.html#jCp



Bottle Bend wetland comes back to life

Vic Country Hour: Deb O'Callaghan

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Updated Mon 30 Jun 2014, 11:10am AEST

PHOTO: After some good local floods and environmental water flows the Bottle Bend wetland near Mildura is coming back to life. (Deb O'Callaghan)

It's amazing what a bit of water can do!

After years of drought, the Bottle Bend wetland reserve, just across the border from Mildura in the south-west corner of New South Wales, has been rejuvenated.

Just a few years ago it was in the news for all the wrong reasons.

The black box trees were dead or dying, surrounded by acidic, sludgy pools of water.

Now with the help of two good local flood events

PHOTO: Back in 2008 the Bottle Bend wetland was full of

http://www.abc.net.au/news/2014-06-26/bottle-bend-water/5551624

Examining the causes of a devastating debris flow

9 hours ago

Storm-triggered landslides cause loss of life, property damage, and landscape alterations. For instance, the remnants of Hurricane Camille in 1969 caused 109 deaths in central Virginia, after 600 mm of rain fell in mountainous terrain in 6 hours. More recently, on 8 August 2010, a rainstorm-induced landslide devastated the Chinese county of Zhouqu, causing more than 1000 deaths. A new modeling study by Ren, published by *Geophysical Research Letters*, examines the multiple factors, both natural and human caused, that came together to produce this event. The triad of storm-triggered landslides is geological condition, surface loading and vegetation roots, and extreme precipitation.

Read more at: http://phys.org/news/2014-07-devastating-debris.html#jCp

Climate-cooling arctic lakes soak up greenhouse gases, study finds

16 July 2014

Found in the Arctic and cold mountain regions, thermokarst lakes occur as permafrost thaws and creates surface depressions that fill with melted freshwater, converting what was previously frozen land into lakes. Pictured: A close-up look at a …more

New University of Alaska Fairbanks research indicates that arctic thermokarst lakes stabilize climate change by storing more greenhouse gases than they emit into the atmosphere.

Read more at: http://phys.org/news/2014-07-climate-cooling-arctic-lakes-greenhouse-gases.html#jCp

Murray Darling environmental water to give refuge to birds and wildlife during El Nino

ABC Rural By Cherie McDonald

Print Email Facebook Tweet More 10

Updated Fri 4 Jul 2014, 9:30am AEST

The Murray Darling Basin Authority (MDBA) has released new water guidelines in an effort to protect wildlife and plants in the basin during dry times.

The conservation priorities are intended as a guide for environmental water holders on how they will allocate water throughout the system.

MDBA executive director Jody Swirepik says fish and birds will need well-watered refuges to sit out sizzling hot weather conditions.

"We've looked right across the basin to try to identify the big watering priorities for the upcoming year," Ms Swirepik said.

PHOTO: Aerial view of the Menindee Lakes, July 2008
(Adrian Pederick: user submitted; file photo)

MAP: Broken Hill 2880

http://www.abc.net.au/news/2014-07-03/nrn-mdba-environment-priorities/5569710

Gwydir Wetlands to be watered but no allocation for irrigators

NSW Country Hour Emma Brown

Print Email Facebook Tweet More 3

Updated Wed 2 Jul 2014, 8:19am AEST

The Gwydir Wetlands have been listed in the Murray-Darling Basin Authority's annual watering priority.

Irrigators in the catchment will receive none of their water allocations and expect much of the water left in the system to be dedicated to environmental flows in to the wetlands.

Executive Officer of the Gwydir Valley Irrigators Association Zara Lowien says the wetlands are environmentally significant but is concerned local input is being omitted from the decision-making process.

She says the local environmental contingency allowance advisory committee had long term strategy which mimics natural events and promoted in flows to the wetlands when rain occurred.

PHOTO: The Gwydir River near Moree. Irrigators have received a zero per cent allocation this year from the river. (User submitted)

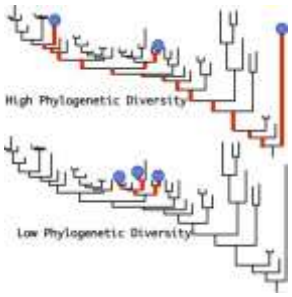
AUDIO: Gwydir Wetlands to be watered but irrigators given empty allocations (ABC Rural)

MAP: Moree 2400

http://www.abc.net.au/news/2014-07-01/gwydir-irrigators/5563512

Scientists enlist big data to guide conservation efforts

18 July 2014



The new model focuses on phylogenetic diversity, which is very different from counting species, today's standard measure of biodiversity. The same number of species (three blue circles) can have a very different phylogenetic diversity (the sum of the red branches on the tree connecting them) depending on how closely they are related. Conservation efforts should focus on preserving phylogenetic diversity rather than the total number of species. Credit: Brent Mishler/UC Berkeley

Read more at: http://phys.org/news/2014-07-scientists-big-efforts.html#jCp

Saving soil: digging for solutions beneath our feet

Agriculture doesn't have to degrade soils – it's possible for food production to enrich the earth, restore nutrients, conserve water, and prevent erosion.

ByDanielle Nierenberg, Sarah Small, and Grace Morgan, Food Tank 15 **July 2014**

One of the most overlooked ingredients in farming exists right beneath farmers' feet—healthy, fertile soils. http://www.csmonitor.com/World/Making-a-difference/Change-Agent/2014/0715/Saving-soil-digging-for-solutions-beneath-our-feet

RN Breakfast

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How do we manage 50,000 abandoned mines?

▶ Listen now ▶ Download audio

Wednesday 16 July 2014 7:53AM

Tens of thousands of abandoned mines exist across the country and governments, mining companies and communities are still trying to work out what to do with them.

Options to better manage the life and death of Australian mines will be explored at a conference in Brisbane this week.

IMAGE: A SIGN WARNS TOURISTS OF THE DANGERS OF EXPLOSIVES AND THOUSANDS OF ABANDONED MINE SHAFTS SCATTERED AROUND THE OPAL MINING TOWN OF COOBER PEDY. (TORSTEN BLACKWOOD/AFP/GETTY IMAGES)

http://www.abc.net.au/radionational/programs/breakfast/how-do-we-manage-50000-abandoned-mines/5600138

Bush Blitz, which found 700 new plant and animal species, to be extended

Australian science scheme to run for three more years after government and BHP Billiton each contribute $6m

• See the full gallery here

Oliver Milman
theguardian.com, Tuesday 22 July 2014 11.48 AEST

Jump to comments (12)

A possum has its feet measured during the Credo station bush blitz in Western Australia. Photograph: Bush Blitz

A key program that has unearthed 700 new Australian plant and animal species has been extended until 2017 via a funding deal involving the government and the mining company BHP Billiton.

http://www.theguardian.com/environment/2014/jul/22/bush-bliz-which-found-700-new-plant-and-animal-species-to-be-extended

Soil Fertility and Smart Farming

16 July 2014, 6:27 a.m.

Dr Christine Jones

It’s time to get agronomists, scientists and farmers in one room to share the knowledge and benefits of different perspectives in order to improve food production and profit for our producers. http://www.easternriverinachronicle.com.au/story/2419182/soil-fertility-and-smart-farming/?cs=633

GIS based soil fertility maps prepared for 19 states

The author has posted comments on this articleManjiri Damle, TNN | 19 July 2014, 07.23PM IST

PUNE: Indian Institute of Soil Science has developed GIS based soil fertility maps of 19 states using data of different soil testing laboratories in the country. The assessment revealed that about 59, 49 and 9% soils are low in available nitrogen, phosphorus and potassium respectively. The extent of micronutrient deficiency in soil (state-wise) was studied under the All India Coordinated Research Project on 'Micro and Secondary Nutrients and Pollutant Elements in Soils and Plants'. http://timesofindia.indiatimes.com/city/pune/GIS-based-soil-fertility-maps-prepared-for-19-states/articleshow/38687622.cms

'Saltwater' From Fracking Spill Is Not What's Found in the Ocean

By Lisa Song 17 July 2014 1:51 AM GMT+1000

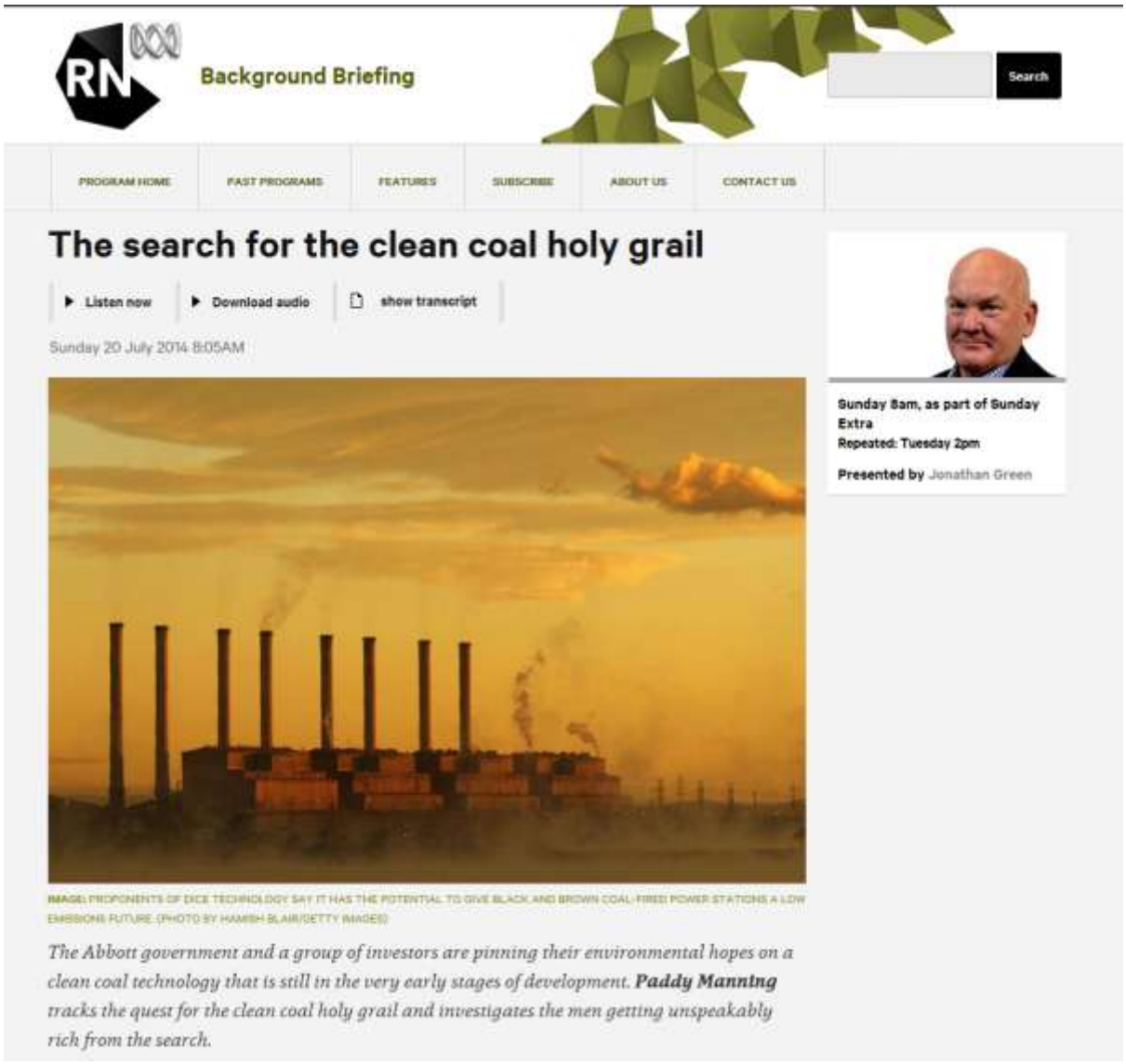
Protective booms surround a water intake system on Lake Sakakawea near Mandaree, N.D. on July 10, 2014. A nearby pipeline spilled around a million gallons of saltwater recently.

InsideClimateNews.org -- In early July, a million gallons of salty drilling waste spilled from a pipeline onto a steep hillside in western North Dakota's Fort Berthold Reservation. The waste—a byproduct of oil and gas production—has now reached a tributary of Lake Sakakawea, which provides drinking water to the reservation.

The oil industry called the accident a "saltwater" spill. But the liquid that entered the lake bears little resemblance to what's found in the ocean.

The industry's wastewater is five to eight times saltier than seawater, said Bill Kappel, a hydrogeologist emeritus at the U.S. Geological Survey. It's salty enough to sting the human tongue, and contains heavy metals in concentrations that might not meet drinking water standards. The briny mix can also include radioactive material. Heavy

metals and radioactive materials are toxic at certain concentrations.
http://www.sciencedaily.com/releases/2014/07/140721181805.htm



http://www.abc.net.au/radionational/programs/backgroundbriefing/mr-clean-coal/5601074

Fungicides for crops: Worrying link to fungal drug resistance in UK, warns scientists

14 July 2014

Manchester University

Aspergillus -- a common fungus that attacks the lungs and is found in soil and other organic matter -- has become resistant to life-saving drugs in parts of rural Yorkshire, researchers report. Although the

link has been made before in the Netherlands, it's the first time its been made in the UK between drug resistance in Aspergillus and fungicides used on crops. Experts warn their findings, now published, are significant and raise serious implications for transplant patients, those with leukemia and people who suffer from severe asthma.

Crop spraying on British farms could be aiding a life-threatening fungus suffered by tens of thousand of people in the UK each year.

New research by British and Dutch scientists has found that Aspergillus -- a common fungus that attacks the lungs and is found in soil and other organic matter -- has become resistant to life -- saving drugs in parts of rural Yorkshire.

Journal Reference:

1. Michael J. Bromley, Guus van Muijlwujk, Marcin G. Fraczek, Geoff Robson, Paul E. Verweij, David W. Denning, Paul Bowyer. **Occurrence of azole-resistant species of Aspergillus in the UK environment**. *Journal of Global Antimicrobial Resistance*, 2014; DOI: 10.1016/j.jgar.2014.05.004

http://www.sciencedaily.com/releases/2014/07/140714213449.htm

Coal terminals, dredging putting Great Barrier Reef at risk, Senate inquiry told

By Alyse Edwards

Updated Mon 21 Jul 2014, 6:39pm AEST

The fast-tracking of coal terminals and dredging along Queensland's coast was endangering the health of vital marine ecosystems, a conservation group has told a Senate inquiry.

The inquiry is examining state and federal government management of the Great Barrier Reef, holding hearings in Brisbane, Mackay and Townsville.

"We are very alarmed at the massive port expansion agenda for the Great Barrier Reef," Australian Marine Conservation Society spokeswoman Felicity Wishart told a hearing in Brisbane today.

PHOTO: Marine Conservation Society supporters state their case outside the Senate inquiry hearing at Parliament House in Brisbane. (ABC News)

MAP: Brisbane 4000

http://www.abc.net.au/news/2014-07-21/coal-terminals-dredging-put-great-barrier-reef-at-risk-inquiry/5612572

Cattle company to keep carbon farming despite market uncertainty

ABC Rural By Matt Brann

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Updated Fri 18 Jul 2014, 5:15pm AEST

The Tipperary Group will continue its carbon farming project in the Northern Territory, despite the market uncertainty caused by the scrapping of the carbon tax.

Last year, Tipperary Group, become the first cattle company in Australia to earn carbon credits under the savanna burning methodology, earning over 26,000 credits valued at around $500,000.

The group's general manager, David Warriner, says the company has already been paid this year for its burning program, but the shift in policy by the Abbott Government has created a lot of uncertainties going forward.

He says the Federal Government had committed

PHOTO: The Tipperary Group was hoping to cash in on carbon credits it earned from its early season burning program (Supplied)

MAP: Darwin 0800

http://www.abc.net.au/news/2014-07-18/tipperary-carbon-credits-hope/5606888

Hungry, invasive 'crazy worm' makes first appearance in Wisconsin, threatens forests

16 July 2014

University of Wisconsin-Madison

Wisconsin's newest invasive species has done its best to stay underground, but the voracious, numerous and mysterious Asian crazy worm has emerged for the first time in the state on the campus of the University of Wisconsin–Madison.

Identifiable by the contrast of a light gray or tan band against a dark body, the Asian crazy worm can be voracious and numerous enough to do serious damage to forests.

Credit: UW Arboretum

Wisconsin's newest invasive species has done its best to stay underground, but the voracious, numerous and mysterious Asian crazy worm has emerged for the first time in the state on the campus of the University of Wisconsin-Madison.

The UW Arboretum, long a refuge for Wisconsin's native plants and animals, is the first confirmed site for *Amynthas agrestis*, an invasive worm believed to have arrived in the United States from its native range in Japan and the Korean Peninsula with plants imported for landscaping.
http://www.sciencedaily.com/releases/2014/07/140716095730.htm

Environmental Soil Analysis, Contaminated Soil Testing with Bruker's S1 TITAN Handheld XRF Analyzer

A Handheld XRF "Soil Gun" for Efficient Contaminated Soil Profiling

Handheld XRF guns have become the instrument of choice for soils analysis when characterizing, remediating and monitoring contaminated soil sites. With just 30-60 seconds per sample, fast, accurate data can be obtained in hours rather than weeks, ensuring that your project meets its deadline and does not go over budget. XRF is nondestructive. Sampling density is the key factor in profiling contamination. Best practice includes sending 5% of these very same samples analyzed with the XRF in the field to the lab for confirmation.

http://www.bruker.com/products/x-ray-diffraction-and-elemental-analysis/handheld-xrf/applications/restricted-materials/contaminated-soil-analysis.html?gclid=Cj0KEQjw3IieBRDl1oG0gr_PweoBEiQAwGHVw5EGvrnk04WY7tA24caJP7S2AKA9fPCB5XNAxDUuNOUaAsIR8P8HAQ

If soils are not restored, crops will fail even if rains do not; hunger will perpetuate even with emphasis on biotechnology and genetically modified crops; civil strife and political instability will plague the developing world even with sermons on human rights and democratic ideals; and humanity will suffer even with great scientific strides. Political stability and global peace are threatened because of soil degradation, food insecurity, and desperateness. *… Lal (Science, 2008)*